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ARTiculating change across environmental conflict stages: Socio-spatial transformation through art activism in Chile, the Philippines, and the United States

Teresa Sanz

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Ph.D. Dissertation
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Director:
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Teresa Sanz

To all those who
bring light to shadows.

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Acronyms and abbreviations

BNPP: Bataan Nuclear Power Plant

COP21: 2015 United Nations Climate Change Conference

CEEAH-UAB: Ethics Committee on Animal and Human Experimentation at the Universitat Autònoma de Barcelona

DiVAC: Digital Visual Activism Contents

EIA: Energy Investment Allowance

EJ Atlas: Global Atlas of Environmental Justice

EJOs: Environmental Justice Organisations

FFFD: Fridays for Future Digital

HRW: Human Rights Watch

IF: Impact Factor

IPBES: Intergovernmental Platform on Biodiversity and Ecosystem Services

IPCC: Intergovernmental Panel on Climate Change

MUZOSARE: Mujeres en Zona de Sacrificio en Resistencia

NCiO: No Coal in Oakland

NFPC: The Nuclear Free Philippines Coalition

OBOT: Oakland Bulk and Oversized Terminal

PMCJ: Philippine Movement for Climate Justice

QPSZ: Quintero-Puchuncaví sacrifice zone

RISD: United Nations Research Institute for Social Development

SDGs: Sustainable Development Goals

UN: United Nations

UNFCC: United Nations Framework Convention on Climate Change

US EPA: United States Environmental Protection Agency

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First and foremost, I would like to express my profound gratitude to the artists and activists whose work has breathed life and meaning into this thesis. I am indebted to those with whom I have had the pleasure of collaborating, who generously shared their time and ideas for this research project. I extend my heartfelt appreciation to all the artists and activists in Oakland and in the Quintero Puchuncaví Sacrifice Zone. Thank you for welcoming me as one of your own, for sharing your art, experiences and wisdom with me. I am equally grateful to the artists, activists and environmental defenders in the Philippines for their virtual presence and for allowing me to learn from them across the distance. To all the artists resisting in degraded and devastated areas, and to the artists navigating the crises of our world, thank you for illuminating it with your light and inspiring hope.

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Abstract

The thesis explores the transformative potential of art activism and creative actions in contexts of environmental conflict. Art's capacity to claim against undesired situations, and to foster cultural, cognitive, psychological and relational transformations is widely recognised. However, art has received limited attention in the study of environmental conflicts from a political ecology and environmental justice perspectives. This thesis aims to fill this gap, involving in an interdisciplinary approach to examine concrete socio-spatial transformations resulting from art activism in three distinct phases of mobilisation in environmental conflicts: restoration, reaction against, and prevention of environmental damage.

The research includes three case studies. Two local cases involve qualitative data obtained in the field using direct observations, interviews, focus groups, and participatory art-making. These cases refer to the restoration of the Quintero-Puchuncaví Sacrifice Zone in Chile, and the prevention of the construction of a coal export terminal in the port of Oakland, California. Another case study, approached at the national level, looks into art activism in eighty-eight cases of environmental conflict in The Philippines. Through a combination of an environmental conflicts database and observation of visual activism on social media, I examine artistic reactions to ongoing environmental violence. Thorough the thesis, analytic methods encompass qualitative data analysis, network analysis, and visual analysis, as well as quantitative approaches such as correlation analysis, and cluster analysis.

Each case provides insights into the unique role of art activism in environmental conflicts. Firstly, art activism reinforced relational values in a restoration context. Fostering local identity, reciprocity and attachment to place, contributed to restore both social environments and public spaces degraded by industrial development. Secondly, art activism does respond to environmental violence in the Philippines. In doing so, art activists generate discursive responses through narratives that denounce violence, stand for the environment and its defenders, and act for justice and memory. Finally, arts activism amplifies the strategic and transformative effects of the anti-coal movement in Oakland, promoting greater cohesion, diversity, participation, and recognition.

The thesis concludes by identifying three spheres of socio-environmental transformation influenced by the use of art: the articulation of environmental mobilisation, the disarticulation of power dynamics over the environment, and the re-articulation of relationships and materialities that challenge the configuration of environmental degradation in relation to time and place. This thesis contributes to the field of political ecology and the study of environmental conflicts, using empirically-based insights about art activism to create bridges with concepts from the environmental humanities, human geography, aesthetic politics, and sustainability science.

Resumen

Esta tesis explora el potencial transformador del activismo artístico y las acciones creativas en contextos de conflicto ambiental. A pesar del amplio reconocimiento de la capacidad del arte para reivindicar situaciones no deseadas y fomentar transformaciones culturales, cognitivas, psicológicas y relacionales, ha recibido una atención limitada en el estudio de los conflictos ambientales desde una perspectiva de ecología política y justicia ambiental. Esta tesis pretende llenar este vacío, implicándose en un enfoque interdisciplinario para examinar transformaciones socio-espaciales resultantes del activismo artístico en tres fases distintas de movilización en conflictos medioambientales: restauración, reacción y prevención del daño ambiental.

La investigación incluye tres estudios de caso. Dos casos locales incluyen datos cualitativos obtenidos mediante observaciones directas, entrevistas, grupos de discusión y una creación artística participativa durante el trabajo de campo. Estos casos se refieren a la restauración de la Zona de Sacrificio de Quintero Puchuncaví en Chile y a la prevención de la construcción de una terminal de exportación de carbón en el puerto de Oakland, California. El otro estudio de caso aborda el análisis del activismo artístico a escala nacional, estudiando ochenta y ocho casos de conflicto ambiental en Filipinas. Mediante una combinación de una base de datos de conflictos ambientales y la observación del activismo visual en las redes sociales, examino las reacciones artísticas a la violencia ambiental en curso. Los métodos de análisis de datos utilizados en estos tres contextos responden a las especificidades de cada caso. Los métodos analíticos abarcan el análisis cualitativo de datos, el análisis de redes y el análisis visual, así como enfoques cuantitativos como el análisis de correlación y el análisis de clusters.

Cada caso aporta información sobre el papel singular del activismo artístico en los conflictos ambientales. En primer lugar, el activismo artístico reforzó los valores relacionales en un contexto de restauración. El fomento de la identidad local, la reciprocidad y el apego al lugar contribuyó a restaurar tanto los entornos sociales como los espacios públicos degradados por el desarrollo industrial. En segundo lugar, el activismo artístico responde a la violencia medioambiental en Filipinas. Al hacerlo, los activistas artísticos generan respuestas discursivas a través de narrativas que denuncian la violencia, defienden el medio ambiente y a sus defensores, y actúan a favor de la justicia y la memoria. Por último, el activismo artístico amplifica los efectos estratégicos y transformadores del movimiento contra el carbón en Oakland, promoviendo una mayor cohesión, diversidad, participación y reconocimiento.

La tesis concluye identificando tres esferas de transformación socio-ambiental influenciadas por el uso del arte: la articulación de la movilización ambiental, la desarticulación de las dinámicas de poder sobre el medio ambiente y la rearticulación de relaciones y materialidades que desafían la configuración de la degradación ambiental en relación con el tiempo y el lugar. Esta tesis contribuye al campo de la ecología política y al estudio de los conflictos ambientales, utilizando observaciones basadas en datos empíricos sobre el activismo artístico para establecer conexiones con conceptos de las humanidades medioambientales, la geografía humana, la política de la estética y la ciencia de la sostenibilidad.

Resum

Aquesta tesi explora el potencial transformador de l'activisme artístic i les accions creatives en contextos de conflicte ambiental. Hi ha un ampli reconeixement de la capacitat de l'art per reclamar contra situacions indesitjades, i per fomentar transformacions culturals, cognitives, psicològiques i relacionals. Malgrat això, l'art ha rebut una atenció limitada en l'estudi dels conflictes ambientals des d'una perspectiva d'ecologia política i justícia ambiental. Aquesta tesi omple aquest buit, fent servir un enfocament interdisciplinari per examinar transformacions socioespacials concretes, resultants de l'activisme artístic, en tres fases diferents de mobilització en conflictes ambientals: la restauració de danys ambientals, la reacció contra d'aquests danys, i la seva prevenció.

La recerca inclou tres estudis de casos. Dos casos locals es bases en dades qualitatives obtingudes en el camp utilitzant observació directa, entrevistes, grups focals i la creació d'art participatiu. Aquests casos es centren en la restauració de la Zona de Sacrifici de Quintero Puchuncaví a Xile, i en la prevenció de la construcció d'una terminal d'exportació de carbó al Port d'Oakland, a Califòrnia. L'altre cas aborda l'anàlisi de l'activisme artístic a nivell nacional, analitzant vuitanta-vuit casos de conflictes ambientals a Filipines. Mitjançant la combinació d'una base de dades de conflictes ambientals i l'observació de l'activisme visual a les xarxes socials, examino les reaccions artístiques vers la violència ambiental en curs. Els mètodes analítics inclouen l'anàlisi qualitativa de dades, l'anàlisi de xarxa i l'anàlisi visual, així com enfocaments quantitatius com l'anàlisi de correlació i l'anàlisi de clústers.

Cada cas proporciona informació sobre el paper únic que l'activisme artístic té en conflictes ambientals. En primer lloc, l'activisme artístic va reforçar els valors relacionals en un context de restauració. Fomentar la identitat local, la reciprocitat i l'adhesió al lloc propi, va contribuir a restaurar tant els entorns socials com els espais públics degradats pel desenvolupament industrial. En segon lloc, l'activisme artístic respon a la violència mediambiental a Filipines. En fer-ho, els activistes artístics generen respostes discursives amb narratives que denuncien la violència, defensen el medi ambient i els seus defensors, i actuen per la justícia i la memòria. Finalment, l'activisme artístic amplifica els efectes estratègics i transformadors del moviment anti-carbó a Oakland, promovent una major cohesió, diversitat, participació i reconeixement.

La tesi conclou identificant tres esferes de transformació socioambiental influenciada per l'ús de l'art: l'articulació de la mobilització ambiental, la desarticulació de la dinàmica de poder sobre l'entorn, i la re-articulació de relacions i materialitats que desafien la configuració de la degradació ambiental en relació amb el temps i l'espai. Aquesta tesi contribueix al camp de l'ecologia política i l'estudi dels conflictes ambientals, utilitzant troballes que descansen en evidència empírica sobre l'activisme artístic per crear ponts amb conceptes de les humanitats ambientals, la geografia humana, la política de l'estètica i la ciència de la sostenibilitat.

Keywords: art activism; environmental conflicts; political ecology; Chile; Oakland, CA; Philippines; socio-environmental transformations; articulations; environmental movements; environmental defenders; sacrifice zones; fossil fuels.

Palabras clave: activismo artístico; conflictos ambientales; ecología política; Chile; Oakland, CA; Filipinas; transformaciones socio-ambientales; articulaciones; movimientos ambientales; defensores ambientales; zonas de sacrificio; combustibles fósiles.

Paraules clau: activisme artístic; conflictes ambientals; ecologia política; Xile; Oakland, CA; Filipines; transformacions socioambientals; articulacions; moviments ambientals; defensors ambientals; zones de sacrifici; combustibles fòssils.

Preface

The transformative and transgressive power of the arts has always enchanted me. It captured my imagination long before this thesis came to be. Then, in 2019, the yearning to explore how art could become a mighty instrument for people who suffer the most from social and environmental inequities of our world impelled me on this odyssey.

Art and the artists fascinated me from a young age, even before I grasped the depth of their meaning. Playing the piano, writing, dancing, painting, and acting have been my go-to creative pursuits and have served as magical tools to express my innermost thoughts, emotions, and understandings of the world.

I grew up in the post-industrial landscape of the Basque Country, which has a complicated history of industrialisation and environmental degradation. I also got first-hand observations of the complexities of rural life visiting my grandparents in Castilla y León, there in *"la España profunda"*. That coupling made me deeply intrigued about the human interactions that influence landscape transformations and environmental deterioration everywhere.

Most likely, that curiosity motivated my interest in environmental studies, which I pursued first with Bachelor's degree in Environmental Science and later with a Master's degree in Sustainability Studies with a focus on Political Ecology and Ecological Economics. Meanwhile, my spare time was devoted to creative activities and amateur theatre projects. These experiences prompted me to delve into the intricate connections between art and social and environmental justice.

Writing the thesis has been a journey of self-discovery as much as a process of intellectual enquiry. During the years of writing these pages, my supervisor, Beatriz Rodríguez-Labajos opened for me the doors to the captivating intersection of art and environmental sciences. This interplay not only nurtured me as a researcher but also ignited my artistic spirit. Working closely with Joan Martinez-Alier and becoming part of the research group of the Global Atlas of Environmental Justice provided me with invaluable insights into the particular sensitivities needed to study environmental conflicts. Later, I had the pleasure of crossing paths with Paula Serafini, whose work influenced this thesis even before we met during my research stay at Queen Mary University London. Simultaneously, collaborating with the street theatre collective ERRO Grupo taught me the most passionate, committed, and incendiary approach to art-making, which I applied when directing my first short film, "Under-ground Ore."

Each experience propelled me to new heights, enhancing my self-confidence and deepening my ability to make sense of the stories about artistic creation and environmental degradation. Now, at the age of twenty-six, I can confidently assert that this thesis has allowed me to merge two lifelong passions, art and political ecology, in a commitment to shed light on the transformative power of art to contest social and environmental injustices.

Art in an ending world, or art as a response to an ending world?

As I reached the final stages of writing this thesis while staying at Queen Mary University of London, a new tactic emerged among climate justice activists. It involved the defacement of historical masterpieces, such as Van Gogh's iconic Sunflowers, by spray-painting, throwing tomato sauce, or "sticking" to them. Some climate activists questioned the value of art in a world that is rapidly deteriorating, with some asserting that saving the world is more important than preserving art (Gayle, 2022; Jones, 2022; Ore, 2022).

Why did museums become targets to raise awareness of the climate crisis? Some believe that attacking a consecrated Van Gogh painting, surrounded by great columns in grandiose buildings, would draw the attention of the press. Others claim that dramatic facts need dramatic actions, or that dramatic reactions are logical responses to dramatic facts. Regardless of the reasons, news of these actions reverberated throughout the climate movement and public opinion, forging a connection between art and a world in crisis.

This thesis delves precisely into the role of art in a crisis-ridden and degraded world. Concretely, into the role of art in devastated territories. While some activists question the preservation of art in an ending world, others create art as a response to a world on the brink of collapse. The type of art I am going to talk about in this thesis is unlikely to be displayed in London's Royal Gallery, as Van Gogh's Sunflowers were. Nor was it created in an art studio in a global metropolis, nor is it likely to appear in the history books or Wikipedia. Many of the "artists" I met during these years do not sign the work or claim property rights over it. Many will refuse to call their creative work "art" and make no pretence to be called artists.

What concerns me is to understand the artistic creativity of the movements involved in environmental conflicts. Close to what Maizels (1996) would call "outsider art", I am interested in art produced by non-artists in the specific context of political struggles against extractivism. I am not interested in discussing what is art and what is not. Throughout the dissertation, I use the word art and artistic practices to refer to human creativity and what interviewees express to me as art.

Chapter 1.

Introduction

What we need most of all is to believe in the world we're creating.
We need to make events, however small, that escape control.
We need to be the worm in the apple of the system.
To do that, it's important to have a capacity for resistance,
but also to construct new forms,
to give birth to new spacetimes,
however small their surface or volume.
The capacity for resistance, or on the contrary,
for submission to control,
is decided in the course of each individual's attempt to create.

Felix Guattari

You have to act as if it were possible
to radically transform the world.
And you have to do so all the time.

Angela Davis

1. Introduction

This thesis is a timely contribution at a critical juncture in history. At a time when the Intergovernmental Panel on Climate Change has confirmed the ongoing planetary crisis (Harvey, 2023) in connection with economic growth (IPCC, 2022), only a giant rupture may reverse the eco-social crisis and the injustices and inequalities that wound humanity and the Earth (Mbembe, 2021). Just when young voices around the world passed on a sense of urgency for environmental action (Marris, 2019), the global COVID-19 pandemic made many people aware that the world they knew can indeed turn upside-down overnight. This heightened awareness highlights the limits, fragility, and existential challenges we face on Earth. However, it is precisely during times of profound crises that diverse practices and opportunities for transformative change emerge.

Despite today's popularity of environmental and climate activism (Timperley, 2021), environmentalism is by no means a recent phenomenon. Communities all over the world have long fought against industrial pollution, waste disposal, or other forms of environmental damage (Bullard, 1990), resulting in conflicts referred to as environmental conflicts (Scheidel et al., 2020). Grassroots organisations of indigenous peoples, peasants, and other front-line communities often lead these struggles to defend their livelihoods, culture, and territories (Martinez-Alier, 2002). The influence of political and colonial networks of power on the distribution of environmental damages has led scholars to emphasise the political as a defining element of the environment (Robbins, 2012). This thesis focuses on the type of environmentalisms and social movements that emerge from environmental conflicts.

The investigation adopts a novel approach that diverges from traditional methods used in the study of environmental conflicts by delving into the realm of artistic and creative practices. Artistic practices are well known for their potential to bring about social, cultural, and political transformation. In fact, a rising body of literature explores the cultural and aesthetic dimension of the concepts of the Anthropocene or the Capitalocene as well as the climate emergency (Blanc, 2012; Bruna Pérez, 2021; Davis & Turpin, 2015; Demos, 2016a). These studies emphasise the transformative power of aesthetics and the arts in challenging dominant relationships with the environment and envisioning more sustainable existences in a world ravaged by political and economic greed.

This investigation does not focus on artistic practices that address broad climate and environmental breakdown as a source of creative inspiration. Instead, the artistic practices discussed in this thesis emerge from front-line communities' struggles, in local contexts of environmental degradation and are known as "art activism", "artistic

activisms" or "visual activisms". The study of both art activism and environmental science requires an interdisciplinary approach (Robin, 2018; Serafini, 2018a). My thesis builds on this convergence, mobilising notions from different interdisciplinary fields to feature the role of artistic practices in the (re)articulation of critical links required for effective transformations emerging from environmental conflicts.

The remainder of this chapter is structured as follows: First, I introduce the main conceptual frames used throughout the manuscript. This examination leads to detect the gaps that drive the research questions of this thesis. Next, I present an overview of the mixed-methods methodological approach. An important part of such an approach is the selection of case studies, described in detail below. Finally, I offer an overview of the structure of the chapters.

1.1. Framing socio-environmental conflicts as politically-mediated struggles

This thesis uses the term "socio-environmental conflicts" to describe conflicts caused by an economic rationality that have an impact on people's living conditions as well as their intricate cultural and emerging political demands (Leff, 2021). Three critical approaches provide useful terminology for the understanding of socio-environmental conflicts in this thesis: environmental justice, ecological economics, and political ecology.

An environmental justice perspective signals that concepts of labour, race, gender, and ethnicity shape the unjust distribution of environmental benefits such as access to clean water, air, land, and environmental burdens such as pollution or waste (Martinez-Alier & O'Connor, 1996). The rise of the "environmental justice" movements and scholarship by the 1980s in the United States demonstrated that marginalised communities were disproportionately affected by toxic substances, as part of a broader pattern of discrimination based on race, gender, and class. (Bullard, 1990; Pellow, 2007). Over time, both social movements and theorists recognised that it is essential to understand the dimensions of recognition and participation in decision-making processes for excluded communities, alongside the distributive dimensions of justice. Schlosberg (2004, 2007) posed the trivalent dimensions of justice –equity, recognition, and participation– as central to the debates on environmental justice. This thesis engages with these dimensions of environmental justice to discuss environmental conflicts.

Because of the distributional nature of socio-environmental conflicts, ecological economists refer to them as "ecological distribution conflicts" (Martinez-Alier &

O'Connor, 1996) and connect them with debates over environmental values. In conflicts over "environmental valuation languages", market and monetary values may clash with values related to identities or rights systems, such as livelihoods or indigenous land rights, which are hard to measure or trade (Martinez-Alier, 2002). In the face of damaging decisions over the environment, social actors may put forward political, social and cultural demands. An "environmentalism of the poor" (Martinez-Alier, 2002) emerges when such demands have to do with the livelihoods, identities, and cultures of impoverished communities.

Political ecologists emphasise the deliberate ways in which such distribution conflicts are mediated by power relations (Blaikie & Brookfield, 1987; Robbins, 2004). In this thesis, I adopt a definition of political ecology as the field unravelling *"the power relations —and the power in knowledge— that underpin the socio-environmental crisis that currently afflicts and challenges humanity, and determines the ways of intervening in, appropriating, and degrading Nature"* (Leff, 2021: 321).

Early political ecology studies in the 1970s and 1980s reacted to the apolitical forms of explaining environmental degradation that relied on mechanistic views of population growth or natural resources management. When it came to land degradation, political ecologists used place-based observations in the Global South to unveil the commodification of land and the pressures of global markets on farmer behaviours (Peet & Watts, 1996; Peluso & Watts, 2001). This focus evolved to different regions of the world, and different concerns, e.g., environmental conservation struggles, landscape production, and adaptation to climate change (Neumann, 2004; Robbins, 2004).

Anglophone political ecology has tended to focus on fundamental issues at the core of contemporary environmental problems: *"industrial capitalism, economic growth, and the uneven power of different players contending over the use and management of natural systems"* (Peet et al., 2011:26). Under this perspective, political ecology analyses of environmental conflicts often refer to Harvey's (2003) notion of accumulation by dispossession: the *"incidence of capitalist expansion that uses dispossession, enclosure, and proletarianisation as core strategies for capital accumulation"*. This concept goes beyond material dispossession and entails cultural dispossession of communities' values, knowledges and meanings (Dunlap & Jakobsen, 2020; Svampa, 2019).

Meanwhile, Latin American political ecologists have underlined the power of knowledge systems and how the hegemonic global order has objectified the world and colonised, marginalised, and exterminated other peoples' knowledge, identities, cultures, and practises (Rivera Cusicanqui et al., 2016). The influential concept of extractivism was first developed in the 2000s by Latin American academia and

civil society (Acosta, 2011; Gudynas, 2010). Over the years, the concept has been applied to describe the processes of overextension of natural resources to mindsets, politics, and practices throughout the world (Nygren et al., 2022).

Expanding on these critical approaches, this thesis employs the term "environmental movements" or "socio-environmental movements" to refer to communities, groups, or grassroots organisations that resist environmental degradation and land grabbing (Martinez-Alier, 2002). These movements employ various forms of "contentious performances," as defined by Tilly (2008), including the use of artistic practices. The spontaneity of these actions allows for disrupting and transforming power dynamics (Tilly, 2008). Thus, this thesis focuses on art activism as a form of contentious performance driven by the defence of threatened or lost livelihoods, identities, and values resulting from extractive processes and subsequent environmental degradation.

1.2. Arts' influence on socio-environmental dynamics

The study of culture, art and creativity in activism and social movements is not uncommon (Cohen-Cruz, 1998; Duncombe, 2002; Reed, 2005; Tucker, 2010). Different terms denote this relationship: 'activist art', 'artivism', 'art activism', 'creative activism', 'political street art'… These terms gained prominence after the alter-globalisation movements of the early 2000s to describe the creative initiatives for social change that emerged during that time (e.g., McKee, 2016; Sholette, 2017; Thomson, 2015)

In contrast, the study of arts and creativity in the context of environmental conflict is relatively rare, being Serafini (2015, 2018a, 2022) one of the pioneers in the field of cultural studies and Rodríguez-Labajos (Rodriguez-Labajos, 2022; Rodríguez-Labajos et al., 2021; Rodríguez-Labajos & Ray, 2021) in the field of social-environmental sciences. In fact, this thesis adopts Serafini's definition of art activism as *"practices that employ artistic forms with the objective of achieving social and/or political change, and which emerge from or are directly linked to social movements and struggles"* (Serafini, 2018a:3). For the sake of clarity, I am going to use consistently the term "art activism" in this thesis.

1.2.1. The power of narratives to think critically about environmental action

Historical narratives have silenced environmental externalities and global inequalities (Barca, 2014), shaping the world under the logic of economic and anthropocentric rationality. For some, such rationality is the cause of actual ecological crisis (Leff, 2004). This importance of narratives linked to extractivism is apparent in the work of some environmental historians. For instance, Armiero et al. (2019) introduce the notion of "toxic narratives", i.e., hegemonic stories that naturalise environmental impacts as inevitable tragic accidents. Based on my literature review, I have identified two key tasks aimed at challenging the prevailing narratives and ontologies that shape environmental conflicts.

On the one hand, researchers need to investigate and dismantle the aesthetics and politics of prevailing environmental narratives. Here we follow Rancière's (2004) definitions of aesthetics as a sensible experience of the world, and of politics as the creation and distribution of sensible forms, i.e., what is represented and made visible. In other words, studies need to approach aesthetics as an element that has been part of the configuration and sustenance of Western rationalities and environmental conflicts. For example, art theorists addressing the aesthetic and cultural dimensions of fossil fuel exploitation reveal how Western culture is dominated by "Petrocultures" (Wilson et al., 2017). This concept delves into how automobile-centric society has influenced social interactions, mobility patterns, and even the design of cities themselves. Furthermore, Western aesthetics would be "fossil", since fossil fuels shape *"what our bodies imagine and do"* (Vindel, 2020:71). Therefore, challenging the aesthetic dimensions of environmental conflicts involves questioning and reconfiguring dominant modes of representation and perception, and creating new forms of political visibility and possibility.

On the other hand, in addition to challenging prevailing modes of representation and perception, it is crucial to conduct studies that explore the role of artistic practices in creating new narratives for socio-ecological change. The importance of narratives and imaginaries to confront the current socio-ecological crisis got stronger attention in recent times, especially after warnings of the reduced ability to create new imaginaries and narratives (Fisher, 2009) that shape other possible words (Haraway, 2018). The responses to the crises of the Anthropocene are a prime example (Demos, 2017; Grindon, 2014; Klingan et al., 2015), where artistic acts of imagination have emerged as powerful tools for crafting alternative narratives and values to address the environmental crisis. Human geographers have increasingly turned their attention to these endeavours, recognising the significance of imagination, aesthetics, and artistic representations as forces that

shape places (Gregory, 1995; Lefebvre, 1991; Massey, 2005). This situates art as a productive space that fosters critical thinking about culture and the environment.

1.2.2. Art activism as a transformative political practice

This thesis investigates art *"that makes visible what the dominant consensus tends to obscure […] and give[s] voice to all those silenced within the framework of existing hegemony"* (Mouffe, 2007:5). The idea of aesthetic politics (Rancière, 2004) gives importance to the emotions, images and visuals of political actors, and thus inspired a rich body of literature on creativity and social movements (González-Hidalgo, 2021; Juris, 2008; Reed, 2005; Shepard, 2011).

The aesthetics of social movements and its potential for new political possibilities (Tucker, 2010) bring about the relevance of the public space as *"a battleground on which different hegemonic projects are confronted"* (Mouffe, 2007:3). The literature on art activism in the public space has conceded relevance to the idea of prefiguration (Duncombe, 2002), a concept that means creating a microcosm of the world one wants to see in the future, within the present moment by experimenting with different ways of organising and living together.

Evidence of arts' influence in the study of social movements are studies about the May 1968 uprising in France and the civil rights movements in the US (Epstein, 1993; Polletta, 2002), the alter-globalisation movements (Graeber, 2002), the Arab Spring (Tripp, 2013) the Indignados movement in Spain (Asara & Kallis, 2022) and the World Social Forums (Juris et al., 2014). Although some authors consider these kinds of mobilisations as the beginning of art activism, Ryan (2017) asserts the Anglo-American-centrist and presentist biases in the literature and highlights the important role of Mexican muralists such as Diego Rivera, David Siqueiros in communicating Mexico's post-revolutionary ideas through murals on the walls of prominent public buildings in Mexico between the 1920s and 1950s. Typically, contributions on art and social movements bring attention to the transformative role of collective identity and everyday practices or resistances (Fians, 2022; Ryan, 2017). It is worth noticing that the creative practices of these movements "occupy" not only public spaces (Juris et al., 2012) but also digital media such as Facebook timelines, YouTube channels or Twitter feeds (Castells, 2015; Postill, 2014).

Art activism has long been a part of environmental movements, dating back to the anti-nuclear protests of the 1970s (Figure 1.1). Through their activism, protesters aimed at both material goals, such as shutting down power plants, and cultural goals, such as prefiguring a sustainable society (Epstein, 1993). In the mid-1990s,

aesthetic practices were central to the Zapatista uprising in Mexico (Figure 1.2) which had land re-possession in its core. The group is known for its distinctive aesthetic style in their fight for autonomy that they portrayed to the media (Stahler-Sholk, 2010), which combines indigenous cultural elements with modern political messaging, such as the use of the balaclava or ski mask, as part of a larger strategy for cultural resistance (Taylor, 2003). Another example is the Chipko movement (Figure 1.3), a forest protection movement which emerged in the Uttarakhand region of India in the 1970s. Women were at the forefront of this movement and used a variety of performative practices to create a sense of community and shared purpose around environmental issues (Shiva, 1988). The artistic expressions explored in this thesis align closely with the latter examples. Through their study, the aim is to challenge the Anglo-American bias in the literature on art activism.

Figure 1.1. Anti-nuclear power movement's smiling sun logo "Nuclear Power? No Thanks". Source: Wikipedia commons.

Considering the significance of artistic practice in environmental struggles, it is essential to acknowledge that studying art practices in relation to specific socio-environmental transformation processes faces unresolved challenges, which will be discussed in the following section.

Figure 1.2. Zapatista mural in Caracol Roberto Barrios. Retrieved from GIAP, 2016.

Figure 1.3. Picture representing women from the Chipko movement standing around trees in Uttar Pradesh in 1973. Source: Wikipedia Commons. Photo credits: N.A.

1.3. Research gaps

The increased use of creative methods in environmental activism has sparked interest in the potential of art practices as a solution to environmental degradation. However, current literature reveals two significant gaps that need to be addressed in any serious attempt to study art activism in environmental conflicts: the need for interdisciplinary research and an understanding of conflicts and transformations towards environmental justice as dynamic processes. This, in turn, requires a greater focus on the role of relationships, narratives, and the effectiveness of strategies within the dynamics of environmental conflicts.

1.3.1. The need for interdisciplinary approaches

In recent years, there has been significant recognition and documentation of the connections between art, creativity, and social movements. However, the exploration of the link between these practices and environmental demands, as well as socio-environmental change, is a relatively new and developing field of inquiry. Building upon Serafini's (2018a) insight into the importance of examining these practices from an interdisciplinary perspective, this thesis seeks to fill this gap by comprehensively addressing socio-environmental transformations at different stages of mobilisation. To achieve this, the research employs a combination of quantitative and qualitative methods across various scales of analysis, including local and regional contexts, as well as different formats and time periods, encompassing both offline and online dimensions.

The primary objective of this interdisciplinary approach is to provide a comprehensive and in-depth analysis of the intricate relationships between art, activism, and environmental justice. By drawing upon a diverse range of theoretical perspectives and critical frameworks, the study aims to unfold the multidimensional connections and interplay between these elements. Through this exploration, the thesis seeks to contribute to a more nuanced understanding of how art activism can exert influence and contribute to transformative processes at different stages of environmental mobilisation.

Central to the research is the close examination of three key stages of environmental mobilisation: restoring, contesting, and opposing. Each stage represents a distinct phase within the environmental movement, characterised by specific activities, objectives, and challenges (Hess & Satcher, 2019; Scheidel & Schaffartzik, 2019). Within these stages, environmental change and conflict manifest as dynamic processes that unfold across various socio-environmental dimensions, where the environment is seen as a complex system that articulates natural, technological, and cultural aspects within the social forces of production (Leff, 2004).

Although all stages engage with cultural, social, political, and material dimensions of change, the intensity and focus within each dimension vary. To address this variation and further contribute to the existing literature on the political ecology of environmental conflicts, the thesis concentrates on specific dimensions of the *ARTiculation* of socio-environmental transformations that have received relatively less attention: relationality, narratives, and mobilising strategies. These dimensions are explored in alignment with each stage of mobilisation, shedding light on their significance in understanding and driving environmental conflicts.

By addressing the gaps in the literature and conducting a comprehensive analysis of the relationality, narratives, and strategies within different stages of mobilisation, this thesis aims to provide a holistic understanding of environmental conflicts. Through this endeavour, the research tries to unravel the complex relationships between art, activism, and socio-environmental transformation, offering valuable insights into the intricacies and dynamics. Furthermore, our interdisciplinary approach lays the groundwork for future research lines and contributes to the development of effective strategies for addressing environmental challenges and promoting socio-environmental change.

1.3.2. Unaddressed critical dimensions of socio-environmental transformations throughout conflict stages

Art practices serve a range of functions, such as promoting togetherness and solidarity (Mahon, 2000), collective identity (Taylor, 2003), conveying opinions to the broader society (Eyerman & Jamison, 1998) and increasing political awareness (Adams, 2001; Eyerman & Jamison, 1998). Moreover, artistic practices have motivated people to take political action and change the way they perceive and comprehend the world (Ryan, 2015). However, there remains a gap in understanding how artistic practices and their potential impact are influenced –and influence– not only by the socio-political and environmental context, but also by the different phases of the environmental mobilisation, strategies, and outcomes.

Clearly, mobilised actors seek transformative change. *Transformations* are characterised as intricate, dynamic, political processes that bring about change in multiple systems, including social, institutional, cultural, political, economic, technological, and ecological systems (Van Den Bergh et al., 2011). Authoritative sustainability transformation perspectives, such as those presented by the United Nations Research Institute for Social Development (UN RISD, 2019) have coined the notion "transformations towards sustainability" to refer to fundamental changes in the structural, functional, relational, and cognitive aspects of socio-technical-ecological systems that lead to new interaction patterns and outcomes (Hans de Haan & Rotmans, 2011; O'Brien, 2011; Patterson et al., 2017). Under this perspective, transformations start with a crisis that serves as an opportunity (Moore et al., 2014), followed by actions pursuing, i.a., sensemaking (Gioia & Chittipeddi, 1991), agency (Latour, 2014), and resilience (Folke et al., 2010).

Artistic practices are increasingly acknowledged as a way to promote sustainability and social change (Bentz et al., 2022; Galafassi et al., 2018; Heras et al., 2021). However, there is still a gap in understanding the specific ways that art contributes to socio-spatial transformations, with awareness of the critical role that power relationships play in facilitating or impeding desired change. Seeking an innovative approach to understand how art activism participates in transformations, I shed focus on three important yet understudied aspects of this research gap. First, the role of art in (re)establishing connections between people and material processes that participate in the conflicts. Second, the arts' capacity to mobilise the rationalities and logics of meanings, and thus shape the political practices that resist the hegemonic global order and the domineering rationality causing socio-environmental damage. Third, the influence of the use of arts in environmental mobilisation and its subsequent transformations. Only then, this research looks into

how artistic practices are used by environmental movements in different stages of mobilisation in relation to the strategic toolkits of environmental movements. The following paragraphs elaborate on the three points.

The connection between relationality and materiality

The recent notions of landscape restoration are rooted in the recognition of a crisis in the connections between people and between the human and nonhuman realms within processes of environmental degradation (Hanaček & Rodríguez-Labajos, 2018; Riechers et al., 2021). In consequence, the way we interact with and perceive the natural world plays a crucial role in shaping environmental outcomes. At the core of this exploration is the concept of relational values (Chan et al., 2016; Muraca, 2016), which refers to the quality of such connections. The study of alternative ontologies has increasingly underscored the significance of human-nonhuman relationships and their challenge to dominant and extractive perspectives of the environment (de la Cadena, 2015; Escobar, 2008). In fact, environmental conflicts can be understood as epistemological conflicts, where differing knowledge systems, valuation languages and worldviews clash (Leff, 2004; Martinez-Alier, 2002).

