RIGHTS FOR SUSTAINABILITY

IBON INTERNATIONAL

Volume II

Community-Led Practices on People-Powered Consumption and Production

Rights for Sustainability:
Community-Led Practices on People-Powered Consumption and Production
Volume II

IBON International (www.iboninternational.org) is a service institution with an international character and scope of work. It engages in capacity development for human rights and democracy around the world. It strengthens links between local campaigns and advocacies to international initiatives and brings development issues from the international arena in a way that people's organizations and social movements can engage with at country level.

IBON International initiates and implements international programs, develops and hosts international networks, initiates and participates in international advocacy campaigns and establishes regional and country offices where necessary and appropriate.

Published by:

IBON International
3rd Floor, IBON Center
114 Timog Avenue, Quezon City
1103 Philippines
Telefax: 9276981 632+
Telephone: 9277060 632+ to 61 local 203 and 207
Email: international@iboninternational.org
Website: www.iboninternational.org

This document has been produced with the financial contribution by the Swedish International Development Co-operation Agency (SIDA) through the Swedish Society for Nature Conservation (SSNC). The views herein shall not necessarily be taken to reflect the official opinion of SSNC or its donors.

Swedish Society
for Nature Conservation

Acknowledgements

IBON International is grateful to all those who contributed to make this publication possible:

Christian Patricio with *Lulu Gimenez, Fernando Mangili, and Fernando Bagyan of Aliansa dagiti Pesante iti Kordiliera (APIT TAKO) and Rendilyn Cuyop and Astrid Bolinget of the Cordillera Peoples Alliance*

Pedro Maldonado with *Maria Zuñiga of Foundation Reparemos! and Alejandra Crocco-Valdivia of University of O'Higgins*

Gabriela Galarza Ferrín with *Camila Rodríguez Estrella, Alicia Franco, and Lucía Ricaurte-Manosalvas of La Cuica Cósmica*

We also extend our gratitude to **Bryan Ziadie** for sharing his expertise in the completion of this publication.

Page and cover design by Neal Igan Roxas
Photo on the cover: Roy Dibakar

Table of Contents

Message from the Executive Director

Sustainable consumption and production practices cannot be achieved without, at the same time, realizing human rights for peoples throughout the global South. This lesson comes from the anti-colonial liberation movement, which, at its height, manifested as a majority influence of Southern nations in the UN General Assembly. This movement transformed self-determination from a principle into a right with the signing in 1945 of the UN Charter.

IBON International's People-Powered Sustainable Consumption and Production (PPSCP) recognizes the accomplishments, but also recognizes that the right to self-determination – which would later become a central element of the right to development when it was established in 1986 – is far from being realized in the context of development practice.

An aim of the PPSCP initiative is to raise awareness about the extent to which this realization is urgently needed, and to build know-how and momentum toward the mobilization of development actors involved at all levels of economic practice for the implementation of the collective rights of peoples.

In 2020, IBON International published Rights for Sustainability: Community-Led Practices on People-Powered Consumption and Production, a collection of case studies on PPSCP practices in Kenya and the Philippines. The research examined how the PPSCP practices were carried out by communities; how these practices promoted people's rights, sovereignty and self-sufficiency, supported social innovations and community actions; and facilitated the communities' demands for accountability of duty bearers.

The studies also lay down both the internal and external contexts of the practices, and analysed the possibility of their dissemination across varied contexts. The examples of PPSCP practices in Kenya and the Philippines that were studied were being conducted by society's primary producers – Indigenous Peoples and farmers.

This current research builds on the outcomes of the previous publication with more ground stories of PPSCP that offer alternative development pathways to dominant consumption and production patterns that rely on extractivist practices, land and resource grabs from local and indigenous communities, destruction of local food systems, chemical-dependent monocrop agriculture, exporting of wastes to poor countries for "recycling" and offshoring, and patronage of flexible, informal, precarious, and irregular labour subcontracted in the Southern countries.

This research also emphasises PPSCP's nexus with food sovereignty, climate justice, labour, trade, other social justice struggles and sustainable development issues, especially as the current framing of these interlinkages, while mostly astute in linking it to issues such as climate change and food security, remain incognizant of addressing systemic issues of inequality, underdevelopment, and poverty.

The struggle for the rights at stake in three cases contained in this book should be seen as part of a broader struggle for the rights to development and self-determination. The UN General Assembly's Declaration on the Right to Development is clear that participation in processes of development is a right. It also states that participants have the right to a fair share of the benefits of such processes. Moreover, the right to development implies the full realization of the right to self-determination, which includes, subject to the relevant provisions of both International Covenants on Human Rights, the exercise of their inalienable right to full sovereignty over all their natural wealth and resources (UN General Assembly 1986).

The right to self-determination is implied because it is "integral to basic human rights" (UN General Assembly 2013). As a collective right of peoples to circumstances that empower them in shaping their own futures, the right to self-determination represents a precondition for the attainment of the broad suite of political, social, economic, and cultural rights enshrined in the UN Conventions. Support for the right is upheld as a "source of pride" and a "crucial pillar" by the UN Special Committee on Decolonization (UN General Assembly 2020).

As the case studies in this book show, there remains much work ahead to achieve the substantive realization of this right in the context of development in the global South. In the Philippines, in Chile, and Ecuador, collective assertions of rights, movements toward self-sufficiency, community innovations for sustainable development, and growing social movement demands for government and corporate accountability all represent important steps toward the right to development. Urgently needed now is further support for these community-based initiatives by all actors shaping sustainable development policy.

We hope that CSOs and grassroots movements will find the three case studies in this volume valuable for advocating for people's rights, both within intergovernmental forums and on the streets, in their communities.

Jennifer del Rosario-Malonzo
Executive Director

Introduction

IBON International's framework of people-powered sustainable consumption and production (PPSCP) recommends that every link of the commodity chain be guided by a recognition of peoples' rights. Because threats to sustainable development practices are experienced collectively, an understanding of human rights as bearing only on isolated entities – whether individual or corporate – fails to protect against the most pressing social problems the world currently faces. The need for governments to respect, promote, and ensure the collective rights of peoples is especially dire in the context of struggles for development in the global South. The need for people-powered development is evidenced by each case study in this book.

These studies detail efforts to implement principles of PPSCP and, as such, offer community-based supplemental proposals and, in some instances, correctives to prevalent development paradigms, including that of the UN Sustainable Development Goals (SDGs).

The UN's failure to heed the voices of global civil society in their call for the SDGs to center the whole range of human rights represents a significant setback to sustainable development initiatives established by community actors, who have been engaging in these practices long before the emergence of the UN agenda (Winkler and Williams 2017). One consequence of this dismissal of human rights, especially peoples' collective rights, is the continuation of the substantial influence that corporate actors of the global North exert over development finance policymaking (Mawdsley 2021). But this is just part of the much broader contradiction between the SDGs' sustainability aims and their commitment to the further expansion of the predominant capitalist portion of the economy measured in GDP (Hickel 2019).

Manifest, in the case studies, are various contradictions of capitalist economy and of governments whose priorities have been narrowed by the Northern-dominated policymaking institutions. Using the PPSCP framework, one might group these contradictions in the following categories. First, community understandings of peoples' rights are denigrated by officials in favor of a government prerogative to prioritize corporate interests. Second, the capacity for community self-sufficiency in achieving household subsistence has been attacked by market forces. Third, innovative community-initiated ecological sustainability practices are dismissed, while only officially sanctioned approaches are promoted. Fourth, governments neglect their role as duty-bearers to respect, promote, and ensure human rights, especially the right to self-determination. The contributors to this volume rigorously examine efforts to implement PPSCP and, in so doing, raise awareness of peoples' struggles to overcome these contradictions.

PPSCP Principle 1: Advancing Peoples' Rights across the Economy

The first principle of PPSCP is that peoples' rights must be advanced across all links of production-consumption value chains. As the name suggests, peoples' rights are rights claimed for specific groups of people (Jones 1999). A diverse set of groups appear within the studies in this book. In **Christian Patricio's "Resilience in Isnag Rice Production Practices,"** this group is the Isnag, an Indigenous People living in the Philippines' Apayao province. The right at stake here is the liberty

of Indigenous Peoples to cultivate their land in accord with their sustainable agricultural practice: Uma, a native implementation of swidden farming, which has been declared illegal by the Philippine government. Patricio's research makes it easier to see that this pattern of criminalization is connected to a desire by the Philippine government to further impose legal restrictions and property rights incompatible with the Isnag understanding of their relationship to the land. Crucially, this understanding entails recognition of an unwritten, customary Isnag law – in their view more important than the laws of the Philippine government – that requires the community to actively maintain the health of the forest.

In **Pedro Maldonado, Alejandra Crocco, and Maria Zuniga's "Empowering Community Resilience through Repair: A Case Study of a Self-Managed Sustainability Collective,"** the group identity is more fluid. The empirical focus of the case study is the Reparemos! Foundation, an organization that promotes the right to repair on behalf of a broad population of Chileans whose wellbeing has been threatened by a protracted structural crisis in the capitalist economy. Reparemos, more than just its members, should also be understood to include its beneficiaries. It is part of a social movement ecosystem responding to national crises. The artificial scarcity of repair components nationally is a symptom of this and Reparemos empowers its community by bringing together technical-minded people and those without this skill set for the purpose of helping one another make personal goods last longer at a time when popular classes find their purchasing power severely constrained.

In **"Grassroots Composting Networks: Local Knowledge for Compost Quality," Camila Rodriguez Estrella, Alicia Franco, Lucia Ricaurte-Manosalvas, and Gabriela Galarza Ferrin** present a case in which the rights-bearing group consists, first, of marginalized populations of the Metropolitan District of Quito and, second, of Nature itself insofar as it falls within Ecuadorian national borders. While some might be incredulous when hearing Nature referred to as a subject of rights, the Constitution of Ecuador in fact enshrines this legal entity. At the same time, however, these rights are not sufficiently defended. As such, grassroots actors such as Alianza Basura Cero del Ecuador intervene to defend the rights both of poor communities experiencing negative health impacts and Nature as existent in Ecuador from the hazardous industrial waste-management regime promoted by capitalist and government actors in the global North.

PPSCP Principle 2: Promoting Self-Sufficiency through Peoples' Sovereignty

The second principle of PPSCP is that self-sufficiency must be promoted at every scale ranging from the community to the national stage through peoples' sovereignty. Such sovereignty is manifest through people's right to self-determination and full empowerment over their own resources.

In the case of the Isnag, acquiescence to unwritten native law demanding care for the land is evident in their long-standing collective dedication to Uma agriculture, and the adequacy of

Uma for self-sufficiency is evident in that it is employed to help farmers meet basic subsistence needs. But, more than this, Uma farming yields a productivity of 5 metric tons per hectare, surpassing the Philippine national average of 4.1 metric tons per hectare.

The self-sufficiency being promoted by Reparemos entails reducing dependence on capitalist markets in which corporations promote planned product obsolescence in order to compel consumers to purchase replacements. The organization helps to build a community to assert its own practices of peoples' sovereignty by carefully managing relationships between three groups: the organization's founders, its volunteers, and its beneficiaries. The structure of Reparemos is fluid and, as an indication of its decentralized nature, all subsets of actors involved played important roles in the organization's establishment and continue to oversee its persistence and growing influence in asserting the right to repair.

In Ecuador, a broad movement network that it helped to foster seeks self-sufficiency as independence from the now-dominant linear destructive practices of waste management, which were institutionalized in the 1970s with the first open-air dumpsite in Quito in 1977. This marked an important tipping point that prompted community resistance. Peoples' sovereignty grows with the emergence of formations like the Red de Guardianes de Semillas, Alianza Basura Cero Ecuador, Red de Compostaje del Ecuador, Colectivo Agroecológico, and Red de Escuelas Basura Cero del Chocó Andino.

PPSCP Principle 3: Supporting Community Actions for Sustainability

The third principle of PPSCP is that community actions and innovations for sustainability must be encouraged and supported. In contrast to technocratic tendencies prevalent among policymakers, it is important to view communities as sources of policymaking for ecologically sustainable development, to be able to learn from solutions in specific contexts developed by people with the greatest understanding of these contexts.

Patricio's research in the Philippines suggests that Uma agriculture of the Isnag community should be upheld as a sustainability innovation, despite widespread perception of the practice as environmentally hazardous due to its slash-and-burn element. The case study presents a holistic picture of Uma as contributing to enrichment of the soil, accomplished in part through systematic rotation of land parcels in and out of agriculture use to ensure soil health. This method has proven meaningful especially in geographies where irrigated farming is not a viable option due to the characteristics of local terrain.

The challenge of Reparemos! Foundation to corporate-normalized industry measures of planned obsolescence in the Chilean economy has clear implications for ecological sustainability in that it represents a cultural turn toward prolonging the lifespan of resources. This, significantly, contributes to strengthening the environmental politics of actors active in the cultural turn toward self-management that is an emergent feature of the contemporary Chilean social movement landscape.

Meanwhile, the broad network of organizations campaigning for a zero-waste Ecuador intervenes at a moment when the waste generation rate is predicted to grow by more

than twice the rate of population growth by 2050, which would double methane emissions. In this context, the case study authors uphold composting as a simple community-developed, climate-change mitigation measure that traps carbon in soils with regenerative effects in terms of soil health. Notably, one of the networks studied, the Red de Compostaje del Ecuador, comprises 12 initiatives that have overseen installation of household and community composters in Quito, as well as managing medium-scale composting in connection to door-to-door collection services.

PPSCP Principle 4: Demanding Accountability from Corporate and Government Duty-Bearers

The final principle of PPSCP is that accountability must be demanded from corporate and government duty-bearers. They must fulfill commitments in relation to sustainable consumption and production initiatives – such as reducing greenhouse gas emissions, cutting fuel subsidies, banning hazardous pesticides, etc. This is important especially considering that there are no existing mechanisms to hold governments and corporations accountable for their repeated failure to accomplish their own targets and obligations.

The Isnag community's demands for accountability are multiple. The criminalization of Uma farming comes at the same time as they are threatened by displacement from the land by a public-private partnership megaproject. The demand for accountability targets the Philippine Department of Energy, which awarded the Pan Pacific Renewable Power Philippines Corporation no less than eight hydropower contracts. The political line "no on dams" has been widely embraced among Isnag farmers due to concerns about the possible submerging of almost all Kabugao. Not only an interruption in sustainable agricultural practice, this represents a major threat not just to humans but to various species, ranging from flora to fauna such as the Philippine eagle.

In the Chilean case study, Reparemos is best understood as part of a broader movement to demand accountability in a context in which an authoritarian constitution was imposed by the Pinochet dictatorship and neoliberal elites ushered into positions of power with the support of foreign military intervention in the form of Operation Condor. The turn to self-management among social movement actors emerged amid demands, inter alia, for a break from this undemocratic constitution. The self-management ethos spread throughout society starting with local councils formed to represent territorial interests in a convening for the drafting of a new constitution. In this sense, Reparemos is an outcome of accountability politics, and the mission of Reparemos develops alongside the political landscape.

The accountability demanded of duty-bearers in the Ecuadorian district of Quito concerns territories that the government treats as sacrificial when it targets them as sites for hazardous industrial waste management operations. For 20 years, no less than 11 neighboring communities in Quito have been forced to experience “foul odors, the presence of vultures, soil and water contamination.” This represents a violation of the rights of residents and of the rights of Nature enshrined in the Ecuadorian constitution. Tragically, these local problems remain invisible to most actors in the Ecuadorian public sphere. The communities of Quito demand, as a matter of rights, “healthier logics of life and relationships with ecosystems and coherent actions appropriate to the crises and needs” confronting the population.

Aliansa dagiti Pesante iti Kordiliera (APIT TAKO)

Resilience in Isnag Rice Production Practices

Text by Christian Patricio

The Philippines is a nation that loves rice. Although this assertion is so evident that it should not require statistical support, it is a fact that a Filipino national consumes 301.03 grams of rice each day, which is almost 110 kilograms per year (International Rice Research Institute 2016). Since rice became a staple of our diet some 3000 years ago, it has then become important to plant rice at least for the consumption of the family.

Rice farming practices in the Philippines can be divided into two broad types: irrigated and rainfed. Irrigated or wet-rice rice farming is the most frequently practiced type of rice production in the country, especially among farmers residing in the plains. This involves planting a variety of rice that needs irrigation. On the other hand, there are at least two subtypes of rainfed farming practiced throughout the Philippines: Bangkag and Uma. These two subtypes are documented to have been practiced by Filipinos as early as the 16th century upon the arrival of the Spanish colonizers. Today, the Isnag peoples of Kabugao, Apayao remain the stalwarts of the traditional practice of rice farming of Uma. Despite the recent shifts in climate and weather patterns, Isnag farmers have persisted in rotational shifting cultivation of swiddens.

This paper investigates the indigenous practice of the Isnag people of the municipality of Kabugao as they face a variety of challenges due to the dire unpredictability of today's weather and climate patterns. We at Aliansa dagiti Pesante iti Kordiliera, reviewed Morice Vanoverbergh's 1941 study on Isnag farming, and also reviewed the earlier papers and articles written by members of APIT TAKO regarding rotational shifting cultivation among the Isnag farmers in Kabugao, Apayao. We have also drawn from a lot of our field notes that we gathered from interviews, personal correspondence and casual conversations with people from Kabugao ever since 2021 until recently.

Brief History of the Isnegs and Their Affinity to Farming

Apayao is situated in the northern Cordillera Administrative Region where the indigenous ethnolinguistic group Isnag (interchangeably called Isneg) have lived since before the Spanish colonization. According to historians, Spanish friars established a presence in the province as early as 1610. During the Spanish and American regimes, Apayao and its neighboring province in the south, Kalinga, were administratively united most of the time. Apayao was first separated from Kalinga in 1907, reunited in 1966, and then separated again in 1995. Although separated by territory and language, Isnags and Kalingas cultures have some common elements including agricultural practices.

Image 1. Apayao river system is not only a source for food and drinking water, but also a transportation hub. (Photo by APIT TAKO)

Apayao is home to a diverse set of groups due to homesteading laws during the American colonization and its proximity to neighboring provinces. In addition to the Isnags, residents include Ibaloys from Benguet, Kankana-eys from Benguet and Mountain Province, Ifugaos from Ifugao, Ilocanos from the Ilocos Region and Cagayan Valley, Kalingas and Tinggians from Kalinga and Abra, as well as the Malaweg, Gaddang, Itawis, and Ibanags of the Cagayan Valley. Although there are major cultural differences between these groups, they are currently harmoniously co-existing. During our stay in the province, it was evident that these groups had intermarriages, which contributed to the development of cultural practices (including farming techniques).

Compared to other Cordillera provinces, Apayao generally enjoys a warmer climate while maintaining a complex river system (the largest of which is the Apayao-Abulug river) between its varying landscapes of mountains, rolling hills, valleys, and plains. This makes the province perfect for farming both upland and lowland crops and produce. Isnags rely on the river for their food, drinking source, and transportation.

With all this, it should not be surprising that an average Isnag is a farmer. Morice Vanoverbergh (1941), a Belgian priest who happened to do anthropological research in Apayao, stated that "it is not necessary to have lived a long time among them to know that (they are farmers): the fact is patent." Rice is the Isnag farmer's main crop, but they also produce corn and bananas, among others. While they mostly produce crops for individual household consumption, selling their produce has become one of the main reasons for production. Recently, this has involved the commercial Bacillus thuringiensis (Bt) corn. Isnags also produce taro, sweet potatoes, coconut, cayenne pepper, sugar cane, coffee, cacao, and yams for their daily consumption and for commercial purposes. Vanoverbergh (ibid.) also noted that Isnags also planted tobacco, coffee and ornamental plants.