Indigenous groups and local communities resisting environmental degradation posse invaluable knowledge and perspectives that are essential for addressing the environmental crisis. Various scholars ranging from anthropology to feminist studies (Haraway, 2016; Li, 2014; Tsing, 2021) conclude that stronger inter-species ties or 'assemblages' are the logical way to survive in an environmentally damaged world. Relationality and materiality seem to go together. A social-spatial theory that identifies places as something constituted by physicality but also social relations and experiences (Escobar, 2001; Lefebvre, 1991; Massey, 2005; Nicholls, 2009; Pierce et al., 2011) seems promising to think critically about environmental conflicts.

In this sense, artistic practices constitute connections among humans and between humans and their surroundings (Dixon, 2009; Hawkins et al., 2015; Whatmore, 2006). In fact, art theorists acknowledge the importance of the artistic process itself rather than solely focusing on the final artworks. In their engagements with issues of social justice and cultural diversity, artists have coined terms such as "dialogical aesthetics" to emphasise the importance of dialogue, collaboration, and participation in the collaboration between artists and communities (Kester, 2004). Participatory art seeks to foster social engagement and political activism as well (Bishop, 2006). However, the impact of these new and emancipatory relationships between humans and human-nonhuman relations on the configuration and restoration of degraded landscapes has not been adequately addressed.

Focus on narratives

The imposition of values that sustain extractive process has colonised, marginalised and exterminated the knowledge, identities, cultures and people's practices (Gómez-Barris, 2017; Rivera Cusicanqui et al., 2016). Narratives, discursive and structural processes that promote the exclusion, harassment, and even annihilation of subaltern identities that mobilise against extractive projects sustain such a marginalisation (Dressler, 2021; Global Witness, 2021).

Despite acknowledging the influence of counter-narratives on cultural changes (Temper et al., 2018) literature on environmental conflicts has not given sufficient attention to the narratives, imaginaries, and meanings that shape places and how they are mobilised to confront extractive projects and the multiple violence associated with them (Navas et al., 2018).

Attention to narratives and the dissemination of environmental awareness and values is something common in the study of art related to environmental issues and the Anthropocene (Bentz et al., 2022; Demos, 2017; Galafassi et al., 2018; Grindon, 2014; Klingan et al., 2015). Nevertheless, analyses of the Anthropocene-related artworks failed to make visible the distributive dimension of environmental crises and the dominant rationalities and cultures that shape the world (Fagan, 1999). Moreover, these studies often focus on art within museums and galleries, overlooking the transformative potential of non-institutional creative practices.

Communities inhabiting and contesting the 'extraction frontiers' (Tsing, 2005), mobilise through the arts and visual images their imaginaries, values and aesthetics abstracted into 'oblivion' (Nixon, 2011) creating possibilities for alternative relations, existences, affects and social orders at a global level (Callahan, 2020a; Tsing, 2005). Through an interdisciplinary lens, I investigate how front-line communities employ creative expressions to construct narratives aligned with their transformative quests, challenging power relations, environmental degradation and violence. In doing so, I contribute to the growing body of work that examines aesthetic practices as pathways to envision hopeful futures in contexts marked by violence, enclosure, and destruction (see Demos, 2020a; Gómez Barris, 2018; Ponce de León, 2021; Serafini, 2022).

Strategies of the movements

Interest in the use of art by social movements to convey social, political and environmental issues is not new (Kester, 2004; Lacy, 1995). Studies on social movements and art recognise the organisational role of art events and the

importance of 'ways of doing', agency and culture alongside the ultimate goals of mobilisation (Bleiker, 2018; della Porta, 2008; Polletta & Gardner, 2015). Indeed, this becomes evident in the recent interest in developing metrics and empirical experiments on the effectiveness of art activism (Duncombe, 2016; Duncombe & Harrebye, 2022).

Meanwhile, environmental conflict studies are increasingly interested in strategies that appear to be useful for the movements (Hess & Satcher, 2019; Tormos-Aponte & García-López, 2018). Usefulness, in this context, encompasses both restructuring dominant social relations and institutional arrangements (Temper et al., 2018), and reaching perceived notions of "success", with special attention to material implications among which "stopping the extractive project" is a key goal (Hess & Satcher, 2019; Özkaynak, Rodríguez-Labajos, & Erus, 2021; Wei, 2015).

Studies on art activism have emphasised its effect on social mobilisations, stressing art's connection to affect and emotions (Duncombe, 2016; Ryan, 2015), which explains art's potential in mobilisation dynamics, fundamental to further achievements of social movements. Although there is recent interest in the affective politics and emotions associated with territorial defence (González-Hidalgo, 2021; Rusansky, 2021; Sultana, 2015; Wright, 2019) few studies focus on the specific practices that incentivise transformative environmental mobilisation, not only socio-culturally, but also politically and materially. The use of the arts within mobilising strategies and the subsequent transformations linked to the dynamics of environmental movements opposing and preventing environmental degradation is yet to be analysed.

1.4. Research questions

The overall aim of this thesis is to better understand whether and how art activism in the context of environmental conflicts can be translated into concrete socio-spatial transformations.

Since environmental conflicts are dynamic processes, transformation may occur at different stages of the conflicts. That notion shaped the formulation of specific objectives (Table 1.1) that acknowledge three distinct stages of mobilisation in relation to the perceived environmental risk or damage that triggers the environmental conflicts.

Mobilisation stage	Specific research objective
1) Restoration of socio-environments persistently degraded by industrial development	To trace the effect of artistic interventions in restoring the landscapes and relationships on the daily socio-environments of front-line communities
2) Reaction to everyday environmental violence in *present* conflicts	To track artistic responses to environmental violence and examine the role of counter-narratives in challenging power structures that sustain violent environmental conflicts.
3) Prevention of future impacts from a planned project that has not been built yet	Articulate the role of art activism in contributing to the strategic tools and transformative processes associated with preventive environmental mobilisation

Table 1.1. Specific research objectives in three distinct stages of mobilisation.

To answer these questions, I adopted an empirical approach, examining concrete transformations induced by artistic practices in different contexts of environmental conflict around the world. Besides geographic diversity, the case selection followed the rationale of addressing each one of the mobilisation stages presented above. Apart from providing empirical grounding, each context allowed sharpening the specific objectives presented in Table 1.1 by formulating research questions that connect the study of environmental conflicts with innovative concepts and pertinent debates.

The intention behind this approach is to investigate socio-environmental transformations in a precise and thorough manner. The inclusion of three different case studies did not correspond to the desire of establishing direct comparisons among them. Instead, I sought specific contexts where particular facets of change could be meticulously examined. The emphasis lies then in identifying commonalities and overarching themes across the cases, rather than seeking direct comparisons between them.

Relevant theoretical and conceptual connections that pertain to all three case studies are laid out in the final chapter, which generalises insights and offers broader conclusions. By adopting this approach, the study could delve into the

intricate details of each case while simultaneously providing an opportunity for generalisation. The final theoretical and conceptual linkages contribute to a comprehensive understanding of the transformative potential of art in the face of present socio-environmental challenges.

The restoration context

A local approach brought me to the most polluted Sacrifice Zone in Chile which affects the communities of Quintero and Puchuncaví, exposed to impacts since 1980. Sacrifice zones are places permanently subject to environmental damage and poor environmental regulations (Bolados, 2016). In this setting, pollution has deteriorated the health, economy and culture of local communities. Through interviews in the field and developing a participatory art-making event, I addressed the role of arts in enhancing relational values, a notion that has attracted considerable scientific attention in the sustainability literature. In this context, I posed the questions:

How do artistic actions enhance damaged relational values?

How does this enhancement transform the social and spatial dynamics of persistent environmental degradation?

The reaction context

Aiming to go beyond the analysis of dynamics at local scales, and capture the new trends of digital and visual activism (see Hartle & White, 2022), I used a mixed-methods perspective to analyse a national sample of 88 environmental conflicts in the Philippines. This country case offered the opportunity to examine the critical issue of violent outcomes (such as criminalisation, deaths, and repression) in ongoing environmental conflicts. Thus, the questions presented in this context were:

How is the digital presence of visual activism associated with the conflict outcomes, strategies and intensity of environmental conflicts?

Which political reactions to environmental violence do activists deploy through visual digital contents?

The question regarding the use of art as a strategy of mobilisation brought me to look closely at the efforts of an anti-coal movement to successfully stop the construction of a coal exportation port in California, US. I sought to contribute to the discussion on the role of art activism in sustainability transformations by addressing the issues of how (and when) art was being used to strengthen the environmental movement's concrete goals. Additionally, I explore the transformations, encompassing material, social, and political aspects, that should be expected from the use of arts in sustainability. Thus, the questions posed in this context were:

How do art activism and campaigning tactics combine to have the greatest impact?

What role art actually plays in environmental mobilisation?

1.5. Methodological approach

1.5.1. Case study selection

To answer the concrete research questions, I select three different cases based on 1) saliency in different stages of resistance to environmental degradation, 2) diversity of socio-political contexts, 3) the potential to expand the literature on art activism and environmentalism outside the Anglo-American contexts, contributing to a wider project to disrupt biases in global knowledge production, 4) facilitated access to data.

Understanding the role of art activism in a restoration context required a setting where the deterioration of the environment had affected people's livelihoods and arts were used in the fight for living decent conditions. For this, I engaged with the notion of sacrifice zones. This term coined in the United States (Lerner, 2010) has been taken up around the world to designate places sacrificed to development. That was the case of an industrial area between the Chilean coastal towns of Quintero and Puchuncaví which is the most polluted area in Chile. This case is a prime example in Latin America of the consequence of an economy centred on external markets. While the saliency of the case has made it the focus of several studies (i.e., Bolados, 2016; Espinoza et al., 2016; Tironi & Rodríguez-Giralt, 2017; Tume et al., 2020; Valenzuela-Fuentes et al., 2021), no prior investigation had looked at artworks produced by the community in their confrontation with the industries and in their reconstruction of day-to-day life.

For addressing art activism in a reaction context, I focused on one of the main issues that environmental activism suffers nowadays: violence against environmental defenders. For that, I choose the case of the Philippines, one of the most violent countries for environmental defenders and with a strong history of fights for peasant and indigenous rights (Borras & Franco, 2005). In the Philippines, direct persecution towards these identities aligns with a political agenda of inequality and authoritarianism. In the face of practical challenges to undertake field research that coincided with the global pandemic, I decided to approach the topic from a larger-scale perspective, making use and contributing to a database that had documented dozens of environmental conflicts in the country. Taking advantage of the fact that the Philippines is one of the countries that use social media more heavily, I conducted a study of digital visual activism. The “digital turn” or “visual turn” of social movement research is on the rise, but so far digital studies about peasant, indigenous, and other environmental grassroots movements are rare.

For addressing art activism in prevention stages I considered a proposal of building a coal-exports terminal in the port of Oakland, California. This conflict was active at the moment of starting the investigation and had the potential to connect issues on climate justice and environmental justice. The conflict started in 2015, at a time when former president Donald Trump claimed that a “war on coal” (Grunwald, 2015) was undermining the economic interests of the coal industry and favoured such interests despite international agreements to decrease CO2 emissions. The coal terminal was planned to be built in a community with a long tradition of racial and social justice fights: West Oakland. The communities that witnessed the birth of the emblematic Black Panthers and went through a long history of resistance against different socio-environmental impacts were facing again a strong threat. Despite the importance of this case, my research work was the first academic study concerning the movement “No Coal in Oakland” that wanted to prevent the construction of the coal terminal.

1.5.2. A mixed-methods approach for an interdisciplinary study

The richness of empirical contexts and research questions presented above leads to a variety of conceptual frameworks, methodological tools, and scale of analysis across the different chapters of the thesis.

Most of the research presented in this thesis took place between 2019 and 2022. Following the importance of studying case studies to understand the role of art activism (Serafini, 2018a), and the tradition of the studies of political ecology, I conducted fieldwork in two case studies: the resistance to a coal exportation port

in Oakland, California, between April and May 2019, and daily life in the Quintero Quintero-Puchuncaví sacrifice zone (QPSZ), Chile, between December 2020 and March 2021. To complement the insights based on case studies and aiming to go beyond the case study analysis (following Del Bene et al., 2018; Navas et al., 2022; Scheidel et al., 2020; Tran, 2023 and others), I developed a regional analysis based on the country of the Philippines that combines non-participatory digital observation and statistical political ecology. Each chapter thoroughly explains the methodology and activities developed in each case, which are summarised in Figure 1.4.

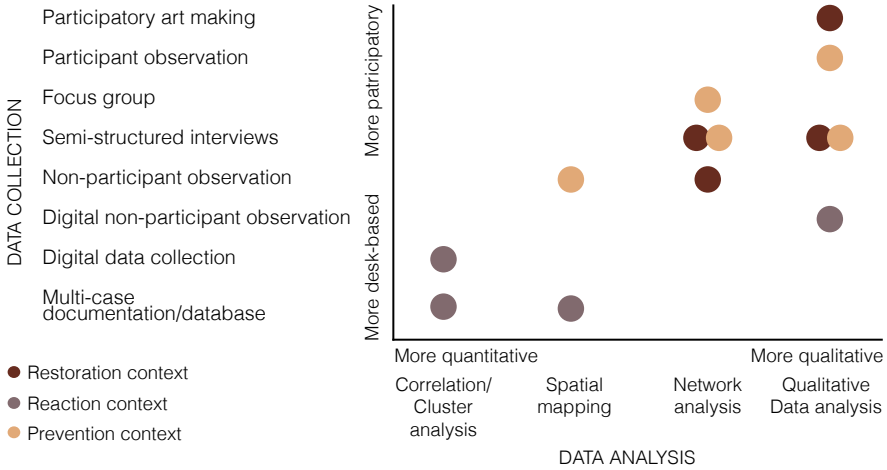


Figure 1.4. Methodologies for data collection and data analysis for the study of empirical case studies.

Data collection

Figure 1.4 illustrates the range of methodologies for data analysis, from less participatory methods such as multi-case documentation, to more participatory ones such as participatory art-making. A great part of the empirical data collection was collected during fieldwork, getting in direct contact with creators, activists, and other conflict-related actors. Interviews were the source of relevant systematic data for subsequent analysis. At the same time, participatory and non-participatory observations, as well as participatory art-making, were fundamental for gaining an understanding of contextual elements of the case, approaching interview participants, and outlining the directions of the subsequent analyses and discussions.

During fieldwork, I paid great attention to introducing methods that would encourage group and collective perspectives. The awareness of the importance of collectivity

in social mobilisations (Taylor, 2003) informed this approach to prioritise techniques that fostered collaboration and the sharing of viewpoints. For instance, I conducted a focus group in Oakland with six members of the "No Coal in Oakland" collective, and in Chile, a collective creation laboratory was carried out in collaboration with the theatre group "Teatro en Movimiento Callejerx", with the participation of 10 activist artists and neighbours from the area.

Fieldwork-based approach to data collection is complemented by the exploration of other sources for documenting and monitoring art activism in environmental contexts. This included browsing and contributing to data from databases, such as the Global Atlas of Environmental Justice (EJ Atlas) and social networks such as Facebook. This was done mostly to obtain secondary data that supplemented other sources. In the case of the Philippines, however, social media was used as a source of primary data. Methodologies that are independent of face-to-face interactions have become particularly relevant in the context of the COVID-19 pandemic, which imposed limitations on mobility. The relevance of such methodologies also responds to the growing concerns about the carbon and economic costs of research activities.

The methodological choices of this thesis prompted reflection on the "need to go there" as an alternative way of thinking about social and geography research (Guasco, 2022). My research explores the possibilities of the digital world for research on environmental conflicts. Embedded in this choice is the aspiration to engage in a discourse about re-evaluating the methods employed in political ecology research within the context of the digital era (Faxon, 2022).

It is relevant to say that careful consideration to positionality and ethics was part of the research design before the consultation with primary data sources. To ensure adherence to principles of responsible research, the research protocols for this thesis (including procedures for participants' consent and data management) were formally evaluated and approved by the Ethics Committee on Animal and Human Experimentation at the Universitat Autònoma de Barcelona (CEEAH-UAB).

Data analysis

The data analysis in this thesis utilises a mix-methods research approach, as shown in Figure 1.4. The study heavily relies on qualitative methods: The coding of interviews following Velázquez & Aguilar (2005) in Chapter 2 and Chapter 4, and discourse analysis of visual content using Doerr & Milman's (2013) approach in Chapter 3. The adoption of qualitative methods is driven by two primary factors. Firstly, it serves as an initial exploration of the connections between art activism and socio-spatial transformation in the absence of established ontological

and methodological frameworks for studying art activism within the context of environmental conflict. Secondly, the thesis aims to capture socio-spatial transformations that are intertwined with experiences, discourses, relationships, and other non-quantifiable aspects, moving beyond quantitative measures such as economic and environmental factors. To extend our comprehension of transformation, qualitative methods of analysis, such as network analysis and visual analysis, are employed. This approach aligns with recent literature that highlights socio-cultural mechanisms of environmental change (Hawkins et al., 2015; Heras & Tàbara, 2014; Temper, Walter, et al., 2018).

In Chapter 3, a combination of qualitative and quantitative methods is used to understand the use of art activism at the regional level. An indicator is developed to measure digital visual activism content detected on Facebook in the eighty-eight environmental conflicts in the Philippines mapped by the EJ Atlas. It is important to note that this analysis does not provide a definitive answer to the link between art activism and violence, but rather highlights relationships and patterns that have not been previously explored in the literature.

The study does not focus on the particularities of each context but instead aims to suggest a theory and methodology of art activism that can be applied and contextualised to environmental conflicts in other regions. Although specific elements and processes will be influenced by the local context, the concepts and ideas derived from this research are expected to apply to art activism practices in other contexts, as demonstrated through collaboration and comparison with researchers analysing practices in other conflicts.

1.6. Structure of the thesis and associated publications

After this introduction, three empirical chapters present the evidence and response to each one of the research questions separately. Each chapter has also a correspondence with publications that I have co-authored with my PhD supervisor Dr. Beatriz Rodríguez-Labajos, as well as several seminars and international events (see Box 1).

Chapter II delves into a case study analysis featuring one of the most polluted sacrifice zones in the province of Valparaiso in Chile (QPSZ). Here I explore art's contribution to the enhancement of relational values endangered by industrial development during the 1980s, ultimately shaping transformational trends. Thus, the title of this chapter is *"Arts, place, and sacrifice zones: restoration of damaged*

relational values in a Chilean sacrifice zone". A version of this chapter was published in the journal *Sustainability Science* (IF 7.196) in 2022. In addition, I was invited to contribute to a special issue for the Argentinian journal: *Heterotopias about Aesthetics, politics and nature: languages and ecopoetic experiences*, where I submitted a Spanish version about the use of art in this case. Moreover, I directed the short film *"Under-ground Ore"* based on the art-making laboratory developed during fieldwork. The short film was selected in ARTS x SDGS Online Festival and featured in the Expo Dubai 2020.

To explore the role of art in restoring relational values, I widely explore the term "relational" and its uses in critical geography literature and relational arts combined with the relational notions of environment, its deterioration through landscape degradation and the importance of relational values for sustainability (*sensu* Muraca, 2016; Riechers et al., 2020). My results mapped the relational values activated through artistic practices like murals, street performances, and music festivals. Furthermore, the chapter proposes a novel framing connecting relational values and stages of socio-spatial transformation that led to the restoration of material and symbolic spaces through art. In this case, through participation in activism-oriented art-making projects, communities in the QPSZ are restoring the social bonds and re-building collectively the degraded community identity as they become agents of change. Facing intense environmental pressures, artistic spaces promote a restoration of the everyday living experiences. In this process, networking and social cohesion are essential to facilitate individual and collective agency toward transformation.

Chapter III leaps towards national analysis, tackling 88 environmental conflicts in the Philippines, from which I identify specific patterns when comparing the presence of visual activism in social media with outcomes of the conflict, for then focusing on a visual analysis that uncovers the visual narratives in response to environmental direct violence. A version of this chapter was submitted to the *Journal of Peasant Studies* (IF 5.333) in 2023.

In this chapter, titled *"Visual narratives against environmental violence: Environmental Conflict, Violence, and Social Media Activism in the Philippines"*, I embrace the reality of violence widely addressed in the literature on environmental and land conflicts (Dressler & Smith, 2022; Navas, Mingorria, & Aguilar-González, 2018) to see the reactions from social media and the visual narratives responding violence in a highly repressive context like the Philippines. The results show three patterns of relationships between violence and visual activism that indicate that the conflicts most violent on the ground are contested through a wider variety of artistic and visual activisms in social media. After a detailed visual content analysis of the materials from most violent and mediatic conflicts, I discuss how visual activism

is used by land and environmental movements to generate discursive responses both to discursive violence and to direct violence faced by environmental defenders in the country. Digital art content such as photographs, drawings, posters, videos and infographics depicting rural, indigenous and environmental visual claims make social media a space to denounce violence, stand for the environment and its defenders, and to act for justice and memory.

Chapter IV, titled *"Does art activism change anything? Strategic and transformative effects of arts in anti-coal struggles in Oakland, CA"*, focuses on the use of art activism in an emblematic case to stop an overseas project of fossil fuels. The opposition to a coal-exportation port in Oakland, California helps to open a discussion of the contributions of arts to activist strategies and transformations associated with the movement. A version of this chapter was published in the journal *Geoforum* (IF 3.926) in 2021.

Grounded in the long struggle to stop the construction of a coal-export terminal in Oakland, CA, this chapter reports on insights gained during 32 in-depth interviews of activists, artists and legal experts linked to the conflict surrounding this coal-export terminal. The result is the systematisation of different effects of art, and the connection between art activism, anti-coal strategies and perceived socio-spatial transformations. One main observation from this case is that art activism was fundamental to shape socio-spatial dynamics that enhanced social cohesion, inclusion and engagement with the movement. Art activism contributed to the expansion of the demographics of the anti-coal movement and the overcoming of demographic barriers. The turn towards a more inclusive movement is significant in environmental justice communities that were already fighting for racial justice and social justice (Reinke, 2019; Schlosberg, 2004).

After the empirical chapters, **Chapter V** shifts the focus to the findings and insights gained through the case studies on socio-environmental transformation through art activism, providing generable insights from the previous case studies. In other words, this chapter directly examines the effects of art in the transformation of spaces and relationships, power structures over the environment and on environmental mobilisation. I reflect on the central role of the concept of articulation in defining political ecology (the environment as an articulation of social, spatial, and political forces) and connect it to the effects of art activism (as an articulator of movement, disarticulator of power structures over the environment, and re-articulator of spaces and relations). This chapter illuminates the key theoretical, empirical, and methodological contributions of the thesis. In the final sections of the chapter, I reflect on the thesis's design and conclude by highlighting new questions and future research, in answer to the uncertain landscape of our current world.

A final list of references includes cited literature, and a comprehensive account of empirical data used in the thesis. Appendixes include a list of interviews with links to the datasets of materials used in Chapters 2 and 4 and a list of cases from the EJAtlas used in Chapter 3 as well as the details on the DiVAC score of each case and the visual content analysis.

Box 1. Outcomes of this thesis

The preparation of this thesis has involved the production of the following:

Publications in peer-review journals

Sanz, T., & Rodríguez-Labajos, B. (2021). Does artistic activism change everything? Strategic and transformative effects of arts in anti-coal struggles in Oakland, CA. Geoforum, 122, 41–54. https://doi.org/10.1016/j.geoforum.2021.03.010

Sanz, T., & Rodríguez-Labajos, B. (2022). Arts, place, and sacrifice zones: restoration of damaged relational values in a Chilean sacrifice zone. Sustainability Science, 0123456789. https://doi.org/10.1007/s11625-022-01252-6

Sanz, T. & Rodríguez-Labajos, B. (2021) Construir mundos paralelos. Experiencias de representación y materialidad creativa para la restauración de zonas degradadas. Heterotopias, Vol. 4. Num. 8. https://revistas.unc.edu.ar/index.php/heterotopias/article/view/36166

Sanz, T., & Rodríguez-Labajos, B. (2023) Visual narratives against environmental violence: Environmental Conflict, Violence, and Social Media Activism in the Philippines. [Submitted]

Research stays and mobility grants

Department of Business and Society, Queen Mary University of London. Three-month research stay with host supervisor Dr. Paula Serafini.

Instituto de Geografía, Pontificia Universidad Católica de Valparaíso. Research visit (8 weeks) with a mobility grant by Fundació Autònoma Solidaria, with my project “Arte para la transformación socio-ambiental (ATSA)”.

Artistic work

Short Film: Under-ground Ore. Artistic intervention in Quintero-Puchuncaví Sacrifice Zone. Featured in: a) *4th International Feminist Geography conference*. Mapping the global intimate: c/artographies for an entangled world Jun 2022; b) ARTS x SDGS Online Festival. *Expo 2020 Dubai*.

Organisation of academic events

“Creative and artistic practices in socio-environmental transformations”. Speakers: Natalia Santos Ocasio, Zihui Lei, Hulya Arik, Dr. Beatriz Rodríguez-Labajos. Co-organised with Beatriz Rodríguez Labajos. 26th February 2022. 2022 *Annual Meeting of the American Association of Geographers*.

"Artistic Activism in Latin America" Speakers: Dr. Holly Eva Ryan (QMUL), Dr. Paula Serafini (QMUL) Dr. Deborah Martin (UCL) and Dr. Chandra Morrison (LSE). 9th December 2022 *Centre for Research on Latin America and the Caribbean. Queen Mary University of London.*

"Lenguajes artísticos para afrontar presentes complejos e imaginar futuros vivibles." Speakers: Rosa Berbel, Adrían Perea Nava, Daniel de la Barra, Ana Berrios. Co-organised with Lucas Barrero. 24th May 2022. *I Congreso Internacional de Humanidades Ecológicas. Facultad de Filosofía y Letras. Universidad Autónoma de Madrid.*

Presentations in international and national conferences

Sanz & Rodríguez-Labajos (2022) "How to build parallel worlds. Artistic practices in the restoration of a Sacrifice Zone in Chile" 2022 *Annual Meeting of the American Association of Geographers.* Feb. 25-March 1, 2022. Virtual

Sanz, T. & Rodríguez-Labajos, B. (2022) "Arts, place and sacrifice zones. Artistic practices in the restoration of a Sacrifice Zone in Chile" *4th International Conference of the European Society for Ecological Economics.* 14- 17 June 2022 in Pisa (Italy)

Sanz, T., "Arte, conflictos ambientales y transformación socio-espacial". May 2022. *III Congreso RUED(H)A. Red Universitaria Española de Historia Ambiental y Programa de Doctorado en Historia y Artes. Universidad de Granada.* 11-13 Mayo 2022. Granada, Spain.

Guest Lectures

Module Global Political Ecology. Dr. Federico Demaria MA Erasmus Mundus Global Markets/ Local Creativities (GLOCAL). *University of Barcelona*. 14th March 2022.

Geografía Ambiental. Dr Ariel Muñoz. *Instituto de Geografía. Pontificia Universidad Católica de Valparaiso.* Three-session module between 2021 and 2022.

Cultural and Creative Industries and the Environment. Dr. Paula Serafini. MA Heritage Management and the MA Creative Industries and Arts Organisation. *School of Business and Management. Queen Mary University of London.* December 5th, 2022.

Seminars

"Environmental Justice Conflicts Around the Globe: A Zoom to Japan, Taiwan and The Philippines" (with J. Martinez-Alier), The International Peace & Coexistence Programme. *Graduate School of Humanities and Social Sciences. Hiroshima University.* May-2022.

"How to survive the (violent) degradation of everyday and future environments: The role of art activism in responding to environmental conflicts". *Centre on Labour, Sustainability and Global Production. School of Business and Management, Queen Mary University of London. November-*2022.

Chapter 2.

Arts, place, sacrifice zones:

Restoration of damaged relational values in a Chilean sacrifice zone

La historia la escriben los pueblos, [...],
la historia está en nuestras manos,
este cuento recién ha comenzado.[1]

Evelyn Cornejo

Art is not a mirror held up to reality
but a hammer with which to shape it.

Bertolt Brecht

[1] History is written by the people, [...], history is in our hands, this story has just begun.

2. Arts, place, and sacrifice zones: restoration of damaged relational values in a Chilean sacrifice zone[2]

While global leaders debate whether or not to end coal investments (Harvey, 2021) to meet the target of the 2015 Paris Agreement (UNCCC, 2015), coal-related industries keep turning many places around the world into sacrifice zones (Lerner, 2010). A sacrifice zone is a term used to characterise a geographic area that has been permanently subject to environmental damage and lack of environmental regularisation (Bolados, 2016). In Latin America, most of the sacrifice zones derive from a development model based on neoliberal policies from the 1980s; the resulting emphasis on the economy and economic dependence on external markets caused degradation of the region's natural commons (Espinoza, 2016; Montaña et al., 2005; Svampa, 2012). Such development-based governance obscured the environmental impacts and land degradation, on one hand, and the damage to local communities' material, symbolic, and spiritual lives (Gudynas, 2013; Svampa, 2019), on the other.

In this sense, neoliberal processes are arguably sustained by the promotion of privatisation, alienation, and individualisation throughout all political formations, interconnections and networks (Bridge et al., 2013; Bustos et al., 2010). As a result, relational values subside. Relational values are meaningful humanenvironment connections and social relations (Riechers et al., 2020) that represent the *"ecological, cultural, and social interdependence"* of identities and communities (Muraca, 2016:31). This term was proposed to widen intrinsic and instrumental values associated with nature and include the values derived from human-ecosystem relationships (Chan et al., 2016), thus values that are relational in content (e.g, stewardship, care, cultural identity, etc.) (Himes & Muraca, 2018). Critical social-spatial theory points to the role of social interaction for placemaking to identify the physical, social, and experiential fragments that constitute places (Escobar, 2001; Lefebvre, 1991; Massey, 2005; Nicholls, 2009; Pierce et al., 2011). Artistic practices have been recognised as relational and constitutor of connections among humans and between humans and the space (Dixon, 2009; Whatmore,

[2] A version of this chapter was published in Sustainability Science as: Sanz, T., & Rodríguez-Labajos, B. (2022). Arts, place, and sacrifice zones: restoration of damaged relational values in a Chilean sacrifice zone. Sustainability Science, (0123456789). https://doi.org/10.1007/s11625-022-01252-6. A Spanish version of the research was published in the journal Heterotopias as: Sanz, T. & RodríguezLabajos, B. (2021) Construir mundos paralelos. Experiencias de representación y materialidad creativa para la restauración de zonas degradadas. Heterotopias, Vol. 4. Num. 8
Parts of the results in this chapter were presented in the conferences: AAG Conference of the American Association of Geographers in 2021 and in the 16th Biennial Conference of the International Society for Ecological Economics in Pisa 2022.

2006), especially in the context of community fracture (Hawkins & Straughan, 2015; Yusoff et al., 2012). Nevertheless, a gap persists on how the arts challenge the material and symbolic configuration of sacrifice zones through the activation of relational values.

In response, this chapter takes recent attempts to develop relational values for landscape restoration forward, including how territorial and community identities, social cohesion, and cultural practices are mediated by the state of the environment (Chapman et al., 2019; Riechers et al., 2019). My intent is to unpack the connection between art activism, relational values, and socio-spatial transformations in environmentally degraded areas. Thus, this chapter aims to contribute to geographers' theorisation of the relationality of art (Askins & Pain, 2011; Dixon, 2009; Hawkins & Straughan, 2015) and place (Escobar, 2001; Massey, 2005; Pierce et al., 2011), by exploring the role of art activism in placemaking. I explore the artistic expressions related to the Quintero-Puchuncaví Sacrifice Zone (QPSZ) in Chile, and categorise the relational values connected to art practice. Then, I analyse how artistic actions enhance damaged relational values, through representation and through experience, and how this enhancement transforms the social and spatial dynamics of place. My analysis engages with literatures on contemporary art theory, human geography, and relational values, and thus contributes to the study of art committed to the socio-environmental crisis, and to political-ecological theorisations of the transformation of degraded areas.

The remainder of this chapter is divided as follows. The next two sections offer a literature review about sacrifice zones, the crisis of relational values, and the relationality of art. After presenting the research methods, the chapter overviews the analysed creative actions, and presents the relational values fostered by artistic experience and representation in the case under analysis. The next section explores transformation trends associated to the described processes. The final section connects the theorisation of relational aspects of artistic practices, place, and the socio-environmental restoration of degraded landscapes.

2.1. Sacrifice zones and crisis of relational values: introducing the Quintero-Puchuncaví Sacrifice Zone

A sacrifice zone refers to a specific geographic area where the environment has been severely devastated by industrial development, resulting in the impairment of basic rights for its inhabitants, often comprising low-income populations. These rights include the fundamental entitlements to life, health, education, work, food, and housing (TERRAM, 2019). The impact of pollution extends beyond the degradation of water and soil, affecting traditional economies reliant on activities such as fishing and agriculture. Additionally, it diminishes the significance of local history, identity, and cultural practices that have evolved alongside the environment (Fernández-Llamazares et al., 2022).

Local governments, civil society organisations, and grassroots groups contest this prevailing model of production and land use due to its detrimental socio-environmental consequences and its failure to acknowledge alternative ways of life (Svampa & Viale, 2014; Valenzuela-Fuentes et al., 2021). Indigenous and local communities, along with their values, knowledge systems, and ways of existence, are often silenced by powerful interests driven by profit-oriented decision-making processes (Martinez-Alier, 2007; Tuhiwai-Smith, 1999).

The QPSZ is one of the biggest industrial complexes of Chile, pivotal to the development of the national economy (Espinoza, 2016). The industrial park hosts more than seventeen industrial facilities, including power plants, petrochemical and oil refining industries, chemical processing companies, gas terminals, and a copper processing plant (EJ Atlas, 2020). The region of Quintero-Puchuncaví, as other Sacrifice Zones, has turned into a non-place. Residents started suffering health issues presumably caused by industrial pollution (Navas et al., 2022; Osses, 2018) and the loss of livelihood and traditional practices eroded sense of place and local identity (Tironi & Rodríguez-Giralt, 2017). In this context of unceasing impacts of pollution and degradation on the collective identity, scholars acknowledge the emergence of new identities ranging between everyday suffering and resistance (Hormazabal et al., 2020; Little, 2017; Valenzuela-Fuentes et al., 2021). In parallel, care –expressed both as self-care and as mutual support– becomes a mode of *"knowing and acting upon their harmed bodies and environments"* (Tironi & Rodríguez-Giralt, 2017:92). This case offers the opportunity (and the urgent need) to analyse the impact of resistance identities and practices in the re-articulation of the public space.

Attempts to analyse the relational values eroded by landscape simplification (Hanaček, et al., 2021; Kaltenborn et al., 2017; Riechers et al., 2020) and social analyses of sacrifice zones (Hormazabal et al., 2020; Hormazabal, et al., 2019) typically focus on cultural identity, social cohesion, and sense of place. In general, these approaches indicate that overcoming value erosion entails the embodiment of new identities and care. Authors analysing relational values acknowledge that activities such as fishing, gardening, and bird-watching, as well as group activities that involve playing, celebrating, and struggling together convey care, and create options to know the place and other inhabitants (Chan et al., 2016). Artistic practices connect with identity (Jenkins, 2010; Serafini, 2018a), care (Barros, 2020; Spiegel, 2021), local knowledge (Rodríguez-Labajos et al., 2021), and agency (Molina Barea, 2018). Yet the scientific literature lacks contributions that address how engaged arts can be the pathway to restore the degraded landscape through enhanced relational values.

2.2. Artistic actions and relational values

To explore the relationality of artistic practices, I explore two components. The first is art's representation potential, that is, the content of the artwork that is expressed, and how the artwork expresses it. The second is the spaces of experience of the art producers, especially in community arts, through the production and reproduction of certain dynamics and values among the participants in the space.

2.2.1. Artistic representations, visuality and place-making

Artistic and visual actions have historically expressed humans' diverse meanings of nature. For instance, the paintings by Caspar David Friedrich or J.M.W. Turner depicted "nature" as a divine creation against the artifice of civilisation –in line with the Western Environmentalism's notions of "nature" as something separated, distinct, and independent from humans (Muraca, 2016)–. Outside the museums and professional artist circles, local environmental movements and communities around the world use their creativity to express their discontent over projects and to promote environmental transformations (Sanz & Rodríguez-Labajos, 2021). These paintings, banners, street performances, and murals directly express people's relationships with the environment (Belalcazar Valencia & Molina Valencia, 2017; Jenkins, 2010; Merlinsky & Serafini, 2021; Ogaga, 2011). Visual artefacts (images,

walls, landscapes, banners, etc.) transcend mere representations or ideologies, functioning as material modalities and sensory spaces that evoke emotions and facilitate connections among individuals and collectives (Callahan, 2020a). These artistic representations possess the power to deeply move people, fostering a sense of connection with others.

In the field of environmental science, scholars addressing relational values acknowledge the meanings imbedded in certain common cultural elements. Trees (Chan et al., 2016; Eriksen & Ballard, 2020) and regional food (Riechers et al., 2021) represent community values such as local identity. In Southern Chile, the Mapuche-Pewenche indigenous people's culture, history and spirituality is based on a reciprocal relation with the Pewen (*Araucaria araucana trees*) (Ibarra et al, 2022). Artists such as Leonel Lienlaf (1989) (as mentioned in Ibarra et al., 2022) and Cecilia Vicuña (as explored by Barros, 2019) represent and amplify these alternative worldviews through poetry and visual arts, challenging historical silencing caused by colonialism and stereotypical depictions of indigenous identity (Contreras, 2021).

Dixon (2009) draws on Jacques Rancière's work (2002) to argue that artistic representations of biodiversity challenge the current configuration of politics, focusing on the idea that artistic practices *"reframe the network of relationships between spaces and times, subjects and objects, the common and the singular"* (2009:412). Community arts against fracking in Argentina, for instance, used paintings to visualise the material processes behind the environmental struggle, resisting oppression through witnessing but also shaping *"symbolic, relational and material forms of cultural resistance"* (Serafini, 2018a:10). Again, through the lens of Rancière, aesthetics is political as it contributes to the creation of affective communities of sense that shape collective worldviews.

Critical thinkers have long acknowledged the relational dimensions relevant to ideas of place (Escobar, 2001; Lefebvre, 1991; Massey, 2005; Nicholls, 2009; Pierce et al., 2011). For instance, Lefebvre's work on "spaces of representation" draws attention to the ways that places are socially constructed and included in his schema all the mental inventions (including codes, signs discourses, imaginary landscapes, symbolic spaces, paintings) that confer new meanings to spatial practices (Lefebvre, 1991). Similarly, Harvey (1989) suggests that the new meanings generated through acts of imagination have material effects on the production of place.

Nonetheless, in the realm of human geography, theories often restrict artistic expressions to mere sources of information regarding communities' interpretations of place, overlooking the transformative role of artistic representations in shaping and redefining spaces. This chapter aims to overcome this limitation by

establishing connections between theories of relational values, environmental degradation, and the realms of art and visuality. Building upon the understanding that artistic representations have the potential to evoke fresh perspectives, stir emotions, and ignite actions, thereby influencing social dynamics and the overall organisation of the world (i.e., Callahan, 2020a; Rancière, 2004) the chapter delves into comprehending how the visual and representational aspects of art activism can empower alternative human-environment relationships that bring about a re-articulation of the deteriorated landscape.

2.2.2. The experience of the artistic practice

The force of art as social practice (Denis & Daniels, 1988; Hawkins et al., 2015) relies on its potential to engender new worlds and alternative futures in the face of socio-ecological crisis (Hawkins et al., 2015). Nevertheless, artistic and cultural practices by local communities receive relatively little attention in environmental research. The indigenous' Water Ceremonies during the Standing Rock protests against the Dakota Express pipeline exemplify the use of people's cultural resources, in this case ceremonies, to resist and assert an *"alternative perspective of care"* (Jewett & Garavan, 2019:52). Similarly, when activists use performances in their demonstrations, including songs, drumming and dance, their bodies occupy the space and create counter-sites that enhance unique social encounters (Whatmore, 2006), a kind of situated utopia that contest and invert the real sites and propose temporary alternative forms of organisation (Foucault, 1984).

Examples of this kind of action include the performances by the Chilean feminist collective *Las Tesis* catalogued as prefigurative acts of solidarity and collectivity (Serafini, 2020) that foster alternative ways of experiencing the public space. Similarly, the Occupy movements went beyond legal territorial strategies to generate *"material practices and representations of territory"* that challenged ideas of land privatisation (Halvorsen, 2017:453). In fact, the potential of activist spaces of leisure, like music festivals, is such that sometimes these spaces are seen as more productive in disrupting the *status quo* than traditional methods of protest (Sharpe, 2008). Rightly so, since leisure activities serve as a social space for individuals to organise, dialogue, and identify with one another (Hemingway, 1999). These "eventful" protests sustained feelings of solidarity, agency, and the sense of community (della Porta, 2008). Ultimately, this kind of spaces support movements and their vision of change (Prentki, 2017).

Human geographers have theorised the physical and embodied experiences of participatory art-making as a place of encounter for fostering intercultural exchange

(Askins & Pain, 2011) as well as particular human-environment encounters (Dixon, 2009; Hawkins et al., 2015). Arts-based interventions such as public murals and singing encourage connections between people, sense of community, inclusion, and dialogue (Baumann et al., 2021) and promote social cohesion and solidarity (Fancourt & Finn, 2019; Tebes & Matlin, 2015).

The transformative potential of artistic interventions –e.g., songs, art installations, and street performances– does not only stem from the symbols it projects. Instead, its ephemeral and seemingly "ordinary" character disrupts established representations and challenges the imperatives of prevailing realities (Mekdjian, 2018), fostering alternative ways of inhabiting the public space. In doing so, they foster alternative modes of engaging with and inhabiting public spaces. Through these interventions, the dominant hegemonic forces promoting privatisation and limiting material experiences are disrupted, reshaping the interplay between the visible, the sayable, and the thinkable (Rancière, 2004). This disruption creates conditions conducive to political and material change.

However, researchers addressing the role of creative initiatives in environmental struggles have rarely assessed art practice as a catalyst for relational values in the transformation of place, especially in degraded landscapes. In sum, this research aims to contribute to literature on relational values, human geography and art theory by answering to the question of how engaged arts can be the pathway to restore the degraded landscape through enhanced relational values.

2.3. Materials and methods

The gaps in the literature presented above led to an empirical exploration of the relation between four concepts: relational values, artistic representation, artistic experience, and socio-spatial transformations. The compilation of background data started by reviewing regional press, relevant social media posts, and webpages of activist groups. The selected case study focuses on a sacrifice zone highly influenced by neoliberal policies that have been analysed by scholars from different disciplines (Bolados, 2016; Espinoza et al., 2016; Tirtoni & Rodríguez-Giralt, 2017; Tume et al., 2020; Valenzuela-Fuentes et al., 2021), but without focussing on the growing influence of artistic movements.

Fieldwork took place between December 2020 and March 2021. I conducted 35 semi-structured interviews to activists, artists, and researchers related to the QPSZ, contacted through snow-ball sampling. Interviews were conducted in-person

or online (whenever interviewees preferred to, in the context of the COVID-19 outbreak). Interviewees were asked to describe any artwork related to the QPSZ that they remembered and the experience, impressions, and feelings the artwork evoked. Length of the interviews varied between 30 to 90 minutes, and each interview was recorded and notes with observations from the interview were taken. A written consent form was obtained from all study participants in accordance with my university of affiliation's Research Ethics Assessment. Among the interviewees, 77% were locals and 23% were external to the area, but had an activist or artistic relation with it. Regarding gender, 57% identified as women, 42% as men, and the remaining as queer or unspecified. The higher percentage of women reflect their importance in leading the mobilisations. In fact, one of the main organisations in the area, *Mujeres en Zona de Sacrificio en Resistencia* (Resistance Women in Sacrifice Zones) (MUZOSARE hereafter), actively endorses a feminist approach.

During fieldwork, I organised and led a scenic art-making laboratory[3] that supplemented the data collection process. The laboratory was designed as an open call to local activists and artists, inviting them to participate in the development of a street performance in the QPSZ. I received support from the Chilean street theatre group Teatro en Movimiento Callejerx, who assisted with costumes, organisation, and promotion. Having previously worked as an actress with this group, their commitment to the project was unwavering when I approached them about this endeavour. The laboratory spanned two days and involved ten participants. I took on the role of an artistic and scenic director, guiding through various theatre improvisation techniques, allowing the participants to collectively determine the content and objectives of the street performance. This activity contributed to understanding the context of the movement and the important values of the community. Observing the activation of relational values helped to define and classify them. The process was recorded, edited and shared as a short-film called "Under-ground ore" (*En-tierra mineral*, in Spanish) and shared in social media (see Sanz, 2021) (Figure 2.1).

A standard qualitative research data organisation and analysis followed (Gallego, 2005). Interviews were transcribed with Sonix and coded using MAXQDA, to capture representations and experiences of artistic practices, relational values, socio-spatial transformations, and the connections between each item that informants made during interviews. A first version of the codebook relied on secondary data, field notes, and references from the literature. This process led to the identification of 5 categories of relational values, 4 categories of artistic representations, 5 categories of experiences of art practice, 4 categories of socio-spatial transformation used

[3] You can read more about this process in a published entry blog as: Sanz, T., 2023. Under-ground ore: street intervention in the face of socio-environmental devastation in the Quintero-Puchuncaví sacrifice zone. Undisciplined environments.

in the analysis (see the codes and definitions in Appendix A). A network analysis through Gephi 0.9.0 (and the models ForceAtlas 2, and circular layout) (Bastian et al., 2009; Jacomy et al., 2014) represents the interconnection between relational values, and artistic experiences, and representations (Figure 2.10). A bar chart represents the relational values activated through arts that were more influential for local transformations (Figure 2.1).

Figure 2.1. Still frame from the short film “Under-ground ore”, an outcome of the participatoryart-making process in the Quintero-Puchuncaví Sacrifice Zone. Image courtesy of Orl Rival, 2021.

2.4. Creative actions in the Quintero-Puchuncaví Sacrifice Zone

When asked about artistic pieces related to the conflict, the interviewees mentioned 37 creative actions across six categories used by Rodríguez-Labajos & Ray (2021) and mentioned in Table 2.1. The most frequent creative actions were performances (32%), image-based expressions (28%) and music (21%). There were fewer written expressions, such as books or fanzines, or audio-visuals. Interestingly enough, the most popular pieces, i.e., the ones that people referred to more frequently, were murals (60% of the interviewees mention them) and events of collective mural painting in particular (mentioned by 28% of the interviewees). The emblematic street-art collective *Murales por la vida* (Murals for Life) (Figure 2.9) is named by 14% of the interviewees. Similarly, 54% of interviewees refer to some musical expression, in particular *Batucada* –an Afro-Brazilian percussion ensemble– (51%) (Figure 2.6). The music festival *Chile un solo territorio* (Chile One Territory) (Figure 2.7) named by 28,57% of the interviewees, is another emblematic event referred to around the conflict.

Figure 2.2. Collective mosaic making. Image courtesy of Efren Legazpi 2017.

Figure 2.3. Ground-based image of the human mandala by MUZOSARE and MODATIMA. Image courtesy of Katta Alonso.

Figure 2.4. Aerial image of the human mandala by MUZOSARE and MODATIMA. Image courtesy of Katta Alonso.

Figure 2.5. *Letras en la Arena* 2017 magazine. Image courtesy of Felipe Faic 2019.

Figure 2.6. *Batuque Achelpeñ* performing in Ventanas main street, in front of the power-plant. Image courtesy of Batuque Achelpeñ.

Figure 2.7. *Chile un solo territorio* music festival in 2018. Image courtesy of Chile un solo territorio.

Figure 2.8. Mural on local flora and fauna. By *Murales por la vida* in the streets of Quintero. Author's own photograph.

Figure 2.9. “No more Sacrifice Zones” mural depicting a portrait of Alejandro Castro an environmental defender who tragically lost his life in 2018. By *Murales por la vida* in the streets of Quintero. Author’s own photograph.

The pieces mainly occurred in the public space (43% of all pieces), although the organisation of ad-hoc events was also frequent (27% of all pieces) (Table 2.1). In particular, performative and image-based expressions tended to happen spontaneously in the public space, whereas music and cultural events took place in ad-hoc events. Meanwhile, written (Figure 2.5) and audio-visual pieces were accessible online or used in multiple locations. 60% of ephemeral actions involving music and performances were later accessible online. Interviewees also note that artistic practices –especially image-based expressions and performances– are often photographed and subsequently shared in social media and news stories.

Type of artwork	Location			
	Street	Event	Multiple locations	On-line
Image based	9	1	1	
Performatic	10	2		1
Music		5		1
Oral-written			2	
Cultural event		3		
Audio-visual	1			2

Table 2.1. Number of artworks according to the topic represented and location, per type of artwork.

2.5. Artistic actions enhance damaged relational values in the sacrifice zone

The categories of relational values used in the analysis rely on an initial exploration of types of relations (human-human, human-place, human-time) to then propose my own terms building on the existing literature. The resulting categories, their definitions and references can be found in Table 2.2. Riechers et al., (2020) define relational values as meaningful human-environment connections and social relations. The interviews revealed five interconnected categories of relational values related to artistic expressions (Table 2.2), namely reciprocity, care, place attachment, identity, and heritage. The five possible categories resulted from this study do not cover all range of relational values but the ones in the intersection between artistic practices and environmental degradation.

Relational values	Definition of relational values
Reciprocity	Human-human relations (solidarity, mutual support, social cohesion, social relations) emanating from sharing spaces and interactions with the environment (Kaltenborn et al., 2017; Riechers et al., 2021).
Care	Based on Jax et al.´s (2018:2) definitions of care as affective concern and practical actions that seek to attend to another´s needs (be the other human or non-human).
Place attachment	The emotional bond between people and places, based on Manzo and Wright's (2021) "place attachment". Place attachment is a consequence of meanings imparted on places by individuals and groups. Destruction of the landscape can drive emotions such as grief, fear, anxiety and anger derived from place attachment Identity.
Identity	Refers to the constitutive importance of environmental elements in shaping individual personalities and local culture. Based in Riechers et al.'s (2021:5) "cultural identity" and "individual identity" and Proshansky et al.'s (1983:60) "place identity".
Heritage	Based on ideas of cultural heritage (Kaltenborn et al., 2017) and local knowledge (Cevasco et al., 2015) appeals to the relation of people with their past, with their traditional practices, origins and history, including collective memory and local knowledge.

Table 2.2. Relational values and their definition stemming from the inductive data analysis and literature review.

Figure 2.10 shows how relational values are *represented* in the artworks and *experienced* through the artistic creation. Appendix A provides a detailed description of the items within each category. Network analysis revealed three clusters of interactions between such representations and the experiences of relational values through arts: 1) the relevance of the creation process for identity and reciprocity; 2) the relevance of representations of local elements and life histories for heritage and place attachment, and 3) the centrality of the materiality of art activism in enacting a variety of relational values.

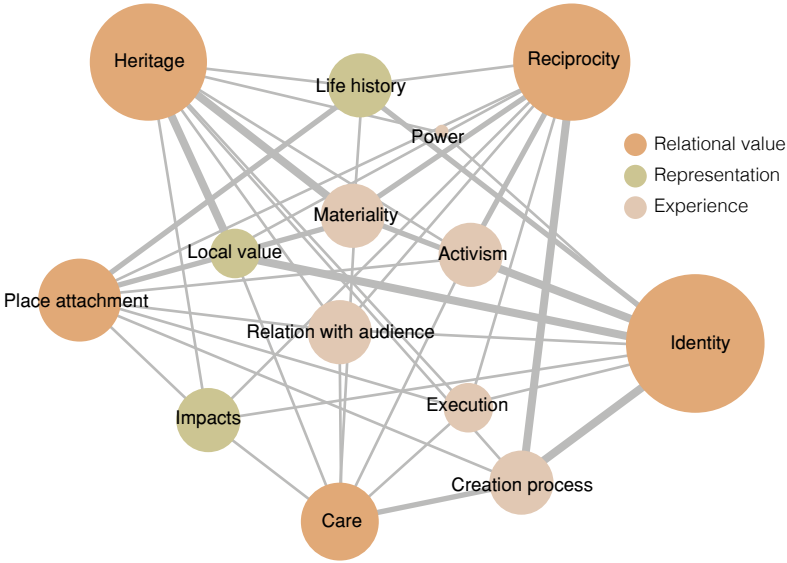


Figure 2.10. Network analysis between relational values, elements and values portrayed in the pieces and experience of the artistic practices. Note: the size of the nodes and the edges reflects the number of times a given item (and their interaction) was mentioned by the interviewees. Source: Own elaboration based on force-directed Model Force Atlas 2. Since axial coding was not performed during the data organisation phase, the direction of causal links was derived from the analysis of the contents but have not been represented in the network.

2.5.1. Activism-oriented art-making enacts identity and reciprocity

Identity is both the most mentioned relational value, and the best connected to artistic representation and artistic experience. Thus, the *creation process* or art-making is the best-connected artistic experience to identity. The initiative of the muralism collective *Murales por la vida* (Fig. 2.8 and Fig. 2.9) is a good example of the appeal for collective identity through participation in an art-making process. The contents of theses murals that represent local values through images of local biodiversity, were decided collectively during creation and execution stages. Such an approach led the interviewees to assert that *"Making art means socialising, building community. Making art collectively is that, creating a community"* (MA, woman activist).

Likewise, *reciprocity*, that is, human-human relations that enable solidarity, mutual support and conversation, is bound with artistic practices, especially during art-making and art-for-activism events. For instance, the music festival *Chile un solo territorio* (Figure 2.7) took place in 2018 in front of the polluting industries to promote

the motto *No más zonas de sacrificio* (No more sacrifice zones). This festival was a concrete place of encounter that provided opportunities for raising feelings of support, and a sense of community among the organisers and the participants. In other words, art activism enables safe spaces of affects (Ryan, 2015) and especially in art-making processes (Figure 2.2), *care* and *reciprocity* are central.

These findings remind us of the notion of dialogical aesthetics developed by Kester (2004). In line with contemporary art trends, dialogical art focuses on human relationships, the interactive, and the socially-engaged experiences that art can generate. In the QPSZ, art initiatives enable new relationships and support networks between community members. When residents create an artistic piece or organise creative events for activism, art becomes a place of encounter, collective identity, and affective connections, where people feel they are part of something.

Moreover, the communication of the collective identity through art allows to overcome the marginalisation of ideas and values that differ from the dominant vision of growth-led development. According to Bishop's theories (2006), the purpose of participatory art is to restore the social bond through a collective elaboration of meaning. I found that artists, activists, and residents help to collectively re-build the degraded identity through creating content that portray their aspirations and their values. Similar to my own results, Bishop spotlights the artistic experience as a source of empowerment for participants.

Political ecologists emphasise that some identities are more affected by environmental degradation than others, especially where indigenous, peasants, and racial identities are concerned (Merlinsky & Latta, 2012). This is why recognition and participation of such vulnerable groups play an essential role in theories on environmental justice (Schlosberg, 2007). The experience of art-making reinforces collective identity, enhances recognition, and increases participation of the marginalised identities, thus contributing to advancements of justice. Such emphasis on identity as a relational value, activated through art practices, is relatively absent from the environmental literature. A notable exception is Serafini (2018a), who focuses on community arts and notes that identity is central in activism as it facilitates collective action. While I concur with this author in the link between participation in artistic projects and collective identity, the present study remarks the relevance of representation of local values and life histories in the artworks for the activation of collective identity (Figure 2.10), as I discuss further in the following section.

2.5.2. Representations of local elements and life histories enact better relational values than representation of impacts

Between the relational values better enhanced by artistic practices, "heritage", "identity", and "place attachment" are directly linked with the portrayal of local values. A member of the muralist collective *Murales por la vida* explains the significance of their work: *"When we paint the Quintero lighthouse, which is an icon of the community, they [the residents] feel identified with it; seeing it painted is very important for them because it makes them feel Quinterano, and belong to this place"* (N, Local muralist). This collective is responsible for bringing vibrant colours to the facades of most houses in Quintero, showcasing local flora, fauna, and historic architectural elements (see Figure 2.8 and Figure 2.9).

The representation of *life histories* involves the personal experiences and interpretations of living in a sacrifice zone. Audio-visual records such as photographs, videos, and music portray the biographies and affectations of peoples living in the area. Unexpected to us, *life histories* play a central role in linking relational values and art (Figure 2.10), as the link between relational values and art. A local activist explained: *"art is a way to express the personal experiences of living here. It [art] is really personal and yet it has a tremendous collective potential. It tells the story in another way and makes people who have nothing to do with this world empathise and makes them feel identified with the feeling"* (RQ, Local activist).

In the QPSZ, artistic pieces that represent local values and everyday life foster sustainable relations between people and places, thanks to the enacting of values of heritage and place attachment. On the contrary, representations of *impacts* have less impact in levering relational values (Figure 2.10). This means that the visibility of an issue or impacts, *per se*, has limited transformative potential. A similar thought can be found in Demos' (2016b) analysis of the aesthetics of climate change politics, where he challenges representations of impacts and catastrophic futures of climate change that silence the relations and resistance of the affected communities. In contrast, the artworks about *local values and experiences* in Quintero-Puchuncaví appeal to affective bonds while unifying different voices. Art activism in QPSZ serve as a contextualised example of the affective work of visuals and their appreciation as practices that shape social and world ordering (Callahan, 2020b). This alignment highlights the intrinsic connection between politics and aesthetics that has been present in philosophical discourses since the last century (Rancière, 2004).

This insight adds to theories on the transformative potential of ecologically engaged art (Demos, 2016b) but also to theories that focus on the processes and practices

that maintain and disrupt relational values (Chapman et al., 2019; Peçanha Enqvist et al., 2018; West et al., 2018).Thus, amateur and non-professional art forms are fundamental contributions in restoring human-environment relationships. Rather than just focusing on the impacts of the industries, the visualisation of everyday life reconnects humans with their environment and thus fosters political changes. In this way, the discussion about pollution moves away from victimisation and inaction and towards re-signification of the environment.

2.5.3. The materiality of art is a force for place-making

Way beyond the original expectations, the *materiality* of spaces of experience and, to a lesser extent, the *relation with audiences*, are entangled with all relational values. *Materiality* refers to a specific connection and dependence to time and place of a particular piece, that is determined by the expressive medium chosen in each case. The materiality of the artistic process is made apparent by the fact that most of the pieces described by the interviewees hail from the reaction to a pollution peak in 2018. Also, as shown in Table 2.2, most of the artistic practices take place in the public space, affecting the type of relational values they stimulate. In the QPSZ, the materiality of art is a relational force as it generates spaces of encounter that enhance *reciprocity* as well as new material and symbolic spaces that challenge existing power dynamics. In the words of an interviewee: *"When you do street-art and do activism based on an artistic activity, more people get together than in a conventional meeting. When the Batu* [batucada, street music performance] (Figure 2.7) *comes, everyone goes down to see the Batu. And then you can focus on making people understand that we have to fight for an area free of pollution"* (M, health worker).

These results suggest that activists overcome certain barriers towards sustainability while *embodying* the creative act. Different stages of art production and materialisation involve people engaged in change; people collaborating in the process of making a collective piece, interacting with an audience, occupying and re-appropriating the public space, and so on. Each one of these activities generate relational values that foster desired socio-spatial transformations. Informal artistic events in the streets of QPSZ attract people to the public space, thus enabling new relations and conversations about the injustices they are experiencing. This way, artistic events become safe and open spaces that inspire feelings of solidarity and mutual support in face of the crisis of sense of community and privatisation caused by industrial activity (Hormazabal et al., 2020).

In degraded places such as the QPSZ, large industrial facilities act as reminders of the power behind national energy interests (Broto & Calvet, 2020). There, art offers a physical counterpoint to the industrial dominant landscape, through representations of resistance that explore alternative relationships with the environment. Just as the feminist performances of *Las Tesis* contribute to the visibility of erased bodies (Martin & Shaw, 2021), when air pollution prevents certain bodies from accessing the street (Walker, 2009), their mere presence in the street is an embodied act of symbolic production and power (Bourdieu, 1991) and, therefore, of resistance. When activists use their bodies to produce material practices and representations of their land and values, an active praxis of embodying their right to the city leads to hope and to personal and group agency. In the words of Serafini, *"what is at stake in making art in territory is the (re)making of that territory"* (Serafini, 2022:67). In this line, the present study proves that artistic spaces of experience in the public space transform industrialised and abandoned spaces into places of resistance and community. There, music and dancing configure care, reciprocity, memory and responsibility.

2.6. Relational values and transformation trends

Authoritative perspectives on sustainability transformations, such as the United Nations Research Institute for Social Development (RISD) (2019:32) acknowledge the need to address the root causes that *"generate and reproduce economic, social, political, environmental problems, and inequities, not merely their symptoms"*. The RISD is not alone in this view. The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), categorises institutions and governance systems as indirect drivers of change that influence relationships between people and nature and thus anthropogenic drivers of change i.e., pollution (IPBES, 2022). Therefore, IPBES encourages the promotion of different type of values associated to the environment in decision making processes for sustainable futures (Pascual et al., 2017). This represents a great progress in the knowledge-policy interface. Despite acknowledging power relationships across stakeholders, these frameworks do not address contexts of degraded social capital or where power relations foil the construction of powerful institutions from the bottom-up and the recognition of local relational values.

Alternative notions of transformation emphasise the transformative role of social movements. That is the case of post-development scholars such as Escobar (2004) and Svampa (2019), who show that place-based non-hierarchical networks are able

to reconceptualise even the notion of development itself. This notion is especially relevant in the context addressed here, where the affected population recognise the impossibility of cancelling the industrial complex. Building on such an approach, the data from interviews revealed four stages of transformation influenced by arts in: awareness, networking, sense of agency and restoration. The ultimate goal "restoration" aims to create new spaces (material and immaterial) that rehabilitate the culture, tradition, aesthetics, and places from their degraded state and also upgrade the everyday life. I accept that transformation is not necessarily a linear process. Still, Figure 2.11 shows the dominant local vision about the order of the stages in the transformation, indicating the relational values activated during each transformation stage, based on the number of mentions during the interviews.

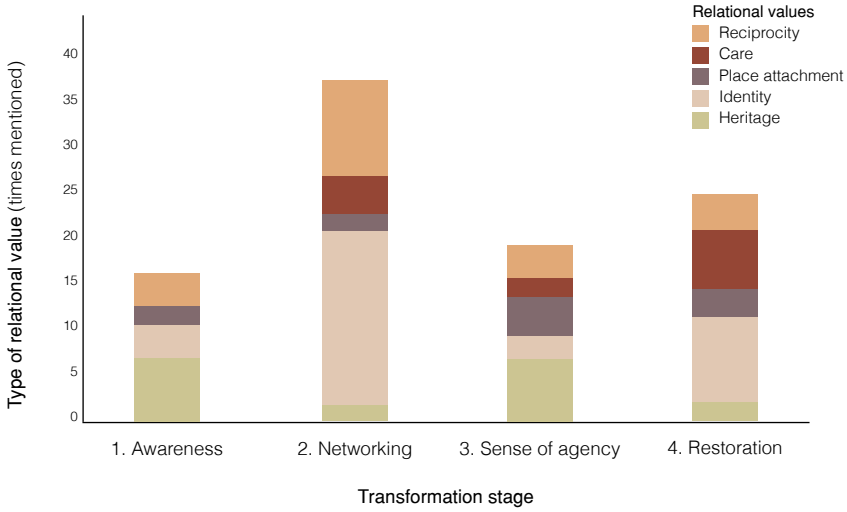


Figure 2.11 Relational values activated through arts across transformation stages in the case study.

2.6.1 Creative networks towards restoration

Overall, relational values through arts have a role across all stages of transformation, especially during networking and restoration (Figure 2.11). The human mandala by MUZOSARE (Figure 2.3; Figure 2.4) is an example of the intersection between networking and identity. *"This action makes us a body, a body-territory, m*akes *us part of something, makes us know each other, makes us communicate"* (A, from MUZOSARE). This example also illustrates the relation between the values of reciprocity, identity, and care enhanced by the *experience of participating in an artistic action* (see Figure 2.10). Indeed, values like care, solidary and community are central

for antiextractivist feminist discourses (Bolados & Sánchez, 2017). In response to the lack of women leadership in the environmental movement, and the patriarchal and colonial system leading the QPSZ, MUZOSARE since 2016 advocates for a new ethic of care associated with Latin American feminisms (Bolados & Sánchez, 2017). Unsurprisingly, the human mandala that represents *cuerpo-territorio* (body territory) is a form of protest that MUZOSARE shares with the women group against hydropower in Alto Maipo river, also in Chile. The notion of *cuerpo-territorio*, popular thorough anti-extractivist feminist movements, acknowledges the inseparability between body and place (Bolados & Sánchez, 2017). The notion comes from indigenous and decolonial ontologies of space (Zaragocin & Caretta, 2020). Therefore, my results situate arts as embodied expressions of *cuerpo-territorio* and thus as avenues to decolonise spatial dynamics and analysis.

At the *restoration* stage, *identity* is again the most influential relational value, followed by *care*. Care means affective concern and actions for the community, family, and the environment. Surprisingly, care is the highest influence of the transformation process during restoration. This finding is significant because both identity and care are strengthened through similar art experiences (Figure 2.10), particularly those centred around themes of "safety" and "healing". Concretely, community art-making is restorative as: *"a space of healing, of dialogue, of being able to tell many things that have happened to us and feel containment. In fact, the work has been important for many women because it creates a safe space where they can share what is happening to them, and move and dance among women."* (RA, performer and musician).

In this sense, my results indicate that a way to restoration goes through the transformative stages of awareness, networking, and agency. In fact, artistic processes, especially those that promote networking, can trigger individual and collective action and, ultimately, transformation. The notion of agency *"emerges in crisis situations and connects networks for action"* (Stockholm Resilience Centre, 2009:2).

In the QPSZ, artistic processes that emerged in situations of crisis ignited a chain of change starting with networking. Subsequently, networking activated values like reciprocity, place attachment, heritage, and identity, and in turn, promoted agency. Accordingly, art activism would be an aesthetic-political practice that fosters collective action towards social and political change (Callahan, 2020a; Duncombe, 2016; Ryan, 2015; Serafini, 2018b). This relational notion is also present in views of art as social praxis in which communities create ephemeral, precarious, and collective 'micro-utopias' (Bourriaud, 1998:65). While endorsing these theories, my study establishes a co-dependence between networking and agency through relational values. Such values contribute to improve the daily life of people affected

by environmental injustice and to restore their everyday landscapes. Thus, art activism can be considered as a value articulating institution (Stagl, 2012) that levers the autonomy of the community and generates social cohesion, a fundamental gain when the complete rehabilitation of the environmental conditions in the sacrifice zone is far from being achieved.

2.7. Towards a re-articulation of relations and spaces through arts

Sacrifice zones result from an extractive development model that obscures the exclusion of local communities' material, symbolic, and spiritual lives, and ultimately undermines pre-existing relational values. This chapter sought to trace whether (and how) these meaningful human-environment connections and social relations can be re-articulated through art, thereby contributing to the reconfiguration and restoration of degraded landscapes.

Local activists' artistic practices such as banners, murals, songs, and dances have proven to have relational effects that re-articulate connections among humans, and between humans and the environment. While critical social-spatial theories acknowledge the relational nature of place-making, previous literature had neglected the study of artistic practice as a way to repair situated relational values damaged by environmental degradation. This chapter has identified the activated relational values facilitated by artistic practices, and proposes a novel framework that links relational values with stages of socio-spatial transformation, leading to the restoration of material and symbolic spaces through art.

My empirical evidence relies on the artistic practices developed in a sacrifice zone in the localities of Quintero and Puchuncaví, Chile, where industrial development configure a highly toxic environment. Through participation in activism-oriented art-making projects, communities in the QPSZ are restoring the social bonds and re-building collectively the degraded community identity as they become agents of change. The visualisation of local elements and life histories seem to enact better relational values than visualisations of impacts. Making the histories and practices rendered invisible by industrial development visible, art pieces generate a critical and affective discourse that promotes a re-articulation of humans with the environment.

Importantly, I identify arts' materiality as a force of place production, as art creates material and symbolic realities that embody the right to the city. Facing intense

environmental pressures, artistic spaces promote a restoration of the every-day living experiences. In this process, networking and social cohesion are essential to facilitate individual and collective agency towards transformation.

While my outcomes are context dependent, similar cases exists around the world (see EJ Atlas). In this context, theorising the role of artistic practices in representing and enhancing relational values expands the toolkit for the socio-environmental restoration of degraded landscapes. These findings are an entrance point for further research on the consideration of an institutional promotion of relational values and arts-based practices in public spaces for the restoration of degraded areas.

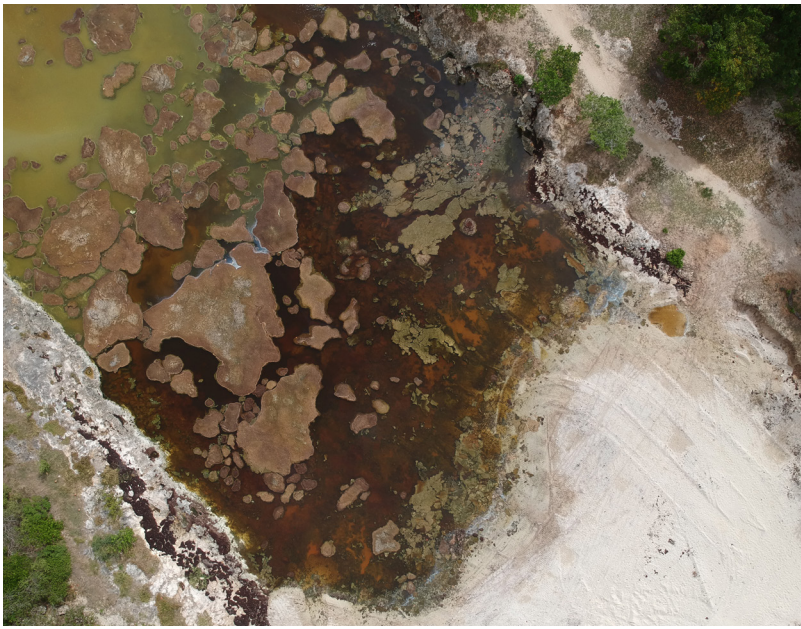
Chapter 3.