Apayao features both irrigated and swidden farming systems with comparable levels of prevalence. Although the Isnag principally practices swidden farming, it is Kankana-ey that primarily practiced irrigated farming. The Kankana-ey migrated during the implementation of the homesteading program of the 1930s and 1950s, and settled in Apayao, especially in the municipalities of Luna, Sta. Marcela, Flora and Conner. Swidden farming was the sole prevalent farming system in Apayao. When the Kankana-ey came, irrigated farming daunted the once prevalent system.

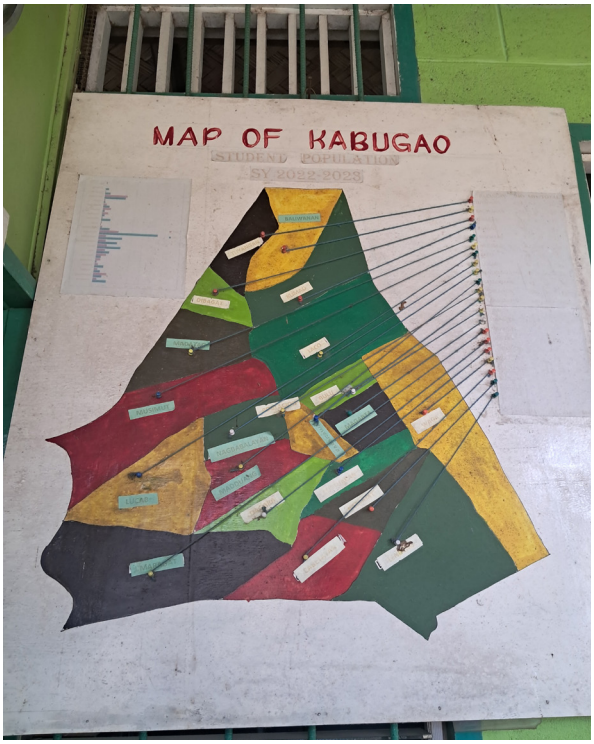


Image 2. Map of Kabugao, as seen in the Apayao Community Learning Center. (Photo by APIT TAKO/Christian Patricio)

However, swidden farming remains prevalent than irrigated farming in the municipality of Kabugao. Kabugao is composed of 21 barangays. According to APIT TAKO (Gimenez 2023a), irrigated rice farming in Kabugao "is limited to sitios occupied by migrant settlers from other parts of the Cordillera and from the neighboring regions." Those who practice irrigated rice farming are situated mainly in barangays Lenneng and Badduat. In most barangays, swidden farming is the most visible at the settlements of the Isnag.

Despite its prevalence in areas like Kabugao and Apayao, agriculture and environment officers from state departments inside and outside the Philippines have been campaigning against swidden farming, as they claim that this practice is detrimental to the environment. Indigenous peoples, including the Isnags, know and demonstrate that swidden farming is not merely about slashing and burning. It involves a cycle of fallowing and cultivation, effectively making the soil fertile and conservation of all life in the farm and the nearby forest (Gimenez 2023a).

Rotational Shifting Swidden Farming and the Kabugao Isneg Practice

Swidden Farming and the Forest

Swidden farming is a traditional but a comprehensive form of agriculture, developed in places with high humidity and tropical climate (Dressler, et al. 2015, APIT TAKO 2020, Gimenez 2023a). It is practiced in upland settlements, either near closed-canopy or open-canopy forests, in Oceania, Southeast Asia, some parts of South Asia and Africa, Central America, and parts of South America. Indigenous peoples in the Philippines practice this form of agriculture due to their settlements in far-flung mountainous areas where irrigation is difficult or impossible. Uma is the overarching Ilocano term of farmers for swidden farms.

Academics also refer to swidden farming as rotational shifting cultivation. Numerous studies have shown that complementary and diversified farming systems, such as swidden farming, are important and beneficial for both livelihoods and ecosystems (Conklin, 1954; Keesing, 1962; Rambo, 1979; Warner, 1991; Dressler et al., 2015). They explained the need for burning for the cultivation of nutrients in the soil:

> *Because rainfall in the tropics is heavy and persistent, tropical montane soils are erosive. The soil is unable to develop a thick layer of humus from the decay of fallen plant material and animal droppings. In this situation, nutrients that could have been accumulated in humus remain in the biomass – in the growing trees and underbrush. Minerals underground can yield some nutrients, but most are trapped beneath the surface of soils turned hard by the constant pounding of rain. This hard surface is acidic. In the slashing and burning of weeds and trees, nutrients are released from the biomass. The soil surface is heated and softened, and its acidity is neutralized by the ash. These allow more nutrients to be released from the subsoil, and in turning the surface warmer and friable, make it more conducive to planting […]. Foremost among the nutrients released are phosphorus and potassium, which plants need to take root, grow, fruit, and also be imbued with resistance to pests and diseases […]. Yet micro-organisms that live just below the surface survive the burning. As swidden crops take root and grow, they become hosts to such micro-organisms and benefit from these. Among the microorganisms are rhizobium bacteria that assimilate nitrogen from the environment and mycorrhizal fungi that assimilate phosphorus, potassium, as well as nitrogen and various other elements which fertilize both the soil and the crops. The rhizobia attach themselves to the roots of rice and legumes, while the mycorrhiza attach themselves to the roots of rice and root crops (as seen in Gimenez 2023a, 5-4)*

In other words, burning the soil makes the soil friable. Another benefit of burning is the extermination of pests in the surface of soil, and also the weeds that can compete for the crop's nutrients. Because the soil in tropical rainforests is rich in moisture, it is not difficult to control the burning. Average-grown trees are cut but their base and roots are left intact as aid in controlling soil erosion (Gimenez 2023a).

After harvesting the crops in the swidden farms, the land is left to fallow – a "rest" in tilling and planting the soil, typically for 3 to 15 years in recent times (in the past, it was over 20 years in the Cordillera region). With claimed ancestral domain being wide, farmers shift to other parcel of their land that was fallowed for a good amount of time. The fallowing period helps in the regrowing of trees and wild plants that can in turn reoccupy the land while accumulating nutrients for the next planting period (Gimenez 2023a;, APIT TAKO 2020). In the practice of Isnag farmers, they believe that the longer they fallowed the land, the more plentiful the next harvest in that parcel of land will be (Gimenez, ibid).

Fallowing is very important in both the livelihood of the farmer and also the ecosystem of the forest. This can be seen in the practice of rotational shifting cultivation of the indigenous peoples in the Cordilleras. Traditional land use of Kalinga tribes illustrates how they are careful not to overuse the forest (APIT TAKO 2020). They know how to segregate the forest between old-growth and secondary-growth. They practice Uma only in secondary-growth forests, while they maintain the old-growth forests as watersheds, irrigation sources, and hunting and gathering sites. The Isnag rice farmers understand that "ti kayo ti mangted ti biag iti pagay [the tree is what gives life to the paddy]." They know that the nutrients accumulated by the forest during the fallow period fertilize the soil and nourish the paddies (Gimenez 2023a, p. 10).

In this case, we can argue that rotational shifting cultivation in accordance with customary law (laws that are unwritten but commonly followed) is a people-powered sustainable consumption and production practice of the indigenous peoples in the Cordillera. This is in opposition to international and local state policymakers' claim that rotational shifting cultivation or swidden farming is unsustainable and destructive to the forest. The Reduced Emissions from Deforestation and Forest Degradation (REDD+) program of the United Nations Framework Convention on Climate Change, which is being used to create laws against swidden farming, undermines the thousands of years of practice of the indigenous peoples that is proven to be effective and good for the environment (Dressler et al. 2015).

Image 3. Rice planted on a cleared uma. (Photo by APIT TAKO)

The Kabugao Isneg Rice Production Practice

APIT TAKO (Gimenez 2023a) has recorded Uma planting methods in Kabugao. Clearing a fallowed land in Kabugao typically starts in December, while others may not start until February. They clear all plants and trees that can stunt the growth of their crops, except the base of the tree trunk and its roots for conserving time and energy. Removing these roots would take considerable effort and could hinder the regrowth of the forest during the fallow period. The plants and trees that are slashed or removed are then left to dry until March or April, then the land is re-cleared of newly grown weeds, and then burned. The thick layer of ash collected from the burning will be of help in the growth of their crops as it will leave nutrients.

The burning (and in turn, planting or patok) should be timed perfectly between the time that the cleared vegetation is dried, and before the time heavier rains (heavier than a drizzle) start. The instrument for patok (dibble) is a bar made of wood or iron. It is used to bore a hole where the seed is to be planted. The hole should not be too deep or too shallow, as this can affect the growth of the rice.

The Isnags are prudent in timing their farming. Vanoverbergh (1941, p. 288) lists several environmental signs, or Tashimmaton (spelled taximmaton in Vanoverbergh's work), that Isnag farmers observe. These include the Yanyan, a small insect that signals the arrival of the dry

season in March, and the Sibulbug, a large bird whose cries indicate the onset of the rainy season in November, among others. Some Isnag farmers count the days through their calendars, calculating the time between the dry and rainy season. With the intensifying erraticness of weather patterns, they are forced "to always look up to the sky" or kanayon a nakatangad iti tangatang to guard the changes in the weather as one farmer would say.

Usually, rice is the first crop to be planted in a newly cleared field (Vanoverbergh 1941). Isnag farmers call this Koman. Some farmers intercrop rice with vegetables, typically located in the corners or borders of a Koman. Banana trees, on the other hand, are seen either in the center or the corners and borders of some Koman, depending on the size of the farmer's lot. In barangays where farmers have smaller lots like Luttuacan, Badduat and Poblacion, they let banana trees grow wherever in their Koman. Bananas from these barangays are usually sold in markets and stores in Poblacion. In farther barangays like Apadi and Madduang, farmers do not mix banana plants in the Koman as the shade can stunt the growth of the rice and may not flower. They, however, plant the banana trees in the borders as the moisture from the banana plant can help spread water to the rice plants.

Image 4. An unfallowed land, left for almost a decade. (Photo by APIT TAKO)

After the harvest of rice, the Isnag farmer will plant an alternate crop starting October or November. After the harvest of this alternative crop (mostly corn), they can decide whether to plant rice again or replant the alternative. This alternating of rice and the alternative crop can go on for two years at most, and then fallowed.

According to Vanoverbergh (1941), an Isnag farmer produces enough rice to last for at least a year. This makes him and his family content until the next harvest. A rice harvest is typically counted in a reppet which is a bundled handful of rice stalks. Two reppets are then tied on both sides of a wooden pole and are called a tangabta. Four tangabtas are called a tangesing, while 10 tangesings are called madalan. Ten madalan are called monpu which is approximately 400 reppets.

Manong Jerry Cabradilla of Barangay Madduang states on our interview that his one harvest season typically produces approximately 1800-1020 reppet which can fill their kalapaw or sihay

(i.e., wooden house storage for grains, typically for protection during extreme weathers). According to him, this can feed the family for a year, or at least for the next harvest season. Some farmers count their rice in sacks. They estimate that a hundred sacks of unthreshed rice is approximately 50 cavans of baggat or milled rice. APIT TAKO (2023a: 13) has approximated that "at 50 kilograms per cavan, the production rate is about 2,500 kilograms or 2.5 tons per half-hectare."

With this data from 2022, we can say that Isnag farmers generally enjoy a higher yield of rice. The Philippine average yield is 4.1 metric tons of threshed grain for every hectare, while the average in the Cordillera Administrative Region is at 3.46 metric tons (International Rice Research Institute 2022). If the Philippine average milling recovery rate is %65, the average production rate for baggat is 2.7 tons per hectare. APIT TAKO (Gimenez 13 :2023) says that "… the estimated production rate of farmers in Kabugao is 1.85 times (higher than) the national average." The farmers associate high yields with the longer durations of fallow.

It is a shame that swidden farming is underappreciated, and even regarded by many as passé or primitive. In many parts of the Cordillera, APIT TAKO (Gimenez 2023a: 12-11) says, "farmers … speak of panaguma (swidden farming) as a necessary but inferior antecedent or supplement to panagtalon (wet rice farming)." These assumptions came from the experience of some farmers that their Uma yields are lower than a talon. Some farmers in Cordillera even do not consider planting rice in Uma, but only vegetables. However, the opposite is true for the Isnag of Apayao as seen on their higher yields of rice in their Umas.

Image 5. Grown rice (from Image 3) in an uma. (Photo by APIT TAKO)

Climate Change and Other Threats to the Isnag Farmers

The effects of climate change are undeniable to the average Isnag farmer. Both drought and heavy rainstorms affect their yield. According to Manong Cabradilla, the years 2023 and 2024 brought intense change in weather patterns felt in Kabugao.

Super typhoon Egay, with international name Doksuri, left a lasting impression on Isnag farmers. Manong Cabradilla and other farmers that we interviewed said that they experienced trauma. The province of Apayao was on Signal numbers 3 and 4 when, on July 25 and 26 of 2023, Egay ravaged

Image 6. A reppet is a bundled handful of rice stalks. (Photo by APIT TAKO)

its landscape and communities. The province was declared to be under state of calamity (See 2023). According to the report of the Provincial Agricultural Services Office of Apayao, 546.8 million pesos-worth of crops were destroyed during the storm, where rice sustained a 52.038 million pesos worth of damage (Comanda 2023). Almost 8.2 million pesos of this is from Kabugao. According to Calayan (11,229 ,(2023 farmers and fisherfolk were affected by the typhoon. Both Umas and Talons were victims of landslides. The 6,000 pesos emergency cash transfer from the Department of Social Welfare and Development is not enough and was given late. Some farmers in Kabugao reported that they only received their share last March and April 2024, when the El Nino drought was in peak and gravely affecting the farmers.

It was disaster after disaster when El Nino hit the farmers in Kabugao. Apayao was assessed in September 2023 as experiencing below-normal rainfall. In March 2024, the whole of Cordillera was identified as under drought. Like Egay, this was the first time in many years that the farmers experienced such an intense weather pattern. When we were on the field last April 2024, APIT TAKO received reports that coconut fruits, bananas, chili peppers, and calamansis were suddenly falling to the ground because they dried up. Corn and rice were also reported as becoming white or yellow, signifying its drying. This went on until August 2024, but with occasional drizzles of rain which lasted for only an hour for two times in a month and only in some parts of Kabugao.

Our interviewees said that in order to have a high yield, the rain should fall at least once a week for a good month. A month without rain is bad for the crops. However, they also said that a month of rain is worse than having a month with no rain. Heavy rain can erode the soil, and its heavy droplets can badly damage the crops.

Due to Egay, most of the farmers in Madduang felt anxious about planting rice this 2024, said Manong Cabradilla. He is one of the few farmers that braved the ever-changing weather of Kabugao. However, he cannot deny that he is also affected by climate change. In contrast to the 1,020 reppets that he gained from 2022, he and his wife only harvested 500 reppets after Typhoon Egay. In 2024, he fears that their harvest will be under 400 reppets. For reference, his family (which is an extended

family) consumes about 480 reppets per year. In 2022, they enjoyed an extra 540 reppets for sharing with their kin and neighbors. Now, they worry about how to make ends meet.

Image 7. Drought-stricken vegetable plants during the 2024 El Nino in Kabugao. (Photo by APIT TAKO/Christian Patricio)

Such erratic changes in the weather cause anxiety among Isnag farmers. They are people who plan and know how many they will yield, after all. Now, they have to accept that this will be the new weather pattern that they have to be accustomed to, and that they should adapt. Besides the heat and rain, farmers still have many concerns that prompt them to be on guard. One of those mentioned is the wind that has no rain. According to Manong Cabradilla, rain can at least suppress the strength of the wind and hydrate the plants. However, without rain, the wind can blow away the rice pollen, leading to empty hulls.

Animals are another source of concern. For example, farmers from Barangay Madatag say that the brown maya bird eats the rice flowers and rice grains. Rice bugs, which represent still another threat, are not new to Isnag farmers. However, according to farmers in Barangay Madatag, such as Manong Alberto Basod, they have observed that dangaw (Leptocorisa acuta, L. oratorius) appears much more frequently during this El Niño drought season. According to them, they usually attack during the milking stage of the rice, when the grain is still soft. The rice breed that they call Palawan, which is the most preferred by swidden farmers and the most resistant to pests and diseases (Ocampo and Bascos-Ocampo 2016), are the ones that are being attacked. It is to be assumed that this pest's population will increase when the rainy season enters (Catindig n.d.). Morice Vanoverbergh (1941, p. 292) also lists several other animals that can damage the fields, including the Laman (wild boar), Ugta (deer), Ditalon (also called italon or kasi, jungle fowl), Abuy (hog), Anu (barnyard fowl), Arrad (a type of green caterpillar), and farm rats.

Isneg Resiliency and the Changes in their Rice Production Practices

In spite of the challenges during the unpredictability of weather and climate change, the Isnag farmers still find ways to be resilient. Some practices like swidden farming are maintained amid the changes in weather as they are the most viable and sustainable for the farmers, and the environment, and bring more advantages in the long run.

The benefits of swidden farming arise in part because of its participatory nature: it involves not only the individual farmer and his family, but the whole community. Although indigenous peoples like Isnags are now required to obtain necessary documents for land claims, their relationship to the land cannot be reduced to the liberal relations of property rights that underlie such documents. They still know that the forest holds a vital part of the community that they live in. They know that the forest supports the swidden farm, with the knowledge that it is important to regrow the forest by fallowing the land after. This, although not written or legally binding, is a law that every Isnag knows, exhibiting how swidden farming is a people-powered sustainable production of rice.

Image 8. Manong Cabradilla proudly showing his uma and sharing his possible yield back in 2022. Only half were harvested in 2023 because of Typhoon Egay. (Photo by APIT TAKO)

This knowledge leads the Isnag to practice fallowing for better yield and for the good of the forest and the land. Manong Basod says that it is their secret to being sustainable. He and his family cultivate only one to two hectares at a time, following a fallow period of 10 to 15 years. They then move to another plot for the next planting cycle. Manong Cabradilla says that the plot where he planted and had the most hope for a higher yield was fallowed for 12 years. Many, however, were forced to have a shorter fallow, as is now the trend in the Cordilleras due to smaller land claims of farmers and commercial reasons. Manong Cabradilla's son, Jayboy, insisted on planting in a plot that had been fallowed for only five years. During Egay and El Nino, its crops yellowed, grains were unpollinated, and thus yield was sparse.

Indigenous tashimmaton or "signs" and how to read these signs are reiterated during this change of weather patterns, while some are adapted. Wind patterns are read through feeling where the wind came from, while cloud formations and direction are read through looking up to the sky and knowing what direction the wind blows. The wind direction is then summed-up by the farmer, and that is one of the decisive factors influencing where the farmer will plot their Koman. They will not

plant in the windiest part of their land. When it is not avoidable, planting banana trees and other plants, specifically situating them on the borders of the Koman, can help in suppressing the wind (since they function as windbreakers) to protect their crops. The banana plants will also help in keeping the crops moist during the dry season. It is also advisable to plot their Koman where the sun keeps on hitting.

Due to the changing patterns of storms, the Isnag farmers who were interviewed have become more cautious in tracking the days on their calendars. They carefully time the first clearing of the land, the burning of the dried vegetation, and the application of the thick ashes before finally planting their seeds. They mostly use Palawan as it is the most resilient to pests and diseases, and is best acclimatized to the climate in Kabugao. It is what they have used since time immemorial (Ocampo and Bascos-Ocampo 29 :2016, Gimenez 2023a: 13). While most farmers (especially those who practice wet rice farming) use insecticides and fertilizers, the traditional way of not using any fertilizers and insecticides is still practiced by swidden farmers.

Some farmers, particularly in Barangay Madatag, practice synchronized farming, where they cultivate their fields in unison with others in the community. This is their way to mitigate infestations by dangaw or rice bugs and attacks from rice birds. Manong Basod says that farming by yourself during the attacks of dangaw can make your plot their focus-area. However, synchronized farming can delegate the attacks to other plots, minimizing the damages over all. They practiced this during the lengthened effects of El Nino. This also helped in uplifting the community spirit in residents of the Barangay.

Besides rice, Isnag farmers also plant white corn, millet, gabi, yams, bananas, sweet potatoes and other starches that can aid when the rice is insufficient. They plant it alongside their Koman, or in their backyard. Isnags also plant vegetables and fruits for food sufficiency.

Image 9. A part of Manong Cabradilla's uma (on the right side), as viewed from his house in Barangay Madduang. (Photo by APIT TAKO/Christian Patricio)

Image 10 and 11. Examples of fruits (left, miracle fruit; right, rambutan) planted in the backyard of Isnags, especially in Poblacion. (Photo by APIT TAKO/ Christian Patricio)

More threats to Isneg Farmers' Resilience

Bt Corn and Commercial Production

Beside rice, Isnag farmers have also been planting corn as an alternate source for carbohydrates. However, recently, Isnag farmers have begun planting corn for commercial reasons. This is not an indigenous variety of corn, but a variety first introduced to the Philippines by agrochemical corporations – the Bacillus thuringiensis corn, or known as Bt corn (Bagyan and Gimenez 2005). As it results in "fairly substantial cash earnings," the Isnags have planted Bt corn everywhere – «as a second crop in former Koman … in former pastures … in home yards. And it is planted in virgin fields (Gimenez 2023a, 16-15)."

Some Isnag farmers plant Bt corn without any fallow period. The downside of this is that they should use synthetic fertilizer for this, forgoing traditional ways of farming. Clearing can be easier also with the use of herbicides, as Bt corn resists its chemicals but the weeds do not. APIT TAKO has warned about the dangers of planting the field over and over again without fallowing:

> *Repetitive planting without any fallow is bound to result in overutilization and thus in steady depletion of the soil – despite repetitive fertilization with synthetics. It is possible that this, in turn, will lead to the clearing of more land which will, again, not be fallowed …. The emerging land scarcity and the intensification of Bt corn production to the extent that some*

farmers now forgo the fallow are threats to the farm-and-forest balance that has characterized Isnag agriculture up until the past few years (Gimenez 2023a: -16 17).

The proliferation of planting Bt corn, in general, can lead to mass shifting of traditional swidden cultivation to a commercially-oriented production. This happened in the Limos Tribe of Pinukpuk, Kalinga, where most farmers shifted to Bt corn (APIT TAKO 2020). Bt Corn can also spread its Bt genes not only to the nearby crops but also to some weeds, making these weeds able to resist the herbicides. In turn, the farmers are forced to use layers of herbicide spray or a stronger one to eliminate these weeds (Bagyan and Gimenez 2005, APIT TAKO 2020). In a case study conducted by Fernando Bagyan and Lulu Gimenez on the introduction of Bt corn to farmers in Alfonso Lista, Ifugao, they identified several negative effects of Bt corn on other crops and human health:

Image 12. Wide plantation of Bt corns in Barangay Laco, Kabugao. (Photo by APIT TAKO/Christian Patricio)

...the Bacillus thuringiensis protein in Bt corn can be transferred to other plants, including any food crops that they grow near their corn fields for their own households' consumption...the antibiotic markers which allowed the Bacillus thuringiensis protein to get spliced into corn DNA can significantly reduce the ability of both people and livestock who consume Bt corn grain to make use of antibiotics like Streptomycin (Bagyan and Gimenez 2005).

Dams

In August 2023, the Department of Energy (DoE) released a list of proposed hydropower projects which were awarded to various firms. One particular firm, the Pan Pacific Renewable Power Philippines Corporation (PPRPPC or Pan Pacific) was awarded eight contracts to be operated in the Apayao-Abulug river system and its tributaries.

Pan Pacific is rather a "mysterious company." Except for news articles, the company has limited online presence and has no website. Journalists, however, referred to the company as being controlled by San Miguel Corporation (as seen in The Manila Times, February 2022 ,21 and The Daily Guardian, September 2022 ,12). Some have been trying to connect Pan Pacific with San Miguel Corporation (SMC) from its connections to SMC-affiliate Bank of Commerce Chairman Francis C. Chua. Even farmers that we interviewed strongly believe that SMC has provided some kind of backing to PPRPPC. We have yet to find concrete paper trails to know if Pan Pacific is truly owned fully or partially by SMC, or was financed through its investment or credit (Gimenez 2023b). It is, however, one of the eight corporations and conglomerates that received a Chinese-loan agreement of a -3billion-dollar loan agreement during the Duterte administration (Lapniten 2022).

Image 13. The Apayao-Abulug River System at dawn. (Photo by APIT TAKO)

As the Apayao-Abulug River system is the 6th largest river system in the country, Pan Pacific has plans to harness its energy-generating capabilities. The largest of their contracts are of Gened 1 and 2 (with 150 and 250 megawatt [MW] capacity respectively) which they will build in the municipality of Kabugao. Aside from that, they will also place a 55 MW dam in Kiyom River (a tributary of the Apayao-Abulug) in Barangay Madduang, and a 40 MW in Sicapo River (another tributary) the headwater for which comes from Barangay Musimut also in Kabugao.

Opposition to, and protests against, the proposed dams have been manifest among the Isnags, and in this youth and elders have combined their efforts. According to our interviewers, the "no to dams" perspective is embraced by the overwhelming majority of Isnag farmers. The core concern of Isnags is the possible submerging of almost the whole of Kabugao. Aside from farmlands and residences, forests that house various species of flora and fauna will also be affected, which has threatening implications for the Philippine Eagle for which these are habitat areas. In turn, the construction of dams will also erase Isnag traditional swidden farming and thereby diminish their resilience (Gimenez 2023b).

Image 14. A sign constructed by the citizens of Barangay Apadi, Kabugao as a protest against the building of Gened dams. (Photo by APIT TAKO)

International and Local Laws against Uma

Environmental and agricultural state officers, locally and internationally, often blame Kaingin (the slash-and-burn process used for Uma) for the large carbon footprint and rapid deforestation. The main promoter of this thinking is the United Nations Framework Convention on Climate Change (UNFCCC). Research from the Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Science wrote:

> *From the United Nations Framework Convention on Climate Change in 1992 to the Kyoto Protocol in 1997, the policies of inter-governmental organization have immensely promoted research on the relationships among swidden agriculture and forest degradation and global warming. Furthermore, from the Bali Road Map drawn up in 2007 through the Copenhagen Accord approved two years later, the United Nations firstly proposed the UN-REDD Programme (or REDD+ later). Following the Durban Climate Change Conference in 2011 and the Doha World Climate Summit in 2012, the UN-REDD+ program has offered invaluable support to humid countries in Africa, Asia-Pacific, and Latin America and the Caribbean in implementing their national REDD+ strategies. Since the implementation of REDD+, there has been an increase in original research involving swidden farming (both positive and negative) in Southeast Asia and worldwide. However, to our knowledge, there are few surveys of systematical (sic) evaluation for swidden agriculture in the literature (Li, et al. 3 :2014).*

Although anti-swidden farming laws predate the UNFCCC, they have influenced the stringent enforcement of such laws, as evident in the forestry and agricultural regulations of Indonesia, Laos, Thailand, Malaysia and China (Li, et al. 2014, Fox, et al. 2009).

The Philippines is not an exemption. Kaingin is a punishable act in the Philippine laws, as seen in the PD 705 or the Revised Forestry Code of the Philippines. On Chapter IV, Section 69 of the said law, it states that anyone who performs Kaingin will be fined for 500 to 20,000 pesos. The Philippine Department of Environment and Natural Resources is a department that is anti-swidden farming. They even warned farmers in Maguindanao to stop Kaingin in 2016 and a then-regional secretary even called it “a crime against humanity” (Fernandez 2016).

The irony of these laws is that the same governments that condemn swidden farming for its supposed “negative effects” on the environment are the ones allowing environmentally destructive energy projects, such as dams, to enter communities and disrupt their forests.

Conclusion

The Apayao Isnag have been practicing swidden farming (also called rotational shifting cultivation or Uma), which is a traditional farming method, as early as the 16th century. Swidden farming, in general, is regarded as destructive by agriculture and environment state officers locally and internationally, especially with the promotion of anti-swidden farming thinking and research by the United Nations Framework Convention on Climate Change. However, the Isnag, together with other indigenous peoples around the world, have been proving how swidden farming has kept them sustained economically and ecologically for all of these years that they practiced it.

They understand that swidden farming involves more than just slash-and-burn clearing; it is a comprehensive agricultural method that includes careful land clearing and fallowing for years – some even for decades – to allow the soil to regain its nutrients and the forest to regrow.

The effects of climate change are very apparent to the Isnag farmers. Farmers have experienced lower yields because of heavy rain during last year's Typhoon Egay and this year's prolonged drought. Amid all this, swidden farming has helped them to become resilient and reiterated the need to preserve their traditional way of farming for their future generations. With this, we argue that this kind of farming is a form of people-powered sustainable production of rice that will help us to sustain ourselves during food crises, especially with the intensifying effects of erratic climate patterns. Aside from that, swidden farming has helped sustain the forests in the long run, contrary to the claims made by anti-swidden institutions.

Besides climate change, Isnag farmers face other threats to their traditional practice of swidden farming – the proliferation of the commercial Bt corn, construction of destructive dams, and local and international laws against Uma.

The most immediate threat among these is the proposed 150 and 250 MW dams by the Pan Pacific Renewable Power Philippines Corporation to be constructed on the 6th largest river system in the Philippines, the Apayao-Abulug River. The construction will not only destroy the forests along and the flow of the river. As it will submerge large parts of Kabugao where Isnags practice swidden farming, the construction of dams will also trample their traditional system of farming, and also diminish their resilience that made them persist for thousands of years. It is ironic that the national government promotes renewable energy projects as a solution to climate change while simultaneously seeking to destroy the very forests and the cultural practices of resilience that genuinely mitigate climate change.It is no wonder why the Isnag are persistent to resist these dams. However, as long as people are steadfast in safeguarding their nature and culture like the Isnag, our dream for a people-powered sustainable consumption and production will persist.

Fundacion Reparemos!

Empowering Community Resilience through Repair Initiatives: A Case Study of a Self-Managed Sustainability Collective in Chile

Pedro Maldonado[a], Alejandra Crocco[b], Maria Zuniga[a]

[a] Fundation Reparémos!, Av. La Paz, 482, Independencia, RM, Chile, 8380564

[b] University of O'Higgins, Av. Libertador Gral. Bernardo O'Higgins 611, Rancagua, O'Higgins, Chile, 2820000

Introduction

After the military coup in Chile, in the late 1970s, a neoliberal economy was established, promoted by the Chicago Boys, a group of Chilean intellectuals educated at the University of Chicago's School of Economics, under the leadership of Milton Friedman. Despite the return to democracy in the early 1990s, these economic and political practices persist to this day, with the country still operating under a constitution enacted during the dictatorship. Today, a significant portion of Chilean society distrusts its institutions, feeling socioeconomically disenfranchised due to prevailing economic and social inequalities, coupled with very low social security.

Within this context, a diverse array of self-managed organizations has emerged, ranging from constituent assemblies to community gardens. This article describes an initiative managed by the authors since 2019, which emphasizes the right to repair and sustainability. Both volunteers and beneficiaries participate in this community collective, engaging in activities that involve repairing objects to give them a second life. The initiative comprises three repair stations: textile, electronics, and bicycles, where around 200 objects have been repaired per year. It aims to address not only local economic precarity and sustainability but also the sentimental value that an object can hold, fostering social cohesion.

The article profiles the individuals involved in this initiative, examining their motivations and purposes through a quantitative and qualitative study. By analyzing the backgrounds and motivations of the participants, this research seeks to understand the broader implications of such community-driven actions in promoting resilience and empowerment in a society marked by deep-seated inequalities and institutional distrust. The findings will contribute to understanding beliefs and narratives about sustainable practices and community-led solutions. This study aims to generate guidelines for other communities to self-manage similar initiatives, ensuring the growth and replication of this model beyond its current existence.

Contextual Background: Neoliberalism and Resistance

Chile has historically been a country with strong aristocratic influence. Two of its constitutions were drafted in contexts marked by conservative regimes and policies, particularly after the government of Balmaceda and under the subsequent parliamentary system. Although there were more liberal currents, such as the one promoted by Benjamín Vicuña Mackenna, they were marginalized in a predominantly conservative environment, even leading to exiles.

Throughout its history, Chile has faced various forms of labor exploitation, especially in the mining industry, which has been a cornerstone of the country's economy. The wealth generated by mining has mostly been in the hands of foreign capital, with few benefits for the Chilean state, primarily limited to tax revenues. During the boom of this industry, abusive labor practices, akin to slavery, were common, leading to worker uprisings in different sectors. In response, the government acted in defense of the extractive companies, resulting in massacres such as those of Santa María de Iquique and La Coruña, where approximately 4,500 people died.

The United States has been known for its intervention in extractive industries and ideological imposition in different regions of the world. Examples like Dole in Hawaii or the establishment of mining industries in Chile are indicative of this type of intervention. During the first half of the 20th century, South America became a territory where U.S. industries, supported by local governments, could operate without significant economic return policies. This model began to be questioned by some intellectual and labor sectors in South America, giving rise to liberation movements that sought to guide governments towards more socialist forms of organization.

Considering the predominant extractivist model in Chile, during the first half of the 20th century, an Import Substitution Industrialization (ISI) program was implemented. This program included state support through economic incentives for the emergence of industries that would manufacture finished products in the country, reducing dependency on imports ("Industrialización por sustitución de importaciones").

At this time, Chile maintained an agrarian economy characterized by the structure of the latifundio (large estates). This structure, controlled by a small group of landowners or aristocrats, presented a profound lack of productivity. The concentration of land in the hands of a few limited competition in agricultural production, and the methods used, which were based on old customs established during the colonial period, prevented effective modernization of the sector (La Reforma Agraria, 1973).

With the beginning of the 1960s, industrialization began to foster urbanization, driven by the ISI program. This led to a massive migration of rural workers to urban areas in search of employment in the nascent industry. As a result, agricultural production decreased dramatically, leading to a food crisis that forced the country to rely on food imports. This phenomenon was not exclusive to Chile but manifested broadly throughout Latin America.

During the presidency of John F. Kennedy, the United States promoted agrarian reform in the region through the "Alliance for Progress" program. This reform aimed primarily at returning land held by landowners to peasants, in order to encourage internal agricultural production, reduce dependence on imports, and promote greater state intervention in the economy. Additionally, the reform sought to counter the growing communist influence in the region (La Reforma Agraria, 1973).

In Chile, the implementation of this reform empowered the lower classes, combined with the ideological currents already circulating, facilitating a transfer of power to the working classes. The redistribution of land allowed peasants and workers to become active participants in the economy, placing them in a more equitable position relative to their employers. According to Gajardo Jiménez (2021), this was accompanied by the popular education movement spearheaded by Paulo Freire. This is closely related to other education movements that, during the 1960s, focused on raising awareness and legitimizing popular knowledge. These movements promoted the mobilization and organization of broad subaltern sectors in both urban and rural areas, aiming to challenge the state on issues of access to economic resources, social services, and political participation at various levels.

In 1970, Salvador Allende, of the Socialist Party, was elected president. Allende based his government on the promotion of a protectionist state, and one of his first actions was the expropriation and purchase of foreign industries, particularly in copper mining. This was a strategic milestone, as it allowed all profits from the country's main export resource to remain in the hands of the Chilean state, facilitating the financing of state subsidy programs and the formation of industrial cooperatives. Manufacturing, textile, agricultural, and forestry industries emerged, managed and directed by their own workers, operating in a self-management model. A system of cybernetic and computer interconnection for production, known as the Cybersyn project, was even developed ("Project Cybersyn - Wikipedia"), an innovative idea for its time.

This phenomenon of economic independence and transfer of power was not only national, but also began to be adopted by other Latin American countries. Faced with this situation, the United States, seeing its imperialist interests harmed, devised Operation Condor ("Plan Condor") during the administration of Richard Nixon, under the supervision of Henry Kissinger. This operation aimed to overthrow socialist governments in Latin America through acts of genocide and the imposition of military dictatorships. While the anti-communist military network thereby formed would repress resistance, ideological dominance was sought through the training of intellectual elites in economics and business schools in Chicago as part of a plan to restore neoliberalism in local economies.

Consequently, military coups were carried out across Latin America, establishing dictatorships, such as that of Augusto Pinochet in Chile, which lasted for 17 years and is considered one of the most repressive in the region. During this period, around 3,200 people died, and 38,000 were tortured, according to the Valech Report ("Comisión Valech - Instituto Nacional de Derechos Humanos," n.d.).

In 1975, economist Milton Friedman made his first visit to Chile in the context of the establishment of a neoliberal economic policy. The Chilean military junta that governed the country decreed its operating principles in the "Declaration of Principles of the Government of Chile," which included the systematic violation of human rights. The industrial belts, mostly cooperatives in the hands of workers, were dismantled and handed over to private individuals close to dictator Pinochet. Public energy and water companies were also privatized, the state university was dismantled, and native forest lands were sold at ridiculous prices for forestry exploitation. The railway system was also eliminated in favor of private road transportation, except for the copper and lithium industries, which remained under state control due to their strategic importance.

In 1980, Jaime Guzmán, with the aim of perpetuating the Chilean neoliberal model, drafted a new Constitution of the Republic ("Constitución de Chile 1980 | Comparador de

Constituciones del Mundo."), enshrining these policies. Most social security systems, including health, old-age pensions, and education, as well as fundamental rights such as access to water, were privatized. Anti-terrorist laws were also implemented, and the role of the armed forces was strengthened. More so, Chile became an experiment in the neoliberal model, which was characterized by one of the highest levels of social insecurity worldwide and extreme economic inequality. According to OECD data (2017), Chile is one of the most unequal countries in the world, and the most unequal within this organization after taxes and subsidies.

This situation coincides with a significant level of deindustrialization. Chile is a country that lacks a robust manufacturing industry, largely due to the abolition of industrialization in favor of an extractivist economy. According to (Barría 2022), this economy is in the hands of a few families who concentrate around %90 of the country's wealth. Despite some international initiatives aimed at adding value to the Chilean economy, these groups have opted to maintain the status quo. Only recently have some state initiatives emerged to retain this added value in the country, but these efforts have not succeeded in changing the extractivist profile of the economy.

Despite the return to democracy in 1989, the policies of social abandonment established in the 1980 Constitution were perpetuated and even intensified. Areas such as education, health, and old-age pensions continue to operate under a neoliberal model, where fundamental rights are commodified. This situation allowed several multinational companies to settle in the country during the 1990s and early 2000s, focused on an extractivist economy, providing very low economic returns to the country. During the government of Eduardo Frei Ruiz-Tagle, foreign companies were invited to invest in these industries, consolidating an economic model that benefited a few and generated inequality.

In this context, social protests began to gain momentum, primarily initiated by university students denouncing the commodification of higher education in a country where, according to the constitution, it should be a guaranteed right. Although some progress was made, it was always framed within partial reforms, with no substantial changes to the system. These protests continued to grow, accompanied by a growing collective awareness of social and economic inequalities.

Over the years, the protests continued and intensified, with students always as the main drivers of these movements. In these contexts of mobilization, spaces for reflection and debate emerged regarding the social and economic situation of the country. A collective awareness grew about the constitutional paradigm that governed Chilean society. Several intellectual currents proposed that the solution to social abandonment and the deepening of the neoliberal economic model was the creation of a new constitution, born from a collective process, i.e., a constituent assembly.

Historian Gabriel Salazar (Soto Barrientos 2014) was a major proponent of this idea. He argued for the establishment of local councils to represent territorial needs, ensuring that these needs would be addressed in the drafting of a new constitution. These ideas began to permeate society, giving rise to self-managed initiatives with various purposes. In a context of social and economic neglect, these groups sought immediate

and concrete solutions to their local problems, promoting more active and direct participation in decision-making processes.