Visual narratives against environmental violence:

Environmental Conflict, Violence, and Social Media Activism in the Philippines

It is not a question of fearing or hoping
or waiting, but of inventing new weapons.

Gilles Deleuze



3. Visual narratives against environmental violence: Environmental Conflict, Violence, and Social Media Activism in the Philippines[4]

As the climate crisis intensifies, so does violence against people who defend the environment (Global Witness, 2021). Philippines, in particular, is the country with the highest death rate for environmental defenders in Asia (Dressler & Smith, 2022), a continent that nowadays hosts some of the world's largest economies (GIC, 2019) but also a long tradition of land and environmental struggles (Huizer, 1975).

As reported in the Global Atlas of Environmental Justice (EJ Atlas)(Temper et al., 2015), the development of extractive projects (e.g., related to the extraction of minerals, water, or even lately renewable energy and materials for the "energy transition") fuels environmental conflicts around the world (Martinez-Alier, 2002). The violence linked to these conflicts is such that Navas et al., (2018) have termed it "multidimensional violence" to encompass "slow", structural, cultural and ecological and direct forms of violence. Among these, addressing the direct forms of violence and the increasing danger of losing life as a direct result of protest and activism is becoming increasingly urgent (UN Environment, 2019). This is particular concern for environmental defenders, defined as *"all those (e.g., NGO staff, lawyers, indigenous, farmers and fishers, park rangers, local politicians, mothers, fathers, brothers, sisters) who work in different capacities to protect and promote human rights and the environment in the context of suppression under authoritarian rule, or otherwise"* (Dressler, 2021a:456).

Even in the digital age, physical forms of resistance like street protests, performances, and banners remain crucial to social movements (Castells, 2015; Milan, 2015). However, contemporary activism is increasingly merges the body and digital technologies (Hartle & White, 2022), especially after the COVID-19 pandemic forced much of life into virtual spaces (Mbembe, 2021). Social media is an effective tool for enhancing communication, visibility, accessibility, and mobilisation, as shown in the protests against various forms of violence such as the Arab Spring (Howard &

[4] A version of this chapter was submitted as Journal of Peasant Studies as Sanz, T., & Rodríguez- Labajos, "Visual narratives against environmental violence: Environmental Conflict, Violence, and Social Media Activism in the Philippines". Also, the ideas contained here were presented at: a) University of Hiroshima in May 2022, where I was invited by the International Peace & Coexistence Program to give an online seminar; and at b) Queen Mary University of London, during a 3-month research stay with Dr. Paula Serafini.

Hussain, 2013), #MeToo (Bogen et al., 2021), Occupy (Weinstein, 2011), and Black Lives Matter (Yang, 2016). Peasant, indigenous and grassroots environmental groups, including those from the Philippines, adapt to global trends by combining traditional forms of resistance like the use of local radios, newspapers, and TV with newer forms of resistance (Alonso-Fradejas et al., 2022), utilising media as a mobilisation vehicle to confront violence related to authoritarian populism (Beban et al., 2019; Scoones et al., 2018; Soriano, 2016).

Visual activism, *"the interaction of pixels and actions to make change"* (Mirzoeff, 2015:297) plays a central role in social media and networked transformation. The recent book "Visual Activism in the 21st Century" (Hartle & White, 2022) explores the significance of visuals and their relationship with mass media communication as a rising dimension of protest and activism. The Journal of Peasant Studies has featured on its covers the work of BoyD, a Filipino painter and agrarian artist, demonstrating the importance of arts and the visual in advocating for rural and indigenous communities against the impacts of extractive capitalist systems (Iles, 2022).

Visual activism is fundamental in climate mobilisations like School Strike 4 Climate (Sorce & Dumitrica, 2021), or indigenous land claims, such as the emblematic struggle against the Keystone oil pipeline in Standing Rock (Hristova, 2022). However, few studies have focused on the visual contents of activism media to unpack the demands of environmental defenders. Currently, there are no existing studies that explore visual responses to environmental violence. With that in mind, the aim of the present study is to track how digital visual activism addresses violent environmental conflicts. In particular, the research is guided by two questions:

Q1. How is the digital presence of visual activism associated with the conflict outcomes, strategies and intensity of environmental conflicts?

Q2. Which political reactions to environmental violence do Filipin@ activist deploy through visual digital contents?

The questions are addressed empirically by examining visual activism contents related to 88 environmental conflicts in the Philippines.

The remainder of this chapter is divided as follows. The next section offers a literature review of violence and extractivism and notions of visuality, and visual activism related to environmental conflicts. The third section details the research methods. The fourth section presents an analysis of the relationship between visual contents and violence in the Philippines' environmental conflicts, leading to three

categories of visual responses to violence. The results are discussed in the fifth section, centred on notions of visibility and visuality of environmental movements, the tlink between digital content creation and violent outcomes and the relevance of visual responses to this violence. The last section concludes.

3.1. Environmental conflicts and violence

3.1.1. Violence goes hand in hand with extractivist dispossession

The links between land enclosures and exclusions of certain identities and livelihoods with extractivism are widely recognised by the literature on agrarian studies and political ecology (Borras & Franco, 2005; Peluso & Lund, 2011; Scoones et al., 2018). The extractive overexploitation of the Earth's resources for economic development (Acosta, 2011; Chagnon et al., 2022; Gudynas, 2010) underpinned by notions of commodification of nature and coloniality (Gómez-Barris, 2017) of "pre-existing life-worlds" (McMichael, 2023), challenges rural and indigenous and other front-line communities' livelihoods, ways of life, culture, and human rights. Following Harvey's (2003) logic of 'accumulation by dispossession', this aggressive process often involves the forced expulsion of peasant populations and neighbouring communities (Peluso & Lund, 2011) as well as the repression, intimidation and criminalisation of activists (Dressler & Smith, 2022).

The academic literature acknowledges the epistemological dimension of these conflicts. For example, under narratives of smallholder culture as inefficient (Beckert et al., 2021), extractive systems have turned largely agrarian populations into "minorities" through extermination, slavery, subordination, or dispossession (McMichael, 2023). The very concept of territory raises from modes of environmental governance that conceptualise human-non-human connections in a way that legitimises extraction (Akram-Lodhi et al., 2007) and obscures environmental, social, and health repercussions, as well as the destruction of cultural knowledge (Borras & Franco, 2005; Leff, 2004; McGregor, 2019). Imposed new valuation languages (Martinez-Alier et al., 2010; Svampa, 2013) undervalue the worldviews, values, and priorities of local rural communities and indigenous peoples, sustaining exclusion, harassment, and even annihilation of the environmental defenders that stand in the way of enclosures and extractive projects (Dressler, 2021a; Scheidel et al., 2020). This is why these projects have been dubbed "violent enclosures", discursively and structurally produced but with material consequences (Neumann, 2004; Peluso & Watts, 2001) and the word "violence" has become more prevalent

in the literature on environmental conflicts and extractive projects (e.g., Navas et al., 2018, Andreucci & Kallis, 2017; Dressler & Guieb, 2015). In the next section, I explain how violent enclosures have influenced the Philippines' history and the actual configuration of environmental conflicts in the country.

3.1.2. Violence towards environmental defenders in the Philippines

Broad and Cavanagh (1993) referred to the Philippines as "plundering paradise", observing the close relationship between colonial regimes and authoritarian powers and the ravaging exploitation of the environment by mining companies, logging businesses, agribusinesses, and dam projects. The struggle of peasants, fishers, and other Filipin@ defenders has been vital in responding to environmental destruction. Yet activists who oppose these activities face the risk of being arrested, detained, or "salvaged", which means they are extralegally disappeared or killed (Cagurangan, 2016).

Since the dictatorship of President Ferdinand Marcos in 1965, the state and the elites strengthened their grip on land and privatised common resources like mines, water and forest resources (Broad & Cavanagh, 1993). In this process, farmers and indigenous peoples were dispossessed of their land, and those who defended their land and livelihood rights were often killed (Borras & Franco, 2005). This context led to the formation of an armed wing of the Communist Party of the Philippines, the New People's Army (NPA-CPP), as well as mobilisations by peasants, indigenous people, priests, and students for basic human and environmental rights, and control over land and natural resources (Dressler & Guieb, 2015).

However, neoliberal extractivism and violence against defenders and insurgents have persisted in the Philippines' subsequent political regimes (Delina, 2020). Extractive projects and enclosures keep relying on discursive and structural mechanisms that regulate and discipline the behaviour of the population and marginalise activists and rural communities who defend their land or resist the dynamics of extractivism (McCoy, 2017). Such violence targets those who oppose the expansion of infrastructure projects funded by international entities, including illegal logging, palm oil plantations, and mining (Dressler & Guieb, 2015). The policies and speeches of former president Rodrigo Duterte exacerbated the situation. Duterte often labeled Filipin@ defenders as "leftist 'anti-capitalists'" and "presumed sympathisers of the CPP-NPA" as part of an anti-terrorist red-tagging system leading to *"incremental harassment, intimidation, and ultimately murder of activists"* (Dressler, 2021b:465).

Before the advocacy organisation Global Witness started reporting the deaths of environmental defenders in 2006, this tragic data went mostly unnoticed by academia and global sustainability organisations. Over the last decade, one defender has been killed every two days (Global Witness, 2021). The claim that the Philippines is among the most hazardous countries for environmental and human rights advocates is also supported by the UN Human Rights Council. The Council reported that at least 248 advocates for environmental and human rights were killed in the Philippines in their pursuit of social and environmental justice between 2015 and 2019 (UN High Commissioner for Human Rights, 2020). The Kalikasan People's Network for the Environment, national NGO, further revealed 46 advocates were killed in 2019 alone, mostly comprising activists, farmers and plantation workers, followed by municipal officials, indigenous peoples, and forest guards (KPNE, 2019).

Global Witness (2021) reports that in the past decade, half of all recorded attacks on environmental defenders occurred in the Philippines, along with Brazil and Colombia. Legal instruments to protect environmental defenders have been adopted only recently, after the UN put forward policy frameworks to increase their protection (UN Environment, 2017). Colombia, regularly featured as the world's deadliest country for land and environmental defenders (Global Witness, 2021) has ratified the "Escazú agreement", the world's first regional environmental treaty, containing specific provisions for the promotion and protection of environmental human rights defenders (ONU, 2021). In Brazil, the newly elected president Luiz Inácio Lula da Silva has sent a clear message about his commitment to increase environmental protections, fight deforestation and protect those who defend the environment (Mantovani, 2023). However, in Southeast Asia, impunity for harmful pressures on environmental defenders remains rampant, threatening the environment, subaltern lives, cultures, and livelihoods from extractive systems that impact politics and hegemonic discourses (Dunlap & Jakobsen, 2020; Gudynas, 2015; Svampa, 2019).

3.2. Visuality in digital environmentalism

3.2.1. Social media activism in the land of environmental violence

Social media studies have gained interest among social movement scholars in recent years (Cai & Marks, 2021; Castells, 2015). Social media represents a new way of communication that can raise awareness in audiences and facilitate collective activism (Cai & Marks, 2021). Eventually, these effects can shape both

individual and institutional aspects of mobilisation processes (Gil de Zúñiga et al., 2012). Some views posit that online mobilisations are only successful insofar as they motivate individuals to attend offline protests (Castells, 2015; Milan, 2015), receiving other individuals the unflattering nickname of 'slacktivists' (Morozov, 2009). The use of platforms like Facebook and Twitter as a common feature in mobilisation is registered since 2009 (della Porta & Mattoni, 2014). An example of successful mobilisations that combined online-offline interventions were the "Occupy Wall Street" or Indignados movements in Spain (Theocharis et al., 2015).

Climate justice movements have effectively combined both online and offline strategies. For example, Fridays for Future which utilises popular social media platforms such as Facebook and Instagram to organise protests and strikes, while simultaneously targeting wider audiences through their digital arm, Fridays for Future Digital (FFFD, 2023). Social media was instrumental in framing and disseminating the movement's core messages (Sorce & Dumitrica, 2021).

In the Philippines, the climate movement itself has drawn attention due to the violence directed towards its activists in the country (Smith, 2022). During the Global Day of Action for Climate Justice protest in Manila in November 2021, Filipin@ climate activists displayed portraits of murdered environmental defenders, calling for an end to such attacks (Greenfield, 2022). Notably, Gloria Capitan Arroyo, an activist from the Philippine Climate Justice Movement and Coal-Free Bataan Movement, was murdered due to her opposition to the coal storage plan in Batangas (See EJAtlas, 2017b). Despite the movement's digital presence (PMCJ, 2023b) and numerous online calls for justice for Gloria Capitan's death (PMCJ, 2023a) there is currently no academic reporting about these activities.

Authoritarian governments have repressed the ability of social media to express dissent on several occasions by ordering internet blackouts, controlling social media platforms, censoring content, and surveilling dissidents. Human Rights Watch has documented these practices in countries such as Myanmar, Belarus, and Iran (HRW, 2020, 2021a, 2021b). The digital blackouts often lasted several weeks, restricting citizens' access to information and communication.

In the Philippines, censoring content matches a politics that criminalises critical media (Putzel, 2020). However, the use of social media to highlight insufficient environmental monitoring and protection, and to document and disseminate local indigenous narratives, has been associated with the internalisation of anti-mining campaigns in Southeast Asia. The shooting of prominent anti-mining activist and journalist Doc Gerry Ortega in Puerto Princesa, Palawan, in 2011, underscores the significance of these efforts (Dressler, 2017).

Despite censorship and political repression, in general social media has served as a unique wa for voicing people's opinions when other means were not available (Alexander, 2014; Balkin, 2004). Therefore, it can foster more democratic forms of participation (Costanza-Chock, 2013), reshaping the very notion of participation itself in the social media era (Gil de Zúñiga et al., 2012; Kleinhans et al., 2015).

By the turn of this decade, the Internet served 80 million out of a total population of 108 million in the Philippines (Statista Research Department, 2022). The country ranks first in the world's lists of internet-addicted regions on the planet (Lamb, 2019) and more time spent in social media (Buchholz, 2020), and therefore is known as the Social Media Capital of the World. National media outlets confirm social media's big influence when Filipin@ choose their leaders (The Manila Times, 2022), as shown in the election of both the former president Rodrigo Duterte in 2016, and the current president Ferdinand Marcos Jr (Arugay & Baquisal, 2022). As of 2022, the most popular social media platform in the Philippines is Facebook (99% of the Philippines' social media users), followed by YouTube (57%), TikTok (17%), Instagram (14%) and Twitter (8%) (Metro News, 2022).

Despite the admitted power of social media to "shape and define the reality of a certain individual, in terms of decision-making" (The Manila Times, 2022), few studies have addressed how discursive violence is portrayed by and resisted through social media in the country. One of them is Soriano (2012, 2013, 2016), who has demonstrated the effective use of media spaces by minority groups in the Philippines such as Moro (Muslim communities), Queer communities (Ladlad political party) and indigenous groups from La Cordillera region (Cordillera People Alliance) to organise political struggles, as well as to challenge underrepresentation and stereotypes prevalent in mainstream media. This analysis is particularly noteworthy given the contrast between the low internet's penetration in the rural Philippines and the high level of social media usage overall. Despite the limited access *"minority groups have begun to gain substantial online presence in websites, blogs and other social media"* (Soriano, 2013:98).

3.2.2. A visual turn on the study of activism and environmental and land struggles

Studies of visual materials created in contexts of environmental mobilisations show that our sociocultural world is visually mediated (Kurtz, 2005; Rodríguez-Labajos et al., 2021). A "visual turn" of increased interest on the visual has influenced the social sciences and humanities in the last years (Gibbs et al., 2015). Social movement scholars have focused on visual contexts to further understand their significance

as a mode of contestation and reflection (Doerr & Milman, 2013). Against the background of a Western "linguistic imperialism" that privileges text over images as a subject of research (Mitchell, 1986), the "visual intelligence" of images appeals to studies recalling the everyday importance of images and their meaning-making role within particular cultural contexts (Manghani et al., 2006; Reed, 2005), like in generating visual knowledge on environmental degradation (Pedraza & Meszaros Martin, 2021; Spiegel, 2020).

The analysis of banners and posters captured in protest photographs has proven to be a useful tool for researchers to comprehend the political positions of protesters. This method was employed to investigate the resistance against welfare system reform during the Anti-Hartz IV demonstrations in Germany in 2005 (Philipps, 2011). Along similar lines, the iconography of environmental justice movements are also deemed essential in shaping political agendas (Kurtz, 2005). More recently, scholars in the fields of environment and agriculture have shown interest in how visual narratives convey local knowledge, values, and relationships (Simon et al., 2020). By emphasising visibility and recognition, visual activities challenge dominant discourses that perpetuate violence towards subaltern communities (Misri, 2019).

The creation of visual social media content, e.g., pictures and memes, is fundamental in platforms such as Facebook, Twitter and Instagram (Gibbs et al., 2015). Images shared in social media contribute to engaging audiences with social movements, and shape the movements' identity, through self-representation (van Dijck, 2008) and through collective identity development (Gonzalez, 2022). As van Dijck (2008:62) puts it, *"The circulation of images constitutes bonds between individuals and groups"*. Regarding Demos' (2016a) analysis of visual elements linked to political practices, when images are linked to an activist cause, they can inspire the reshaping of political, economic, and environmental arrangements. Thus "activist-images" in social media underpin a new era of political expression (Kasra, 2017).

The contribution of art activism to strategies of environmental movements is undeniable (Sanz & Rodríguez-Labajos, 2021). During the last decade, an increasing scholarly interest on art activism has focussed on extractivism. Serafini (2022)'s *"Creating worlds otherwise. Art, Collective action, and (Post)Extractivism"* features five functions of art activism: denunciation, documentation, democratisation, deconstruction, and design. In addition, art practice enhances relational values in spaces distressed by extractivism (Sanz & Rodríguez-Labajos, 2022). Nevertheless, the use of arts in social media in contexts of environmental violence has not been systematically documented and analysed. This gap motivates our intent to critically examine the role of visual activism created and used by environmental defenders in the Philippines.

3.3. Materials and methods

3.3.1. Case study: Environmental conflicts in the Philippines

Data collection for this study began with a list of cases of environmental conflicts in the Philippines (Figure 3.1) tracked by the Global Atlas of Environmental Justice, a database with over 3856 environmental conflicts that have substantiated scholarly analyses of violence related to extractive industries (e.g., Del Bene et al., 2018; Navas et al., 2018; Tran et al., 2020), including previous analysis on violence towards environmental defenders in the Philippines (Tran, 2023). To the best of our knowledge, this is the most comprehensive collection of environmental justice conflicts in the Philippines, and therefore an adequate dataset to sample the activists' visual repertoire. For a complete overview of the cases in the Philippines see Appendix B.

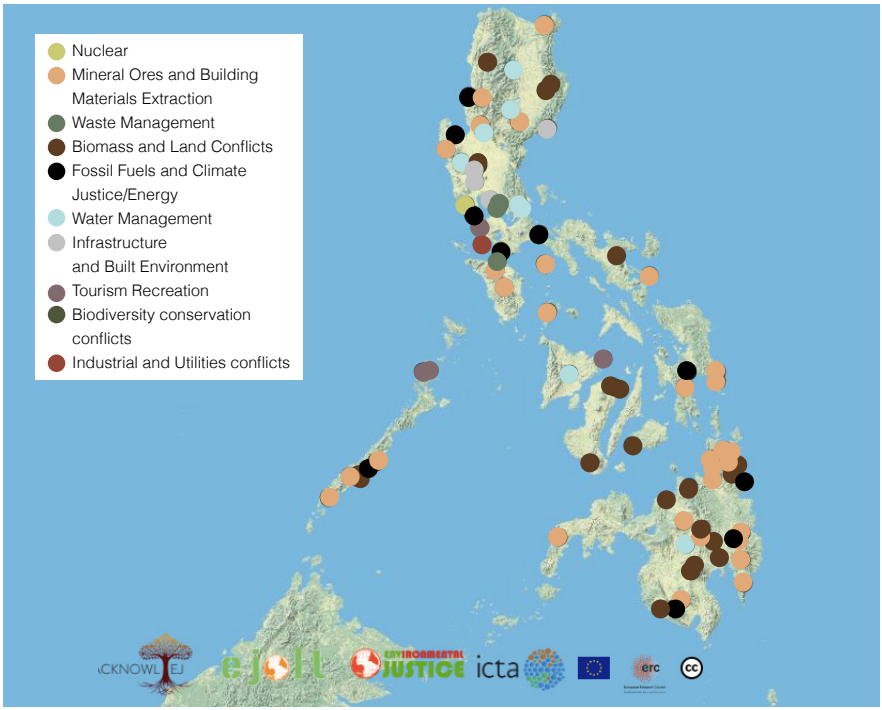


Figure 3.1. Environmental conflicts in the Philippines as of April 2023 mapped by the Global Atlas of Environmental Justice based on the category of conflicts.

At the time of the analysis (March 2023), the EJ Atlas had mapped 88 cases in the Philippines, registered by me and other academics and activists. The oldest conflict dates back to 1958, *"Sugar workers demand land distribution in Hacienda Luisita, Tarlac, central Luzon",* and the most recent started in 2019 *"Negros Massacre: Murder of 14 farmers in Negros, The Philippines"*. The three most frequent types of conflict types are those related to mining (32 cases), biomass and land management (24 cases) and fossil fuels (10 cases) involving both coal extraction and coal fired power plants. There are eight on hydropower. The most common mobilising groups are local Environmental justice organisations, followed by indigenous groups, farmers and religious groups (Figure 3.1). While most of the conflicts are rural (67 cases), there are eight semi-urban and five urban, between which we find the recent mobilisations of environmental groups waste pickers and urban residents against terrible disasters related to dumpsites, like the Smokey mountain (EJAtlas, 2020b) or waste incinerators in Quezon City (EJAtlas, 2019). Fifty-one cases (58%) are classified as high-intensity conflicts, meaning that they involve widespread mass mobilisation, violence, and arrests. Thirty-six conflicts (40%) involve murders.

It is important to highlight that the EJ Atlas functions as a database that specifically records conflicts that have already been reported in various sources, such as local or international newspapers. Consequently, it is essential to acknowledge that our reliance on this database implies that not all environmental conflicts in the Philippines are encompassed within its scope.

3.3.2. Data gathering on visual activism

To evaluate the extent of visual activism, the Facebook content associated with each conflict was examined, to then rate the presence using an indicator of digital visual activism contents (DiVAC) developed for this analysis (see below). "Presence" in this context means the activity related to a concrete environmental conflict in social media spaces.

Algorithmic biases that perpetuate discriminatory outcomes for certain groups of people based on, e.g., race, ethnicity, and gender are a major issue of internet data (O'Neil, 2016). To ensure that the variety of data obtained online truly reflected activist perspectives on the ground, I undertook a 10-months period of engagement with activist contents generated in environmental conflicts in the Philippines. The engagement involved following Facebook channels focused on the identified conflicts and regularly checking publications from these media. The next step was a systematic search of audiovisual materials across all identified conflicts. The search for materials was done from a newly created Facebook profile to prevent

algorithmic biases based on private profiles. The profile was used to carry out online fieldwork based on non-participant observation from February 2022 to December 2022.

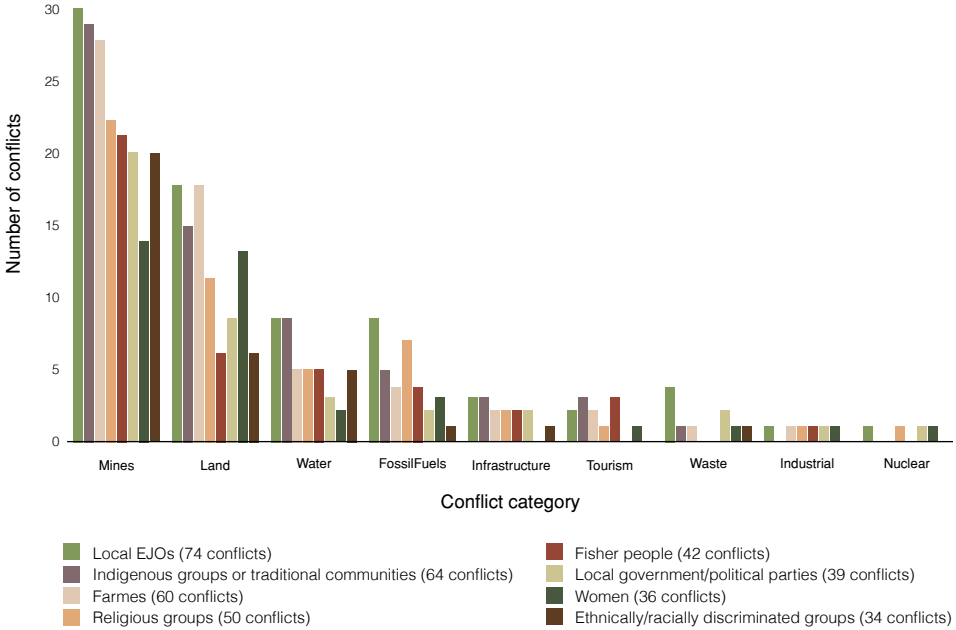


Figure 3.2. Most popular mobilising groups per category of environmental conflict.

The search involved writing specific keywords related to each case, based on the place of conflict and its category (e.g., "Zambales nickel mining"), or the name of environmental defenders in the case reported in the EJ Atlas. The main hashtags related to each case (e.g., #NoFerronickelPlant #mendiolamassacre) were detected, but also broader campaigns connecting several conflicts (e.g., #NoToMining #stoptheattacks). Besides ensuring a thorough exploration of materials, this procedure also helped to identify the most active Facebook profiles in each conflict, the language of the communications, and their media strategies. I designed this methodology from insights of previous social media analysis (Chen et al., 2021; Sorce & Dumitrica, 2021; Soriano, 2013; Taylor et al., 2014).

Once identified the visual contents used by activists in each conflict (between 1 or 2 publications in the least frequent cases and several dozen in the most frequent cases), I rated the overall digital presence of these contents. To this end, an indicator of digital visual activism contents (DiVAC) was developed, based on preliminary

knowledge and observation of the media context of each case, ranging from 1 to 5, being 5 very frequent and very diverse contents (e.g, more than 20 contents, between which we find posters, infographics, photos, drawings, videos, etc), and 1 very sporadic and non-diverse contents (e.g., 1 or 2 photos of protests). For a complete overview of the DiVAC score from each conflict see Appendix B. For a systematic rating, we used the crosstab in Figure 3.3 as a guide.

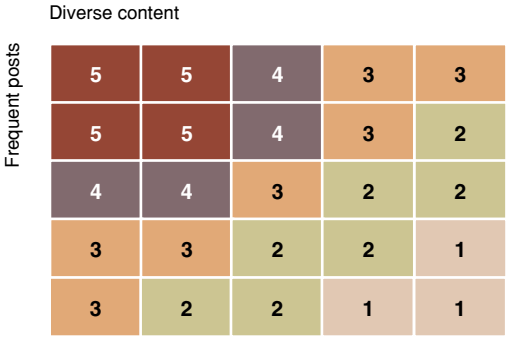


Figure 3.3. Rating guide for the indicator of Digital visual activism contents (DiVAC).

3.3.3. Data organising and analysis

First, a correlation analysis was run to detect any significant correlations between DiVAC and key descriptors of the conflict (regarding strategies, actors, outcomes, and success). The size and the sign of coefficient of statistically significant correlations were taken to detect major pointers in the association between digital presence and characteristics of the conflict.

However, the analysis of such an association mostly relied on a hierarchical cluster analysis of conflict based on their DiVAC, conflict outcomes, perceived success and diversity of the activist strategies to identify distinct groups of conflicts within our dataset. Then each one of these conflict clusters were described, looking at the average mean that the value of the indicators (of DiVAC, and different conflict descriptors) has in each of them.

I must emphasise here that the statistical analysis is just a support to understand relations and organise thoughts after examining data of these conflicts for about one year. This work does not argue in favour of a deterministic response between violence and visual activism based on statistical methods only, taking to account the possible bias of the dataset mentioned above.

Visual discourse analysis

To detect the digital visual strategies in conflicts involving violence (i.e., deaths, criminalisation of activists, repression, displacement), the three most shared contents of the 15 conflicts with higher DiVAC from the cluster that combined high content creation and violent outcomes were downloaded, following a more traditional approximation to the study of social media data based on ethnography, based on the idea that *"ethnography figures as a specific knowledge-producing practice in a data-saturated world"* (Knox & Nafus, 2019:19). The steps of visual analysis proposed by Doerr & Milman, (2013) were followed. They involve 1) Visual content analysis, identifying patterns of recurring visual elements and text with replicable and exhaustive coding categories; 2) Iconographic interpretation, considering the wider historic context of image traditions, forms and aesthetic backgrounds; and 3) Contextualising images in their broader social and political context of emergence, diffusion, and reception. In our case, the third step is meant to detect different functions of digital content creation in face of violence.

To prevent that subjective interpretations of images on the part of the researchers affect the reliability of the findings, text-based methods, and discourse analysis of the texts of the posts created by the activists were also undertaken. The idea was to avoid the isolation of specific instances of the visual and consider the complexity of protest and activist expressions as a whole (Hartle & White, 2022).

3.4. Philippines' environmental conflicts through visual activism

3.4.1. A nuanced vision of the association of visual content creation and the outcomes, strategies, and intensity of the conflicts

Except for one case, all the environmental conflicts registered in the Philippines have some level of social media presence, with a clear skew towards high presence of visual activism contents (Figure 3.4) 35% of the conflicts were at the top-tier of the DiVAC scale, while the lowest level was less than 7%. The only variables of the conflicts that were found to be significantly correlated with the usage of social media activism were: deaths, project suspension and stopped, positive outcomes, and street marches. The findings indicate a connection between the usage of visual media and violent outcomes of the conflict i.a., deaths. However, other factors displayed a weak link that obscures a variety of circumstances, which I elicit by analysing clusters in the following lines. The hierarchical clustering revealed three

distinct groups within visual activism (See Appendix C). Two of these groups have a relatively high DiVAC scores but differ in terms of patterns of intensity and violence, while digital presence is low in the third group. The rest of the section presents three typologies that provide insights into the contexts in which environmental activists in the Philippines employ digital visual content.

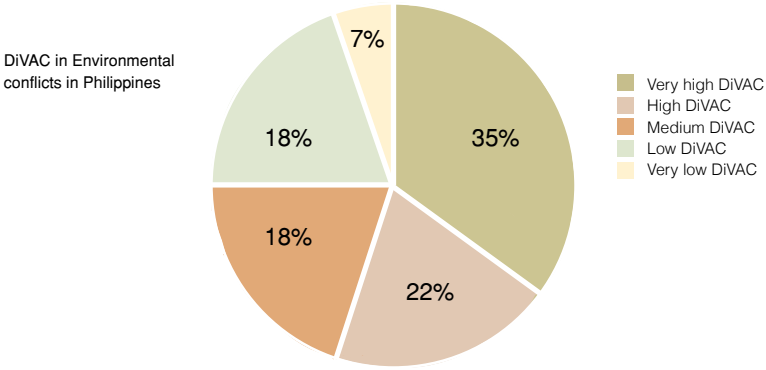


Figure 3.4. Frequency of cases in each level of Digital visual activism contents (DiVAC).

Most violent (and unsuccessful) conflicts have high presence of digital visual content

All 38 cases in this group (Cluster 1) combine high presence in social media through DiVAC and the experience of violent outcomes such as criminalisation, deaths, repression, and violent targeting of activists. Opposition to dams are frequent in this group. As with the opposition to the construction of the Kaliwa-Kanan-Laiban dam and the Ahunan pumped-storage hydroelectric project (EJAtlas, 2015b, 2015a) which has been made visible on Facebook through the dissemination of photographs of street protests, posts that combine drawings with information about the projects and images of recognisable activists and their advocacy messages. Following up on this well-known advocate's case, the *"Kaliwa, Kanan and Laiban Dams Resistance Network"* is tracing the historical links between dam construction in the Philippines and human rights abuses.

In all conflicts in this group, the project has not been suspended, and 92% of the cases are seen as failures for environmental justice. The reasons behind the perception of injustice are clear in conflicts that recall the "massacres", recurrent deadly episodes in peasant struggles against land enclosures, especially linked to sugar plantations: i.e., massacre of Hacienda Luisita in 2004 (EJAtlas, 2022b) Kidapawan massacre in 2016 (EJAtlas, 2021c), Escalante massacre in 1986 (EJAtlas, 2021a), Sagay Massacre in 2018 (EJAtlas, 2021e). The symbolic memory of these events is coined in hashtags invoking fights for land distribution (#freelanddistribution, #landtothetillers), the rice liberation law, and against the persecution of peasants and activists (#stoptheattacks #stopkillingfarmers). In these conflicts, social media activism joins other mobilising strategies, like street protests and networking. The most visible groups in these conflicts are farmers, indigenous peoples, and women. I should note here that as in the Philippines there are so few cases of success, mean that lack of success will be strongly correlated with cases with a lot of violence, but also with cases of little violence.

...But not all the conflicts present in social media are violent.

Cluster 2 packs 25 cases with high DiVAC score (3,68 average) but less violent conflicts in which direct violence towards defenders and activists is rare. The fights for climate justice are a good example, as illustrated in the mobilisations after typhoon Yolanda (EJAtlas, 2021d). Yolanda was one of the strongest tropical cyclones ever recorded, causing 6000 deaths and more than 30000 injured. In this regard, a Facebook group asserted that activities like mining, quarrying, building in protected watershed areas, and building huge dams undermine the natural function

of watersheds, which worsens the effect of typhoons. This information was next to a poster showing pictures of the devastation after the typhoon and requiring *"Declare Climate Emergency Now!"* that was shared 103 times together with the hashtags #rememberYolanda and #NoToImperialistPlunder.

Under this cluster there are also struggles that have so far achieved to stop the extractive projects, such as the case of Ipilan and Macro Asia nickel mines in Brooke's point, in the UNESCO Biosphere Reserve in Palawan, (EJAtlas, 2017a). On May 20th, 2017, the Department of Environment and Natural Resources cancelled the tree-cutting permit of Ipilan Nickel Corp after an inspection of the mine by Environment Secretary Roy Cimatu. Nevertheless, as of 22nd of March 2023, the community has installed a barricade and anti-mining rally to stop the illegal operations of Ipilan Mining Corporation in the area, which has been operating without permits, preventing the community from accessing the mining site (Maghanoy, 2023). This resistance is accompanied by a significant presence on social media platforms through hashtags like #NotoMiningInBeautifulBrooke and #NoToMiningInBrookesPoint #SavePalawanMovement. Various Facebook organisations and groups share posts containing information about the barricade "Barikada ng Bayan", photos documenting on-ground actions, quotes, and videos from different movement supporters. These posts urge followers to share and sign the Save Palawan's Forests Online Bataris Petition (Caralde, 2023).

A conflict similar to the present case involves the Bataan Nuclear Power Plant (BNPP) that was planned to be constructed in the Bataan province in 1976 (EJAtlas, 2020). This conflict is among the five urban environmental conflicts identified in the Philippines. The proposal of the BTPP faced strong opposition from various groups, including The Nuclear Free Philippines Coalition (NFPC), Nuclear-Free Bataan (a sister organisation to Gloria Capitan's Coal-Free Bataan), and No Nukes Philippines. Thanks to their efforts, the plant was prevented from becoming operational. Recently, these groups have become active on Facebook, campaigning against the renewed efforts to revive the power plant in Bataan (GMA News, 2020).