The discontent culminated in the social uprising of October 2019, triggered by the announcement of a public transportation fare hike in Santiago, Chile. This was the latest in a series of increases in basic goods and services that affected the population. High school students began to massively evade transport fares, under the slogan "It's not 30 pesos, it's 30 years," referring to the 30 years of democracy without apparent changes in public policies for social welfare. Social media played a crucial role in the mobilization, allowing people to access information that was not available in traditional media. On October 2019 ,18, a massive protest gathered millions of people across the country, marking the beginning of a period of demonstrations that paralyzed Chile's economy and infrastructure for two months.

In response to these protests, Sebastián Piñera's government declared a state of emergency, militarizing the streets and violently repressing the demonstrators. According to the National Institute of Human Rights (2019), during this period, 36 people died, 460 suffered eye trauma (including 36 who lost their vision entirely), and approximately 11,000 people were injured.

Despite the heavy repression, social mobilization continued, driven by an organizational spirit that called for solutions to social and economic problems that had been ignored for decades. However, the social uprising began to lose strength toward the end of 2019, especially with the arrival of summer and the proposal of a constituent process, promoted as an agreement by political parties as a way out of the conflict. In November 2019, a plebiscite was called for April 2020, where it would be decided whether a new constitution would be drafted to replace the one imposed during the 1980 dictatorship. This process, along with the initiation of judicial investigations against some government officials for human rights violations, helped calm the mobilizations.

Ultimately, what truly disbanded the protests was the arrival of the COVID19-pandemic in March 2020, which forced the population into total confinement. This almost completely paralyzed the social movement in Chile, including initiatives like the "Reparemos!" foundation, which had begun to take shape in the context of the social uprising.

As mentioned, Chile is a country with marked industrial precariousness due to its dismantling during the second half of the 1970s, which led to the perpetuation of extractivist practices in the country's economy. Consequently, repair is seen more as a craft than as an industry in itself. There is no industrial ecosystem dedicated to repair across the entire production sector. The associated industrial machinery, whether for small industries or objects to be repaired, heavily depends on imports. Thus, the practice of repairers is an "artisan" one, where, using outdated industrial machinery and a few imports, they manufacture and repair parts and components.

This modality is observed in sectors such as automotive repair, the textile industry, and agriculture and forestry, where almost %100 of the machinery is imported, and repairs are carried out in small workshops that operate with outdated technology. Until a decade ago, trades like seamstress or neighborhood cobbler were common, and these professionals repaired objects in

an artisanal way. However, as globalization has gained ground and Chile has opted for neoliberal policies in its production model, these trades have gradually disappeared. This has imposed a disposable culture in the consumption of personal objects and made industrial-level repair difficult.

In Chile's industrial context, repairs are often handled by foreign entities due to the lack of an industrialization culture or specific technical knowledge to allow the repair of medium and high-complexity machinery. Recognition of this lack has promptedthe implementation of government policies over the past 20 years aimed at creating added value for the country. However, the inertia of the neoliberal model established during the dictatorship continues to influence a disposable mentality across all spheres, including productive, personal, and social aspects.

Repair is further complicated because large industrial conglomerates have adopted a planned obsolescence model in their products. This is an industrial practice dating back to the 1920s, which, with the advance of technology, has extended to almost all everyday objects (Benchetrit 2024). This, coupled with the increasing complexity of manufacturing, makes it difficult for unofficial repairers to access parts or perform repairs. To this end, users are compelled to turn to the manufacturer, who often offers the option of purchasing a new object instead of repairing the existing one. This, in turn, increases repair costs and promotes the consumption of new products, generating greater environmental impact (Miller 2023). Additionally, over the past 10 years, there has been a growing practice of acquiring objects as a service. In this model, consumers do not actually own the object but instead pay a subscription to access certain features. This model exacerbates neoliberal practices, where companies seek to maximize their profits at the user's expense (Alistair 2023).

In response to these manufacturing practices, movements advocating for the right to repair have emerged. The most well-known is led by Louis Rossmann, with his "Right to Repair" movement (The Repair Association, n.d.). This movement originated from the repair of Apple products and the observation of the restrictive practices mentioned earlier. Rossmann, as an independent repair technician, raised a political movement that seeks to ensure consumers have the right to dispose of their objects as they see fit, without the manufacturer imposing limitations on ownership or repair possibilities. This movement has achieved some legislative changes in U.S. states, forcing companies to offer repair options for their products. However, these measures have been implemented with caveats, and companies have exploited legal loopholes to continue their previous practices (Wuerthele 2024). In Europe, however, these initiatives have been more successful. The European Union mandates that manufacturers provide spare parts and repair options for at least 10 years after a product's release ("Right to Repair: Making Repair Easier and More Appealing to Consumers | News," 2024).

However, an effective way to address this issue of repair and the negative effects on technological innovation and access to it is through the use of open-source licenses, such as those promoted by the GNU movement (The Free Software Foundation, n.d.), founded by Richard Stallman in 1983. GNU is a software licensing system that allows the free use, distribution, and modification of software, supporting both for-profit and non-profit purposes, as long

as the source code remains open. The concept of "open source" was revolutionary for its time, as it empowered users to understand and control the functionality of the programs they used. This contrasted sharply with proprietary software, which often contained hidden elements, such as backdoors, that could be exploited for malicious purposes or to collect information without the user's knowledge.

The open-source concept has extended to other sectors, including industry. There are campaigns and forums that promote the use and dissemination of open designs and engineering, which has the advantage of expanding creativity and technological innovation. It allows interconnection between manufacturers and designers, broadening creative industrial ecosystems by considering the flexibility this permits (Danise 2022). However, this perspective clashes with the neoliberal worldview, which seeks to maximize profits through industrial protection measures, such as patents and restrictive licenses. These measures primarily benefit large corporations and foster monopolistic growth.
Repair is also contextualized within a creative and iterative process, in which information is gathered about the functioning of the device and the operating principles that govern it, through the practice of reverse engineering. This process involves collective learning, especially in the case of foundations, where repair is a shared effort. This exhaustive work is often rendered invisible in the neoliberal context of a "buy and throw away" culture (Batlle Lathrop and Álvarez Caselli 2019). Additionally, repair involves an act of care, similar to interpersonal relationships, as it incorporates an affective value. In this neoliberal context, the act of repairing also gives objects sentimental value, distancing itself from the logic of disposable consumption (Baigorrotegui, González, and Gumucio 2023).

Empirical and Theoretical Background: A Turn to Self-Management

Self-management can be understood as the organizational capacity of a group of individuals or a collective entity to employ methods, strategies, and skills that allow them to carry out their activities and achieve their objectives autonomously. It is based on the empowerment of the organization's members, promoting a collective vision where individuals themselves make decisions about the actions and direction of the organization. This practice initially emerged in productive sectors facing difficulties in the context of an emerging capitalism. In response, workers, without the need for supervisors, managed to organize production, seeking fairer working conditions and a more equitable distribution of essential goods (Moreno 2008).

However, self-management is not limited to the productive sphere; it also manifests in organizations linked to primary needs that find no solution in institutions or the state. This is particularly relevant in neoliberal contexts, where social welfare policies have been delegitimized. In many cases, self-management emerges as a way to protect social heritage in the face of these policies. In countries like Chile, it has emerged to address basic needs such as food, housing, and education, and in some cases has evolved into trades and productive activities (Moreno 2008; Moreno Crossley 2021; Collins 2021).

These organizations not only seek to achieve their immediate goals but also aspire to transform social relations, laying the groundwork for a new social configuration (Moreno 2008, Collins 2021).

In this process, the participation of diverse actors is fundamental to their constitution. Although these organizations often emerge to address basic needs, they face challenges to their long-term sustainability, such as loss of member interest, inadequate education, and the achievement of their original goals (Moreno 2008). If the purpose of these organizations is to become engines of social change, they must adopt an interdisciplinary approach that provides their members with the right tools and a non-hierarchical structure that fosters resilience (Martela 2023).

Self-management implies an interdependence of roles among the agents of the organization. Although there are specific tasks for each, the absence of hierarchies allows roles to be interchangeable or tasks to be distributed among agents if one cannot fulfill them (Martela 2023). This facilitates the solution of pragmatic problems, as social cohesion among agents promotes the search for solutions that benefit the community. Additionally, self-management promotes strength and satisfaction by fostering bonds among its members (Annosi et al. 2017). This gives self-managed organizations a resilience that allows them to continue operating despite disruptions in their functioning (Annosi et al. 2017; Martela 2023) (Seidl and Schoeneborn 2010).

To understand the resilience and emergence of these organizations, it is helpful to frame them within a systemic definition. In 1973, Humberto Maturana and Francisco Varela introduced the concept of autopoiesis (Maturana R. and Varela 1973), which aims to identify the sufficient and necessary characteristics to define a living being. The concept holds that, from the interactions between its components, the property of a living organism to self-organize and sustain itself emerges. An autopoietic system self-produces through the interactions between its parts, generating autonomy and avoiding dependence on external agents for its self-maintenance.

A fundamental characteristic of autopoietic systems is operational closure, meaning that while they interact with their environment, they maintain their internal organization through closed interactions between their components. These interactions also produce self-regulation (homeostasis), which presents mechanisms through redundancies of agents or interactions, giving the system adaptability and resilience in the face of adverse situations or disturbances.

Just as cells and organs collaborate to maintain homeostasis in biological systems, institutions, norms, rules, and roles perform a similar function in social systems. In the context of sociopoiesis (autopoiesis applied to social systems), social organizations reproduce themselves through communicative interactions. In this sense, the purpose of the social system can be understood as the preservation of social structures and cultural reproduction, ensuring the continuity of the system over time.

Following these same authors, in sociopoietic systems (Luhmann 1998), there is not necessarily an explicit purpose at the individual level. Instead, the global system can display an emergent purpose, where shared objectives, such as common welfare, political stability, or ecological sustainability, emerge from the interactions between the members of a society.

Despite their adaptive capacity, self-managed organizations can exhibit characteristics that reveal their fragility. For these organizations to persist, it is essential to have a functional internal structure. According to Martela (2023), self-management cannot be considered successful without clear rules and structures, along with strong commitment, executive capabilities, and a clear visualization of goals by the agents involved. This contrasts with hierarchical organizations, which operate based on mandates. Sometimes, it becomes necessary for someone to take on the role of coordinator or moderator of immediate executive decisions and tasks.

If practices that ensure the commitment of the agents involved are not promoted, these organizations will struggle to achieve their objectives or endure over time (Annosi et al. 2017, Collins 2021). Additionally, neoliberalism has weakened civic engagement, causing basic needs to be viewed from a clientelist approach rather than a community perspective (Annosi et al. 2017). These same shortcomings generate new needs, which are capitalized on by neoliberalism, but also give rise to new self-managed practices.

An important support for the operation and functioning of self-management corresponds to volunteering, that is, to the unpaid work performed by the participants of these organizations. If we understand volunteering as any unpaid work activity, the foundations for the establishment of self-managed organizations are based on this. Volunteering requires a certain motivational profile to be exercised by the agents who perform it. Given that it is an unpaid labor or work, the driving force "disposition" (Wilson, 2012) or "ethos" (Pasamanik et al., 2019), which characterizes it, and is based on certain traits and motivations. They tend to be outgoing and friendly people; in particular, they present resilient personalities, with soft skills and high degree of empathy (Cabrera-Darias et al., 2015; Wlison 2012). The latter is not only present on its own, but is also accompanied by the feeling of a "caring principle" (Butt et al., 2017, Sandoval et al., 2022; Wilson, 2012); that is, there is a social involvement in the volunteer's work. The volunteer carries out his or her work accompanied by this feeling that the impact of his or her work generates important social and environmental changes. This is known as the concept of generativity.

The concept of generativity is not positioned from the selfish logic of perpetuation after death, but rather seeks a perspective of contribution "beyond", of sowing something for future generations with a vision of collective construction and improvement.

Thus, generativity considers two aspects: a communitarian one, which contemplates giving to others, and another one of agency, which establishes self-strengthening through leadership, productive or generative actions (Sandoval et al., 2022).

Although there is a strong sense of solidarity in the work of volunteering, this engine is affected by an empathic factor: «connecting with others". Therefore, in some contexts in which the organizational size tends to be large or the organizations are highly hierarchical, there is a greater likelihood of volunteer attrition (Wilson 2012). Similarly, it can be seen that volunteering is accompanied by emotional attachment and is characterized by a collective sense; therefore, it is strengthened in the context of territorial work. There is evidence that better organized and communicated neighborhood groups tend to have better volunteering practices (Wilson, 2012). In addition, if there is a sense of integrity in the work of the organizations that call for volunteering, being part of a collective also boosts the volunteer's motivation.

Another aspect observed, though with less significance, is that volunteering opportunities contribute to personal development. These experiences facilitate learning through the activities carried out, such as the acquisition of new skills or competencies related to performing community tasks, including soft skills, among others (Butt et al., 2017; Wilson, 2012). There is some connection between professional training and volunteering; however, this is highly dependent on the context in which the volunteering takes place, particularly in neoliberal settings. Volunteering has evolved with the so-called modernization of society, where short-term, low-commitment volunteering has become more common, with participants often pursuing more personal objectives rather than a broader community-focused mission (Butt et al., 2019; Wilson, 2012).

In the context of Chile, we appreciate that volunteering in self-management is strongly accompanied by a territorial factor (Fernandez 2023; Pasmannik el al. 2019, Lisboa 2023;); in them we appreciate the strong link to territorial contexts such as learning and education. These contexts emerge due to the high focus of public policies in areas such as education, health, food, housing, among others, which are not sufficient for the needs of the population. However, it is important to point out that part of the desertion of volunteers in these contexts occurs when this factor of social cohesion is deteriorated (Lisboa 2023; Wilson 2012). It is important to emphasize the effect of the COVID19-pandemic in the country and its repercussions on the social cohesion of these organizations and, therefore, on volunteering itself.

Added to this are the contexts of socio-economic diversity, which produce desertions due to social diversity and the lack of a combination of ideas and criteria (Wilson 2012). Other characteristics of volunteer desertion include lack of integration into the work group, differentiation between peers and tasks, lack of variability and/or diversification of tasks, as well as low appreciation of the work and incentives (Wilson 2012). These characteristics are generally promoted by neoliberal forms of interaction, which do not contemplate collective or community considerations, but rather manifest models of competition and individual prevalence. Therefore, it is also relevant to understand what factors are relevant in volunteers who participate in these organizations, which allow establishing permanence, so that these organizations take shape and can extend their emergence to social, not only territorial, levels.

The purpose of this article is to study the mechanisms and practices that give rise to and sustain self-managed organizations like "Reparemos!" We will investigate how, in this case, the productive and sustainability practices led by individuals can or cannot intertwine with a role of social and territorial cohesion. Through a mixed-methods study, qualitatively guided, we aim to analyze the organizational and relational forms that exist among the actors that make up the foundation, as well as the dynamics within and between the volunteers and beneficiaries. The idea is to examine how participants understand the work process, their perspectives, the organization's goals, and whether these align with the participants' values and motivations, ultimately, to investigate if they form a constitutive unit. The goal is to understand 'Reparemos!' both as an organization and as a complex system. This also aims to explore the motivations behind why various actors choose to participate in a project that challenges the dominant neoliberal principles globally. This project declares a commitment to non-hierarchical relational forms, peer interactions, the formation of social bonds, and territorial aid. The goal is to explore whether these aspects, from the agents' perspective, are crucial to the formation of the organization and to understand how contextual factors – such as environmental neglect, social inequalities, and insufficient social guarantees – contribute to its creation.

From the above, we can establish that the practical relevance of conducting this study lies in contributing to a certain degree of transferability to similar organizations, with respect to understanding the practices and mechanisms that allow them to emerge.

Research Question: What Explains the Emergence of the Reparemos! Foundation?

This study asks: **What are the practices and mechanisms involved in the emergence of Reparemos! within the context of PPSCP initiatives, from the perspective of the agents participating in it?** The answer to this question is pursued with the general objective of

understanding these practices and mechanisms from the perspective of agents participating in it. This general objective is advanced by means of focusing on the following specific objectives:

- To describe the social practices related to the participation of Reparemos! volunteers and founders, from the perspective of the agents involved.
- To describe the mechanisms that allow the initiative to emerge and be sustained over time, from the perspective of the agents involved.
- To describe the practices related to the participation of Reparemos! beneficiaries, based on both their own perceptions and those of the founders and volunteers.
- To explore how the organization is constituted as an agent, participating in a larger system and collaborating with other institutions of a similar nature.

Theoretical Framework

We will now develop, as a theoretical lens, some key concepts that we consider crucial for understanding the emergence and persistence of the Reparemos! Foundation. First, we will explain what we mean by social practices, community participation, and agency, then collaborative learning, the historical-cultural view of learning and motivation, and finally, outline the systemic view of organizations and the role of the essential volunteer in them.

Social practices are examined from two perspectives. The first, a more general perspective, follows Gadamer (1993) and views social practice as a process of social interaction and linguistic experience. This perspective focuses on how social practice generates group identity through levels of "understanding as an event of meaning" (p. 173), rather than aiming for joint action. The second perspective is ethnomethodological, as described by Garfinkel (2006). It conceptualizes routine tasks carried out by society members as methods for analyzing actions, practical circumstances, common-sense knowledge, and the practical reasoning behind them (p. 2). It begins by assuming that any act of members of a given context, no matter how insignificant it may seem, can be a clear subject of study.

Participatory and agency

In social sciences, the concept of participation does not have a single, definitive meaning. Moreover, it is a polysemic and even vague term in its classification (Alguacil, 2005; Ussher, 2008). In this study, the perspective of Latin American social psychology is adopted. Following Montero (2004), participation is understood as a psychosocial process where community members mobilize to achieve common goals. This process enables them to meet their own needs and generate social transformations within their contexts.

However, according to Montenegro et al. (2014), governments and private companies often promote a form of participation centered on bureaucratized leaderships, directed toward external agents and evaluators, which contradicts the initial definition proposed here.

Participation is closely linked to the concept of agency, which we understand through Anthony Giddens' (1986) theory of (dual) structuration. For Giddens, agency refers to power rather than the specific intention of the agents. Thus, agency

is seen as the capacity for realization, not as the subject's intent to realize it (Giddens 1986). He states that "Agency refers to events of which an individual is the author, in the sense that the individual could have acted differently at any phase of a given sequence of conduct" (Giddens 1986, p. 9).

From this perspective, agency precedes the intentions of individuals and is therefore not dependent on those intentions. It differs from notions of skill or subjective capability. As Ema (2004) argues, agency is a property that emerges from relationships. Agency thus becomes a mediator between courses of action, indicating and generating a position of intermediation.

Furthermore, the concept of agency, as developed by Giddens, enables the creation of a space of responsibility for action. From this perspective, responsibility goes beyond the notion of being solely human; by politicizing it, it establishes a relational position within a network rather than a predetermined activity or an essence that exists prior to specific contexts. Responsibility involves recognizing the place of enunciation and acknowledging that this place can be inhabited by many different voices – it is a shared space. Responsibility is not a privilege of the individual or the structure. The specific forms of agency are diverse and emerge uniquely in each act.

Linked to this conceptual development, this study also focuses on collaborative learning, which is widely agreed to be a collective process from its outset, where all members actively and jointly participate in the task at hand. Barkley, Cross, and Howell (2007) epistemologically distinguish this term from the concept of cooperation. While cooperative learning is based on the sum of individual parts, collaborative learning assumes that knowledge is socially constructed through consensus among peers. Bruffee (cited in Barkley et al., 2007) goes a step further, asserting that collaborative learning, unlike cooperative learning, seeks to develop critical thinking, autonomy, and the ability to articulate personal ideas, even if this generates discord or competition. The latter – competition – is an aspect that cooperative learning aims to avoid.

Understanding the object of learning as a dynamic, non-foundational social construct is key to adequately describing and analyzing concrete processes of collaborative learning as moments of responsibility.