In this cluster a variety of actors, such as farmers, indigenous groups, local EJOSs and local scientists, combine digital activism with many other forms of mobilisation (e.g., report writing, complaint letters, referendums and street protests), in a persistent manner.

Not all violent conflicts are in social media, and some conflicts hit without digital activism

Cluster 3 (22 cases) includes cases with low incidence of digital activism and high frequency of project suspension. A conflict around illegal activities fishing activities is representative of the cluster. The license of a commercial fishing vessel that repeatedly violated fishing laws was revoked for the first time in Philippines history, after a strong mobilisation from fishers and the killing of Sagñay Tuna Fishers Association's secretary, Gerlie Menchie Alpajora (EJAtlas, 2020a). This conflict involved a high diversity of strategies, especially street protests, and the involvement of NGOs and public campaigns. However, digital avenues played a significant role in none of these cases, which kept a low profile in social media channels, despite the extrajudicial violence faced by local Fisher communities.

Nevertheless, there are also cases with violent and negative outcomes, which have low rate of digital activism. This is the case of Taganito Mining Corporation's Nickel Operations (EJAtlas, 2015c), an intense case involving militarisation, repression and numerous deaths. Despite the critical situation, I have not detected a significant amount of online activism criticising or asserting these facts, despite some national-level organisations denouncing Philippine mining act of 1995 (IEA, 1995). This is an example that not all violent cases are highly present in social media. Furthermore, it is worth noting that a few cases (specifically five cases) with low or moderate social media presence have also achieved success. These cases primarily emerged in response to construction projects or during preventive stages.

Figure 3.5. Publication in relation to illegal gold mining and killing of anti-mining indigenous leaders in Mindanao. (ID 1919). *SAKA*, 2019. Courtesy of the author.

Figure 3.6. Publication in relation to sugar workers demand of land distribution in Hacienda Luisita, Tarlac, central Luzon (Conflict ID 5708). *Unyon ng mga Manggagawa sa Agrikultura* 2022. Courtesy of the author.

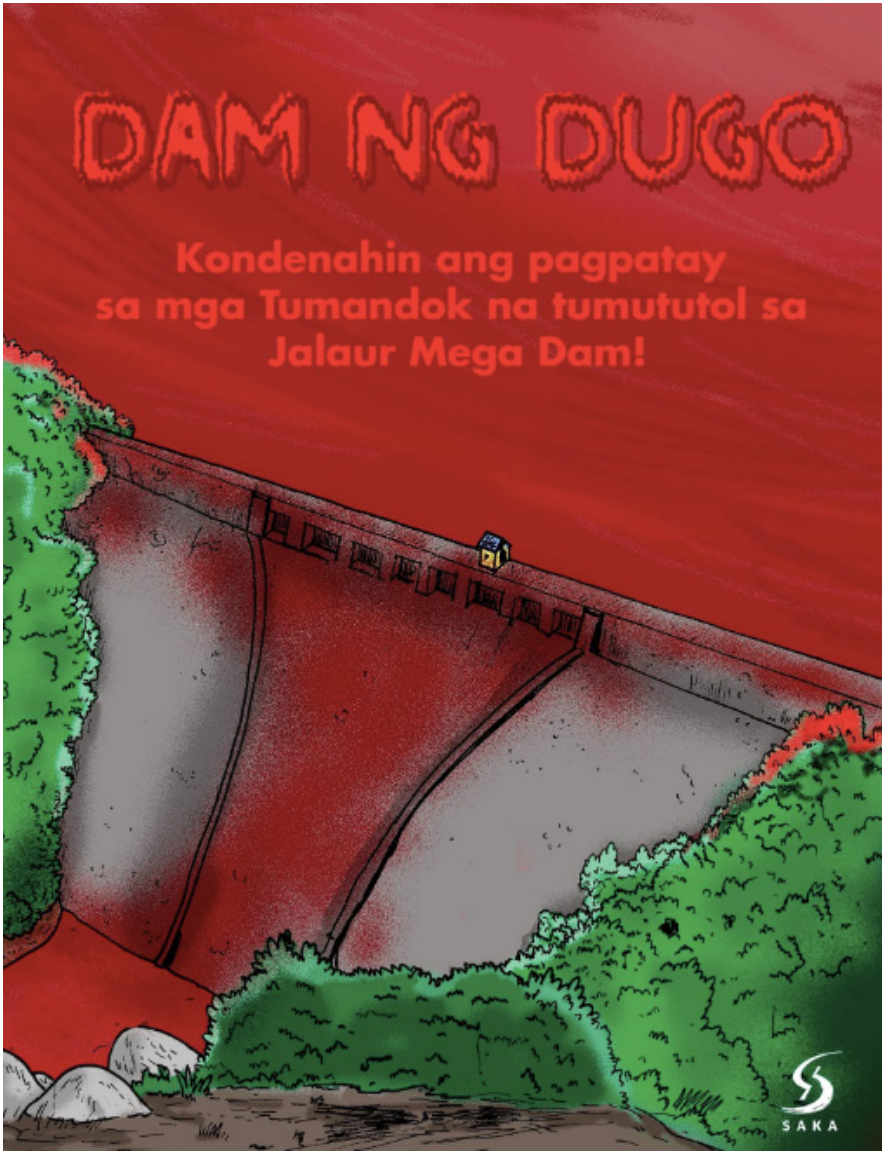


Figure 3.7. Poster in relation to "Jalaur River Multi-Purpose Project (JRMPP) Phase II Dam", Iloilo. (Conflict ID 1988). *SAKA*, 2021. Courtesy of the author.

Figure 3.8. Poster in relation to Mendiola massacre against farmers demanding genuine land reform (conflict ID 5797). *SAKA*, 2021. Courtesy of the author.

Figure 3.9. Publication in relation to "Jalaur River Multi-Purpose Project Phase II Dam", Iloilo. (Conflict ID 1988). *Anakpawis* 2021. Courtesy of the author.

Figure 3.10. Publication in relation "Laiban Dam - New Centennial Water Source Project", Quezon. (Conflict ID 1991). *TFIP* 2018. Courtesy of the author.

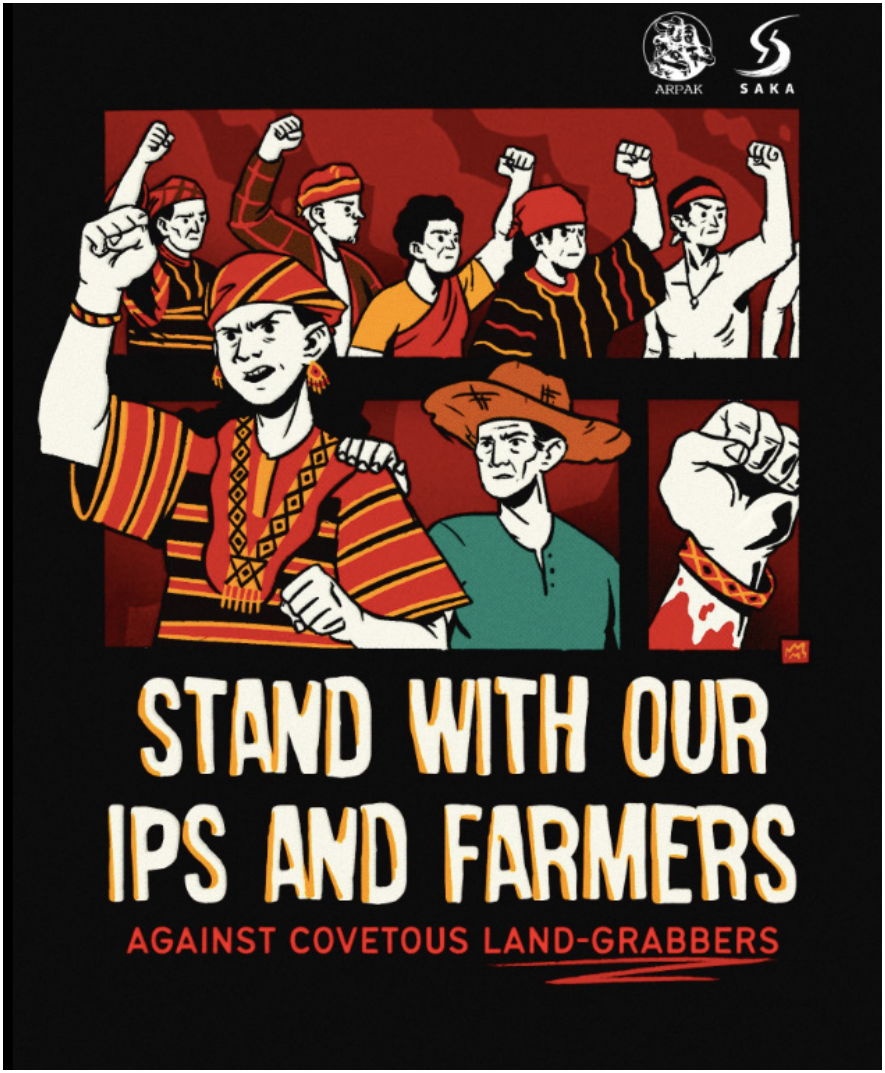


Figure 3.11. Publication in relation to human rights and environmental defenders killed in 2017, Compostela Valley. Conflict ID 3187. *SAKA* 2022. Courtesy of the author.

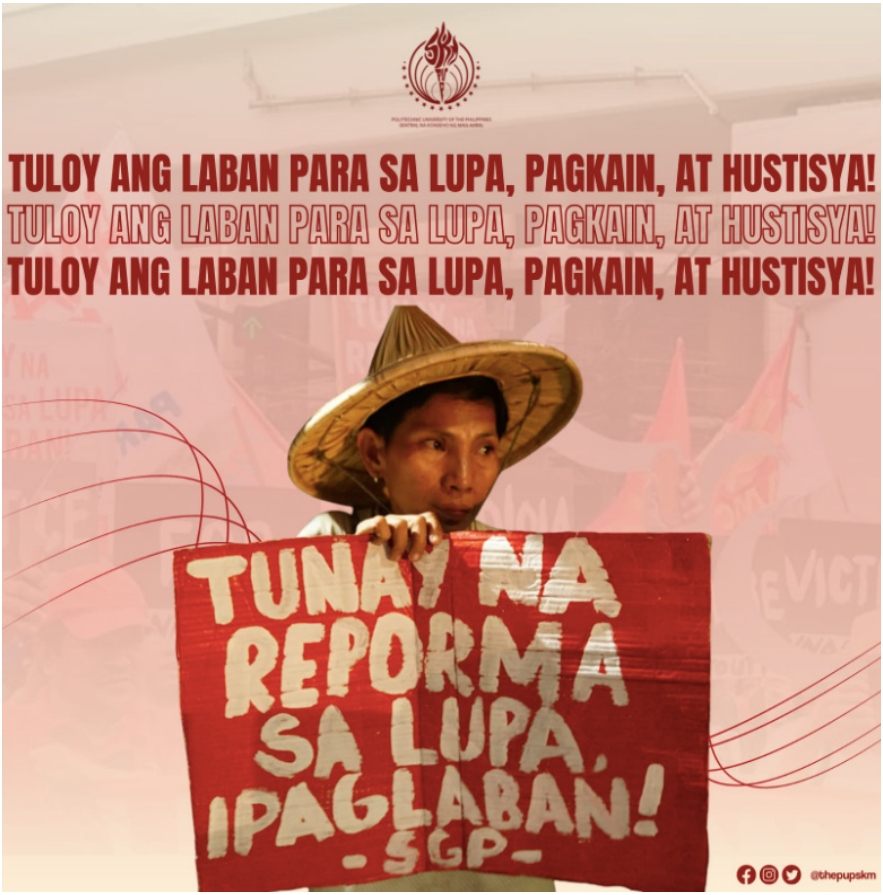


Figure 3.12. Publication in relation to mining and logging operations in Pantaron Range, Talaingod, (Conflict ID 5634). *PUP Central Student Council*, 2022. Courtesy of the author.

Figure 3.13. “323 we will charge Duterte for each one”. *SAKA* 2021. Courtesy of the author.

Figure 3.14. Publication demanding justice for Gloria Capitan, activist against coal stockpiling in in Bataan. (Conflict ID 5128). Philippine Movement for Climate Justice. Courtesy of the author.

Figure 3.15. Publication on Illegal gold mining and killing of anti-mining indigenous leaders (conflict ID1919). SAKA, 2019. Courtesy of the author.

Figure 3.16. Publication on the "Luisita Massacre". (Conflict ID 5708). *Luisita Watch* 2016. Courtesy of the author.

Figure 3.17. In memory of peace activist Felix Randy Malayao, *Concerned artists of the Philippines*, 2019. Courtesy of the author.

3.4.2. Three visual responses of digital activists to violence

This section reports the results of the visual content analysis of 45 materials in the first group of violent digitally-mediated conflicts described above. The analysed images are mostly posters that combine photos with drawings and texts, most of them created by Facebook groups with descriptions like *"Collective Artists for the Agrarian Movement"* or *"Artist of the Cultural Revolution"* or *"Concerned Artists of the Philippines"*. After identifying the most frequent visual elements in the images within this group of violent conflicts, I carried out an iconographic interpretation of those elements and their contexts. Figure 3.18 shows the frequency of certain words and images in the analysed materials (X=45). The most used words were related to affected actors, data on the conflict, action claims, the name or mention of powerful actors, and words related to violence. Regarding images, the most used images were objects linked to peasant identity signs, the red colour and symbols related to protest and images of violence.

Putting these visual elements in context, three distinct visual narratives connect them to particular political aims of the digital activists. Note that the narratives are not mutually exclusive and some pieces portray more than one narrative. Overall, the first narrative (Denounce the violence) is slightly more frequent than the other two (Stand for the environment and its defenders, and Act for justice and memory). Interestingly enough, the last two narratives are more frequently expressed in Tagalog than in English (Figure 3.19).

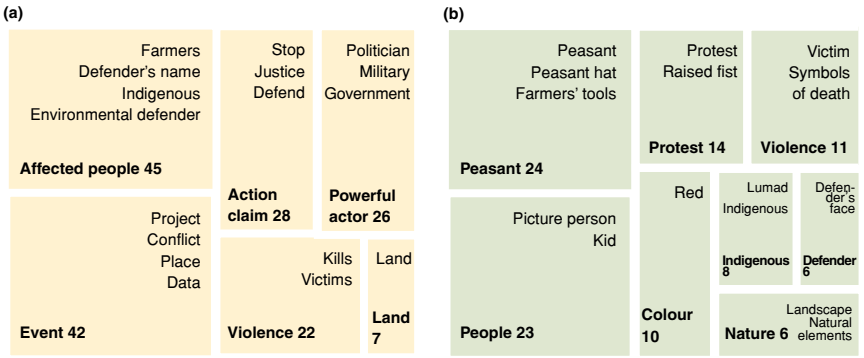


Figure 3.18. Iconographic elements in the analysed visual content: (a) text, (b) images.

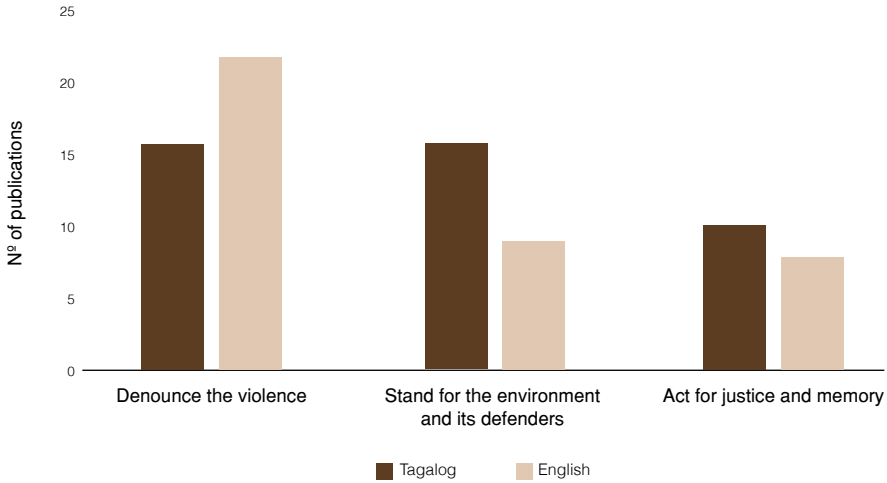


Figure 3.19. Language of the publications related to the three narratives presented in this section (X=45).

Denounce the violence

Given the environmental conflict and political repression the digital activists observe, one of their political aims is to stop the violence by reporting on the situation and denouncing those responsible for it. Visual contents within this narrative portray people and landscapes receiving impacts (Figure 3.7) and the forces behind those impacts. Images of farmers and indigenous people are presented together with the name of the political actor that is blamed for the impact, combined with words and images that depict violence (Figure 3.8), accompanied by words of urgency (e.g., “alert”) written mostly in English (Figure 3.5). The red colour, often associated to leftist or revolutionary movements, is used frequently to challenge the governmental institutions.

In contrast, portraits of government actors and politicians appear in images that refer to evil elements, associating politicians to symbols of money or war (Figure 3.8). This narrative challenges the notion of a democratic government guided by the common good. Instead, corruption and economic interest that motivate “projects of development” are presented vis-a-vis the militarisation and violence against peasants and indigenous people that the projects cause. The narrative exposes the historical and systemic discrimination of peasant and indigenous communities (Figure 3.6), who suffer both the impacts of the projects and the persecution after opposing them. Hashtags that encapsulate mottos within this narrative are #stopkillingfarmers and #StopTheAttacks (Figure 3.5).

Stand for the environment and its defenders

The political aim of this narrative is to show the strength and the resistance of populations defending their environments and to seek broader support for these movements. Posters, mostly written in Tagalog (Figure 3.9; Figure 3.13; Figure 3.15) include drawings or photos depicting protests and banners. The people holding banners, often peasants and indigenous people, present demands of the movement, such as “land distribution” and “Indigenous People’s rights”. The banners also pursue empowerment for a collective identity, with messages that include words like “defend” and “stand” (Figure 3.11).

The common use of images of landscape and environmental elements like rivers demonstrates the link between these resistance movements, their identities, and their territories (Figure 3.9; Figure 3.10). Symbolic icons like the sickle and the raised fist evoke the international historical struggle of peasant revolutions (Pomeroy, 1977) (Figure 3.10; Figure 3.11). The raised fist is a global symbol of fighting oppression, and a persistent symbol of resistance and unity. The sickle is used to represent the proletarian solidarity, a union between agricultural and industrial workers, normally used with the hammer. In the analysed images, this tool was handed by raised hand, recalling the idea of a raised fist. Thus, the notion of strength conveyed in this narrative is aware of a vision of resistance that also involves the use of force. Rather than a force through violent means, this narrative appeals to the strength of collective action and solidarity networks. Is worth noting that lots of this post may not denounce a concrete project but consist more in a praise of the peasant presence and power against institutional violence perpetuated by laws related to fisheries or land distribution.

Act for justice and memory

A great number of posts include drawings with face portraits with captions mostly in Tagalog (Figure 3.14; Figure 3.16) where the name of the person appears together with the word “hustisya” or “katarungan” (justice). These are portraits of the victims of violence and martyrs of the environmental defence. Some posts show several names and numbers, referring to some type of counting of peasants, indigenous, environmental defenders who died under Duterte’s government, in connection to mining, fossil fuels or dam projects (e.g., Gloria Capitan from the Climate Justice Movement) (Figure 3.14) but also agrarian reform activist like Randy Echanis or human rights and peace activists accused of terrorism (e.g., Randy Felix Malayao (Figure 3.17) and Elisa Badayos). Some visual content represents bodies lying on the floor, especially those related to the so-call massacres that are commemorated every year. The images of this defenders serve to oppose ongoing projects like

the Ipilan Nickel mine in Palawan (Figure 3.13) and laws related to red-tagging, By acknowledging and honoring the past and the harm that has been inflicted on marginalised communities.

These materials portray farming tools, or other elements associated with the peasantry like the peasant hat, or traditional clothes (Figure 3.12; Figure 3.15). Such elements are placed at the centre of the image defying the idea of these assaulted identities are "underdeveloped" or undeserving in any respect. Thus, the narrative humanises the subjects of violence, putting a face to the name of at least 323 (Figure 3.13) peasants and environmental defenders allegedly murdered since Duterte's presidency. This memory is not a trivial matter. Mainstream media not only contributes to making this violence invisible by underrepresenting the attacks against environmental defenders but also by portraying defenders as terrorists or demonic figures sometimes. The symbolic representation of the candle refers to ideas of death and sacredness and it is widely used in martyrs' memorials. By words like "remember" and "justice", these images call to amplify the voices of the victims and validate their struggles. Furthermore, they inspire action to hold those accountable for the harm inflicted and to honour the memory of those lost to environmental violence.

3.5. Visibility and visuality of environmental grassroots movements in the digital age

More than eighty environmental struggles in the Philippines, affecting to numerous communities such as rural communities, indigenous peoples, and fishers, are all depicted in social media. The findings of this study highlight that users and creators who engage in social media reacting to environmental violence adopt a variety of visual activisms. The results emphasise the significance of visibility and visuality within visual activism practices, affirming the importance of ideological struggles for visibility and the affective power of visuality (Callahan, 2020a) for movements combating environmental violence in the Philippines.

My results corroborate the presence of environmental struggles in social media, suggesting that the politics of visibility, defined as *"the virtual embodiment of individuals and groups and their meanings"* (Milan, 2015:59), is part of the realm of environmental struggles in the Philippines, especially concerning the recognition of violence against environmental defenders. Political ecology studies have long revealed that behind the unjust ecological distribution is a lack of recognition of subaltern identities, territorial rights, ways of life, and ways of doing by extractive models (Martinez-Alier, 2002; Nygren et al., 2022; Svampa, 2013). In the Philippines,

this issue is further exacerbated by discursive violence that perpetuates prejudice and racialisation of peasant and indigenous communities (Dressler & Smith, 2022) and the political demonisation of environmental defenders (Batac, 2020).

In her work, bell hooks emphasises the significance of the visual, as she argues that visual representation is *"a crucial location of struggle for any exploited and oppressed people"* (bell hooks, 2016:3). In my research I provide evidence on the central role of visual activism in asserting subjectivity and challenging dominant narratives. Visual activism serves as a means to confront the lack of representation and visibility that underlies extractive projects. Notably, the use of social media for visual activism differs from traditional mediums such as local newspapers, radios, and posters, as it allows for a broader dissemination (Soriano, 2016).

Furthermore, the present chapter provides evidence of three different visual responses to confront environmental violence. This findings emphasise the importance of visuality, defined as the ability of visual images to evoke shared affective experiences among communities (Callahan, 2020a), to promote actions such as 1) denouncing the violence, 2) advocating for the environment and its defenders and 3) pursuing justice and remembrance. Demos (2016a) defines "visual activism" as politically motivated practices of visuality aimed at instigating social, political, and economic transformation. Visuals and arts play a crucial role within a broader framework of political activities and strategies, emphasising the importance of aesthetics, poetics, and affects in shaping new forms of emancipatory politics.

Peasant and local narratives shape collective identity and mobilise people to social action (Elias, 1994; Nogué & Vicente, 2004; Routledge & Simons, 1995). In fact, peasant place-based narratives in Negros Island serve to maintain a collective oppositional identity linked to sugar plantations (Diprose & Mcgregor, 2009). However, the role of social media and arts violent environmental struggles has been largely overlooked in environmental and peasant studies. Through this research, the importance of the visual in Philippines' rural, indigenous, and human rights issues is demonstrated, as it aligns with particular political purposes. Thus, visual activism in social media opens a space of contestation and claiming a collective identity, especially relevant in contexts of high violence and lack of representation. It is therefore crucial to integrate visuals, thematically and methodologically, in our efforts to understand and address environmental conflicts today.

3.5.1. Violent outcomes and digital content creation

Numerous studies address violence related to the environment (Dressler & Guieb, 2015; Navas et al., 2018; Peluso & Watts, 2001) and violence towards environmental defenders (Delina, 2020; Dressler 2021a, 2021b Dressler & Smith, 2022; Le Billon & Lujala, 2020; Scheidel et al., 2020; Tran, 2023). Yet the environmental literature has somehow neglected the mutually constitutive nature of artistic and political movements (Demos, 2020b; Reed, 2005). This is critical to understand the scaling of social media contents in a context of violent conflict.

Existing studies tend to focus on the drivers of violence and the strategies driving to successful mobilisation of environmental defenders. For instance, Scheidel (2020) finds media activism in 40% of the most successful mobilisations. Our results supplement this approach by signaling a distinct strategic role of media activism in either successful mobilisations or unsuccessful mobilisations. As shown above, when conflicts get more violent on the ground and activist are violently persecuted, social media does not remain silent, regardless of the level of success. Studies on violence and visibility demonstrate that violent events receive media coverage in mainstream outlets like newspapers (Mingorría, 2018). In addition, our analysis of the visual contents finds an increase in digital visual activism in solidarity with the victims of violence, and a call to action, linked to the visual narratives (i.e., denunciation, defence, justice). In other words, rather than being just a strategy towards successful outcomes, engaged social media would voice critical responses to events of direct violence in environmental conflicts. The value of this "reactive strategy" is particularly apparent when social media is used as a means for aesthetic creation, visibility, and mobilisation. Responses to environmental violence through visual activism reminds us to Achille Mbembe's (Mbembe, 2016:54) claims of the importance of not only languages of resistance but also *"languages of opposition, languages of confrontation and protagonism".*

Nevertheless, our results show that not all the violent conflicts are present in social media (Cluster 3). This result remits us to think about notions of repression in social media, concretely through surveillance, since visibility also *"discloses relationships and makes a movement transparent to its opponents, facilitating surveillance and repression'* (Milan, 2015:62). While social media can be an emancipatory tool, it can also contribute to structures of oppression (Beban et al. 2019). The concern about Internet surveillance is rising in the Philippines, as evidenced by the concern expressed in response to the last law on SIM Card Registration Act and its possibilities for data breaches, red-tagging and other privacy risks (Madarang, 2022). Since this is a more general concern, some studies have already examined social media

mobilisation strategies to frustrate potential surveillance. For example, Hristova's (2022) analysis on The Dakota Pipeline movement explored how Facebook users 'checked into' Standing Rock to show their solidarity with the Native American opposition of the North Dakota Access Pipeline, thus hindering online surveillance. Our results show that, in the case of the Philippines, visual activism contents are mostly made by Facebook pages that do not individualise the content creation, and supporters or activists share the post in allowing a more fluid and open sociality that obscures the legibility of surveillance.

3.5.2. Visual narratives in face of environmental violence

In the Philippines, social media has become a political arena that has favoured governmental discourses. Indeed, extractivism is not only sustained by material processes of dispossession but are also by narratives, structural and discursive violence that insert the extractive logics in the public discourses (Dressler & Guieb, 2015) being and social media a major tool for the reproduction of extractive narratives (Demos, 2020a). This is in line with notions of narrative violence that silence stories and narratives of injustice related to extractivism (Barca, 2014). Against these forces, our results show efforts to make digital activism a vehicle of indigenous' and human rights' claims and narratives, that point to three different calls for action:

1. Denounce the violence.
2. Stand for the environment and its defenders.
3. Act for justice and memory.

Several contents portray the president, the name of the companies, the impacts of the industries. This visual strategy exposes the perpetrators of environmental violence, helping to generate a discourse that links the political persecution of human rights and environmental defenders with the environmental impacts and extractive projects perpetuated by the government. My results show that social media is for environmental and human rights defenders in the Philippines an archive that denounces the impacts of extractive projects but also contributes to shift the attention from victims to perpetrators of state violence. With this I contribute to the literature on discursive and epistemic violence linked to environmental conflicts by pointing to the emancipatory possibilities of Facebook (like YouTube or Vimeo), as spaces where critiques of mainstream media are raised (Liosi, 2022), but also as a space for delegitimising liberal electoral politics. Serafini points to expositions of photos pointing to human rights violations during the dictatorship as *"documents of a crisis that is not being properly recorded by the relevant authorities"* (2022:125).

The faces and images of peasants, indigenous peoples and defenders that I found in my analysis call for empowerment and stand for a collective identity related to peasanty, indigeneity, and the defence of the environment. Many of the murdered environmental defenders listed in the reports by Global Witness are represented in street murals, posters, songs. As my study reveals, this content has also found its way onto social media platforms. Showing online the portraits of environmental defenders reinforces their status as martyrs or heroes of environment cause. This connects with international initiatives around the celebration (See Goldman Prize) and protection (See Global Witness) of the environmental defender, praising their individual struggle (Scheidel et al., 2020).

My results show that the recirculation of art activisms not only contributes to preserve an iconic memory, but also provides support for collective struggles. This support also works historically or retrospectively, connecting past and present struggles. For instance, images that commemorate past peasant massacres (Figure 3.16) are used to advocate for land distribution in the present. However, it is important to note that social memory and social media can also pose risks. An example of this is the recent cyber tag accusations against activist Sarah “besting” Dekdeken, triggered by her social media comment regarding the dismantling of the memorial to the heroes (Cabreza, 2022) of the Chico Dam struggle in Tinglayan, Kalinga (EJAtlas, 2021b). These incidents highlight the potential dangers associated with social memory and online platforms.

The appearance of portraits of environmental defenders serves to make visible and represent hundreds of activist fighting for their land and life, contributing thus to their persistence, such as BoyD’s paintings on Filipin@ peasants and Indigenous peoples (Iles, 2022). It can be argued that even though content creation and sharing in the face of extreme danger may appear decentralised and individualised, they can still disrupt the system due to the affective power associated with the images and their ability to create new ways of seeing, feeling, and acting (Callahan, 2020b). While art activism may not lead to immediate and sweeping changes, it can contribute to a broader movement towards systemic change.

3.6. Towards a disarticulation of environmental violence through visual activism

Philippines is a prime example of the violent implications of the global expansion of the extraction frontiers on the lives of those who defend the land and their livelihoods. This study has traced how social media and visual activism respond, in terms of presence and in terms of content, to a context of violent environmental conflict because of land dispossession and repression to subaltern identities like peasants, indigenous peoples, and environmental defenders.

Our empirical evidence relies on social media visual contents related to eighty-eight cases of environmental conflict in the Philippines, the "most internet addicted country". Filling an important research gap in the study of environmental conflicts and peasant studies, I have profiled three distinct combinations of types of conflicts –regarding, e.g., violent outcomes and diversity of activist strategies– and levels of digital visual activism. While not all violent conflicts are in social media, most conflicts have high digital content creation as a response to a context of political repression. Discussing these results vis-à-vis other studies about the repertoires of contention in violent environmental conflicts, it has been possible to highlight the significance of reactive visual strategies in the face of environmental violence.

Environmental visual claims make social media a space of contestation, of denunciation and documentation. These claims are conveyed through particular narratives that our work has disclosed: 1) Denounce the violence, 2) Stand for the environment and its defenders, 3) Act for justice and memory. Social media has proven, through this analysis, to be a place to voice environmental claims through visual activism.

In the age of social media notions of identity and recognition of environmental movements and frontline communities blurs with notions of visibility and visuality, and therefore it is crucial to integrate them into our efforts to understand and address environmental conflicts today. Digital visual activism is an emancipatory tool for subaltern identities suffering environmental violence, in a moment and space where mainstream and social media is rising extractivist notions of the environment and a discourse of hate towards those opposing that model. This chapter addresses the area of peasant studies in a novel way, applying knowledges from other literature to build a bridge and spark a dialogue with the literature on visual politics and social media. In this chapter, I probe how applied visual methods can increase the outcome of environmental conflicts research. I show how visual and digital activities generate visibility, remembrance, and denunciation, contributing therefore to disarticulating violence and power structures in the face of contexts of invisibility, repression, and dispossession, that sustain extractivism and environmental violence and the persecution towards environmental defenders.

Chapter 4.

Does art activism change anything?

Strategic and transformative effects of arts in anti-coal struggles in Oakland, CA

The role of the artist is to make
the revolution irresistible.

Toni Cade Bambara

4. Does art activism change anything? Strategic and transformative effects of arts in anti-coal struggles in Oakland, CA[5]

Recent projects to develop export terminals for fossil fuels along the West Coast of North America face increasing opposition (Hazboun, 2019). Besides the implications for climate change, activists denounce the danger that transporting, storing, handling and shipping fossil fuels poses for neighbouring communities (Allen et al., 2017; Boudet & Hazboun, 2019). The transformative discourse opposing fossil fuels connects environment and climate impacts with social justice issues (Croeser, 2017). These movements' ultimate aim is not only to avoid the construction of projects that aggravate climate change (UNFCC, 2015), but also to trigger socio-environmental change to solve the crises impacting local communities (Warlenius, 2018).

Three out of four environmental hazards in the US are placed in poor and marginalised communities (Schlosberg & Collins, 2014). Race plays a prominent role in exposure and response to environmental risks in the US (Bravo et al., 2016; Bullard & Wright, 2018). Aware of the power relationships behind global ecological, political and economic dynamics (Martinez-Alier, 2002; Nixon, 2011), the environmental justice and climate justice movements see the need to foster imaginative routes towards alternative socio-environmental relationships (Wapner & Elver, 2016).

Environmental humanities have long pointed towards cultural change as the way to tackle environmental problems (Carson, 1962). The transformative power of art relies on its capacity to spark cultural, cognitive and psychological changes (Bell & Desai, 2011; Bleiker, 2018; Danchev, 2009). Resistance movements and environmental activists use artistic expressions to educate (Blanc & Benish, 2017), engage community in participation in decision making (Bianchi, 2018; Brewington & Hall, 2018), and strengthen community identity (Vidianu et al., 2014). Moreover, artistic and creative expressions are important for younger cohorts (della Porta, 2013b) whose voices are currently leading climate justice protests on a global scale (Carrington, 2019; Martínez García, 2020).

[5]A version of this chapter was published in Geoforum as: Sanz, T., & Rodríguez-Labajos, B. (2021). Does artistic activism change everything? Strategic and transformative effects of arts in anti-coal struggles in Oakland, CA. https://doi.org/10.1016/j.geoforum.2021.03.010. Parts of the results in this chapter were presented in the ICTA2020 Conference on Low-Carbon Lifestyle Changes.

Yet the academic literature comes short in bringing these theoretical perspectives to the ground level. Some studies have addressed the uses of art in social movements (Adams, 2001; Eyerman & Jamison, 1998; Mahon, 2000; Ogaga, 2011) and, to a lesser extent, in environmental movements (Sommer & Klöckner, 2019; Ogaga, 2011; Williams et al., 2010). Nevertheless, the theoretical question remains as to how art activism and campaigning strategies work together to achieve maximum impact and, more broadly, what role art really plays in environmental conflicts.

This chapter addresses this gap by analyzing how art activism is used in an emblematic fossil fuel resistance movement in Oakland, CA, where a coalition of movements for environmental, climate and social justice has resisted a coal export terminal since 2015 (Arnold, 2015). I systematise the effects of the artworks used by different activists and artists referring to the coal terminal and trace the concrete changes and anti-coal strategies linked to the transformative power of art based on interviewed activists' perception of impact. The research is thus guided by two questions:

Q1. How is the use of the arts linked to the strategies of the movement against coal exports?

Q2. Which transformations and achievements of the anti-coal movement do activists recognise as relatted to the use of art?

Overall, the chapter seeks to contribute to the geographical aspects of the environmental justice literature (Kim et al., 2018; Raddatz & Mennis, 2013) by systematising situated knowledge about art activism against a potentially damaging project and determining the local effect of arts in anti- coal movements. In this respect, the research acknowledges environmental conflicts as a source of knowledge about socio-spatial relations (Moore et al., 2017). I use an interdisciplinary environmental humanities lens, discussing to what extent art triggers socio-ecological change, including spatial transformation, when used by mobilised communities. The opposition to coal exports in Oakland, which has not been analysed yet by the scholarly literature, is an example of the fossil-fuel export debate in western North America. Thus the study adds to the new geographies of coal (Cardoso & Turhan, 2018) by positioning the vision and arguments of local opponents to coal exports in northern countries.

The remainder of this chapter is divided into four sections and a conclusion. The next section offers a literature review about art in environmental and social movements and the state of the coal industry in United States. The third section details the research methods. The fourth section presents a brief history of the

use of arts in the movement 'No coal in Oakland', and an analysis of the relation of artistic expressions with associated effects, strategies and transformations. These results are discussed in the fifth section, centered on the contribution of anti-coal art activism in community-based strategies and the types of transformation art triggered. The final section concludes.

4.1. Art activism in socio-environmental movements: contributions and gaps

Against the notion of an art divorced from morality and function, art activism engaged deeply in politics and social change (Weibel, 2014). Early in the 20th century, for instance, the Dadaist movement aligned with politics and protests of social movements, rejecting at the same time the formalised artistic definitions of their contemporaries. In doing so, new forms of art-making and protesting generated new artistic expressions (Grindon, 2011). Since the beginning of modern environmentalism, art has served as a catalyst of inspiration for green politics (Blanc & Benish, 2017). The tree-planting artwork *"7000 Oaks"* by the German Joseph Beuys, 1982, had an impact in cities around the world and across generations (Adams, 1992). Today the number of artists working on ecology and sustainability is such that there is an annual dedicated prize to visual arts and sustainability, the COAL Art and Environment Prize (Coal, 2020).

My topic of interest, coal exploitation and trade has attracted the interest of engaged artists in the past (Blanc & Benish, 2017; Thesing, 2000), and especially after the 2015 United Nations Climate Change Conference (COP21) in Paris (UNFCC, 2015). In the Appalachians, the best-known coal territory in the US (Shapiro, 1993), music helps to express emotions and opinions about ongoing social injustice, labor struggles, and claims to promote new identities after coal (Jenkins, 2010). The poster 'The True Cost of Coal', by the art-activist collective Beehive Design, became an educational and organisational tool for grassroots organisations in Appalachia against coal extraction and burning (Blanc & Benish, 2017). Similarly, theatre and performing arts served to produce and exchange of evidence for public health policies in coal mining towns (Byrne et al., 2018).

Overall, researchers recognise the role of art in promoting sustainability, for instance, by communicating climate change (O'Neill & Smith, 2014), captivating the general public (Blasch & Turner, 2016), and inspiring awareness and personal action about climate change (Anderson, 2018; Kim Sommer & Andreas Klöckner, 2019). Participatory art has sought to engage with a community's environmental

knowledge (Sacco et al., 2019; Williams et al., 2010). Additionally, some hail art as an act of resistance to '*redress historically silenced narratives*' (Ogaga, 2011:98).

Therefore, it is not surprising that environmental humanities confer to the arts the capacity to trigger the cultural change needed to deal with the socio-environmental crisis (Iovino, 2019; Robin, 2018). Nevertheless, the environmental justice literature has done little to connect, empirically and theoretically, actual processes of resistance movements towards socio-environmental change with the use of the arts.

Environmental conflicts are social conflicts that manifest through social mobilisations in response to projects perceived like environmental threats like water, air, soil pollution, environmental and health risks and impacts (Conde, 2014; Rodríguez-Labajos & Martinez-Alier, 2015; Scheidel et al., 2020). Race and ethnic identities explain distributive injustices over the location of environmental hazards (Agyeman et al., 2016; Pulido, 2017). Movements for environmental justice made such a connection apparent, e.g., in the struggle against waste dumping in North Carolina in 1982 (Bullard, 1994). A common goal of such mobilisations is the material and political dissolution of projects perceived as socially and environmentally adverse (Martinez-Alier, 2002; Nixon, 2011).

Just as any project goes through stages, the strategies of a movement opposing a project are also diverse and evolving. That is, both conflicts and community mobilisation go through different phases, in which the strategies of the environmental activists differ considerably, involving, e.g, engagement, networking, or education (Hess & Satcher, 2019; Porto et al., 2018; Scheidel & Schaffartzik, 2019; Tormos-Aponte & García-López, 2018). The strategic ways in which art is used by environmental justice activists in their campaigns along these different phases is not fully understood. In particular, the overall strategies of anti-coal movements have never been studied vis-à-vis their use of the arts.

The theoretical interest of this enquiry transcends the concrete aim of ending a project to prevent the material effects of environmentally destructive activities. Environmental problems cannot be solved without a transformative approach towards "*restructuring of dominant social relations and institutional arrangements*" (Temper et al., 2018: 753), since gender, class, and ethnic identities explain distributive injustices over the location and impacts of environmental hazards. The creation of counter-narratives (Bell & Desai, 2011), strengthening of collective identity and knowledge (Temper et al., 2018), and promoting recognition and participation (della Porta, 2013a; Schlosberg, 2013) have a potential for socio-cultural transformations towards sustainability in the context of environmental conflicts. Following prefiguration politics (Maeckelbergh, 2011), environmental justice movements reflect in their daily life the world they want to create by

embodying in their resistance practices the principles they advocate (Grosse, 2019; Rodríguez-Labajos et al., 2019).

Arts have been used to challenge the status quo and imagine new realities (Anderson, 2018; Bell & Desai, 2011; Bleiker, 2018). From this perspective, artistic practices stir togetherness and solidarity (Mahon, 2000), communicate opinions to the larger society (Eyerman & Jamison,1998) and raise political awareness (Adams, 2001; Eyerman & Jamison, 1998). Furthermore, artistic practice has moved people to act politically and change the ways of thinking and understanding the world (Ryan, 2015).

Despite the valuable contribution of the transformative potential of arts, there is lack of clarity about what type of transformation should we expect from the use of arts in sustainability, when, where, and how the transformation occurs and who is affected by it. These points constitute building blocks of a novel understanding of the links between art use and environmental conflicts.

I will advance such an understanding building on three angles of transformations in the environmental justice: a) Material transformations associated with the end of an environmentally and socially hazardous project (Martinez-Alier, 2002; Nixon, 2011); b) Political transformations encompassing regulatory changes, participation in decision making processes, and gaining support from powerful actors (della Porta, 2013a; Hess & Satcher, 2019); c) Socio-cultural transformations emerging from interactions between individuals, identity, values and knowledge (Rodríguez-Labajos et al., 2019; Temper et al., 2018). Thus, the contribution to the geographical aspects of the environmental justice literature highlighted above lead us identify concrete changes across these categories linked to the transformative power of art in the analysed case.

4.2. Opposition to coal exports within the anti-coal movements in United States

Coal was and still is the fuel of global economic growth (Böll Stiftung, 2015). The US has biggest reserves of coal and is one of the world's largest exporters, exporting 8.3% of global production in 2018 (EIA, 2019a). Falling natural gas prices, declines in the costs of wind and solar energy and, to a lesser extent, environmental regulations have reduced coal's popularity (EIA, 2018a). As a result, US coal demand has fallen by more than one-third since peak production in 2008 (EIA, 2019b).

Meanwhile, activists in the US oppose coal denouncing the danger this industry imposes on communities, and the contribution to climate change from transporting, storing, handling and shipping fossil fuels (Eshelman, 2010). The climate justice and environmental justice movements are particularly concerned (de Place, 2018; Grunwald, 2015).

Still, researchers in cultural politics have discussed the persistent economic and political power of the fossil fuel industry (Brown & Spiegel, 2019; Geels, 2014). President Donald Trump challenged the 2015 Paris Agreements, repealing low-carbon transition policies with the slogan: 'Trump Digs Coal' (Walters, 2018). The end of the alleged 'War on Coal' meant overturning existing regulations regarding carbon emissions and attempting to revive the coal mining (Wang et al., 2019).

In a context of declining coal extraction and coal-mining employment, the industry survives thanks to international markets (Dlouhy, 2018). Coal exports increased since 2016 (EIA, 2018b), driven by the demand of countries like China and India whose industries rely on coal-based energy (Clemente, 2018; Geels, 2014). This is in the origin of proposals to build coal and other fossilfuels exports terminals –especially in military bases or other federal properties– on the West Coast (Brown, 2018).

Utah mines have gained increasing attention after their recent interest in coal exportation through West Coast (Yardley, 2015). Coal producer Wolverine Fuels (formerly known as Bowie Resource Partners) saw the Port of Oakland as an option to expand mining operations (Loftus-Farren, 2015). The project evolved towards the combination of a railway and a coal shipping terminal in the Port of Oakland. In 2011 they joined forces with a local developer in charge of the company 'Oakland Bulk and Oversized Terminal LLC (OBOT)', created to redevelop the former Oakland Army Base (OBOT, 2019).

Oakland is a major West Coast port city in California, with 429,082 habitants in 2018 (Oakland City, 2019). As the industrial and trade center of the San Francisco Bay Area, Oakland has a high concentration of pollutant sources, which configures a territory of environmental injustice (Fisher et al., 2006; McClintock, 2015; Rhomberg, 2004). East Oakland and West Oakland are the most exposed neighbourhoods to environmental hazards, which affect a majority of African American, Southeast Asian, and Latino populations with a high concentrations of poverty (Garzón et al., 2013).

The US Environmental Protection Agency (US EPA) situates Oakland at the core of the country's environmental justice movement. Since 1999, community

organisations pursuing environmental justice have succeeded in shutting down an incinerator (Hamburg, 1998) and a yeast plant (DeFao, 2002), and in pushing for the management of toxic soils (Counts, 1999). This background proved the community's capacity to fight effectively against polluting industries. The Port of Oakland remains at the center of anti-pollution struggles, specially from sea shipping and the carrying of diesel trucks (Hamilton & Wentworth, 2016).

Unsurprisingly, the threat of a new polluting project faced the resistance of activists and residents. An opposition movement gained support from the city council, worker unions, and diverse social movements. So far, they have stopped the exportation of coal from Oakland (Arnold, 2015; Express, 2018). Despite the interest of this movement in terms of the strategies used and how they are leading their path towards social environmental justice, the case has not been analysed yet by the scientific literature.

4.3. Materials and Methods

This research follows a mixed-methods approach guided by the two research questions (Q1, Q2) presented in the introduction. My conceptual map (Figure 4.1) connects notions from environmental justice, social movements and transformations inspired by the background literature review. Appendix E includes a definition and elaboration of each key concept.

The compilation of background data started by reviewing regional press, relevant social media posts, and webpages of activist groups. In this period, I contacted potential interviewees by email and a snowball sampling followed. In April and May 2019, semi-structured interviews were conducted of a total of 32 artists, activists and legal actors from different organisations involved in the anti-coal movement in Oakland. As part of the primary data collection, interviewees were asked to describe the movement and associated artistic expressions, and to relate their experiences and perspectives about any socio-environmental transformation since their involvement started. The research did not impose any given definition of art and I accepted as such anything that informants perceived to be art. The artworks mentioned during the interviews were recorded with the title provided by the informants.

Interviews were coded using MAXQDA, a software for analysis of qualitative data. The codebook emerged from the analysis of the interviews, although the grouping categories were informed by the background literature review (see codebook as Figure A.1. in Appendix E). Among the informants, 18 were artists (who consider

themselves to be also activists) and 14 non-artists; 10 informants (31% of the sample) were children, 9 (28% of the sample) were between 18 and 60 years old, and 13 (40% of the sample) were older than 60; 18 (56%) women, 12 (37%) men and 2 (6%) non-binary. The sample represents the demographics (age, gender, race) of the movement. The high percentages of women, retired people and under-age reflect their importance in organising and leadership. The analysis had into consideration possible differences in the use of artistic expressions according to age and gender.

Direct observation also contributed to primary data collection in two ways: by inspecting and mapping the places where the conflict and artistic expressions occurred, and by complementing the interview data. Supplementary non-participant and (occasionally) participant observation included the attendance to events and activities organised by the movement during the fieldwork period (see Appendix D for a list of attended events). This helped refining the interview design, collecting background information of the movement, contrasted later in the interviews, and expanding the network of contacts.

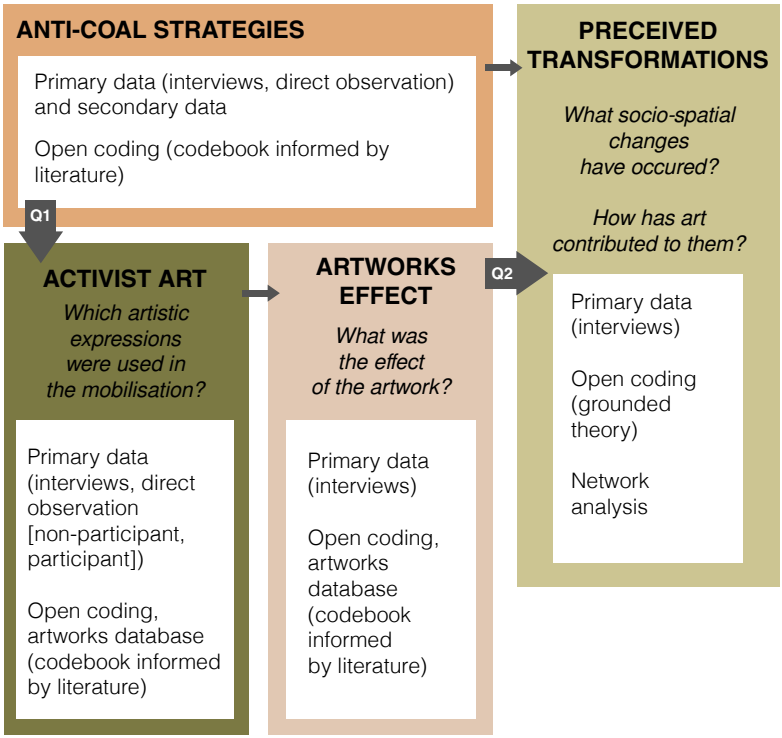


Figure 4.1. Concept map of the chapter, connecting key concepts, research questions (Q1, Q2), and data collection and organisation methods.

Based on the compiled data, a detailed timeline, a map, and network representations of relevant concepts were developed using different analytical tools (ArcGIS, Excel, Gephi). Summarising, the timeline was built from secondary data collection, non-participant observation and a form with a timeline completed during interviews. The timeline was the base for the chronological description of relevant events, as well as the timing of strategies, artworks and transformations mentioned by the informants (Figure 4.3). The map was built from direct observation and interviews. It served to connect the artworks with the place and discuss their spatial impact (Figure 4.8). The networks of concepts resulted from the codification of the data obtained in the interviews. Network analysis allowed data visualisation and the representation of the frequency and co-occurrence of codes in the interviews. The codes categories used for network analysis were “anti-coal strategies”, “effects of art”, “targets” and “transformations” (See Appendix E for definitions).

Figure 4.2. Artist and community organiser David Solnit in his workshop. Author’s own photograph.

4.4. The use of arts in the anti-coal movement in Oakland

4.4.1. History

This section explains the history of the movement and the most significant events, the strategies and artworks used and their location. A complete timeline of the movement is shown as Figure 4.3.

Phases of the anti-coal movement in Oakland	Building the movement and spreading the message	Starting to take action	Success: the second hearing and the ban to coal transportation	Silent movement and maintaining the life of the issue	Today: Block the memory
YEAR	2012 - 2015	2015 - 2016	2016	2016 - 2018	2018 - 2019
STRATEGIES					
KNOWLEDGE	x	x	x	x	x
ORGANISATIONAL	x	x	x	x	x
ECONOMIC		x		x	x
LEGAL		x	x		
ARTS USED BY THE MOVEMENT					
AUDIOVISUAL/SONGS		x	x	x	x
IMAGE-BASED	x	x	x	x	x
CLOTHING				x	x
MEDIA	x	x	x	x	x
ORAL/WRITTEN		x	x	x	x
PERFORMANCE		x		x	x
ORGANISATION		x		x	x
ARTS IN GENERAL		x	x	x	x
CHANGES AND TRANSFORMATIONS					
SOCIO-CULTURAL	Creation and strenghtening of human connections	Creation of an artistic movement Expanding demographics Increased local awareness	Youth movement	Demoralise oposition	
POLITICAL			Increased political support for the movement		
MATERIAL			Stop the terminal		

Figure 4.3. Timeline of the movement against coal in Oakland.

Building the movement and spreading the message

The Oakland Bulk and Oversized Terminal (OBOT) project, as planned by a well-known local developer from Oakland, was not contested until 2015, when negotiations between the developer and the Utah coal industry became public (Reaper, 2015). In May 2015, a movement against this project was formed with the motto "No Coal in Oakland" (NCiO). The core group of people in this movement, came from different parts of Oakland and different social and environmental movements such as "System Change Not Climate Change", "Idle No More", "Occupy Oakland" and the Civil Rights Movement.

When asked about the position the movement as an environmental justice or as a climate justice movement, interviewees refer to both the local and global impact of coal, although typically emphasise elements of racial injustice and demographic segregation in Oakland: "*So locally, West Oakland is largely African-American. In this country we have housing segregation by governmental design, including that polluting industries are put into the neighborhoods where Black people were allowed to live.*" (MM, independent artist, NCiO).

During the first months, the group focused on finding support from other environmental groups, unions and health workers and the faith community. House signs with the message "No Coal in Oakland" conformed the first image-based artworks of the movement. The signs were placed through all Oakland, with the purpose of calling the attention to the situation. The group also created a website with posts of news about the cause that informants see as an artistic piece due to the profusion of visual elements, such as photos and graphic design.

Interestingly, worker unions and port workers were key for the anti-coal coalition. *"Oakland wouldn't benefit economically very much. I mean the bankers always say 'jobs, jobs, jobs'. But the number of jobs that would be needed to operate that would be like twelve or so. Meaningless."* (JR, Rose Foundation).

NCiO got information about the legal state of the project, and learned that the City Council could, under public health and safety regulation, block the project. Therefore, the strategy during the second stage was twofold. On the one hand, coalitions with different environmental and social organisations were sought so that the movement could generate its own knowledge base. On the other hand, the creation of a big coalition aimed at participating in decision making towards stopping the project.

The first street demonstration took place in the "Bike to work day" (May 2015). Artists and activists dumped charcoal in front of Rotunda Building, in downtown Oakland, and called the street-performance "Dumping Coal" (Figure 4.4). Pictures from this action appeared in the local newspapers in the following days, and the name of the movement NCiO circulated widely (Tepperman, 2015). Other artistic forms were used for contestation that day. Activists prepared their first banners combining texts with images. Kids recited poems directed to the public in general, decision makers, and to the developer.

Figure 4.4. Street performance "Dumping Coal". Image courtesy of NCiO 2016.

While waiting for a judicial decision, the activists tried to reach as many people as possible. During this stage, NCiO organised teachings with social collectives like Black Live Matter and the housing movement. They wrote reports about health and safety and sent letters and signed petitions to politicians and developers. They also prepared press releases for local newspapers like the San Francisco Chronicle, the East Bay Express, and the Oakland Post. The message targeted decision makers like Governor Brown, urging them to act. NCiO took advantage of the increasing global attention on climate change and participated in 2015's Oakland Climate March together with other regional environmental justice organisations. The NCiO poster, launched that day, deserves a special mention (Figure 4.5). It was silkscreened in front of the City Council in the Climate March and it was amply used in the anti-coal mobilisation.

Figure 4.5. No Coal in Oakland T-shirt. Authors own's photography.

The artist who created the image remembers: *"We wanted to get the message out to the community, and the best way is a big bold poster. Then they took the image and made their own street signs and then gave them out too. [...] They made some T-shirts."* (JP, Artist). The NCiO T-shirt (Figure 4.5) became a useful and popular artwork for the activists, who wore it often, especially in court hearings (as observed directly during fieldwork) and in social events and marches around the city (e.g., the Climate March). Some activists used it during our interviews.

Other popular expression of NCiO actions were the Occupella songs, sung in every demonstration. The performers used the music from popular songs and adapted the lyrics to the anti-coal struggle. BL from Occupella explained: *"The idea was rewriting songs to get people to sing [...] it's really hard to get people to sing to an original tune. Using tunes that people are going to know them enough, people are going to sing together"*. (BL, independent artist - NCiO).

The strategies behind these actions aimed at engaging more and more people, educating the general public, generating "their own science" to expand the knowledge and information base of the movement and demanding participation in the legal decision-making process.

Success: the second hearing and the ban to coal transportation

The most important public hearing according to the interviewees was held in June 2016. More than 600 people testified against the project. Many dozens of Oakland's children, elders, faith leaders, workers, politicians, business owners, pediatricians, teachers, and artists participated. *"I never saw a community come together to fight like this like to the coal terminal. You never saw anything like that before."* (BB, WOEIP).

The artist DS and the photographer BA honored all these efforts with the transmedia piece called "Faces of Coal Resistance" at Oakland City Hall. The artists used *"photos that were reflective of all the different parts of the community that had come out to protest the coal"* (DS, Independent Artist), enlarged, printed and put them in sticks and used them as signs. Another part of the piece was a nighttime projection of these photos on the City Hall. The purpose was to make *"ordinary people to be the heroes and the leaders"* (DS, Independent Artist).

This hearing would be the first opportunity for children to publicly advocate formally to decision making. Informants remembered children using emotive poems to express their opinions about the project, that caused deep impact. From this day, kids would be frequently photographed and quoted. In fact, informants recall:

"We've had students recite poems [...] so many different times in front of City Hall and in front of council members (CZ, Rose Foundation)". A young activist explained: *"I think poetry it's to make people feel things and to also for the Author to be able to authentically express what they're trying to get out."* (IC, Youth vs Apocalypse).

In this stage, art and activism were used together for purposes such as expressing opinions, and getting attention to the issue. Yet in the judicial process, public health professionals played a key role. *"There was a clause in there that said basically 'the city can't change the terms except for health and safety'. So, to do that, we had to show 'this is what the science says"* (AH, NCiO).

After this second hearing, seven Council members unanimously voted to uphold the ban on transporting coal. The whole community and the activists celebrated the Council's decision. They expressed their joy through songs, cheered by Occupella musicians. That day was the most successful event that interviewees remember. The 'successful strategy of the movement' combined organisational, educational, and knowledge-generating strategies that generated a popular movement and allowed participation in decision making.

Figure 4.6. Banner "New Year No Coal" from fieldwork's artwork observation. Author's own photography.

Silent movement and maintaining the life of the issue

The City Council's ban to coal was not the end of the battle against coal in Oakland. Five months later, the developer filed a federal claim against City, claiming that the ban violates his constitutional and federally protected right to ship coal. A period that interviewees describe as a turn to a "silent movement" started, as the case entered a litigation process. Written artistic expressions were always present throughout all the city like the announcements in Grant Lake Theatre that claimed with glowing lights: *"We praise Oakland stand against the deplorable lawsuit to inflict planet killing coal on our community".*

In this context, young people helped "maintaining the life of the issue". Youth organisations such as "Youth vs Apocalypse" and other youth social justice movements took a central role. Led by young people of colour, these organisations strongly represent the West Oakland community. Organisations like 350.org, Rose Foundation and Clean Energy Alliance were focused in organising and supporting youth activism and they hosted summer programs and educational sessions. They educated kids about climate change and its relation to the coal project. Education initiatives included artistic activities like the creation of *memes* were kids merged images and text in a multimedia format, collective painting of the banner "New Year No Coal" (Figure 4.6), and craft building.

Young activists organised several anti-coal demonstrations that informants regarded as artworks themselves. Youth's advocacy was essentially based in art activism. Youngsters occupied the streets dressed as zombies or elves, performing, singing and carrying banners they designed. The strategy was *"direct truth telling about the project including creativity and fun, and making it something that feels good to be part of, emotionally and spiritually"*. (CO, 350.org). These artistic demonstrations were mainly in downtown Oakland around the U.S. Courthouse, the City Council, the developer's office at Rotunda Building, but also in other parts of the city, such as the kids' schools, or near the developer's residence.

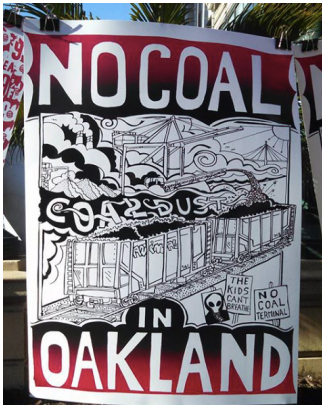


Figure 4.7. "No Coal in Oakland" poster by the artist John Paul Bail. Courtesy of the author.

Meanwhile, the core NCiO group was *"trying to figure out how does the funding of such a project work and how do we find out who might be contacted for the whole project"* (NS, NCiO). In May 2018, a federal judge overturned the ban, to the advantage of the developer in the legal battle (Veklerov, 2018). Therefore, the activists had to look for other ways to stop the project.

In sum, during this silent period the movement aimed at influencing the developer, keeping the community mobilised, and engaging more people through education. Youth art activism became central. The core NCiO group explored new avenues to stop the project through legal or financial means.

Today: Block the money

In 2018 the movement discovered that the Bank of Montreal may fund the project. Taking advantage of the Meeting for Principles of Responsible Investment at Marriott Marquis Hotel in San Francisco, a loud demonstration in front of the venue involved dances and music coordinated by different artists. The demonstrators handed out informative flyers, that included creative graphics that represented *"a pile of coal and a bunch of dollar bills coming out of it", with the purpose of "getting to somebody who doesn't really care about those issues but is worried about what their money is being used for' and 'trying to get people to go there sign a letter"* (NS, NCiO).

When asked about the current state of the conflict, interviewees believe to have won the battle. In the Federal Courts the litigation continues via several ongoing cases. The activists see themselves part of a growing global movement for climate and against fossil fuels. Their presence at the mural painting celebrated at the Climate Justice Mural project at San Francisco in 2018 serves as a visual representation. Their mural portrayed a pollutant industry using the colors of the movement: red, yellow and black.

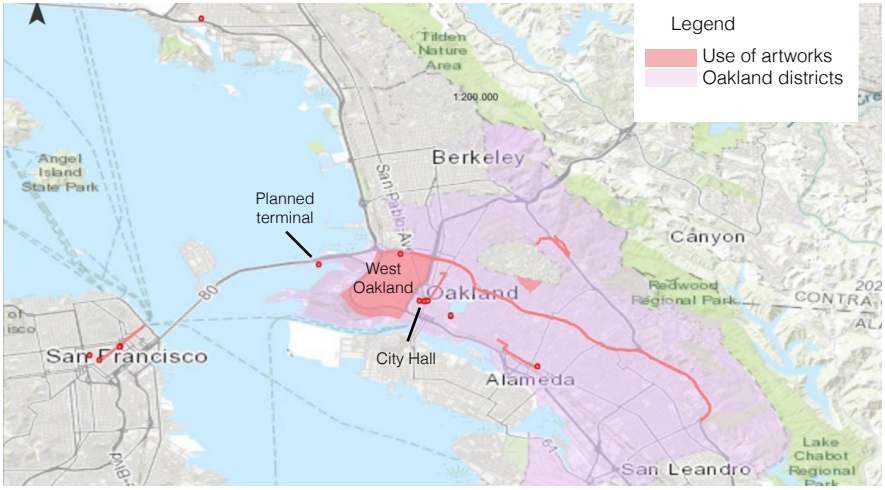


Figure 4.8. Anti-coal art activism location.

Interviewees see their main achievement as the fact that the terminal project has been stopped thus far, even after a subsequent adverse court decision in May 2020 (Dinzeo, 2020) . They celebrate the building of a solid movement that opposes the project. Thus, artistic expressions were present throughout the timeline of the movement. The interviewees recall 28 different expressions that span all the period (Figure 4.3) all around the city (Figure 4.8).

Most of the pieces intended to expose the community views and the socio-environmental injustice of the project and to explain the dangers of coal. Coal is portrayed as a polluting, hazardous, and toxic element. The term or the visual representation of 'community' appears often. Red, black and yellow colors dominate the visuals. The No-coal in Oakland poster (Figure 4.7), described as the most representative of the movement, uses black to represent the dark coal dust, and red as the colour of the movement (e.g., the NCiO T-shirts were red).

The poster shows a factory burning big piles of coal, and the coal train emitting plumes of smoke with the text "*coal dust*". As the artist explained, the intention is to depict the coal dust *"that would blow off into us"* (JP, independent artist). The slogan *"kids can't breathe"* and a skull mask stress the scientific argumentation that coal harms the health of the Oakland citizens. *"It invokes pollution and death"* (BB, WOEIP). The New Bay Bridge in the background and a graffiti on the train convey Oakland's local identity. The informants that mentioned this poster praised its contribution to the recognition of diverse community views in environmental decision making and to make the environmental injustice behind the project visible. *"You can't disagree with what's on this poster. I think it brings people to the issue who might otherwise not have thought about it. It activates people who are more emotional than perhaps rhetoric based"* (BB, WOEIP).

Spatially (Figure 4.8), 46% the artworks occurred in Downtown Oakland, in front of the City Council, targeting decision makers and the general public and in the nearby Rotunda Building, addressing the developer. 28% were itinerary, such as practices during marches to the City Council, or to the Lake Merritt. Kids' artworks were the most aimed to the developer (Figure 4.10), thus they were performed in their office or near his residence (e.g., Zombie Coal-pocalypse). 28% were at relevant places in San Francisco like the Federal Building and the Civic Center Plaza. Just 7% of the artworks were located in West Oakland, near the planned building site of the coal terminal. 54% of the pieces were created for ephemeral events, out of which 27% were performances (e.g, Coal dumping, theater plays, Elf delegation), and 40% were image-based expressions (e.g., the banner used in the youth march against coal).

4.4.2. Connecting art, effects and strategies of the movement

A network of concepts displays the relationships between artwork's effect (blue), type of medium (green), and users (pink) (Figure 4.9). The network shows the more frequently depicted artwork type and effects (indicated with the size of the nodes), and the relation and co-occurrence between them and the users (width of ties and the closeness between nodes). *Education, social cohesion and expressing opinions* are the three most frequently perceived effects of anti-coal art activism. Among the artistic expressions, image-based pieces and audiovisuals are the most popular expression of the anti-coal movement. Another network allows visualising the chained connection between the strategies of the movement, the effects of art activism and the perceived transformations (Figure 4.10).

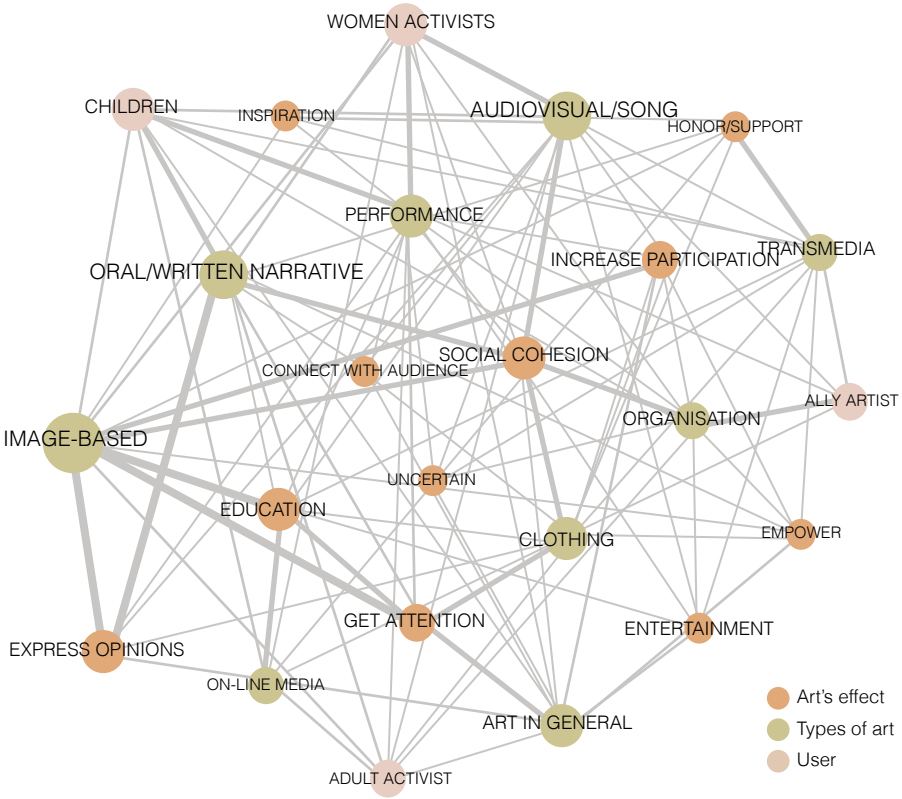


Figure 4.9 Network analysis between types of art, art's effect and user. Note: the size of the nodes and the edges reflects the number of times a given item (and their interaction) was mentioned by the interviewees. Source: Own elaboration based on force directed Model Force Atlas 2.

The size of the nodes indicates the frequency of mentions in the interviews, and the width of the tie indicates items' cooccurrence. This figure reveals an interest of the anti-coal movement beyond education, towards engaging more people in the movement, organising members of community, and promoting participation in decision making.

Interestingly enough, education is most frequently perceived effect of art (Figure 4.9; Figure 4.10). Education appears directly connected with image-based expressions like banners, posters, signs, and online media (e.g., the NCiO web-site, and Angelica's animation about coal). As an example of combining art's effect in education and in getting public attention: *"it's a catchy, it's colorful, it directs people's attention and it tells people what you're about, people start asking questions and people feel a lot of folks know that this is happening and it raises awareness"* (CZ, Rose Foundation). Rising local environmental awareness follows the combination of education and increased public attention (Figure 4.10).

Image-based media are the more mentioned artworks during interviews. Pieces such as the anti-coal poster, big banners and collective murals were the most referred to; they also were connected to all perceived effects of arts, especially education, social cohesion, increasing participation, expressing opinions and getting attention. Furthermore, image-based expressions are the preferred media for adults, women and children, as the direct ties of the "users" nodes in Figure 4.9 reveal. Image-based artworks and online media showed information about the conflict using drawings, symbols and colors that depicted the impacts and injustice of the coal terminal, providing an avenue for the activists to express their opinion to the public at large.

The NCiO T-shirts contributed notably to social cohesion and to get people's attention (see node "clothing" in Figure 4.9). *"We'd have the experience of wearing them and people coming up and asking us about it and stuff like that" (SS, NCiO). "You now feel a part of something and connecting with other people"* (LM, Faith Community). In fact, the T-shirt alone contributed as much to social cohesion as all the rest of audiovisuals and songs. For the NCiO supporters, the T-shirts were also a way to honor and support their own activism. Interestingly enough, socialcohesion responds directly to the movement organisational strategy of engaging people in the movement and organising the community (Figure 4.10).

Oral and written narratives had an important role in expressing opinions. Children used them twice as much as adult and woman activists (Figure 4.9) to join the anti-coal strategy of participating in decision making (Figure 4.10). Interviewees remember poems in City Council hearings as a major form of advocacy for decision making of young activists, especially poems recited by young women of colour. This is an example of a coincidence of preferences between women and children. Interviewees

would explain: "*most of them* [children activists] *are girls. And all the adult supporters are female"* (CO, 350.org). Similarly, *"the youth were both male and female, mostly female. And the same with the adults that are involved, mostly female"* (JT, Clean Energy Alliance). Artistic demonstrations qualified as "performances", were also a place of convergence for children and women activist. The main effect was to get attention of the general public, and contributed this way to the strategic purpose of organising the community and calling media attention.