Historical-Cultural View of Learning and Motivation

Building on Leontiev's work, Kuutti (2001) suggests that human activity seeks to objectify needs by translating them into an object that serves as the driving force. It is important to highlight that activity is not understood as a simple mechanical response to stimuli but as a complex process, mediated by tools and signs, that develops in a specific historical and cultural context.

To understand the operationalization of this process, the author proposes a hierarchical structure of activity consisting of three levels. First, at a basic level, activity represents the global unit of the recursive process that begins with the recognition of a need and culminates in its objectification in a motive. This encompasses both individual and collective activity, the latter being understood as the joint action of a community around a consciously recognized motive. Second, actions are subordinated to achieving specific, consciously defined goals. To achieve these goals, a variety of actions must be performed. The set of actions so subordinated at this level become the domain for the next level. Third, concrete operations are performed. These are operations that involve people using different mediators of activity, determined by the objective conditions of realization, mainly instrumental and contextual, within which the activity unfolds.

In summary, Kuutti's (2001) proposal, based on Leontiev's work, allows us to understand human activity as a complex and structured process that seeks to satisfy needs – which become objectified in a motive – by transforming the environment through the use of tools and signs.

This development of the concept of motive helps us understand why people engage in certain activities and what their goals are. By identifying the motive, we can analyze the structure of the activity, the actions that comprise it, and the tools used. In this way, motivation may be understood as an emergent phenomenon. The meaning of emergence has been most rigorously elaborated in the field of systems theory.

Systemic View of Organizations

In systems theory, emergence refers to the manifestation of new properties or behaviors in a system that cannot be predicted by observing its components separately but result from the interactions within the system. In other words, the "whole," understood as the complete set, contains something more than the simple sum of its parts. Emergence is a key characteristic of systems theory and the definition of complexity in complex systems. It focuses on studying how interactions between agents reveal these properties and how they manifest across different levels of scale and containment.

The study of emergence lies at the intersection of various fields, such as physics, biology, and social systems, which focus on the study of agents and their interactions. The purpose is to identify the characteristics or conditions that allow these emergent properties to manifest. In particular, the concept of autopoiesis – i.e., the emergent capability of self-definition of a system via interaction of component parts – can be reconceptualized in the context of social systems as sociopoiesis. In this context, the constitutive agents of the system, through communicative processes like education, socialization, and decision-making, build structures that maintain social cohesion. The analogy with living systems lies in the fact that both maintain their organizational coherence through operational closure. In social systems, this closure refers to the fact that communication mechanisms are self-referential, meaning that decisions (which are also communications) reinforce and reproduce the system. This is seen in the creation of laws, cultural norms, codes of conduct, and political structures.

Unlike biological systems, where closure is structural (e.g., a physical membrane), in social systems, closure is communicative, based on a specific type of language, such as scientific or legal language. Like biological autopoiesis, sociopoiesis grants autonomy to the social system, meaning that the system is capable of self-regulation without the need for external influences. Although it can interact with other agents, it does not depend on them for its regulation. Internal processes of consensus and social interactions maintain the system's stability and ensure its perpetuation.

Moreover, social systems are adaptive, allowing them to respond to changes in their environment through decision-making. This includes the modification of norms, redesign of social structures, and other aspects, granting them resilience in the face of crises or transformations. Since the system modifies itself through decisions, emergence in sociopoiesis corresponds to the properties that arise from communication within the system, reinforcing its self-referential capacity.

Complexity is also observable in these systems, as they share an organizational containment

structure, i.e., social structures exhibit a containment hierarchy. For example, scientific language contains the specific language of physics, or a territorial community is immersed in a larger system, such as the functioning system of a city or region. This allows for defining levels of complexity, from micro to macro scales, similar to what occurs in living systems.

Volunteering View

Volunteering does not only imply a conduct of help or altruism; it develops from an activity carried out by one person towards another, without the expectation of receiving compensation. Volunteering has a social implication in its essence (Cabrera-Darias et al., 2015; Wilson, 2012).

As mentioned earlier, the volunteer must possess an ethos or internal drive where there exists a "disposition" (Wilson, 2012) toward generating a social contribution. According to Yuen (2018), "it is a set of dispositions acquired not only through repetition (routine, custom) but especially through moral effort or perseverance (virtuous habit), which demands adherence to certain principles determined and/or autonomously assumed." Thus, according to Pasmanik et al. (2019), a volunteer acts "from an altruistic order, with the desire to concretely contribute to social transformation and the recovery of the community tissue." This aligns with the concept of generativity, which refers to the motivation and capacity of the individual to transmit a legacy to future generations, positively impacting their development – that is, generating a transformation of society.

What is interesting about generativity is that it contemplates two dimensions: the communal, which involves nurturing and caring for others, establishing links between the self and other people; and the agentic, related to the extension and strengthening of the self through leadership, production, or creative activity (Sandoval et al., 2022). Thus, a volunteer must have a strong commitment to the community. According to Wilson (2012), territorial ties strengthen and drive volunteering and allow for the envisioning of active and enduring participation.

Another aspect that drives volunteering corresponds to task flexibility. In environments where volunteers enjoy greater autonomy in their work, they often value the ability to change tasks and schedules according to their needs and preferences. This flexibility can be an important motivating factor that allows them to better balance their personal responsibilities with their volunteer commitment (Wilson 2012).

Learning in volunteering is a key aspect that transforms volunteers, both in terms of their self-perception and their knowledge of the world around them. Volunteering offers an opportunity to acquire new skills, knowledge, and experiences. This process is not only related to the specific tasks that volunteers perform but also to the social and organizational interactions in which they participate. Furthermore, learning through volunteering is not limited to the acquisition of practical skills; it can also change a person's self-perception, making volunteers see themselves as more capable, useful, and responsible. As they gain more experience, they tend to see the world with more nuances and better understand the social and organizational dynamics in which they participate (Butt et al. 2017; Cabrera-Darias et al., 2015; Wilson, 2012).

However, in liberal societies such as the United States, Canada, and the United Kingdom, volunteering is mainly supported by the idea of

private initiative and individual responsibility. These countries tend to have less state intervention in social welfare, which creates greater space for individuals and private organizations to take the initiative in providing services and social support. As a result, volunteering in these societies tends to be more prevalent, as it is considered a way to fill the gaps that the state does not fully cover. In this context, people are more likely to engage in volunteer activities to help others or to obtain personal benefits, such as networking or professional skills, given that there is a greater demand for private support (Wilson 2012).

Empirical Focus of the Study: Birth, Development, and Role of the Reparemos! Foundation

Amid the social unrest of 2019, the initiative "Reparemos!" was born. It was initially driven by one of its founders, who offered to repair objects for free with an altruistic goal. The aim was to share the sense of satisfaction derived from reviving an object. These first gatherings were self-taught and took place in a private setting (at the founder's home), but with a purpose that transcended simple repair: the pursuit of social cohesion in a context of widespread discontent.

The participants of these early meetings, motivated by a collaborative spirit, organized themselves to find a physical space where they could carry out the repairs collectively. Thus, the first two gatherings took place during the summer of 2020, bringing together people from different sectors, primarily from the neighborhood community. These events were successful in terms of turnout, considering the social cohesion generated by the social uprising. However, the COVID19- pandemic interrupted this process, delaying the formal establishment of "Reparemos!" until 2023.

In 2023, activities resumed with monthly meetings, where volunteers began to participate regularly, forming a collaborative ecosystem. Beneficiaries brought objects to repair and, in the process, learned to repair them themselves. This learning not only allowed them to extend the useful life of objects, contributing to sustainability, but also helped them overcome the fear of intervening in an object and challenged the logic of planned obsolescence imposed by the industry.

Thus, the Reparemos! Foundation not only focuses on social and territorial cohesion work but also aims to educate on these topics. It offers repair workshops, teaching the underlying physical concepts, such as electricity and mechanics (in the case of bicycles), and also provides instruction on the use of textile machinery for repairs. The foundation's mission is to convey ideals of openness, expansion, and the liberation of knowledge associated with repair, while fostering critical thinking about the neoliberal paradigm in which consumption and repair are embedded.

Additionally, the foundation seeks to raise awareness about the environmental impact problems arising from excessive consumption, instructing on creative and collaborative ways of working that can be implemented in everyday life. The foundation's motto, "In a consumer society, repairing is a revolutionary act," encapsulates this philosophy of resistance and proposes a more sustainable and mindful way of life.

The foundation's mission is to empower communities through concrete repair and recycling initiatives, fostering a more sustainable culture and driving cultural change in favor of the environment. Its vision is to be

promoters of the culture of repair, recycling, and cooperation, contributing to building a fairer and more sustainable world for present and future generations. It envisions a world in which the culture of repair permeates all layers of society and where nothing that can be repaired ends up in a landfill.

Image 1: The Reparemos! instance is articulated as a common table where beneficiaries, volunteers, and founder repair object, with an educational approach.

Methodological Framework

The methodology corresponds to a mixed-method case study guided qualitatively (Morse, 2017). In this way, the main component is qualitative, with a complementary quantitative component. In a qualitative approach, key notions include the meanings that individuals construct from their experiences within specific contexts, practical interactions, and research settings. Additionally, the role of the researcher is crucial, as they engage in a reflective practice that influences their position and interpretation (Flick 2012). On the other hand, the quantitative approach is used in a complementary manner, providing an additional or supportive perspective (Arias 2023).

Following Vasilachis de Gialdino (2009), in Social Science research, I understand case studies as constituting the case as a specific phenomenon that may also be analyzed as a paradigmatic manifestation of a social problem. The present case study functions at both registers – specific and paradigmatic. In line with this approach, the case is framed within a specific space-time domain,

involving actors/agents, relationships, and social institutions, where, in a complex context. These are further specified in the research plan sections (5.1 and 5.2) below. The aim of this research is to explore the particularities of the case object and in doing so shed light on the social problem prompting its emergence.

Plan for Qualitative Stage: Researching Founder and Volunteer Perspectives

Participants: Sample and Characterization

For the qualitative stage, the participants considered are the board of the foundation, specifically its founders, in addition to its permanent volunteers. A single-case sampling (Stake 1994) is carried out, as this part of the research is framed as a case study of an organization with particular members. The characterization of the participants is presented in Table 1 and Table 2.

Table 1. Board of Directors – Founders

Participant	Gender	Years in the Foundation	Paid/Unpaid Work Outside of Reparemos! (Area)
Participant 1	M	2019 - Present	Paid Work
Participant 2	F	2019 - Present	Unpaid Work
Participant 3	F	2019 - Present	Unpaid Work
Participant 4	M	2021 - Present	Paid Work
Participant 5	F	2021 - Present	Paid Work

Table 2. Voluntarios

Participant	Gender	Time participating as volunteers	Activities outside Reparemos!
Participant 1 (V1)	M	2024 - Present	Technical-professional work
Participant 2 (V2)	M	2024 - Present	Professional worker
Participant 3 (V3)	M	2024 - Present	Higher education student
Participant 4 (V4)	M	2021 - Present	Technical-professional work
Participant 5 (V5)	F	2023 - Present	Academic
Participant 6 (V6)	M	2024 - Present	Professional worker
Participant 7 (V7)	M	2021 - Present	Academic
Participant 8 (V8)	M	2021 - Present	Professional worker

We will identify the interviewers with the letter E. For example, E1 for Interviewer 1 and E2 for Interviewer 2.

Data Collection Tool

A group interviews were conducted (Íñiguez, 2004), on the one hand with the directors/founders of Reparemos! and, on the other hand, with the volunteer participants to investigate the shared meanings around their work in the foundation, the practices that take place in it, the organization, their motivations and, ultimately, the narrative about the meaning of their experience. With the first group mentioned, the interview was conducted in video call format, while with the volunteers it was face-to-face. In both cases, transcripts were created using a trusted external service.

Data Analysis Tool

A thematic content analysis was carried out based on the transcription of the interviews with both the founders and volunteer participants of the foundation (Vásquez, 1994). This involved an inductive coding process, where the themes emerged from the data itself. This "bottom-up" approach allows for a rich and complex interpretation without the need for extensive structuring. The thematic content analysis procedure is characterized by the construction of categories that emerged from the content, which can thus be inferred (Arbeláez & Onrubia, 2014).

Plan for Quantitative Stage: Researching Beneficiary Perspectives

Participants: Sample and Characterization

The target population for this survey consists of beneficiaries who have attended the repair sessions with the aim of having their objects repaired for free. These participants have directly interacted with these services and are an integral part of the foundation's activities, making their feedback crucial for evaluating and improving the quality and effectiveness of our sessions. All participants have had direct experience with the repair sessions, allowing them to provide opinions and feedback based on their interaction with the service.

Convenience sampling was used to select the sample. This type of sampling involves selecting participants who are readily available and willing to participate. In this case, 20 beneficiaries were selected because they attended the repair sessions and were present and available to be surveyed immediately, providing a direct view of the experience and satisfaction of the beneficiaries at these events.

Regarding the characterization of the sample, it is diverse in terms of age, with a good representation of both young adults and older individuals, and gender, with a slight majority of women (%55). In terms of education, the majority have some form of technical or university education. Most respondents are actively working, with the largest group being dependent workers. This suggests that the majority of the sample is of working age and has a medium to high level of education, specifically those with technical or university education.

Data Collection Tool

The survey was designed with a total of 24 questions, organized into 4 thematic blocks to facilitate understanding and response. The first block collects general information about the respondent, avoiding questions that could individualize or identify the person, thus ensuring anonymity. The second block focuses on how participants learned about the repair sessions, aiming to identify the most effective communication channels. The third block addresses the experience and appreciation of the respondents regarding the sessions, evaluating their level of satisfaction and the most valued aspects. Finally, the fourth block deals with sustainability and the environment, seeking to understand the participants' perceptions and knowledge of these key topics.

The questions included open-ended responses, drop-down lists, multiple-choice options, and linear scales. Notably, a pilot test was conducted with 3 participants from the June 2024 repair session to ensure that the responses were clear and relevant, and that the data collected would be useful for addressing the study's assumptions.

The survey was administered in person and face-to-face, using Google Forms on a tablet and/or mobile phone provided on-site by the foundation's volunteers. The survey was conducted during two repair session dates, one in July and the other in August 2024, in the Santiago de Chile districts of Independencia and Peñalolén, respectively. Respondents were asked to complete the survey after having objects repaired for free at our sessions. Additionally, the study sought to gather the beneficiaries' overall opinion of the foundation's work and their specific role within it, through another survey and subsequent analysis.

Data Analysis Tool

Simple Statistical Analysis, statistical analysis of the surveys, was employed in the analysis of the multiple-choice responses.

Ethical Considerations

The data production used in this research adhered to current regulations and standards that govern scientific activity for researchers in biomedicine and social sciences. We followed the guidelines of the ethics committee of the Faculty of Social Sciences at the University of Chile.

For the qualitative stage, the project explanation, risks and benefits, voluntariness of participation, and confidentiality and anonymity safeguards were established through informed consent (Ferrero, De Andrea, and Lucero 2018).

Regarding the quantitative stage of the surveys, they were anonymous, and no personally identifiable information, such as names, addresses, identification numbers, email addresses, or phone numbers, was requested. Respondents were assured that their participation was voluntary and that their responses would only be used for the purposes of the study.

Results and Theoretical Discussion: Perspectives on the Emergence and Persistence of the Reparemos! Foundation

Qualitative Results: Founder and Volunteer Survey Responses

Founders Interview

Formation and Structure: Motivations and Expectations

According to the participants' accounts, forming as an organization occurred in a conducive context of social questioning, where initiatives like Reparemos! hold a privileged position from a political perspective, in terms of their stance on issues that impact citizens' lives. This is reflected both during the organization's formation and in the present, as expressed in the following interview excerpts:

> This started in the context of the social uprising [...] it was something that had always interested me, and with all the excitement of the social uprising, it felt like the moment to finally do the things you had always dreamed of (P1).

> What P4 says is deeply political, I mean, I think it is, even though we probably don't strictly share the same political beliefs, we do agree on several things, like how this thing is really about resistance, or at least that's how I always imagined it. For me, for example, the fact that it's free is like a political act (P1).

Throughout the emergence of this organization, different meanings and expectations from those on the board arose, which needed to be articulated. These ranged from a motivation driven by the project's content, as illustrated in the following excerpt:

> I've always been motivated by projects related to environmental care, sustainability, etc., and, well, I came across the project, I loved it and wanted [...] it to become really well-known, to go viral, and I could finally combine my work with something I enjoy (P3).

Another motivation involves gathering with others to enjoy a shared activity centered around repair:

> For me, we're just a group of people who get together because we have a good time. No one is going to get rich off of this, and it has no pretensions other than enjoying ourselves – and, well, doing something good for the community and all that, but that's part of having fun (P1).

In these accounts, following Leontiev's activity theory (Kuutti 2001), we find individual goals that converge into common purposes and are articulated around an explicit shared motive. In the formation of Reparemos!, a concrete operation (see section 3.2 above) was the start of systematically meeting and gathering, which helped solidify the motive that aligned them as a team.

There was also the need to give structure and order to the organization. As noted by Martela (2023), this functions as a mechanism of resilience essential for the organization's survival. An

individual with a management and organizational role is essential for a group, even though this may go against the principle of self-management. This individual's role is structural rather than decision-making, as decisions are collective:

> It's like I said, this needs to operate in a more organized way, and that's easy for me, so I saw I could contribute, and I told P1, I'll help organize this so it works (P2).

In the previous excerpts, it is clear that, beyond the need to articulate individual expectations, there is also a connection formed through the different skills and abilities of the members. This serves as a sustaining mechanism over time, which, from systems theory, contributes to improving the resilience of the organization. The organization is seen as self-regulating as a system, resulting from a broader outlook on the future and the organization's actions stemming from diversification (Martela 2023).

Meanings of Being Part of the Foundation: Connections and Distances

Regarding the meanings of being part of Reparemos!, accounts emphasize the importance of repair work as the guiding axis of their actions. This represents the primary need that sparked the micro-community's self-management (Moreno 2008; Moreno Crossley 2021; Collins 2021). It is understood more broadly as contributing to sustainability, but at a more concrete level, it relates to the act of giving life to repaired objects and the action of repairing itself. This includes the relational value that the repaired object provides:

> The other two aspects, which are the environmental and sustainability angle and the meaning of repair itself – being in contact with the object – those are the ones that really speak to me, the ones that call out to me the most. I like what repair culture represents in terms of environmental or socio-environmental impact, and what I love about the sessions is being there, being able to grab the sewing machine, take it apart, and connect with the things materially, and also achieving what P1 always says: giving objects new life (P2).

Another theme regarding the meaning of belonging to Reparemos! is the notion of community-building. Participants reference both the internal community within Reparemos! and the external community they reach out to:

> The community aspect, which has so much to do with creating a community and connecting with people, but also, on the other hand, contributing to the broader community (P2).

In the first perspective, the creation of a community among the foundation members involves building a context that brings together people with similar interests, beliefs, and emotions, which are in harmony and central to generating and sustaining this encounter. As expressed by Participant 4:

> And that's something we share, you can feel it, you feel it in the group's integration, like the way we relate to each other as a group. It's something that's shared, like a kind of community, and I think that's something that encourages me to show up, at least. I feel like I'm not just trying to educate people here; I'm building a space with people who matter to me, people I care about, with shared interests, people who think similarly to me (P4).

This highlights a positive evaluation of common visions or similar approaches. This aligns with Garfinkel's (2006) concept of competent members within a specific context, where everyday arrangements and agreements shape a particular way of functioning and understanding among organizational members.

> So, deep down, the people who join this, they kind of have the same feeling, a somewhat similar purpose or interests (P4).

From the previous segments, it is possible to identify the characteristics of the language and common forms of this particular sociopoietic system, in this case, the culture of repair, learning, and teaching (Luhmann 1998; Seidl and Schoeneborn 2010).

Regarding contributing to the community, there are meanings that point to a social function of the work, one of the premises being the pursuit of the common good.

> I'd comment something here, I don't know, correct me if I'm wrong, but part of our identity is doing this for the common good, like something we want to share, we want to enjoy ourselves, we want everyone to be a part of what we're doing, so I imagine the things we reject are also somewhat related to this (P1).

The above is intentionally directed toward a specific community that needs repair, where the free nature of the work gives meaning to the foundation's activities and distinguishes it from other initiatives.

> We organize these events where we invite volunteers, and people show up, and we repair things for them for free (P2).

Going a step further, offering free repair services is seen as a political stance.

> For me, for example, the fact that it's free is a political act. I mean, it's something that goes against a way of thinking about the world, where everything is disposable and everything is expensive. You're not just donating your time, but you're fixing something for free, and people, well, now they know us, but I think at first what impacted them the most was that it was free (P1).

This form of resistance, rooted in the practices and ethics of the foundation, contrasts with the hegemonic mercantile view associated with obtaining goods and services. It creates tension with the surprise and astonishment people feel when they bring their belongings or appliances to be repaired – specifically, the beneficiaries. In this regard, we could infer that the surprise beneficiaries experience is related to the fact that many participation forms in the current context tend to be more utilitarian, under a neoliberal rationality where outcomes matter more than processes. This has little to do with the notion of transformation proposed by Montero (2004).

One of the meanings behind the existence of Reparemos! is the establishment of networks, initially with close connections, as an inherent part of the foundation's formation, as expressed in the following segment:

> Someone showed up who was really key […] a friend of a friend, I didn't know them directly, and this person had a broken drill, and since they were really well-connected, they said they knew of this space in [Open Work Place] where we could maybe make it work for real, and without many expectations, I met with another person who runs that space, and they told me, "Go for it, let's do it now" (P1).

Another set of network instances includes different organizations that request support, accompaniment, or teaching-learning processes in more specialized areas related to repair. This materializes in workshops, through which the foundation has diversified its activities and started charging for services. These workshops are generally funded by government grants through public and private projects. It's hinted that in these instances, there is a notion of monetary compensation for work performed by someone with the appropriate knowledge, who may even be a volunteer.

> […] we also do workshops, which have more of a teaching structure, where people are taught how to repair certain things for free. The workshops started with the idea of teaching people to repair things, and then we invited them to volunteer. So, the first workshops we funded ourselves, but then other organizations started requesting workshops. Now, we offer workshops as a service, but always when someone finances them, and the volunteer, the person running the workshop, is always paid. So, for example, if someone reaches out and says, "I'd like a bike repair workshop at such-and-such a place," I feel free to send them a quote (P3).

In this context, it's evident how state or government bodies instrumentalize self-managed organizations to give the appearance of meeting goals or objectives aligned with their government plans, without genuine interest in promoting socio-environmental changes (Catalán 2019). Although these organizations may follow certain external communication guidelines, the foundation, as an organization, maintains its autonomy and integrity in terms of communication, preserving its internal structure and its ability to make decisions independently. However, material difficulties highlight one of the weaknesses of self-management, which often struggles to endure over time (Moreno 2008).

The other organizations with which Reparemos! collaborates are similar in mission and vision, particularly those related to sustainability. These spaces are also seen as strategic, both for expanding outreach and for potentially recruiting new community members to become volunteers:

> Just by being part of an alliance, we think the same way, we do the same things, it's convenient to be part of it, because they help us too. It's part of our plan to have Reparemos! cells in different districts, so it's always worth it. When someone doing similar work says, "Hey, I have event X, would you like to participate with a workshop and be part of the event?," we say yes, depending on our capacity, available volunteers, and our schedule. It's worth going even if it's for nothing, because we're thinking about recruiting volunteers, forming alliances, getting ourselves out there, and that's helped us plan for the future of repair (P5).

The expansion and consolidation of Reparemos!, particularly through new partnerships, such as with a multinational retail company, challenge the foundation's principles. In response, they must think, discuss, and make collective decisions on their stance.

This reflects interactions occurring at an intermediate (meso) scale, with self-managed interaction

mechanisms aligned with the organizational forms promoted by the foundation (horizontal hierarchy). However, although these interactions generate synergies between organizations and are integrated into broader alliances with similar discourses, and thus greater complexity, operations are not always successful if the entities involved do not have aligned purposes (Annosi et al. 2017).

> We got an offer from a big retail company, and it really shook us up. It was a request for a quote, but not just any quote – it was for a huge company that's a major polluter. We usually work with municipalities, foundations, community spaces, cultural centers – that's the kind of people who contact us, and we all agree on that. But we also agree that Falabella, for example, is a really noisy presence, and we spent a lot of time discussing what we were going to do. I think it helped us come to an agreement about things we hadn't talked about before (P1).

As Luhmann (1998) and Seidl and Schoeneborn (2010) point out, rejecting interactions that don't align with the foundation's values keeps the organization's activities within the communicative modes it seeks to uphold.

However, in this challenge, we see that the reality of the foundation – often facing financial struggles, a lack of budget to advance certain proposals, among other issues – means the framing of principles may be reconsidered. As illustrated in the following segment, despite preferring to distance themselves from the retail company, they may evaluate working with them if the financial compensation could support new repair-related actions.

> […] the retail company thing also made us talk and set limits, like, you know what? If it doesn't fit with us, and we're not getting a ton of money out of it to fund this, then it's not worth doing. And that's where we started setting boundaries (P3).

Finally, one of the potential barriers for those leading the foundation is the workload, which, given the organization's growth over the past year, has at times impacted motivation, though not the shared values that sustain it.

> We've had massive growth issues, so we've had to adjust our schedules. None of it has consumed us, but there was a moment of burnout […] there was a lot of demand. At one point, P2 told me they weren't having a good time, just kept their head down all day… started at 3 and by 7, they hadn't looked up. They didn't enjoy it at all (P5).

> […] we started saying yes to everyone, and I, at least, stopped enjoying it as much. It became a burden. I was personally tempted to slow things down, but bringing more people on board helped a lot. It lightened the mental load because it felt like we were all sharing it, supporting each other (P1).

The shared values haven't been compromised, thanks to the incorporation of new members, adjustments to the organization, and consistent support, which everyone takes part in. Additionally, one thing that is highly valued in the accounts is that, as a team, they've learned to set limits regarding workload to avoid personal and group burnout. This is expressed in the following quote from one of the interviewees:

> Between last year and the beginning of this year, we faced a lot of challenges and projects that pushed us to our limits […] like Organization X's fair. We started learning our limits […] Yunus – it was like a book fair, a stand, eight hours a day or more. We realized we couldn't handle it. We tried, it was a paid event, we did it, but we didn't really enjoy it. Some volunteers had a hard time, so that's when we realized we had limits. We learned our limits and started setting them (P3).

In other words, homeostatic mechanisms (self-regulation) are generated in response to disturbances in the organizational system.

Group Dynamics and the Individual

There is a shared understanding that the foundation operates based on complementarity between its members and a horizontal organizational logic. The first is particularly evident when a team member is unable to attend the sessions. In other words, there is a system in place to replace individuals who cannot attend at a given moment, particularly for meetings. This is especially important now that the foundation has grown and expanded into various areas

> So, if someone is absent, luckily so far there's always been someone willing to cover, and if not, then nothing gets done. If no one shows up to fix bikes, then no bikes get fixed. We used to stress about it, but now we don't, because we're doing so many other things anyway (P3).

> We've been working on that now, making sure every team has someone who can step in, and if no one shows up, we make that clear (P5).

In the two previous excerpts, it is evident that, beyond the logistical task of finding a replacement, there is a significant acknowledgment that the organization may not always function at full capacity. This is understandable, given that it is composed of people. Thus, we can see that the relationships are more oriented toward collaboration than cooperation (Barkley, Cross, and Howell 2014), where a shared sense of purpose guides everyday actions and decisions. Additionally, there is an emphasis on care over raw production (Baigorrotegui, González, and Gumucio 2023).

Secondly, regarding organizational logic, the repair work is highlighted as being non-hierarchical or authoritarian, which is fundamental for some founding members.

> What I like is getting together with people to fix things, in a very horizontal way; I'm not interested in anything beyond that (P1).

However, it is evident that the leadership responsible for the foundation's daily operations and management is currently concentrated in a single person. This individual meets specific criteria, including having available time, a structured and organized work style, and the ability to address both external and internal demands. This role is full-time but unpaid.

> […] I said from the beginning that this was needed because at one point in the conversation we said that the problem was if we do this, we're going to need someone who's there all the time. And I said, well, if that's the case, if it's necessary, I'm willing to take on that role and work on this, hoping that eventually there might be some compensation. We're still waiting, but I

> think that's been fundamental because, I don't want to downplay anyone else's work – I know everyone does a lot – but I know I play a very central role in organizing, coordinating, and managing the day-to-day, and I'm overseeing several areas (P2).

We see that Participant 2 (P2) acknowledges this role for herself, which is legitimized in some accounts, but also flexibly approached in others, as shown in the following segment:

[...] one of us could, I mean any of us could make a decision, like, let's go to the municipality of such-and-such (P1).

Thus, the need for an executive role for the structure and proper functioning of self-management is recognized. This does not contradict the horizontal hierarchy, as long as decision-making is done collectively, and this role primarily handles decisions outside the collective context (Martela 2023).

Another instance where individual and group aspects intertwine is in the meanings the founders create around the volunteers. While it is expected that these actors adhere to the organization's principles – and their tenure is often unsuccessful if they do not—there is also significant emphasis on the individual interests and motivations of each volunteer. This focus helps to foster a sense of group cohesion.

> What fascinates me about this is that it seems like a place where people can unleash what they really want to do, and that's amazing. I think of Seba, for example, he's really into it, he just joined, full of energy... this new volunteer who gave the 3D workshop, after being with us for two weeks, is now in love with it [...] he's using this as a way to do something he's clearly wanted to do for a while, and it's the same for all of us – I feel like I'm doing something I've wanted to do for a long time, and this is the context where I can do it, and that's awesome (P1).

In the excerpt presented, we can observe a sense of integration among participants, positioned within the same communicative sphere.

Us and Them

First, a characterization of the beneficiaries is made by the board members.
It is important to note that the founding team perceives themselves both as board members and as volunteers, attributing shared characteristics. However, this is not the case when discussing the beneficiaries of Reparemos!. One key distinction is the profile associated with resistance and political stance.

> The volunteers and the people who participate tend to have more of this resistance profile that P1 mentioned, whereas the beneficiaries don't have this resistance profile as much (P4).

The characteristic mentioned in the previous segment corresponds to a profile that merges the notion of volunteers-repairers, regardless of their management role. Meanwhile, the beneficiaries, who come from diverse backgrounds, engage with the repair sessions for various reasons.
These include individuals who are unfamiliar with how to repair an object, those committed to environmental care, and those who cannot afford to purchase a new product.

> […] I think the beneficiaries have a much more diverse profile than the repairers. The volunteer repairers are a bit more homogeneous, although not strictly. But with the beneficiaries, there are people who come because they're curious and want to see what it's all about, people who come because they lack the physical ability or knowledge to make repairs, people who know how but want someone to help them, people who come with an environmental focus, wanting to fix something instead of throwing it away, and people who come for economic reasons, because they can't afford to buy another one (P2).

The fact that volunteers and beneficiaries do not share the same language or mode of communication inherently makes it difficult for beneficiaries to fully engage with the system, unless they are introduced to a common language (Luhmann 1998; Seidl and Schoeneborn, 2010). This is especially true if the foundation's work is tied to a political stance, where the responsibility derived from agency (Ema 2004) comes into play. It recognizes the polyphony of voices that appear when individuals take certain positions. For example, a beneficiary may initially approach Reparemos! from a position of unfamiliarity, which affects the relationship they form with the repairers and the organization. However, if this person learns and later joins the volunteer team, they take on a different level of responsibility compared to their original position.

Expectations Regarding Beneficiaries

A recurring theme in the participants' accounts is the importance of beneficiaries recognizing the act of repair. This has subjective implications for the repairers, as gratitude is the minimum gesture expected from the beneficiaries. If this doesn't happen, it can cause frustration.

> For me, it really fills my soul when the person in front of me is genuinely happy and grateful that we succeeded. Plus, there's the euphoria of having succeeded. But I think if someone wasn't grateful – it hasn't happened because people are always thankful, this is hypothetical – but if someone just said, "Oh, thanks," and left, I think I'd be angry (P1).

> I don't expect them to think this is a technical service where they drop something off and come back in two hours to pick it up. I don't expect them to think they're the only one, asking me to write down all these things and pulling out multiple items from their bag, saying, 'I also brought this and that.' How can I help someone else if I've got ten things to repair? That really bothers me. It feels like they're taking advantage (P5).

The frustration is primarily associated with the comparison of Reparemos! being perceived as a technical service, in the sense that it operates with a clientelistic logic that distances itself from the premise that the work being done carries a sense of community, as expressed in the following quote:

> This is Reparemos!, not "I fix it." Reparemos! means you and me, we're doing this together (P5).

This demonstrates that neoliberalism places citizens in a clientelist position, where they expect that basic needs are viewed as services, without engaging beyond their position of comfort. This only begins to shift when guarantees start to disappear, and needs emerge due to the systematic imposition of capitalism (Annosi et al. 2017).

Volunteers Interview

Motivations and Learning: Between the Sense of Community and Individual Motives

The stories of the participating volunteers consider motivational aspects to be important both for joining the foundation and for staying in it.

> A first motivational element is related to the motivation to learn and meet people with common interests. The above is in line with those expressed by different studies (Wilson 2012, Butt 2017, Cavalcante, 2015) in which one of the reasons for volunteering adhesion is usually learning in the work and the task during participation, However, we observe a weighting factor in concordance of language and communicative context, which endorses in the emerging context of Reparemos.
> One day I decided to go, and I met the kids, they were super nice, and then I decided to learn more, so more than anything else, because you can fix something simple, just a cable, but behind that, there may be a bad component and that's what motivated me to go, learn more, meet more people who liked the same thing, more than anything else (V1).

The common interests that can be noted in the stories are intellectual, creative and those of resistance to the neoliberal logics of consumption. This can be seen in the following segments:

> What motivates me is that it is a space with people with the same interests, the same intellectual curiosity as me (V2).

> [...] and also the desire for the same madness, so to speak (V2).

> It has been nice to be in this time participating in this group of people interested in fighting against programmed leave and keeping things moving longer than you might expect, yes (V4).

Another motivational aspect is related to the contact established with the people who attend the repair days, which is linked to emotions of well-being.

> [...] it's fun, because you have contact with people, which is very rare, and also the happiness that you manage to generate when you fix things for people, I think it's worth investing a Saturday, coming here or to Independencia to basically spread happiness (V3).

> I was happy with the result and so was the gentleman, that is to say that he saw everything, I think that for both of us it was very gratifying to have solved a problem that we thought was going one way and in reality it was another (V6).

From the above quote, it is clear that the emotion of well-being, associated with happiness, has to do with the fact of managing to repair a certain artifact, which generates both self-satisfaction for the work done, as well as the gratification generated for the owner of the artifact when it is repaired. Both manifests account for the engine or ethos (Pasamanik et al., 2019), which refers to a “disposition” (Wilson 2012) that entails this generative character (Sandoval et al. 2022), i.e. to generate both collective and individual well-being.

Learning is also something important highlighted by the volunteers, emphasizing the companionship that occurs in the interactions that take place during the days; this companionship can also be related to peer learning and the notion of collaborative work (Barkley, Cross and Howell, 2007).

> [...] I appreciate it from the colleagues, from you, from Jaime in particular, who I am always asking him, that you have that horizontality, to say I don't know this, and well, look here I am doing this and this and this and in that way it also generates a kind of self-learning, among the stations that are there, that is what I appreciate (V5).

No, a pact within those ideas that come to one's mind, to make days of repairing things, whether it is a closed day, that we repair our own things, also, and to promote as a cross learning experience, that you bring your bike, I teach you and try to cross as much as possible, bring your bike, you fix it and I ... I explain to you and meanwhile I am doing some electronics, as a closed day as a camaraderie (V4).

The above notions are associated with a community aspect, from the openness to integrate the community in the work and assumptions of the foundation.

> so it seems to me that this instance has also been formative as well, as in opportunities, it also calls my attention, that it is open to people (V).

This communitarian character is strongly supported by the notion of companionship that occurs during the meetings, which contrasts with other positions such as those that are deployed from authoritarian practices. Those who belong to Reparemos distance themselves from the latter. The following segment is decisive in this regard:

> I feel that there is a community that is like a very good one, that is to say that it happens in the Foundation, with a lot of companionship, when there are people who suddenly feel they are more than the rest, that obviously falls badly, because they are trying to get out of the community environment, it is almost like a terrible authoritarianism, but ... I mean here there is no white helmet, there are people who know more than others, but they are all people who do not feel more than the other, because of the knowledge they have (V3).

Part of being a community implies understanding learning from non-punitive notions, and on the contrary, what characterizes them is to operate from formative logics, where making mistakes is part of the process and is not punished.

> Without fear of making mistakes, that is, I disassemble and start to look and suddenly it helps, or suddenly I can do it alone, but there is still a space where they let you make mistakes, so that's great (V3).

> I think that the issue of fear of making mistakes happened to me, I thought I had to be almost an expert to come to Reparemos, but the first day what I could not repair I passed it to my colleague and so on. So, there is that space to tell the person, hey, you know what I couldn't do, and they understand (V2).

> To lose a little bit the fear of facing an appliance and of course, many times you just open it and realize that there is something loose or something that is easy to fix and that also, being able to teach the person what you are doing and what the error may be and what they can do themselves, it is also very interesting for the community in general (V6).

In the previous segments, it can be seen that the formative approach involves not only the volunteers and the relationships among them, but also integrates the broader community in this way of understanding the repair process. The interdependence and horizontality of roles not only contributes to the resilience of the self-managed organization (Martela 2023), but it is also a very important value for the permanence of volunteering (Wilson 2012). The above is in line with the consideration of learning as an end in itself.

> What I mean is that it doesn't matter so much what, but the desire to, to know. I mean, there is a limit, if I don't think it's like someone else's life, I don't know, of course, a more intellectual thing, more of knowledge (V4).

It is interesting to note that personal development, understood as learning, is usually the most frequently mentioned reason for volunteers to join the organization. This is remarkable considering that, in most studies, learning in volunteering is considered a motive in second or third order of importance for adherence (Butt 2017; Cavalcante 2015).

Finally, in this category, we can highlight that the stories give a role to social networks in having been able to approach the foundation, get to know it and decide to remain as volunteers.

> Suddenly the Foundation appeared on Instagram, and it caught my attention a lot, because of course, they were in charge of replacing appliances commonly for free, that caught my attention a lot (V2).

> Then came this instance that I met, in some social network, I said already, let's go collaborate with the cause, it would not be the first time that I approached a social organization let's say (V4).

Interaction with Beneficiaries and Relationship with Objects: "Giving New Life to Objects"

According to the volunteers, the relationship with beneficiaries is constituted by mutual expectations that revolve around the repair of the object that they bring to the workshops to be repaired. This involves contacting each other in a friendly, pleasant and mutually interesting way. This is reflected in the following excerpts:

> It's interesting that topic, because maybe, you have to know how to face the expectations of the people who come to repair, because many times people think you know much more than you know, and it is not uncommon that you say, I'm not really going to be able to do this (V4).

> And the issue of expectations is true, there is also a very good reception from the community, maybe it sounds bad, but they come without any expectation that, as if it could be solved, they

come very open to the fact that things were not working, so they come here looking for a miracle, and many times they get that miracle and many times they don't (V3).