4.4.3. Art, strategies and transformation

The NCiO movement triggered transformations, as perceived by the interviewees, that I have grouped in three categories (socio-cultural, political, and material), with the aim to connect with literature on environmental conflicts and social movements. Nearly half of the perceived changes are socio-cultural transformations that started since the first stages of the mobilisation. Several political and material transformations occurred after the city's ban coal. In particular, the chord diagram in Figure 4.10 reveals three patterns of art-induced transformation that are described next.

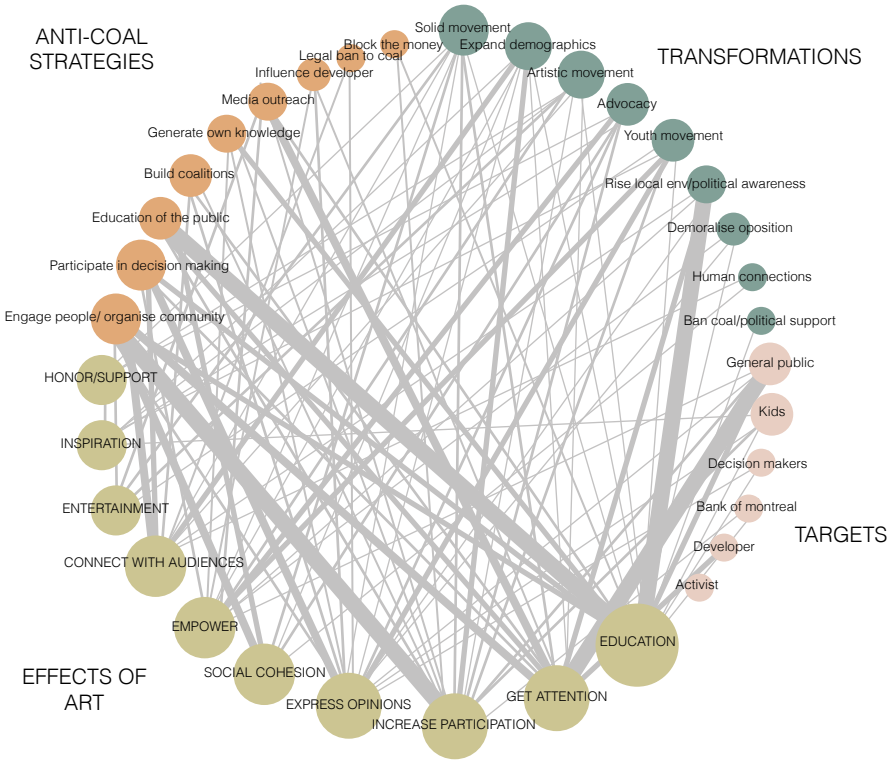


Figure 4.10 Chord diagram of anti-coal strategies, art activism effect, art-induced transformations and target of the artworks. Note: the size of the nodes and connecting ties reflects the number of times a given item (and their interaction) was mentioned by the interviewees.

Socio-cultural transformations highly related with relational effects of art

The creation of a solid and artistic movement, its expanding demographics and advocacy capacities, and the increased engagement of younger cohorts were socio-cultural transformations most frequently associated with artistic practice of the anti-coal movement. Several effects of the arts converge in the creation of a solid movement. Meanwhile, the expanding demographics, advocacy capacities, and youth participation rely on the connection with audiences, increased participation, the possibility of expressing opinions, and the empowering effect of the arts.

Artistic means helped to expand the demographic composition of the movement due in part to their role in communication. Different kinds of people and understandings get to identify with the movement thanks to art's effect in connecting with a variety of audiences. *"Specifically, communities of colour, environmental justice communities, immigrant communities, for example, where maybe the language is different. If you have a visual, sometimes you don't even need to speak that language to understand the issue [...] A role that art places specifically in these campaigns is communicating with a wider audience"* (JT, Clean Energy Alliance). Thus, art practice and enjoyment increase participation and became a space of encounter for everyone.

Similarly, the capacity to increase participation engages the youth. This effect concurs with the possibility to express opinions and thus a feeling of empowerment. Furthermore, the youth movement is characterised by the activism of children of colour who see their role as actors of change. *"It talks a lot about challenging the dominant paradigm... these pieces of art create change for the creators"* said CZ (Rose Foundation) talking about the "New Year No Coal Banner" created for a youth demonstration organised by a afro-american girl (Figure 4.6). As the demographics of the movement expanded, art activism also made it more inclusive: *"I think art is just different ways of reaching out to different types of people with different kinds of experiences and types of learning"* (IC, Youth vs Apocalypse). Oral/written narratives (e. g., poems) and image-based expressions (e. g., banners and murals) contribute the most to social inclusion.

Figure 4.10 also shows the strong connection of perceived educative effects of art with rising local environmental and political awareness. The ability to educate in an attractive and catchy way makes people sensitive to the environmental concerns affecting their community.

Political transformations moderately related to educative effects of art

NCiO promoted political transformations that cannot be attributed directly to the effect of the arts. That is the case of gaining the political support that would eventually lead to the legal ban on coal transportation. It is worth emphasising that this transformation is connected with education, the most impactful effect of art activism. This is well-known by the activists: *"I feel like that education is part of agitating people to act"* (JT, Clean Energy Alliance); *"the important thing for the grow of this movement is education, more people have to see [...], so I really like to hold banners, in the maximum exposure"* (MB, NCiO). Besides being the most frequently mentioned effect, directly connected with image-based expressions like banners, posters, signs, and online media (Figure 4.9), education connects practically all the strategies, transformations and targets, especially the organisational anti-coal strategy of educating the public (Figure 4.10).

Material transformations poorly connected with art

Interviewees did not link directly the arts to the most important material transformation perceived by the movement: *Stopping the terminal*. The education effect was the only one somewhat connected to achieving the legal ban to coal. This raises the question as to what extent artistic expressions are truly necessary for the success of the movement. When interviewees were directly asked this question, two basic positions emerged.

- *Not movement without art.* Some interviewees, and specially artists, conceived art as part of human nature, not only in this movement but historically. A young activist said: *"I've never known a social justice movement without art"* (IC, Youth vs Apocalypse). An experienced social activist agreed: *"I think without it would be very different. I mean I can't imagine not having the banners and not having that kind of visual expression"* (JL, NCiO and Thousand Grandmothers).

  Under this vision, the art activism of social movements is linked to the cultural conception of mobilisation. For them, it makes sense that one of the transformations triggered by the movement was "becoming an artistic movement". *"A movement has music, artists and intellectuals, intellectuals need someone to do art [...] Like Emory Douglas from the Black Panthers: they were activists in the room. And he had to become the artist of the group, he was the only artist in the room"* (JP, artist). This is linked to inspirational and entertaining effects of the arts.

- *Art is one effort among many others.* Many activists agreed that the arts were part of the toolkit of the movement, together with legal, organisational and knowledge strategies. "*Art by itself doesn't make change but art together with smart organising and strategy can be very powerful"* (MB, NCiO). This is linked to the effect of art of giving "honor and support" to the activists' work: *"There is two arms to this movement [...] who wants to talk about the financial goings on in Montreal and someone who wants to figure out how to paint the street. Those are really different conversations. And I think that we've done a good job of respecting that both of those things need to happen"* (TF, NCiO).

Interestingly enough, none of the interviewees endorsed the idea of a movement devoid of the arts.

4.5. Contributions of the use artworks in anti-coal struggles

Combined, the results above point to two major findings regarding the use artworks in anti-coal struggles. The first one is that creative activism is a necessary component in the strategic toolkit of anti-coal movements, with critical relevance for engagement, education and outreach. The second one is that the use of the arts triggers socio-cultural transformations desired by environmental justice movements and underpins political changes. The contribution to the material transformations that constitute the ultimate goal of the struggle is mostly indirect.

4.5.1. Creative activism as a necessary component in the strategic toolkit of anti-coal movements

A striking finding regarding the arts' influence on anti-coal strategies is, on the one hand, its role in engaging people and organising community, beyond being a mere resource for dissemination and awareness. In the analysed case, art was present since the very beginning of the mobilisation. Art fueled the spread of concerns about the project and energised the struggle keeping it alive during periods of apparent stagnation. This is of particular significance given that good community organisation is a challenging task for environmental justice groups and communities (Larsen et al., 2015). Once achieved, community mobilisation has proved to be key for blocking effectively polluting activities (Leonard, 2018; McAdam & Boudet, 2012).

Social movements scholars recognised the relevance of organisational and social networks for social movement mobilisation (Snow et al., 1980). In the analysed case, the effect of art activism in social cohesion and increasing participation were the most influential for organisational strategies of the movement. For instance, singing together had a significant incidence in enhancing feelings of collectivity, solidarity and social cohesion.

Indeed, social cohesion is critical in environmental resistance movements (Rodríguez-Labajos, et al., 2019), especially in challenging power structures over the uses of public spaces that disrupt community life (Lefebvre, 1991). This disruption can even involve violence against environmental defenders resisting coal projects around the globe (Roy & Martinez-Alier, 2019; Watts, 2018). My results support previous analyses showing the effectiveness of artistic means to enhance community participation and social cohesion within activism (Byrne et al., 2018; Schwartz, 2012), and in context of environmental conflicts (Harper et al., 2018). Activists wearing the NCiO T-shirt created a joint identity and an enhanced feeling of collectivity; they were using the same signs that, as Otte (2019) puts it, represented shared values. The artistic object, a material entity, communicated ideas, opinions and struggles. This aligns with organisational aesthetics theories (Taylor, 2002) that position clothes as communicative artistic with incidence on organisational strategies.

On the other hand, environmental-justice activists emphasise the need of community participation in decision-making processes. The demand of “a place at the table” (Schlosberg, 2004) was oneof the claims and strategy of “No Coal in Oakland” that, interestingly, was highly catalysed by art activism. As pointed in the results section, both the house signs and the poster showed the distress of the community over the project; they were the first claim of community views recognition in environmental decision making.

Beyond entertainment and social cohesion, art was a vehicle for political mobilisation, (Ogaga, 2011). Banners, performances and poems recited in front of the City Hall were critical in the expression of discontent, and in the activists’ request to the City Council to act against the project. Our research has unveiled concrete effects and functions within this process, linking Ogaga’s understanding of art as an act of militancy to the actual strategies of the anti-coal movement. Artistic militancy led to effective interventions that fostered the participation of the community in decision making and the education of the public. Notably, art activism was the main form of expression youth used for advocacy, specially by reading poems.

4.5.2. Transformative effect of art

Socio-cultural transformation: inclusiveness

Inclusiveness was the other key transformation of the struggle. Art activism contributed to the expansion of the demographics of the anti-coal movement and the overcoming of demographic barriers. Seasoned activists raised the first voices against the project, but the social transformations were particularly influenced by the work of youth activist groups, consisting mainly of young black and brown girls. The turn towards a more inclusive movement is significant in environmental justice communities that were already fighting for racial justice and social justice (Reinke, 2019).

Young activists introduced performances and poems in the mobilisations. Such pieces served to empower, to increase the participation of children and other affected racialised communities, and to connect with different types of audiences. Artworks emerged as a fun, jazzy and friendly choice for demonstrating opposition, with the advantage of producing aesthetics that engaged different kinds of people.

In Oakland, young activists identified their advocacy against the coal-exports project as a source of awareness about the social conflicts in their community and in their capacity to be agents of change. Through the arts, they gained a voice and wielded power to denounce an important local developer apart from being the main militant force in 'maintaining the issue alive' during the silent period of the movement. This way, children of color demanded a metaphoric space within the environmental and climate justice movements, as women of color did in the People's Park Movement in the late Cold War era (Lovell, 2018).

Several scholars have pointed the use of art as a tool to empower disadvantaged communities (Brewington & Hall, 2018; Lovell, 2018). Blurred limits between political will and art shaped this process in Oakland, although considering art activism as the only source of empowerment would be naïve. Still, the co-occurrence of "empowerment" with other effects such as "increased participation" and "connection with audiences" calls for the acknowledgement of art activism as a mechanism to challenge power relations, and to promote inclusion within the movement. Siding Reed (2005), the NCiO movement was a transformative experiences for those who take part in it. Consistent with Serafini (2015), participants of activist performance in Oakland were as political agents. Indeed, kids and racialised communities became involved, physically and symbolically, with the anti-coal struggle though art activism and in this process, they developed their political subjectivity.

Radical environmental justice and climate justice movement seek to regain power over dominant forces (Croeser, 2017). Segregation reproduces environmental injustice (Pavel, 2015). Therefore, overcoming demographic antagonisms and including everyone is a pre-requisite for promoting transformations towards justice and fairness (Kwon & Nicolaides, 2019). Scholars studying the Regional Climate Justice movement in the Bay Area have already detected the advocacy potential of vulnerable community members such as young African-American women (Pavel, 2015). Our results complement this idea by pointing to artistic expression potential for social inclusion in the context of environmental conflicts.

Socio-cultural and political transformation: awareness through education

Communities impacted by environmental hazards often create their own knowledge to confront big corporations (Maldonado-Torres, 2008). In this respect, three strategies of the movement 'No Coal in Oakland' (education of the public, generate own knowledge and media outreach) revolve around knowledge and communication of the environmental and climate injustices that the OBOT project would reproduce. Interestingly, when art was used for anti-coal contestation, educative effects were the most visible outcome. Indeed, the literature addressing the role of art environmental justice conflicts (Fuller & McCauley, 2016), climate issues (Gabrys & Yusoff, 2012; Heras & Tàbara, 2014; Iovino, 2019; Sommer et al., 2019) and ecological change (Ballard, 2017) focusses on science communication and promotion of environmental awareness. Our results advance previous contributions by analysing art created by the environmental movement itself rather than environmentally-motivated artists.

Artworks, and specially banners, posters and murals against coal in Oakland, helped activists communicate the hazardous impacts of coal on the community. This resulted in social change by rising local political and environmental awareness. Theories on environmental humanities that encourage the use of arts for rising environmental awareness to meet the climate change challenge point to the same direction (ArtCOP21, 2019; Galafassi et al., 2018; Sommer & Klöckner, 2019). In fact, a popular outcome of social movement actions is changing culture (Juris et al., 2014).

Yet the effect of art activism in a context of resistance on fostering cultural transformation towards sustainability is still under-studied. Our results suggest that the transformative potential of education through the arts not only influenced local environmental and political awareness, but also induced the political transformation sought by activists through increased political support. With their artistic work,

environmental movements push for a local environmentally conscious society, and with this they drive a political transformation that affects urban geographies as well.

In the Oakland anti-coal coalition, education appears directly connected with image-based expressions like banners, posters, signs. There is an increasing literature on the effects of audiovisuals –specially documentaries and images– in generating awareness about climate change and enhance participation of affected local communities (Blasch & Turner, 2016; Nicholson-Cole, 2005; Suarez et al., 2008). The anti-coal movement in Oakland made little use of films. In contrast, they chose site-specific media with direct incidence on the urban space (like banners, posters, outdoor building projection, T-shirts, songs). The resulting on local environmental awareness, reduced segregation and fostered social cohesion are arguably akin to the benefits of films. Yet this choice of media highlights the importance of spatiality in the use of art activism.

Material transformation and the spatiality of the artworks

None of our results demonstrated a direct connection between art activism with material transformations (i.e, stopping the terminal). Still, interviewees were respectful of the influence of every anti-coal action for paralising the project. They conceived art as essential or supportive tool of the mobilisation. Accordingly, material transformation was only indirectly related to art activism.

Yet at this point it is worth noticing that the effects of arts depend on time and place. As discussed above, art had an incidence on inclusion and in Oakland this has a spatial implication. Although the project was planned to be built on the coastline and affect West Oakland, most of the artworks happened outside those areas. The claims of the West Oakland community moved to other parts of the city and even the crossed the San Francisco Bay. These areas, just some miles away, are regularly divided by barriers of inequalities that decades of pro-social justice initiative are yet to dismantle (Reinke, 2019). Through arts, prevalent injustices were made apparent to demographics and communities outside West Oakland but still in the local and regional context. Art was the embodied way of moving an issue away from the space directly affected by the project. A similar “transporting effect” occurs when murals in urban landscapes bring to the present the memories of past social struggles with (Eyerman, 2014). At the same time, the movement reflected on the impacts of coal beyond the local contexts and became aware of the global effects of paralyzing coal exports. This is a clear example of how contemporary activism combines local with global impact of their actions (della Porta, 2013b).

Artistic expressions create tangible experiences of coal impacts in the Oakland landscape that today only exist on paper, but that could potentially modify the urban dynamics. Indeed, *"art is the place of imminence – the place where we catch sight of things that are just at the point of occurring"* (Flynn (2016) quotes García Canclini, 2015: xiii). As pointed by Brown et al., (2017) spatiality and aesthetics are key for to attract a large number of participants in protests, and to reinforce the visibility of their message. While the general public was a main target of the anti-coal messages in Oakland, the movement aimed at making the issue visible to decision makers and even the developer by getting close to their regular spaces of operation. Mapping the artistic expressions has allowed us to understand the spatially of this incidence, that responds to the strategies of the movement.

All in all, this research acknowledges the interdisciplinary work on the inter-relationships between art and environmental conflicts, and contributes to expand the theoretical framework to address specific role of art in anti-coal movements in an urban context in the US, with implications in the global geography of coal. The findings of the study come from a specific, albeit emblematic, case study. I acknowledge limits to generalisation. Socio-ecological conflicts largely depend on contextual conditions (Heras & Tàbara, 2014; Iovino, 2019), as well as the scope of action of the social movements around them. I can then presume that art activism only makes sense in the context where it is created. This research unveils the importance of understanding the culture, the place, and the intentions behind the use of an artistic expression in an environmental justice conflict. Therefore, context dependency and the individual experiences of participants should be properly explored in further attempts to understand environmental art activism.

Another precautionary note has to do with the concepts of 'change' and 'transformation' as the adopted methodology relies on subjective perceptions about the processes at hand. While the material process of preventing coal exports actually happened, activists preferred to focus on socio-cultural and political transformations in their statements. Undeniably, the study reveals the significance of art activism in the strategic toolkit of social movements and unpacks its key components.

4.6. Towards an articulation of environmental mobilisation through art activism

Artistic expressions are part of environmental movements' efforts to promote a sustainable future. Nevertheless, the literature neglected the study of the concrete strategies and outcomes in the use of artistic expressions in environmental justice movements. This study has systematised different effects of art, and identified the connection between art activism, anti-coal strategies and perceived socio-spatial transformations based on interviewed activists' perception of impact.

Our empirical evidence relies on the efforts (so far successful) to stop the construction of a coal-export terminal in Oakland. A chronological review of the actions undertaken by the movement 'No Coal in Oakland' reveals several phases in which the strategies of the activists and the use of artistic expressions interweave. According to the interviewees, art did not produce any direct material change in the urban landscape. Nevertheless, art activism was fundamental to shape socio-spatial dynamics that enhanced social cohesion and engagement with the movement.

In particular, art was decisive to create and maintain the contestation movement that spread knowledge and influenced decision makers. The education of the general public was a main consequence. In this process, not only the anti-coal movement became more solid, but also made itself more inclusive. Through the arts, youth and women activist achieved new political spaces. Thus, art may have contributed to lessen the implications of socio-spatial segregation, by facilitating that people from different demographic backgrounds share spaces of contestation. Along with its capacity to disseminate environmental and political awareness, art activism emerged as a tool to tackle the socio-ecological crisis.

While the outcomes are highly context dependent, the resistance of Oakland's community is part of broader set of efforts to tackle several proposals to expand infrastructure for fossil fuel management on the West Coast. In this context, the theorisation of art effects can underpin the toolkit for environmental justice movements. Highlighting the more significant effects of art provides tools towards the achievement of transformations to break segregation and gain cultural environmental awareness.

The chapter contributes to research on human geography as I underscore the importance of the spatio-temporality of anti-coal strategies and art activism for transformations in the urban landscape. I underline the capacity of art to influence socio-spatial structures, and to trigger social dynamics for sustainable transformation in cases of environmental conflict.

Chapter 5.

Conclusions

Perdóname si en el presente
he sufrido por el futuro
cual Casandra rondando por las calles
de la Antigua Troya
[…]
Perdóname si en el presente
he sufrido por el pasado
de Virgilio a Sigmund Freud
todo está perdido de antemano,
y sin embargo,
como jugadores locos –Dostoyevski–
seguimos apostando.[6]

Cristina Peri Rossi

[6] Forgive me if in the present I have suffered for the future, like Cassandra wandering through the streets of ancient Troy. […] Forgive me if in the present I have suffered for the past, from Virgil to Sigmund Freud everything is lost beforehand, and yet, like gamblers -Dostoyevsky- we keep betting.

5. Conclusions

5.1. Theory contributions on socio-spatial transformations through art activism

My interdisciplinary perspective on the transformative role of art activism in socio-environmental conflicts has approached relational, visual, and strategic notions at play in shaping the materiality and spaces where activists operate. Previous studies have addressed issues of representation, education, and denunciation through art (Dixon, 2009; Heras & Tàbara, 2014; Serafini, 2022). Adding to that, this thesis situates art activism as a process of articulation, appearance, and experience of the transformative paths opened during environmental conflicts.

The emblematic case studies examined in this thesis refer to concrete contexts of environmental conflict. Each case has helped to clarify complex socio-environmental dynamics at the stages of preventing damage, coping with ongoing damage, or trying to restore damaged places. Confirming the importance of studying case studies to understand the role of art activism (Serafini, 2018b) my methodological approach has yielded insightful results that have been discussed separately for each case.

This section synthesises transformative notions of art activism whose relevance transcends specific case studies. In line with the overall objective of the thesis, this synthesis contributes to the debate on the role of art in current socio-environmental crises by looking into the concrete socio-spatial transformations induced by art activism in the context of environmental conflicts.

5.1.1. Art activism ARTICULATES environmental mobilisation

All thorough the thesis, I have argued that the arts have strengthened the social-ecological movements engaged in the conflicts, in terms of their demographics, cohesion, and popularity. The creation of strong social movements is fundamental to prevent impacts on communities and the environment from extractive projects. Presumably, strong mobilisations lead to more *participation* of communities in decision-making, and the enhanced *recognition* of their identities, values, and ways of life (Leonard, 2018; McAdam & Boudet, 2012), two fundamental dimensions of environmental justice (Schlosberg, 2007). In the past, quantitative approaches demonstrated that more intense mobilisations are indeed associated with the

perception of more environmental justice served in the conflicts (Özkaynak et al., 2021) but the strategic mechanism of such a connection remained as a black box. The thesis has traced such mechanisms in three different stages of the conflict.

The resistance against coal in Oakland (Chapter 4) is the case that more explicitly portrays the effects of art activism in articulating environmental mobilisation. Art activism helped to educate the society at large about the damaging effects of coal, to express the opinions of underrepresented children and young adults, and to promote social cohesion within a movement in which many different communities of justice converged. The use of art as a contentious performance (Ryan, 2017; Serafini, 2018a; Weibel, 2014) contributed to restructuring the mobilisation, expanding the demographics of the movement. Art was perceived as the main channel of activism for young people from black and brown communities. Thus, in the context of a social organisation for *preventing* a extractive project art activism facilitated the critical task to engage more and more diverse people in the movement and provided these groups with diverse avenues to voice their claims. In this way, they reached a critical mass that decision-makers had to listen to their cohesive demand: *"No Coal in Oakland".*

In Chapter 3, which illustrates reaction contexts, activist visual content emerged as a response to the perceived harms caused by violent conflicts. Like in Oakland, art activism in the Philippines provided a platform to express views that would otherwise be suppressed. Through social media, activist art disseminated narratives that call for *"denounce, stand, and act"* against the mechanisms of extractivism. Artistic portraits celebrate and honour the lives of environmental defenders such as Gloria Capitan in the Philippines (Figure 3.15) and Alejandro Castro in Chile (Figure 2.9). Many other portraits, like Berta Caceres' in Honduras and Chico Mendes' in Brazil (Jiménez Thomas Rodríguez et al., 2023) would surely be found if we visited conflict areas of those countries (See Zúñiga, 2020). By re-signifying environmental defenders as the icons of the environmental struggle, art activists elevated subaltern identities (*sensu* Escobar, 2001) and created shared references to articulate the grievances of those affected by extractivism. The dissemination of art activism through non-traditional channels, such as social media, expands the reach of opposition and creates alliances across diverse anti-extractivist efforts. This is particularly crucial in contexts where dissenting opinions are criminalised, and the ecological and social implications of extractivist projects are obscured or repressed (Dressler & Guieb, 2015).

As art enhances and represents local identities, the movements get stronger while restoring people's relations with their surrounding space. The link of these "relational values"(Chan et al., 2016) with the organisation of the movements is proved in the case of Chile (Chapter 4). There, activist art-makings included the

views of neighbours and other locals who do not consider themselves activists. The link was ®established through the portrayal of local values in murals and songs, but also by creating spaces of encounter that fostered a sense of identity and community. Combined sense of identity and community is something especially fragile in contexts of extractivism (Svampa, 2019) and repression (Dressler & Smith, 2022) but have nevertheless a strong transformative potential (Gudynas, 2009; Valenzuela-Fuentes et al., 2021). The changes observed in the *restoration context* are a prime example of the relationship between participation and identity. Indeed, enhanced spaces for collective elaboration of meaning through participatory art-makings (Bishop, 2006; Kester, 2004; Serafini, 2018a) contribute to develop a sense of collective identity, relevant for social movements (Bernstein, 2005). As it happened in Oakland, the sense of belonging to the movement through arts contributed to expand the social mobilisation itself.

All in all, apart from generating awareness and educating, art activism articulates socio-environmental mobilisation in different manners: generating social cohesion, reinforcing and interconnecting diverse identities, and offering people diverse ways to participate in the mobilisation. In bringing these insights together, this thesis demonstrates that art activism broadens the mobilisation towards a situation of greater cohesion and diversity, while also bolstering participation and recognition in decision-making processes.

The internal cohesion of the movements is not a minor issue. Feminist political ecology literature featured power injustices within environmental movements as "participatory exclusions" (Agarwal, 2001; Bolados & Sánchez, 2017). With my results, I give value to artistic practices and events as sources of empowerment and social cohesion that help to sustain movements (della Porta, 2008). Outside environmental studies, the notion of art as a source of empowerment is not new (Prentki, 2017; Reed, 2005). In fact, art activism has proved to promote diversity, specifically regarding gender and age, in the context of environmentalism (Rodríguez-Labajos & Ray, 2021).

In my analysis, I demonstrate the valuable and unique role of artistic practices in forming and expressing –or *articulating*– of environmental mobilisation against concrete situations of socio-environmental damage. Art activism enables wider and more diverse participation by broadening the forms and scope of opposition, and it fosters a sense of collectivity and shared identity by celebrating icons such as environmental defenders and endangered local elements and values. Moreover, art activism creates spaces of encounter, where people can connect emotionally. These findings are particularly relevant to scholars of political ecology and environmental justice who recognise the dynamic interplay between identity, power, and environmental change (Peet & Watts, 1996). Ultimately, movements

that engage with artistic activism –or ARTiculated movements– will interact with the prevention, reaction, or reversal of environmental degradation, while challenging hegemonic power dynamics over the environment.

5.1.2. Art activism DISARTICULATES prevalent power structures over the environment

Throughout this dissertation, I argued that notions of culture and power (Willow, 2019) shape the location of the ecological extraction frontiers (Moore, 2000) based on a misrecognition of meanings and valuation languages from the affected population (Martinez-Alier, 2002; Svampa, 2013). Situations of dispossession and violence emerge as a result (Harvey, 2003; Peluso & Lund, 2011), as widely explored in the literature on environmental conflicts (Del Bene, Scheidel, & Temper, 2018; Dressler & Guieb, 2015; Mingorría, 2018; Navas et al., 2018). The forms of art activism that I have analysed contribute to re-elaborate the meanings related to environmental conflicts with an ensuing effect on the politics of the environment. The results presented in previous chapters show how environmental groups resisting at different stages of an environmental conflict use artistic practices to express, shape and defend their values, identities, culture, and territory. In doing so existing power relations intertwined in the environmental conflicts are disarticulated.

The Section 3.4.2 of the chapter on the Philippines study (Chapter 3) focuses on uncovering the political motivations driving artistic activism. The chapter highlights three common visual narratives used in reaction to environmental violence: denounce the violence, stand for the environment and its defenders, and act for justice and memory. Artistic representation of both the affected people, often indigenous peoples or peasants, and landscapes impacted by extractive projects is essential for bringing overlooked bodies that are deemed to be 'expendable' (Pellow, 2017) to the forefront, as well as for identifying the forces responsible for the harm. Consequently, visual activism exposes and disrupts the power structures that drive environmental degradation, revealing the power mechanisms that cause violence in extractive projects. In contexts where governments punish anti-extractivist efforts (Middeldorp & Le Billon, 2019), art activism's messages of denunciation, defence, and remembrance challenge and disarticulate mainstream discourses, policies, and actions that support extractive projects.

In the Oakland case study (Chapter 4), artworks created by activists reveal the community's views on the socio-environmental injustice of the project of building a coal exportation port in West Oakland. Artworks were used in various events to raise awareness, express disagreement, demand participation in decision-making and obstruct international investments. Oral and written narrative pieces, such as

poems and house signs, were especially significant in expressing the views of community members, both young and old. The community was able to claim "a place at the table" (Schlosberg, 2004) thanks in part to creative expressions, and thus the anti-coal movement could present political demands to decision-makers directly. This case study demonstrated that art and creativity can play a key role in expressing opinions and knowledge, generating not only environmental awareness but also political agency. Art activism provided space and language to shed light on aspects of the extractivist model that governments and the media often ignore or hide (Serafini, 2022), challenging the authority of large corporate powers that threatened environmental and social justice (Maldonado-Torres, 2008). The use of creative expressions, in this case study, ultimately led to a dismantling of power structures, giving the community a voice and a means to challenge the status quo.

In Chile (Chapter 2) artistic practices (e.g., murals and chants) became means to restore human-nature bonds activating relational values such as heritage, identity, and place attachment. Counter-narratives centred on a defence of identity, culture, and territory against the commodification of the environment by industrial development were central for the development of these values. In this context, the artistic expression of personal experiences of a landscape, local values, and life stories, brought community meanings to the core. The resulting re-signification of the environment through affect is an effect of art activism that had already drawn attention to social movement studies (Ryan, 2015). This *restorative* context helps then to shed light on arts to catalyse and preserve cultural values related to the environment (Chan et al., 2016; Riechers et al., 2020). Resonating with political ecology views about the emergence of identities in conflicts over the environment (Lau & Scales, 2016; Peluso, 2008), artistic practices challenged governmental and corporate power structures by confronting them with the identities affected by environmental degradation. This insight supplements studies on environmental conflicts that sustain a similar notion (Del Bene et al., 2018; Gerber & Veuthey, 2010) by pinpointing specific mechanisms of such a confrontation across conflict stages.

Exploring the contents and narratives of the artistic practices in each context shows that arts contribute to confront the hegemonic discourses and power structures in environmental conflicts. With this, the thesis aligns with a recent interest in narratives about the environment for promoting socio-ecological change (Tsing, 2021). Prior research on the intersection of art and sustainable social-environmental transformations highlighted the importance of narratives and imagination to envisioning new forms of resilience (Araeen, 2010; Demos, 2016b, Tsing, 2021), the need for aesthetic and cultural responses to environmental crises (Blanc, 2012; Davis & Turpin, 2015; Miles, 2014), and the search for new ways of understanding the world (Landau & Toland, 2021; Solnit, 2019). Ecocriticism, which

involves examining the ideological considerations behind socio-environmental issues through contemporary art and culture (Michéle & Johnson, 2020), is a key transformative achievement of creative environmentalism (Rodriguez-Labajos, 2022).

In my research, I shed light on how art activism can disarticulate the hegemonic discourses of domination and exploitation over nature and people. Previous theories on art and politics have discussed the ambition of artworks to reveal the power of politics and mass media (Ungureanu, 2015). Accordingly, artworks that engage with political resistance and solidarity tend to unmask power with a narrative of sacrifice. While the representation of killed environmental defenders certainly supports this notion, my focus is on the counter-narratives presented in previous chapters that also promote alternative imaginaries of sustainability and well-being rooted in place-based ways of knowing and caring about the environment.

Previous studies acknowledging power issues in the study of art for sustainability transformations (Landau & Toland, 2021) tended to focus on institutionalised art practices, neglecting the study of creative actions by communities affected by environmental degradation. Therefore, my thesis fills an important gap in the critical discourse on art and sustainability by highlighting the transformative potential of community-based creative practices in pursuit of socio-ecological justice.

Drawing inspiration from Ursula K. Le Guin (1986) and Rebecca Solnit (2019), this thesis highlights the importance of diverse voices in shaping cultural narratives. It emphasises that art activism materialises the epistemological contestation that underlies environmental conflicts. By turning values and imaginaries into a strategy for action, art activism confronts power relations underneath environmental issues and thus triggers new political and material transformations.

5.1.3. Art activism RE-ARTICULATES spaces and relations

Spatial aspects of arts are central in this thesis, and so are the relational ways in which space is configured. My approach aligns with the views of space as inherently relational (Massey, 2005).

Siding this notion, the thesis conceives space as a product of relationships between humans and the more-than-human. In the different chapters, I have looked at how art activism is transforming these relationships, thus re-shaping the spaces themselves.

Extractive projects that degrade ecological systems not only impact the livelihoods and health of communities but also impose control over territories and bodies, limiting the relationships with the environment and with other communities (Gobby et al., 2021). In different chapters, the thesis demonstrates how art facilitates the re-possession of such places and contributes to new understandings of time and place in environmental conflicts. Across case studies, art practices function as counter-hegemonic interventions, occupying public space to disrupt the smooth image propagated by corporate capitalism and revealing the associated impacts and violence (Mouffe, 2007).

Artistic interventions in Chile (Chapter 2) have demonstrated their ability to enhance values such as identity and reciprocity, which in turn contribute to *restoring* degraded landscapes. Through creative interventions in public spaces, such as a music festival held in front of the industrial complex of the QPSZ, new material and symbolic spaces arise. By focusing on the relationship between art, time and place, this research responds to Pellow's (2017) call for critical environmental justice studies to consider the temporal and spatial dimensions of environmental issues.

My results highlight that artistic practices provide a safe space for affects (Ryan, 2015b) and for cultivating relational values interlaced with landscapes (Hanaček et al., 2021). The restoration of landscapes derives from (re)built networks for action and agency that are not only crucial to reverse degradation in concrete instances of environmental conflict but also for upscaled effects (Aydin et al., 2017). Art plays a significant role in this process by enhancing values such as identity, reciprocity, and care, and by creating spaces of relationality and prefiguration (Serafini, 2020).

The case of Oakland (Chapter 4) exemplifies how art can re-articulate spaces and disrupt global commodity chains, such as the intercontinental coal trade. Although interviewees did not recognise direct material impacts of art-activist initiatives, the suspension or even the delay in the construction of a transportation terminal impeded inter-continental flows of coal. Art undoubtedly served as a medium to make the impacts of coal on the Oakland landscape tangible. In doing so, artistic productions brought broad public attention to the injustices happening in West Oakland beyond the immediate vicinity of the planned terminal. Thus, the environmental justice conflict upscaled from the area directly impacted by the project to the whole city of Oakland and beyond. As a result of this upscaling, the distributive dimension of environmental damages gets exposed (Urkidi & Walter, 2011). Fostering the upscaling of environmental conflicts is thus a power of art to re-articulate spaces and prompt social change.

Chapter 3 explores how visual arts activism in the Philippines can be a powerful tool for promoting visibility, resistance, and memory. Social movement theorists have

long recognised the power of the body in spaces of contestation, particularly in the context of street performance (Garbayo Maeztu, 2016; Martin & Shaw, 2021; Prentki, 2017; Ramírez Blanco, 2015; Serafini, 2015, 2020). This thesis builds on those insights to show how art can bring bodies in reaction to environmental degradation –*"living archives of contamination and oppression"* (Iengo & Armiero, 2017:50)– into spaces of environmental violence and historical memory. In this context, the communities subject to violence are often rendered invisible. Since visibility is such a critical issue, visual art provides an effective avenue to reclaim people's right to life and a safe environment. As illustrated by feminist writer and activist bell hooks (1995:34) [portraitures] *provided a necessary narrative, a way for us* [African American families] *to enter history without words"*. Similarly, communities involved in the conflicts use art's unique quality of being visual to challenge dominant narratives and reconfigure the social and political dimensions of space, emphasising the importance of remembrance and recognition through visuality in environmental struggles.

This thesis highlights the influence of art on the re-appropriation of spaces by social movements, both online and offline, as well as the ability of the arts to transcend geographical scales. My findings demonstrate that art connects local environmental issues with global environmental struggles in context that go from prevention to restoration. The importance of transnational connections between movements has long been part of the study of environmental conflicts (Tsing, 2005). Similarly, art activism can evoke memories of past social struggles, transporting the viewer to a different time and place. The ephemeral nature of art activism, which lacks the protection granted to art in museums and galleries, does not diminish its importance. Art activism supplies a vital form of evidence, particularly for marginalised individuals and communities whose stories have been made invisible by history (Ryan, 2017). In this respect, I assert that art activism serves to create effective environmental resistance, influencing not only space but also history.

Art theorists such as Miles Malcolm (2005) had already outlined the role of public art to transform and regenerate urban environments, showing how it can help to create more liveable and sustainable futures. However, these ideas have not yet been applied to the study of art activism. While such studies pay attention to art outside of conventional art spaces, such initiatives remain institutionalised or used by those in power to incorporate them as a means of urban regeneration. This undermines the power of art activism *"as a disruptive technology and form of critique"* (Ryan, 2017:5). My study situates art activism in environmental conflicts as a direct material and aesthetic opposition to projects that disrupt the sustainability of spaces and fragment local communities. My work demonstrates that art practices create narratives around the environment in space and history, and in doing so, re-articulates relationships and spaces that challenge the configuration of environmental degradation.

5.2. Featuring contributions

In synthesis, art activism promotes transformations in the socio-environmental conflicts in three ways (Table 5.1) which theory relevance I feature in this section.

ARTICULATION	DISARTICULATION	RE-ARTICULATION
Environmental mobilisation	**Power structures over the environment**	**Spaces and relations**
Expand the movement / sense of belonging to the movement	Push counter-narratives	Reclaim public space
Voice diverse perspectives	Reinforce local and subaltern identities	Enhance relational values
Focus attention on goals	Encapsulate political intentions	Up-scale / out-scale

Table 5.1. Key contributions of this thesis

Despite distinguishing the three dimensions of transformation that art activism contributes to, I acknowledge that they are interconnected. The research on sustainability transformations already emphasises that transformations must occur across social, political, and spatial spheres to be meaningful (United Nations Research Institute for Social Development, 2019). Art activism in environmental conflicts –whether in Chile, the Philippines, the United States, or wherever front-line communities are– mobilises all three spheres of transformation simultaneously. Art activism is a material and political-social action that has proved its different virtues at various stages of mobilisation. By dividing environmental mobilisation into three stages (precautionary, reaction, and restorative), my intention is not to highlight a specific function of art in each stage, but rather to examine how the potential of art comes into play at different intensities depending on the context.

This work aims to intervene in the field of political ecology by building bridges with notions from the environmental humanities, human geography, aesthetic politics, and sustainability science. Although political ecology has recognised the importance of artistic practices in environmental movements (Merlinsky & Serafini, 2021; Rodríguez-Labajos et al., 2021; Serafini, 2022), the study of art and aesthetics linked to environmentalisms of the poor is relatively unknown. This thesis demonstrates how art accompanies environmental conflicts in their different stages, forms, and dimensions, providing empirical and theoretical tools to study it.

The need for empirical studies to distinguish the unique effects of art activism from other forms of activism is evident in the Copenhagen Experiment conducted by the Center for Artistic Activism (Duncombe & Harrebye, 2019). This study concluded that art has a distinct connection to emotions and affects, a concept that has piqued the interest of scholars examining the intersection of art and social change (Bishop, 2006; Mouffe, 2007; Reed, 2005). The emotional and affective dimensions of art, combined with a political motivation for social mobilisation, serve to engage people in activism by appealing to both their hearts and minds (Duncombe & Harrebye, 2022). Moreover, art can promote cognitive liberation, which can drive new ways of understanding the world and catalyse social mobilisation (Ryan, 2015).

This thesis builds on these ideas by situating them in the context of environmental conflict, where emotions and affects are directly linked to the state of the environment (Aedo & Cabaña, 2020; Riechers et al., 2021; Rusansky, 2021; Wright, 2019) and, consequently, with the production of environmental degradation. By doing so, I contribute to the study of the effects of art activism by demonstrating how it can articulate different notions surrounding the production of the environment and the environmental crisis.

I bring the concept of "articulation" as a key notion of this thesis to connect with the different uses and meanings of this concept in political ecology. As explained in the first chapter of this dissertation, political ecology recognises the environment as the result of various articulations (Clifford, 2001). The notion of environment emerges as a complex system that articulates natural, technological, and cultural processes within the social forces of production (Leff, 2004). Additionally, space is defined by the articulations between uses and meanings, as well as the political subjects of environmental conflicts that articulate notions of identity, class, race, and ethnicity (Escobar, 1999:260). Furthermore, the world is articulated through narrativity, as the act of defining the world through words and knowledge. This idea was developed by Bruno Latour (2005, 2018), who emphasised the importance of understanding the complex relationships and interactions that shape our world, as well as the role that different actors and elements play in creating these connections. Art activism, therefore, articulates the production of environmental degradation with the narratives, relations, and mobilisations in environmental conflicts. It highlights that the environment is not something static, but something that is constantly articulated, disarticulated, and rearticulated every day, and art plays a significant role in its construction, challenge, and transformation.

This thesis also introduces conceptual and methodological contributions. Each empirical chapte involved new methodologies to categorise artistic practices in connection to a) concrete relational values, and restoration through art (Chapter 2), b) political digital narratives (Chapter 3), c) strategies of the mobilisation, and transformations (Chapter 4).

In relation to transformation, I developed two frameworks that help to fill a research gap in the study of art activism from an interdisciplinary perspective: 1) Based on the type of transformation (social, political, material) triggered by the anti-coal movement in Oakland (Section 4.4.3, Chapter 4); 2) Based on the relational values activated through arts across transformation stages in Quintero Puchuncaví sacrifice zone (Section 2.6, Chapter 2).

Always anchored in the field of political ecology, these frameworks create bridges with different schools interested in environmental struggles (environmental humanities, human geography, political ecology, and environmental justice) and social debates more in general (social movements, social media studies, cultural studies). The proposed transformation frameworks are of special interest for studies on environmental conflicts and transformations (Temper et al., 2018), post-development studies that engage with ontological and epistemological lines of inquiry about the environment (Escobar, 1992), and the study of sustainability transformations. For instance, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services encourages the promotion of a different type of values associated to the environment in decision-making processes for sustainable futures (Pascual et al., 2017). The categorisations presented above may support the examination of these different types of values.

Also in the methodological line, another contribution of the thesis is the development of the DiVAC (Chapter 3). This is a useful indicator to compare digital contents and artistic incidence with different outcomes of environmental conflicts. This innovative methodology provides insights into the potential of the digital realm for researching environmental conflicts, thereby contributing to the ongoing discourse surrounding the re-evaluation of research methods in political ecology within the context of the digital age (Faxon, 2022).

The application of each of these methods, categories, frameworks, and indicators was designed for a concrete context. However, each methodological innovation has great potential to support the understanding not only the important role of artistic expressions in the contexts addressed in this thesis but also the relationship between environmental conflicts and aesthetics, relationality, digital spaces, culture, conceptions of the space and environmental discourses.

5.3. The way forward

The empirical data presented in the thesis offers valuable insights into the efficacy of environmental art activism in tackling socio-spatial segregation, disentangling power relations, and cultivating relational values and spaces. This constitutes a crucial step towards achieving environmental justice. Further research in this area could explore the effectiveness of environmental art activism in addressing the global macropolitical dynamics of injustice and environmental crisis. However, it is imperative to develop novel ways of comprehending art that do not perpetuate the productivist logic associated with the term 'effectiveness,' which often disregards sociocultural dimensions of change. To this end, grounded in the field of political ecology and the study of environmental conflicts, I have forged connections with other disciplines grappling with the environmental crisis, such as the environmental humanities, uncovering extensive points of intersection and pointing to promising avenues for future research, particularly considering the pressing challenges of the present climate emergency.

This study also examined the visual activism in the Philippines, the third most dangerous country for environmental defence and where no protection program has yet been implemented. It would be useful to develop information about environmental visual activism in countries such as Colombia and Brazil, which have recently implemented protection programs for environmental defenders. Art activism can become a way to monitor to what extent such programs are recognised, valued and used by the people in the struggles.

The study has been structured around three contexts –restoration, reaction, and prevention– to situate artistic activism within the realm of environmentalism. By considering the element of time –past, present, and future– a comprehensive understanding of environmental struggles is attained. With the alarming projections of catastrophic scenarios for our planet in the medium to long term, it becomes crucial to investigate the potential of art activism in envisioning and inspiring alternative, utopian futures. The exploration of utopian possibilities can foster hope, inspire collective action, and drive the transformation necessary to address the long-term challenges facing our planet.

As a final note, I recognise the value of raising knowledge that highlights the histories, strategies, values, relationships, and spaces that encapsulate the art of those rendered invisible by history. However, all this knowledge loses its meaning if it does not break the barrier of academia and does not reach the cases investigated here. The main task that remains to be done now is to follow up on whether this thesis really serves the people I are talking about here, and to do what we can to make this new knowledge serve them.

5.4. Final remarks

As I sit here completing this thesis, each morning I awaken to a bitter feast of news about our present and future. It seems that governments and other powerful economic and social actors are not doing enough to shift the prevailing patterns of economic growth-driven, unsustainable, and unequal living. In the face of global crises such as environmental degradation, extractivism, authoritarianism, forced migration, and wars, what can we do?

This thesis delves into the realm of artistic initiatives and direct resistances to environmental degradation across diverse geographical contexts. The thesis shows a reality in which there is no one-size-fits-all solution to the undesirable events. We need multiple paths to imagine alternative ways of living and relating, rooted in place-based needs, values, territories, and cultures.

Through the exploration of artistic practices developed by artists, activists, and communities grappling with environmental conflict, this thesis seeks to unravel the ways in which these practices shape socio-spatial transformations that confront environmental degradation and other forms of violence and injustice. By transforming organisational efforts, hegemonic narratives and power dynamics, relationships, and everyday spaces, these practices resist and redress the challenges posed by environmental degradation.

The cases addressed in this dissertation show that the power of art transcends geographical boundaries, types of conflicts, and circumstances. Artistic creativity becomes a tool for all, a vehicle for distribution and resistance that interweaves a range of movements and struggles, long-standing narratives, injustices, and political conditions in each country.

Each chapter of this thesis focuses on a distinct conflict in different countries and historical-political situations. Such diversity allows to grasp how environmental conflicts and the use of the arts are articulated in each case, responding to unique challenges and realities. In this way, this thesis creates a poetic record of the use of the arts in various stages of resistance, illuminating three avenues of socio-environmental transformation while simultaneously responding to the need for new interdisciplinary approaches to the study of creative activism.

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Credits to chapter cover images

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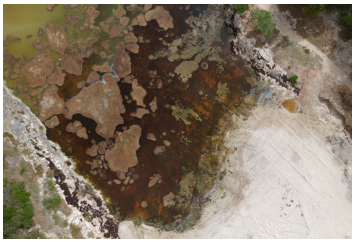
Chapter 1
By Scott Osborn; 2019

Chapter 2
By Gerson Repreza; 2018



Chapter 3
By Tim Oun; 2018

Chapter 4
By Yann Allegr; 2018

Chapter 5
By Wesley Tingey; 2020

Appendixes

Appendix A. Codebook for developing Chapter 2

ARTS EXPERIENCES	RELATION WITH AN AUDIENCE	communication	art as a way of communicating with an audience
		call the attention	art as something that appeals
		entertainment	artistic pieces that make people have fun
		controversial	some artworks generate conflictive answers from other public actors
	ACTIVISM	non-violent activism	art uses for non-violent form of activism
		artistic activism	a way of doing activism through arts
		engaged artists	art makes people engage in protest
		protest	art that takes place in protests
	MATERIALITY	context-time-reaction to pollution peak	the temporality of the artwork
		context-place-sacrifice zones	the spatial impact of the artwork in the sacrifice zone
		public space	artworks as street interventions
		embodiment	the importance of the presence of the body in the artwork
	CREATION PROCESS	participatory	participatory art-making
		idea	the importance of the collective idea
		creative relations	social relations enhanced by artistic projects
		art-making	the process of making art
	EXECUTION	ritual	artistic practices with a ritual flow
		express themselves	art use to express wills, emotions, values
		execution experience	activate emotions when using art

ARTS REPRESENTATIONS	POWER	power	representations of community resistance and power of the people
	IMPACTS	environmental degradation	
		health impacts	
		environmental demands	
		violence to environmental defenders	
		quantitative data of the conflict	
	LIFE HISTORY		personal experiences about living in a sacrifice zone, the conflict in first-hand
	LOCAL VALUE	indigenous culture	representations of the indigenous peoples living in the area in the past
		social practices-before industries	representations of economic activities and social practices before the industries
		local elements	elements representations of local elements, like legendary places and local flora and fauna
		alternative futures	representations of imaginated alternative futures
SOCIO SPATIAL TRANSFORMATIONS	NETWORKING	(Escobar, 2004; Svampa, 2019)	connection between people, better relation with neighbours, unification, feeling of community
	AWARENESS		concern about the impacts of the industry and a recognition of injustice
	SENSE OF AGENCY	(Peçanha et al., 2018; Barker & Pickerill, 2020)	the praxis of generating an oposition to the actual state-of-things
	RESTORATION (Bourriaud, 2004; Duff, 2017; Halvorsen, 2017)	catharsis	emotional healing
		materian and non-material spaces	build and re-build spaces, create new identities and imaginaries
		everyday life	upgrade daily lifes by participating in art-related activities

Appendix B. List of EJ Atlas cases from the Philippines as of April 2023.

Conflict Id	Case	DiVAC Score	Cluster
123	A. Brown / Nakeen Corporation palm oil plantation and human rights violations in Opol, Misamis Oriental, Philippines	3	1
1375	Rio Tuba and Coral Bay nickel mining and processing in Palawan, Philippines	2	2
1789	Philipino Farmers Uproot GMO “Golden” Rice, Philippines	5	2
1869	Chromite mining in Salcedo and killing of activist Francisco Canayoung, Philippines	2	1
1878	Didipio Gold and Copper mine, Nueva Vizcaya, Philippines	4	1
1886	Mt. Canatuan Gold Mine on Subanon Ancestral Lands, Western Mindanao, Philippines	1	1
1890	Rapu Rapu polymetallic mine, Philippines	2	3
1895	Glencore Xstrata Tampakan Copper-Gold Project in South Cotabato, Philippines	4	3
1896	MacArthur Metallic / Black Sand Mining, Philippines	3	3
1897	Mamanwa Communities of Dinarawan and Bunga Asserting Ancestral Land Rights over MRL Agata Mining expansion, Philippines	1	2
1906	Pujada-Hallmark nickel mine on ancestral lands, Oriental Davao, Philippines	2	3
1907	APECO Special Economic Zone on ancestral lands and fishing grounds, Aurora, Philippines	4	1
1919	Illegal gold mining and killing of anti-mining indigenous leaders, Mindanao, Philippines	5	
1927	Citinickel’s Pulot Sofronio mine in Palawan, Philippines	1	3

1928	Citinickel's Toronto Narra mine in Palawan, Philippines	2	3
1935	Marcopper Placer Dome Mining Disaster, Marinduque Island, Philippines	4	3
1936	Intex's Mindoro Nickel Project, Philippines	4	3
1937	Santa Cruz, Zambales nickel mining impacts sustainable agriculture and fisheries, Philippines	5	2
1939	Philex's Padcal mine, the biggest mining disaster of the Philippines	5	3
1950	Shenzhou Mining / Claver Mineral Development Corporation Nickel mining in Claver, Philippines	2	3
1952	Taganito Mining Corporation's Nickel Operations, Surigao del Norte,Philippines	2	3
1953	Cagayan black sand mining in shore areas, Luzon, Philippines	2	3
1957	San Roque Metals Inc. Nickel mining in Tubay, Agusan del Norte, Philippines	2	1
1965	Puerto Galera waste dump facility may relocate indigenous Iraya Mangyan families, Philippines	1	2
1976	Southwood Timber Corporation's logging activities on ancestral lands, Misamis Oriental, Philippines	2	3
1981	Ventura Timber Corporation's logging operations on ancestral lands of Mamanwas and Manobos, Northern Mindanao, Philippines	0	3
1983	Sudecors' corporate logging activities and illegal logging in Mindanao, Philippines	3	3
1987	Marcventure's mining operations in Cantilan, Surigao del Sur, Philippines	3	3
1988	Jalaur River Multi-Purpose Project (JRMPP) Phase II Dam, Iloilo, Philippines	5	3

1990	Kaliwa Dam – New Centennial Water Source Project (NCWS), Quezon, Philippines	5	3
1991	Laiban Dam - New Centennial Water Source Project (NCWS), Quezon, Philippines	5	3
2006	Illegal logging in Northern Sierra Madre National Park, Isabela, Philippines	4	3
2010	Mining in Bakun and Royalco's withdrawal, Philippines	3	3
2058	Palawan Oil Palm Plantations and Land Grabbing , Philippines	3	2
2070	San Roque Multipurpose Project, Philippines	5	1
2075	Water and sanitation privatization in metropolitan Manila, Philippines	3	2
2432	Killing of anti-mining activists in Compostela, Mindanao, Philippines	5	1
2435	King-King copper and gold mine in Pantukan, Compostela, Mindanao, Philippines	3	1
2444	Farmworkers poisoned by DBCP (Nemagon), Philippines	1	2
2559	Resistance to coal stockpiling leads to Gloria Capitan's murder, Bataan, Philippines	4	1
2830	Ipilan and MacroAsia nickel mines in Brooke's point, Palawan, Philippines	4	2
3084	Quezon coal fired power plant in Atimonan, Philippines	5	2
3085	Coal fired power plants, Batangas, Philippines	5	2
3187	Human rigths and environmental defenders killed in 2017, Compostela Valley, Philippines	5	1

3190	Members of peasant organizations murdered in 2017, Calatagan, Batangas, Philippines	2	1
3205	Combatting deforestation in Palawan, Philippines	4	1
3367	Coal-Fired Power Plant in Luna, La Union, Luzon, Philippines	4	2
3414	Smokey Mountain and Payatas dumpsites, Manila, Philippines	3	2
3546	Save Pulangi Alliance, Bukidnon province, Mindanao, Philippines	5	1
3681	Bulacan Aerotropolis threatens fishing livelihoods, Philippines	5	2
3706	Sicogon Island Tourism Estate, Philippines	3	3
4147	Protesters in Quezon City, resist planned incinerators despite national ban, Philippines	4	2
4867	Sagay Massacre of Sugar Farmers, Philippines	5	1
4952	Illegal fishing in Bicol, Philippines	2	1
4999	Metallic mining moratorium in Romblon, Tablas Island, Philippines	4	3
5128	Bataan Nuclear Power Plant in Morong, Philippines	5	3
5337	Local LGBTQI struggles for post-disaster recovery turn into the Climate Change and Human Rights Inquiry against “Carbon Mayors”, The Philippines	5	
5358	Coal mining in Barangay Ned, Lake Sebu, South Cotabato, Philippines	4	1
5422	Dawang Coffee Plantation on Indigenous Territory in South Cotabato, Mindanao, Philippines	5	1

5440	Bioethanol plantation and plant conflict in Isabela, The Philippines	3	2
5443	Coastal and land grabbing for tourism in Hacienda Looc, Nasugbu, Batangas, Philippines	5	1
5514	Coal power plant in Narra, Palawan, the Philippines	4	2
5532	Cancellation of Korean 2nd coal plant in Sual, Pangasinan, Luzon, Philippines	3	2
5631	Andap Valley Complex coal mining, Surigao del Sur, Philippines	5	1
5634	Mining and logging operations in Pantaron Range, Talaingod, Davao del Norte, Philippines	5	1
5653	Banana plantations and logging in Mount Apo Natural Park near Magpet, Cotabato, Mindanao, The Philippines	2	1
5664	Karayan Dam in Chico River, Lucog, Kalinga, The Philippines	5	2
5677	Escalante Massacre over sugar plantations, Negros Occidental, the Philippines	5	3
5687	Logging in San Fernando, Mindanao, the Philippines	2	2
5707	Diwalwal Mineral Reservation on indigenous land in Monkayo, Compostela Valley, Philippines	3	1
5708	Sugar workers demand land distribution in Hacienda Luisita, Tarlac, central Luzon. The Philippines	5	
5740	Kidapawan massacre in 2016 over hungry farmers protest, North Cotabato, the Philippines	5	
5742	Gold mining and paramilitary attack in San Fernando, Bukidnon, Philippines	4	1
5745	Mining and murders on indigenous land in San Teodoro, Mindoro Oriental, Philippines	3	3

5746	Typhoon Bopha´s post-disaster climate injustices and relief corruption, Compostela Valley, Philippines	3	
5747	Murders of UMAN leaders over mining, logging, and plantations near Butuan City, Agusan del Norte, Philippines	5	1
5753	GENED-1 Hydroelectric Power Plant in Apayao-Abulug River, Cordillera Region, The Philippines	4	2
5758	Negros Massacre: Murder of 14 farmers in Negros, The Philippines	5	2
5780	Environmental lawyer killed in Bohol, Visayas Islands, The Philippines	2	
5797	Mendiola massacre against farmers demanding genuine land reform, Manila, The Philippines	5	1
5806	Balog-Balog Multipurpose Dam Project, Tarlac, Luzon, The Philippines	5	2
5817	Deadly landgrabbing in Hacienda Dolores, Porac, Pampanga, Philippines	4	1
5858	Nickel mining in Manicani Island, The Philippines	4	2
5864	Dispute over trash dumping from Canada to Manila (Company Chronic Inc), The Philippines	4	2
5887	Indigenous people's resistance against Cellophil Resource Corporation	3	1
5892	Lio Tourism Estate and Lio Airport, The Philippines	2	2
6037	The struggle for land in the New Clark City project, Luzon, The Philippines	5	

Appendix C. Average means of different outcomes, mobilizing forms and groups per cluster

	Clusters		
Ward Method	1	2	3
EVAQuant	4,605	3,68	2,545
INTENS_Quant	3,921	2,8	3,636
SUCCESSQuant1	1,105	1,52	1,773
POPRuralBi	0,943	0,571	0,909
MG_DIVERSITY	7,76	5,6	9,55
ResistanceQuant	1,757	1,565	1,636
ProjectStatusQuant	2,912	2,208	2,045
CE_Corruption	0,368	0,12	0,318
CE_Criminaliz	0,632	0	0,227
CE_Deaths	0,842	0	0,318
CE_CourtDec_victoryEJ	0,079	0,08	0,318
CE_CourtDec_failureEJ	0,105	0,16	0,091
CE_CourtDec_und	0,316	0,08	0,045
CE_MigratDispl	0,395	0,08	0,136
CE_Repression	0,789	0	0,545
CE_StrengthPart	0,342	0,36	0,455
CE_Undernegot	0,211	0,12	0,182
CE_ViolActiv	0,816	0,04	0,364
CE_ApplyRegul	0,132	0,12	0,364
CE_Moratoria	0,026	0	0,227
CE_ProjCancelled	0,053	0,04	0,318
CE_ProjSuspend	0,053	0,28	0,727
CE_StopProjectBi	0,132	0,32	0,955
CE_ViolentOutcomesQuant	3,474	0,12	1,591
CE_PositiveOutcomesQuant	1,553	1,2	3,5
MF_Artistic	0,237	0,08	0,182
MF_Blockades	0,395	0,08	0,591
MF_Communitybased	0,263	0,12	0,591
MF_CreatKnowledge	0,447	0,44	0,5
MF_DevelNetwork	0,737	0,6	0,864
MF_DeveloAplter	0,158	0,16	0
MF_InvolIntNGOs	0,737	0,44	0,773
MF_Landoccupation	0,132	0	0,182
MF_Lawsuits	0,605	0,36	0,591
MF_Mediabased	0,526	0,52	0,182
MF_ObjectionstotheEIA	0,158	0,2	0,136
MF_OfficialComplaint	0,658	0,56	0,773
MF_Publiccampaigns	0,711	0,52	0,818
MF_Streetprotest	0,789	0,68	0,864
MG_Artisanal_miners	0,158	0	0,136
MG_Farmers	0,816	0, 36	0,864
MG_Fisherpeople	0,368	0,36	0,818
MG_Indigenousgroupsortraditionalcommunities	0,816	0.52	0,909
MG_Landlesspeasants	0,237	0	0,045
MG_Localgovernmentpoliticalparties	0,5	0.16	0,727

MG_Neighbourscitizenscommunities	0,632	0,72	0,955
MG_Women	0,553	0,16	0,455
MG_Ethnicallyraciallydiscriminatedgroups	0,421	0,2	0,591
MG_Localscientistsprofessionals	0,421	0,28	0,636
MG_Religiousgroups	0,579	0,44	0,773

Appendix D: Events attended during fieldwork period in Oakland (April-May 2019).

Event attended	Contribution to the research
NCiO meeting	Non-participant observation. Understanding of the methods, current strategies and objectives of the core group. Observation of artworks.
Warriors for justice meeting	Idem + connect with kids for interview, observation of artworks in process.
Art build for Brazil demonstration. (Brasil Solidarity Network)	Participant observation. Connection with interviewee and understanding of the concept 'art building'. Participation in the art-making.
Climate Justice Block Party	Participant observation. Strategies of the youth movement and artwork observation. Connection with informants. Participation helping organizing.
West Oakland Earth Day Fair	Non-participant observation. Connection with interviewees, background information.
Court Hearing in [developer name] Second Lawsuit	Non-participant observation. Understanding of the legal processes over the case, connect with lawyer for interview. Register NCiO t-shirt use.
Earth Day Church service at Skyline Community Church	Non-participant observation. Connection with interviewee, understanding of the involvement of faith community in environmental/climate justice movement. They lifted up the Green New Deal and anti-coal struggle.
WOEIP tour	Non-participant observation. Background information about West Oakland environmental justice fight, connection with interviewees.

Appendix E: Categories, codes and definitions* for the development of Chapter 4.

- **Strategies of the movement.** Building on concepts proposed by Hess and Satcher (2019) and Porto et al. (2018) the strategies were coded from the questions 'which were the stages of the mobilization' 'why were you interested in doing [action that interviewees described]', 'which was the most relevant moment', 'what was the outcome of the movement'. The answers were coded in 4 ad hoc categories.

- **Art activism.** The research does not depart from a given definition of art and we accepted as such anything that informants perceived like art. All the different art pieces mentioned during the interviews were recorded with the name provided by the informants. Artwork type. The artwork pieces where coded in 5 groups based on own observations of the artworks, pictures and interviewee's description. The concepts departed from notions compiled by (Rodríguez-Labajos, 2019).

- **Artwork effect.** This code refers to the influence of art in the different stakeholders and socio-spatial dynamics involved in the mobilisation/conflict. Artistic expressions have different effect in social movements and society, for example, increase participation (Bashi et al., 2018) and generate social cohesion (Jasper, 2011; Mahon, 2000; V idianu et al., 2014). The codebook of this category was a result of a systematization of 9 effects of art registered in literature and presented in Figure A.1. The effects were coded from the questions 'What was the short-term and the long-term effect of this piece?' 'Why this was important in that moment?'

- **Transformation.** The categories of transformation where coded from the questions 'what has been the greatest change' and 'what are the major outcomes or achievement of the movement so far?' and resulted in 3 categories. The codebook for this section departed from grounded theory and theories on transformative and strategic environmental justice (Della Porta, 2013b; Hess & Satcher, 2019; Martinez-Alier, 2002; Nixon, 2011b; Rodríguez-Labajos, Yánez, Bond, Greyl, Munguti, Uyi, et al., 2019; Temper et al., 2018).

Parental codes	Categories	Codes	Definitions
Anti-coal strategies	KNOWLEDGE (Porto et al., 2018; Hess & Satcher, 2019)	activist's politics/finance knowledge	The core group research about the political-legal state of the project and the best institutional strategies to stop it.
		public education	Inform general public and community about the issue, actors, causes and consequences of the project.
		media outreach	Reach newspapers and computer mediated communication.
		generate own science	Develop own science and knowledge about the environmental hazards and injustice that would reproduce the project
	INSTITUTIONAL (Larsen et al., 2015; Hess & Satcher, 2019)	mobilise community	Organize the community affected by the project.
		build coalitions	Make alliances with academic institutions, regulators, community groups, social movements.
		engage + people	Influence general and international public to act and to participate in the anti-coal movement.

Anti-coal strategies	ECONOMIC (Hess & Satcher, 2019)	influence developer	Lobbying and extra-institutional strategies against the developer of the project.
		block the money	Extra-institutional and institutional strategies such us petitions directed to the banks and other economic institutions funding the project.
	LEGAL (Larsen et al., 2015; Hess & Satcher, 2019)	participate in decision making	Lobbying to have access to the decision making process about the future of the city.
		legal ban to coal	Litigation against the project.
Activist art	AUDIOVISUAL/ SONGS	Music	Occupella songs; NCiO rap
		Film	Angelica's animation
	IMAGE-BASED	Poster	House signs; NCiO poster
		Painting	Banners general; Youth banner; Paintings summer; Interfaith banner; The New Oakland
		Photography	Photos; Faces of Coal Resistance
		Mural	SF street mural
	MATERIAL-BASED	Clothing	NCiO t-shirt
	MEDIA	Media	Web site
		Digital	Memes
		Graphic design	Flyers

Activist art	ORAL/WRITTEN NARRATIVE	Poetry	Youth's poems
		Text	Statements grand lake
	PERFORMANCE	participate in decision making	Flash mob; Charcoal dumpling; Good Samaritan; Elf delegation; Zombie Coal-pocalypse
	ORGANIZATION	Art-making process	Art builds; Silk-screening
	ARTS IN GENERAL		Youth's Perfo
			Activist art
Artworks' effect		Express opinions	The artwork gave activist voice to communicate their opinions and feelings, intended to influence decision making . (Allen, 2009)
		Get attention	The artwork called attention of the people, media and gets attention to the issue (Dewhurst, 2018)
		Empower	The artwork encouraged to mobilize and participate in decision making those that normally take not part in this issues (Bell & Desai, 2011; V idianu et al., 2014; Sacco et al., 2019)
		Photography	Photos; Faces of Coal Resistance and the health and safety implications (Blanc, 2017)

Artworks' effect		Entertainment	The artwork contributed to people enjoying or having fun in demonstration/ mobilisation (Ogaga, 2011)
		Honor/support	The artwork is an act of respect, solidarity and recognition to the community movement work. 'collectivity and solidarity necessary for mobilization (Mahon, 2000)
		Inspiration	The artwork contributed to people believing in the use of arts in social movements or creating their own artistic expressions
		Increase participation	Art brings people together, and is a way that people participate in the mobilization (Bell & Desai, 2011)
		Social cohesion	The artwork (singing, painting together) enhanced feelings of collectivity and community unity to fight against the coal terminal. (Jasper, 2011; Mahon, 2000; Vaidianu et al., 2014)
Perceived Transfor mations	CULTURAL	Rising global environmental awarenes (context)	The growing global environmental movement influences the success of the movement

Perceived Transfor mations	CULTURAL	Creation of an artistic movement (grounded theory)	The dynamics of mobilisation tend to be more artistic
	SOCIAL	Creation and strenghtening of human connections	Political engagement in the anti-coal movement connected people with same concerns
		Expanding demographics	Fighting against this project enabled communication across geography, race and class, because is an issue that concern different people.
		Increased local awareness	The people is aware not only about the socio environmental consequences of the project but about the political and economic interest of the different actors in the conflict (Uncu, 2016)
		Youth movement	The Youth started to have a very important role in the movement, linking it with climate justice movement
		Demoralize opposition	The movement was able to shame the developer and make visible his hypocrisy. He was no longer popular in the community.
	POLITICAL	Prevalent neoliberalism (context)	Interviewees showed anti-capitalist feelings when opposing the project

Perceived Transfor mations	POLITICAL	Increased political support for the movement	Anti-coal movement succeeded obtaining the litigation against the project
		Trump (context)	Trump's presidency was perceived as a pro-coal force influencing the building of this type of coal exportation ports
	MATERIAL	Increasing gentrification (context)	Perceived as other actual force influencing social injustice in West Oakland
		Stop the terminal	Perceived as a success, for different reasons, the terminal is not built yet.
Demogra phics	Age	age_adults; age_retired people; age_youth	Terms related to the category "age".
	Race	race_white; race_communities of color	Terms related to the category "race".
	Income	income_high; income_middle; income_low	Terms related to the category "income".
	West Oakland	West Oakland_affected community;	Terms related to the category "West Oakland demographics".
	Other	big environmentalist; disadvantage; diverse; immigrants	Other terms related to demographic information

Gender	Women	women_activist; women_leaders; women_mothers; ecofeminism	Terms related to the category “women”.
Targets		target_affected community; target_bank of montreal; target_decision makers; target_federal judges; target_general public; target_kids; target_phil tagami	Terms related to the category “target” of the artworks and anti-coal strategies
Justice	Climate justice	climate justice_general; climate justice_anti-fossil fuels; climate justice_movement	Terms related to the justice notion in the corresponding category
	Environmental justice	environmental justice_affirmation; environmental justice_general; environmental justice_geographies; environmental justice_health; environmental justice_movement; environmental justice_WO; environmental justice_NIMBY	
	Economic justice	economic justice; economic justice_gentrification	
	Environmental racism		
	General injustice		
	Political justice		
	Racial justice		
	Social justice		

Anti-coal reasons		reason_capitalism -injustice; reasons_coal cycle; reasons_coal dust; reasons_dead business; reasons_health; reasons_need clean energy; reasons_non-sense coal 21st century	Terms related to the category “anti-coal reasons”.

Figure A.1. Codebook for the development of Chapter 4

*The codebook emerges from the analysis of the interviews. The codes proceed from the systemization of the answers. The categories are loosely based on notions from the literature described in the background section.

Art iculating change across environmental conflict stages

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