In addition to the relational process mentioned above, it is essential to build a space for orientation and education, not only in terms of the repair itself, but also to be prepared to face instances such as workshops or technical services:

V4: In a workshop they probably charge you for this, it is to give a guide in addition to being able to repair, which is also an instance of learning.
E1: As a kind of orientation, of course.
V4: Of course, because it is not uncommon, in places where one goes to repair, to be beaten up if one arrives without having a minimum notion of what one has to do or if one has to buy a spare part, it is not uncommon either if the price is not displayed in a showcase, especially in places that are more informal, if one arrives, I need this, this is worth three times what it is worth in the market formally, so be careful, they will not harm you.

The above fragment shows the importance of this instance and the relationship with its emergence. In the case of Chile, due to its industrial precariousness, it does not allow the repair of objects due to their high cost. This is evident in the neoliberal practices imposed by the industry on objects, and is the reason why people gather in these instances.

However, the relationship established with the objects to be repaired appears as a relevant issue, in terms of the possibility that the repair grants to give a new life to the objects.

[...] in the end, I find what is happening here very powerful, which is to give a new life to something that I don't know, literally a lady had come with a vacuum cleaner that a neighbor was going to throw in the garbage, so now we are rescuing it from the garbage, so this is very powerful. That's it (V2)

The fact that the implements are discarded instead of being repaired would respond to a lack of knowledge that things can be repaired or given a chance for someone else to use them, and not to an apathetic attitude on the part of the beneficiaries in a context of a society that discards objects.
[...] also realizing that a lot of items you end up throwing away, because you don't know simply how it can be fixed or that it is simple to fix, for example, lack of knowledge used to eat me, and now I end up fixing things at home, easy (V3).

[...] I find it quite interesting and not only because of that interest, but also because people are used to throw things away, and sometimes they don't give them a second chance, because they don't see it, they don't see it as a second vitality, they just throw it away and well, it can also be useful for someone else (V8).

The fact that people decide to take their objects to be repaired, in addition to contributing to not polluting, allows them to save money by being able to use the repaired utensil again.

Things are getting more and more expensive and being able to fix things, suddenly solves tremendous headaches, because one thinks well, I'm going to have to buy a new washing machine,

and in the end no, I'm going to bring it here, and if it can be fixed, maybe I can save a few bucks, which are not minor, so I think that even in practical matters, the Foundation is very useful (V3). According to Kuutti (2001), this material achievement responds to objective conditions of realization, both in relation to the context in which the repair activity is carried out and the tools used, which has implications for the way in which volunteers are involved.

It is interesting the affective and bonding relationship that is made known by the interviewees. Especially from the connections that human beings have with respect to a specific materiality to which a meaning is given.

> [...] we are part of different human and non-human elements that are in constant interaction, so it's like feeling affection for a tree, which can also be obviously, I don't see why it would be... it would be strange if it happened with materialities that you add symbolism to, they are significant in some way, so I think it's really very common (V7).

The notion of care is also inscribed in this materiality.

> There is also a material, philosophical and also very careful relationship there, and from there I entered as a volunteer (V5).

Specifically, the objects that the beneficiaries bring to be repaired are loaded with meaning and situated stories, which are based on the relationship of affection towards what the object evokes, which is connected with what Baigorrotegui, et al. (2023) stated. The following segment is decisive in this regard:

> The computer was falling apart by itself, it was dying, it was a miracle that it turned on and until I installed the operating system, it worked and of course, it was her first computer, which was given to her in elementary school, and she now had a gamer computer, very powerful, but she did not want to get rid of the one she had there, she was very fond of it. So, she was very happy, because we gave her computer a second life (V2).

That which is full of meaning and affection for the beneficiary, becomes a shared meaning between them and the volunteer repairers at the time of repair.

> [...] I have also received things that are a million years old, and that occupy it every day and the person comes almost in tears saying please, I hope it can be fixed and it is like ayy, how do I explain to him that I hope it can be fixed "cachai."[1] And suddenly it can be done and the person leaves with a tremendous illusion and so do you, because you did it. You gave it all, I think that's what happens when you give it all, and it's very nice too (V3).

We can infer that this relationship is much more specific in relation to the objects that the beneficiaries seek to repair. But there is also an allusion to an emotional connection to the repairer's own tools.

1 Chilean expression for "do you catch it"

> [...] but the same tools also require that care and that patching or when you were gluing the little wire, that looks like patching, but ultimately, it rebuilds and creates like another artifact. That's very valuable of the repair (V5)

It is interesting to note how this attachment extends to the object of the aid, and is also seen as a characteristic or motivation that promotes the permanence of volunteers.

Generalized Area of Repair

The participants refer to the existence of specific areas of repair. Specifically, the repair of household appliances, electronics, bicycles and textiles. The dynamic has been that each one has been involved in a particular field.

> More than anything else, the repair of household appliances or things more electronic than the ones they come with, as in the sense that I don't ride a bike, those things, I don't understand that at all (V3).

> [...] I joined the Foundation, a little more with a communicative role, in the sense that I also realized, doing research in my career, that repair was not very much in vogue, when talking about waste, pollution, etc., and that's when I found out about the Foundation and I said well, first of all it was a good opportunity to get involved in something that I don't know but that is important to rescue, that's why I wanted to start instead of being a repair volunteer, maybe I wanted to go more towards communication (V7).

In the previous excerpt, it is possible to note two motivational characteristics of volunteering, the first is learning, the second is the possibility of diversification of roles, both of which generate a better permanence of the volunteer in the organization.

> But, also very recently I was thinking that I could help in another way, virtually repairing photos perhaps, rebuilding things, in that way, I think that would be my contribution. But I do see myself as an assistant, I love to watch the kids when they repair things with electronics (V8).

The specificity of spheres in the roles, based on interests, to which the previous quotations allude, is also crossed by gendered practices (Acker 1990). That is, gender norms are produced and reproduced in organizations (Matus, Errázuriz, & Follegati 2021; Scott, 1992). This is possible to notice in activities such as electronics, which is masculinized, and textile repair, which is feminized, and translates into gender gaps, as expressed by participant V5:

> I still believe that there is a gap in the electronics part, I came to Reparemos to a basic electronics workshop in the pandemic and from there I wanted to continue learning in the field of electronics and I have realized that there are few women repairers in electronics (V5).

> [...] there are still certain roles, within the way we work, in which certain roles are feminized and others are left in charge of certain repairs, I have realized this and I believe that we could couple it much more and that more women would come. I have realized that there are many women in textile, that currently, historically it has been a very feminized role, in terms of time,

> but in electronics, I still believe that there is a lack of women. And in my case, it also has to do with how we approach the use of tools from a gender perspective, I also see the expectations of the people who come to repair, that it gives them more confidence, guys who have certain, I don't know, that they are more visible in the Foundation, and I have realized a little bit of that, that maybe we could generate more alliances (V5).

The existence of these differences and the reproduction of women in certain roles, mainly associated with care, which, as pointed out by Pérez-Bustos, et al. (2019), is a sign of this and can be understood from the historical socialization in which both women themselves or those who identify themselves as such and men conform to a binary gender norm. Based on the above, the subjects themselves normalize certain practices and so do their interlocutors, as expressed in the quote: "it gives more confidence to boys ... who are more visible in the Foundation." In other words, historically, the public sphere has been identified with male work and for this reason female beneficiaries would not be more actively involved in reparationsrepairs.

> [...] for example... today I talked a lot with the ladies who brought cleaning utensils, i.e. vacuum cleaners and things, and of course, they left the vacuum cleaner and it was difficult for them to put it there, they talked more with Javi, but suddenly they leave the appliance, and I think it is a gap we have, it is a gender gap, a cultural gap, like the fear of getting involved, of making mistakes, I think we still lack, that on both sides of course, as a self-criticism (V5).

From the accounts of male volunteers, it is clear that they have also been agents of reproduction of the feminization of textile work, in terms of this task falling on women repairers. This awareness makes them think of initiatives to encourage the participation of female volunteers in activities related to repair in the field of electronics.

> [...] it's like suddenly I have brought things like a bag that had a bad zipper and I tell the girls to fix it, but as V5 said, it's like the women are super into sewing and the men into electronics and it's like very little what you see, women trying to fix things. There should be an incentive to do a workshop ... As to encourage them, involve them, let them do it themselves, and get rid of that fear of throwing it away, it is a win-win, you fix it great, if it died, you don't lose something good in itself, because they were going to throw it away and it had already fulfilled its cycle (V1).

In this way, an ethics of care, from the perspective of the female participant, should emerge as transversal to all practices, in human and non-human relations, from a solidarity and fair approach.

> I would also add the ethics of care, not only of the artifacts and so on, but also among us, if a colleague is sick, another colleague will replace him/her, I think that's also the way it goes and that is dedicated a little, also to why we are repairing, it is related to the care and maintenance of things (V5)

Purposes and Perspectives

Within the fundamental purpose of the foundation's work and, in particular, from the role of volunteers, there is a clear political position that the foundation presents itself as a form of

resistance to a logic that promotes the short term and individualism. In the above context, community articulation is fundamental and enters into tension with the notion of strategic alliances that seek economic profit.

> And I think that this is a view that resists the country's individualistic view, that the processes are more about the individualization of each subject, but more communitarian, generating not strategic alliances, but community alliances with other organizations. I see that it contrasts a little with the country's current view, a very pessimistic view (V5).

I find that the country is a bit individualized to obtain profits from something, that is to say, it happened to me once when I was commenting on this at the Foundation, it seems that while talking to a person, ah but (this person and) I had the same idea, but to (instead) sell, that is to get paid, to make 3D pieces to later fix and get paid (V6).

This is linked to the fact that repairs would also have the objective of confronting consumerism and the logics that are promoted from there.

> In other words, we want to fight against consumerism, we want to fight so that people can keep their things, so that suddenly they can simply get rid of certain parts of poor quality appliances, so that they spoil and we can solve that for people, also because the vast majority of people who perhaps cannot simply buy a new appliance, because they cannot afford it, and also here we are giving them a second chance, so that people can continue to grow (V3).

In addition, the participants' meanings reflect a vision that transcends Reparemos!' directors and volunteers, but it is also expected that the beneficiaries learn and understand, through example, that repair is a way to confront a culture of the immediate and disposable.

> I think it is also a way of protesting against all the companies that make things of poor quality, and not only that it is us, but also to show the other people who bring things to be repaired that it is possible, that things are not disposable, although many times it may be easier to go and throw it in the trash, it is good as a struggle to keep things working (V3).

A perspective that connects with the above is the promotion of the strengthening of the social fabric, from the most micro levels, such as linkages and relationships, to a higher level of territorial scope, typical of Paulo Freire's popular education, present in the Chilean context, in non-institutionalized educational spaces (Pasamanik et al., 2019; Lisboa, 2023; Jimenez 2021).

> Create and strengthen the social fabric, the relationships, the link between people, territory, artifact and several levels, several systems actually (V2).

On the other hand, from a more concrete angle, there are stories that refer to how the work of the foundation is taking shape, from a notion that rescues practical knowledge and experimentation, as expressed in the following segment:

> In my case, like stimulating skills around knowledge, in the end, as it is an instance of volunteering or also of the Foundation, it encourages experimentation with knowledge, the same as what the kids said, to go through stations (V5).

Once again, the factors of flexibility of functions allowed by the foundation are mentioned, which contribute to both the resilience of the organization and the permanence of the volunteers. Additionally, it is relevant to note that, given that there is an instance of learning, this can be projected into a trade or job derived from this experience; this is known as career motivation (Wilson, 2019; Butt et al., 2019). Since the foundation is framed as teaching-learning, it allows participating agents the possibility of this personal growth. However, as this last aspect or characteristic is of a personal order, the expectation of permanence is reduced (Wilson, 2019). Let us repair! is relatively new as an organization – legally constituted one year ago – therefore, it would be necessary to observe if the cohesion values are strong enough to counteract this finding.

In the volunteers' speech, the role played by the repair days and workshops to promote spaces for innovation and creativity is mentioned as relevant. The aforementioned is in a logic of collaborative learning Bruffee (cited in Barkley et al., 2007) in the sense that autonomy is promoted to transform and test and the ability to articulate personal ideas to achieve the ultimate goal of repairing or guiding the repair of the object being worked on.

> I, that of creativity, is also reflected in the fact that even though many times, for example, electronics, wires A has to be connected to B, there are many ways to connect it, or suddenly there are, one can use his creativity, to achieve that the repair is carried out with the tools we have, that is, many times maybe it is a half "flip-flop" arrangement as we could say, but in the end we are solving a problem in a creative way, an innovative way (V3).

> [...] to some kids here who were repairing things, together with my colleagues, it was that of course, we can find an alternative, it can suddenly be a cable, that is, in a manual you can only do it with a cable, but maybe the kids know about five thousand other ways, and that can make their life easier, so to speak (V8).

On the part of the volunteers there are stories that are repeated in terms of what would be good for the future of the foundation and it has to do with the need to expand both within the region where the foundation is located (different communes of Santiago de Chile).

> Perhaps not a Reparemos of the commune, but a Reparemos of the zone, “cachai”. Perhaps the laboratory Reparemos could be Reparemos central, northern zone, and here it could be Reparemos eastern zone, have a Reparemos southern zone (V4).

> I think that the way the Foundation is going and its biggest problem is that there is a lack of people and that the same people as always have to move, like to every place where the Foundation wants to go. I would love that at some point on the same Saturday, more than one Reparemos could be done, of course, that each commune could be solved with the same people that live here, it doesn't seem that people have to cross all of Santiago to go to support, it would be great if at some point, as if each zone, could obtain a solvency of personnel, enough to support the needs of the people in each zone (V3).

This desire responds to the need to have more people related to and committed to the work of repair, which would also extend as an expectation to be able to operate in other regions of the country.

> [...] I would like to take this initiative to southern Chile, because I am from there, and when I was at the University, I also got together with a couple of people and convinced them that we could build a lot of things and we could not, but now with the lessons I have learned over time and also with what I have seen in this Foundation, I feel more capable of carrying out similar initiatives in the south (V2).

In the need to have more people interested in the repair work, new strategies have been sought to generate interest in potential volunteers, in this case targeting an age group oriented to young people and adolescents in school.

> [...] to go to educational centers in general, which are like adoc to the necessary knowledge to be a repairer, obviously it is not the only requirement, but it is the only way to start, I don't know, last Monday we went to two schools, they were younger kids, so it was difficult to motivate them to do volunteer work, but today we saw a little boy who came from that instance, so it is like from there, little by little, to start to grow and integrate people to the group to the territories, you understand? and finally, I think it is the most important thing to move to look for those people (V7).

In the long term, the volunteers themselves refer to the need for a paradigm shift with respect to the approach to repair that understands it from a legal perspective (The Repair Association, n.d.) and not as something ancillary. This implies leaving aside a short term view and from a service-client relationship and, on the contrary, appeals to a commitment and involvement by all the agents that are part of the process.

> «I think there is also a long-term view, like understanding that repair is also slow, understanding the concept of repair and not seeing it as a technical service, which is to arrive and leave, but also to get involved in the repair, so that requires a lot of dissemination and it is also like a paradigm shift, because it costs [...] this is free, that change, it is difficult to incorporate it, because we are used to that it is a paid service, but at least the kids as volunteers, we all have the initiative to do, to involve others in this repair (V5).

> In other countries there is the right to repair, here it is just emerging as a regulation, which is a requirement already as a law and I also wanted to give my opinion [...] regarding the software that comes from outside and that the repair is also subject to the territories [...] So, there is no regulation that is concerned, at least in Chile, with the repair itself or the maintenance of things at the infrastructural level (V5).

It is possible to see that from some accounts the projections are circumscribed to a vision more limited to recruiting participants and from there tend to territorial expansion, while other accounts emerge from a broader approach where practical experimentation is put into play, from the interdisciplinary and placing itself from a view of justice and the right to repair in which its participants have available the relevant and appropriate tools to encourage resilience (Martela 2023) and permanence in these spaces.

Quantitative Results: Beneficiary Survey Responses

Beneficiary Profile Inference

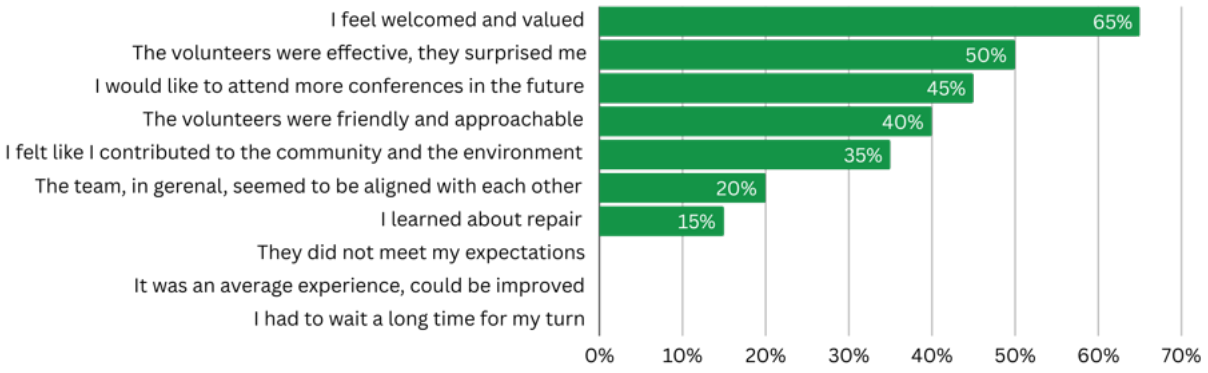
The analysis of the data collected in the surveys has made it possible to describe the profile of the beneficiaries of the Reparemos Foundation and the practices that motivate them to participate in the repair days. Through these results, it is possible to identify a series of characteristics and dynamics that explain the relationship between the beneficiaries and the foundation, as well as the reasons that lead them to opt for this initiative.

Firstly, a central aspect of grantee participation is the precariousness of the repair industry and culture in Chile. The majority of respondents indicated that "there are no professional technical repair services in their commune," reflecting the lack of access to local repair services. This lack not only limits users' options, but is evidence of a structural crisis in the supply of repair services, forcing people to rely on initiatives such as Reparemos to keep their objects in use. In this sense, the foundation responds to a need not covered by the industry, acting as an alternative that, although not a formal technical service, fulfills a crucial social function.

Despite the fact that the Reparemos Foundation does not present itself as a technical service, many beneficiaries treat it under a clientelistic logic, expecting practical solutions for their objects. This expectation reveals a relationship of trust that has been built between the beneficiaries and the foundation. In a context of loss of trust in traditional institutions, exacerbated after the social outbreak in Chile, people are looking for solutions in closer and more community-based initiatives. Fundación Reparemos, by operating with a horizontal and participatory structure, is perceived as an institution that beneficiaries can trust, offering an empathetic and accessible environment, as opposed to the distant and ineffective perception of many formal institutions.

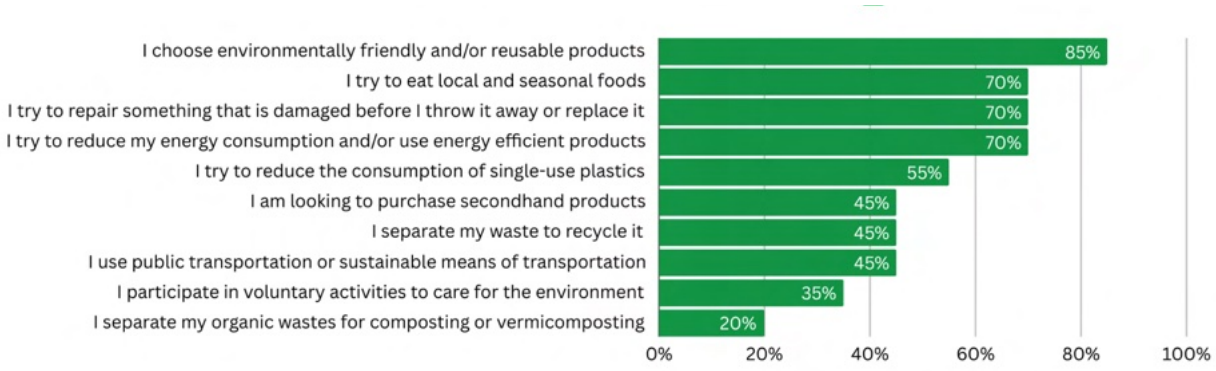
Another key factor that strengthens this relationship of trust is the efficiency of the workshops. Beneficiaries value the fact that the foundation fulfills its promises: %50 of those surveyed managed to completely repair their objects and %25 did so partially. This ability to meet expectations generates continued trust in the foundation, which translates into repeated participation of beneficiaries in future workshops. Efficiency, in this sense, implies not only the repair of objects, but also the fulfillment of practical objectives and the strengthening of the sense of community.

What was your opinion or impression when attending our free repair days?



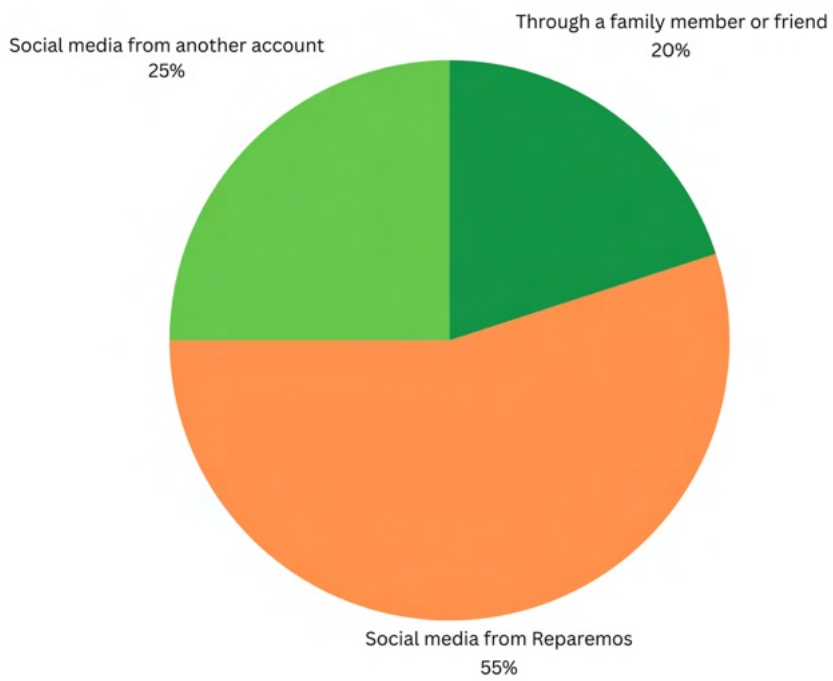
The beneficiaries also expressed feeling well received during the workshops. Sixty-five percent of those surveyed said they felt valued, highlighting the sense of community and integration offered by the activities. This feeling reinforces social cohesion, since the workshops not only provide technical solutions, but also create a space where people can interact, share experiences and build bonds based on common values, such as sustainability and cooperation.

Which of the following practices do you usually do in your daily life?



Regarding the motivations of the beneficiaries, it is observed that many of them attend the workshops not necessarily because of an interest in learning repair techniques, but because of their environmental awareness and their desire to reduce their impact on the planet. This profile reflects individuals who already carry out daily actions oriented towards sustainability, such as choosing environmentally friendly products (%85) and preferring to repair rather than discard objects (%70). For them, repair days not only offer a solution to the obsolescence of objects, but also align their environmental values with the actions promoted by the foundation. Unlike volunteers, whose main interest may be to learn repair techniques, beneficiaries are attracted by the commitment to sustainability and social responsibility that Reparemos communicates and promotes.

How did you find out about free repair days?



An important aspect for the communication and dissemination of the workshops is the use of social networks, which have proven to be a key tool for reaching beneficiaries. Fifty-five percent of those surveyed learned about the activities through the foundation's social networks, which underscores the effectiveness of these platforms in generating interest and ensuring attendance at the workshops. In addition, social networks not only serve for promotion, but also allow the foundation to share visual and audio content that reinforces the sense of community and keeps beneficiaries engaged beyond face-to-face activities.

In conclusion, the beneficiaries of the Reparemos Foundation not only value the technical efficiency of the workshops, but also find in them a space for social cohesion and resonance with their environmental values. Although the foundation is not a formal technical service, it plays an essential role in a context of precariousness of repair in Chile, generating trust and attracting people seeking sustainable and community-based solutions. The combination of factors such as efficiency, a feeling of welcome and a commitment to sustainability are the key elements that sustain the participation of beneficiaries, and reinforce their willingness to continue to be part of this initiative. Social networks, meanwhile, play a crucial role in disseminating and maintaining interest in the foundation's activities.

Conclusion

The emergence of the Reparemos initiative and foundation can be understood in terms of the communicational forms that compose it, i.e., it is an organization that summons its participants, both volunteers and founders, motivated by the need to repair their objects. the need for repair arises in the context of industrial precariousness in Chile, as well as the neoliberal

model of consumption, which imposes policies of programmed obsolescence, little freedom to adapt objects to social needs, and diminished feasibility of repair, among others issues.

The interviews testify to these motivations (Kutti 2001) for the repair work, in addition to revealing reasons related to the defense of the environment, as well as shedding more light on the experience of the political context mentioned above. It reveals how the birth of the initiative social outburst (Joignant et al. 2024a), a Chilean contextual moment, where many of the social needs that were invalidated or not covered during the years of Chile's post-dictatorship government, which did nothing more than perpetuate the neoliberal model of little social welfare, were brought to the social forefront.

It can also be seen that the organization is characterized by being resilient, a characteristic of sociopoietic systems, since Reparemos presents a non-hierarchical or horizontal hierarchical structure, which allows flexibility of roles and, therefore, the substitution of roles in case any of the participating agents cannot fulfill such role. This last characteristic is also mentioned by the volunteers, who appreciate this aspect of the organization. They allude to this as a positive characteristic, which allows for better learning. The latter is in line with Wilson (2012), as it generates a more continuous permanence of volunteers and also strengthens resilience. However, for the foundation to exist, there must be a strong structure (Martela 2023), as well as persons, who create cohesion and maintain this character. It is also possible to notice it in the dynamics of the organization, which may be in some sense contradictory, since sometimes the organization's character can be dominated by a more individualistic point of view.

The participants (founders and volunteers) agree that the purpose of the organization is to gratify the community in order to repair objects that may represent different values (whether economic or sentimental) for the beneficiaries. The return that it generates for the repairers arises in part from the commitment they make to others, which contributes to personal and collective growth, expressed according to Sandoval (2022), as generativity, or the creation of ties between agents, generation of social fabrics. Even so, the aspect most valued by the volunteer participants corresponds to the learning they acquire. The latter is interesting, since it would suggest that one of the fundamental purposes would be of a rather individual nature. In this repertoire there are some nuances, already mentioned, where the adhesion as a volunteer would be placed, among other things, in an eagerness to climb in a professional career or something similar (Wilson 2012). At the same time, the volunteers express that the space, as a learning space, is generated from a joint and community instance, and consequently consider this as a positive property, expressing thankfulness for the experience since it provides a creative and intellectually stimulating space, which in addition to sharing, their knowledge can be translated into direct actions for the benefit of others, thus the gratitude generated by the beneficiaries, is a motivational engine that is based and exercised from a community edge. It is not by chance that these contradictions arise in the stories, due to the fact that interactions and intersubjectivities, in a globalized world, are permeated, in any case, by the rationality of neoliberalism, where competition among peers and individual gains are promoted. Even when fighting for the opposite, not always or at all times, the agents are aware that their practices sometimes reproduce and maintain this logic.

In line with the above, neoliberalism is not only subject to the political disarticulation of communities, but also has a direct influence on the agents who live immersed in this system. According to Gago (2021), "Neoliberalism is not a rationality that concerns only large political and economic actors, whether transnational,

regional or local. Rather, we are interested in thinking about the molecular level in which neoliberal rationality has expanded, but also mutated, degenerated and become part of novel combinations with other rationalities. And this, in particular, is linked to social dynamics of actors who are often seen more as victims of neoliberalism than as articulators of a social heterogeneity, increasingly fast, overflowing and intelligible in terms of a classical political geometry." Thus immersion leaves the agents, on several occasions, in a position of impossibility as generators of change. But there is also the possibility of transgressing these precepts once conscious work is done towards the search for other modes of relations and practices, in this case in the context of repair.

Something important that is articulated in these relationships between the participants of the organization shows the emergent character of complexity. The interactions of the agents generate among them other types of initiatives that take shape in possible projects that are beyond the scope of the organization itself. For example, some of the participants have developed projects such as plastic recyclers for the generation of 3D printer filaments or have come together to promote donations for children and adolescents whose rights have been violated and who are under the guardianship of the state. These initiatives do not fall within the scope of the organization itself, but they reveal that aspects, such as the motivation and creativity that take place in these learning spaces, generate the organization's aforementioned emergent qualities. Considering this same aspect, other types of interactions are also constituted at the organizational level, such as alliances or interrelationships between territorial or environmental organizations with similar purposes and views. In this sense, the organization has established links with organizations that generate learning, repair, or provide humanitarian aid in the context of need. In the latter, we can appreciate how these alliances can be actors of change that have repercussions on possible new public policies. According to Maillet et al. (2024), territorial groups around environmental issues are the engine of change for public policies in Chile. In many cases, founders or constituent agents of these groups, which are born in a context of socio-environmental precariousness, end up running for and being elected to political office as a result of outstanding territorial work that is recognized by the inhabitants of the territory. These agents then play a fundamental role in bringing to the forefront and proposing initiatives to the government that address socio-environmental problems, which can culminate in public policy changes. This is a demonstration of how the degree of emergency at a meso scale can transmute to a macro scale; it is also evident from the results of the study of the work of the founders, where in addition to telling about the need to become legally constituted as a foundation, they also make known the possibility of raising state funds, which allows the realization of projects contemplated by the organization. Considering the difficulty of self-financing.

Notwithstanding the above, this last aspect may be somewhat dangerous, since it may lend itself to the image washing of public institutions rather than a real intention of change. This is in line with Catalán's (2019)statements, in relation to the fact that the political disaffection in Chile, derived from the military dictatorship between 1973 and 1989 (years of military dictatorship in Chile), has caused an individualization of politics and a weakening of community relations. This has allowed participation to be instrumentalized by social policy, since collective action does not influence state decisions. In this way, organizations are oriented towards particular interests, individualizing community action. As a result, social intervention can be reduced to participation in activities to meet institutional goals, moving away from the ethical principles of discipline and minimizing the strengthening of communities.

In spite of the above, the generation of these types of initatives points to an important feature, not only in the Reparemos organization, but of all types of learning spaces. We must remember that Reparemos is immersed in a citizen laboratory called Independencia Ciudadana, in which Reparemos is part of an ecosystem of territorial organizations, all of which provide learning opportunities completely free of charge. The relevance of this concerns two aspects. The first one that has already been mentioned, and which also emerges from the analysis reported by the founders, is that these initiatives are spaces where agents can propose their ideas and concerns and carry out related actions. Therefore, any concrete initiative that wants to be carried out with a community purpose and that is in line with philanthropic communicational modes will be welcomed, and therefore correspond to interactive and creative spaces, a kind of "fertile ground" where the agents can feel free to shape their projects. This is in correspondence with a second relevant aspect: since these learning spaces are scarce, the existence of them allows a community education around territorial and environmental learning, constituting the laboratory as a kind of "university" for the neighboring citizenship. This is extremely important in a neoliberal national context, which has few social guarantees and in which education is a privilege rather than a right. This gives glimpses of another scale of organizational emergence that takes shape as an instance of collective learning that contemplates many aspects of knowledge and use of territorial spaces. It is important to understand here that politics then does not become an ideology, but rather is transformed into an act of action, what we could call praxis (Zamora 1997). This can be understood in the sense that the ideologies of the agents that participate in the initiatives may present some differences, but the political act as such is established in the factual, in the very work of these organizations, establishing the political from the work and towards the territorial.

As already mentioned, these instances are scarce, therefore the role of caring for them is of utmost importance. Since communication establishes the emergence of these organizations, it is the same communication that self-regulates them. In this sense, agents who do not share common principles are excluded from the organizations. This is clear from the analysis of the volunteers, where it is reported how participants with neoliberal principles are integrated with greater difficulty, considering that they do not fit in with the principles of the organization. These regulatory mechanisms are of utmost importance, since they allow the subsistence of these learning spaces. For example, Reparemos contemplates in its agenda, the diversification of gender in the repair trade, given that the workstations have not been able to overcome the patriarchal stereotyping of the trades, i.e., men repairing appliances, women repairing textiles. Another example is the organization Foco Migrante, which establishes coexistence protocols, where inclusive languages, feminist norms, and violence-free environments are normative in order to satisfy healthy coexistence environments, and thus protect these spaces. Considering that objects are often appreciated from an affective point of view, and the repair itself as an act of care, it is important to take care of these spaces.

In this context, social networks play a fundamental role as a driving force in the activation and management of these organizations. Through them, bridges are established between the different actors-founders, volunteers and beneficiaries-allowing fluid communication that facilitates the emergence and self-regulation of these spaces. It is important to note that social networks have been widely used to convene social protests in the country for at least 15 years. For example, Reparemos emerged during the social outbreak through the use of these platforms, and although its praxis is territorial work, all its activities are managed through this means of communication. This not only makes it possible

to convene beneficiaries and communicate each event or action of the foundation, but also contributes to the generation of alliances, connecting people with common interests and other organizations. In this way, social networks are an essential engine that follows a common thread in the construction and strengthening of these collective spaces, allowing their subsistence and potential expansion to meso and macro scales.

However, social networks can be seen as a double-edged sword. According to Maillet et al. (2024), the Chilean media often defame socio-environmental organizations by framing their protest demands as violent articulations, focusing public opinion on the latter and thus disarticulating their importance. Other cases of media manipulation as microtargeting, similar to the cases executed by Cambridge Analytica (Durán et al. 2020, Molina 2022), were observed in Chile, during the plebiscite process for the approval of the new Constitution after the constituent process that emerged after the social outburst (Joignant et al. 2024b). This proposes new challenges in the political election process, in order to establish informed voter transparency (Romero 2023).

Reparemos seeks to replicate its repair cells in other territories through the previously mentioned mechanisms, which include fund applications, interconnections with other organizations and calls for proposals through social networks. This replication has been achieved in at least one additional territory outside the usual scope of the organization. This progress has been achieved through the articulation with local actors, who initially participate through visits from the founding organization and, after multiple interactions, where the local call for proposals is imbued with the dynamics and forms of the organization's operations. This local call is then deployed in the territory, finding local volunteers to replicate. It is not yet defined how this dynamic will be implemented in the future, i.e., it is not clear whether these cells will be affiliated to Reparemos or whether they will enjoy autonomy. However, in the first instance, the expansive mechanisms have shown positive results. There is already a third initiative outside Santiago which, in principle, is beginning to be implemented.

Finally, the question arises as to how these organizations can emerge and generate substantive changes at a macro level of complexity. It is worth mentioning that the social explosion was an effervescent phenomenon that emerged as a result of the perpetuation of a neoliberal model implemented during the military dictatorship, which did not undergo significant changes in terms of social guarantees during the 20 years of democracy that followed. According to Joignant et al. (2024a), the social outburst was a territorial phenomenon, both in the execution of the protests and in the agents that made them up, given that they were mostly neighborhood groups. Therefore, the demands associated with the protests were popular and recognized by their peers. However, the pandemic (2020) generated an apparent change in the way of making the collective visible, moving from a collective to an individual stage. Consequently, the aforementioned collective instances of territorial work, including Reparemos, act as managers of this social fabric, making it possible to make visible and educate the population about relevant needs, and could eventually lead to changes in public policies. However, it is not entirely clear how a macro-scale emergence could take place that would allow the inclusion of a collective block and, thus, a collective cosmovision of social change. This is especially relevant when considering the aforementioned difficulties, such as media management by large economic conglomerates, the greenwashing of public and state institutions, and the ideological propagation of neoliberalism among agents.

La Cuica Cósmica

Grassroots Composting Networks: Local Knowledge for Compost Quality

Camila Rodríguez Estrella, Alicia Franco, Lucía Ricaurte-Manosalvas, Gabriela Galarza Ferrín

We are all compost, not posthumans. Humans are not exceptional in the ways that have been said; there are no privileged places in the web of life, no obvious demarcations between organic and inorganic matter, no clear boundaries between entities, human or non-human.

Donna Haraway

Introduction

Ecuador is known as a megadiverse country due to its geographical position in the middle of the world, being crossed by the Andes mountain range. It is characterized by several altitudinal zones ranging from the coastal region to sea level, going up through areas of tropical rainforest of the Chocó, through the western mountain range, and crossing through cloud forest, and high Andean mountains, that then leads down the eastern mountain range, where a series of other ecosystems stretch to the lush Amazon. Likewise, the influence of the different marine currents that converge at this point has made this small country of 256,370 km² a territory not only with a great biological diversity and ecosystems, but also with a great diversity of human cultures and rich resources. (García et al. 2023)

Ecuador, a country where Nature has rights

In 2008, Ecuador marked a historical milestone for the world by declaring nature to be a subject of rights in the national constitution, which makes explicit that nature is vital for human existence.[2] The constitution views humanity as part of nature at the same time as it serves as the environment in which life thrives. This paradigm, known as Sumak Kawsay,[3] has become recognized as the basis for an alternative to dominant development frameworks. A society following Sumak Kawsay seeks to live in harmony with nature, where the vital cycles, structure, functions, and evolutionary processes of ecosystems and other species are respected, maintained, and regenerated (Maldonado and Martinez 2019).

2 For Legal resources, visit https://www.derechosdelanaturaleza.org.ec/base-legal-para-ddn-en-ecuador/

3 Kichwa words that mean in Spanish Buen vivir (in english literally -Good living-). This concept makes references to the worldview of the Andean people.

Despite this intention and the creation of laws, as well as legal actions, to demand compliance with the rights of Nature, Sumak Kawsay has not been embraced as quickly as needed to generate the systemic changes necessary to achieve society-nature harmony. Civil society has been the principal champion of Sumak Kawsay, while the Government has resisted the paradigm. Thanks to civil society actions, important declarations of territories free of mining have been achieved, such as the case of Chocó Andino, a rural territory of Quito, as well as the declaration to stop oil exploitation in the Yasuní National Park, both realized through popular consultations driven by citizens (Paz Cardona, 2023).

But the creation of a more holistic vision of the world, although old and diverse in this multicultural country, remains the most important obstacle to generating the necessary structural changes. This is especially so when Ecuador has not been free from the neoliberal and capitalist development model. The country continues to orient its economy around extractivist activities, such as oil extraction, mining, and an industrial agriculture model, where the relationship with resources has been based on exploitation and damage to ecosystems with the aim of generating profit and competing to gain access to international markets.

Breaking Extractive Logics: A Zero Waste Proposal

These relationships can be better understood with reference to the concept of "social metabolism": the way human societies organize their exchanges of matter and energy with the environment (Martinez-Alier and Walter 2016). In an extractivist and agroindustrial economy, resources go through five metabolic processes: appropriation, transformation, distribution, consumption, and excretion. As Solíz (2021) puts it, waste becomes nature transformed by the extraction-production chain, and when discarded by its private owners, it becomes a common good again – also a raw material again – in other words: nature. Thus, today, attention to waste management is fundamental to understanding the direction in which our society must move because waste, as the fifth stage of social metabolism, represents the end result of the relationship between humans and nature.

For the global South, we consider Zero Waste proposals to represent the most successful models for waste management. The actions of the global North has already demonstrated that, without reduction policies, the pollution problem simply persists and the waste crisis deepens. A zero waste system is aligned with the rights of nature: the discarded waste, which is both common good and nature, must have all the guarantees to be reintroduced into the metabolic circuits, replacing the need to extract more raw materials and avoiding false solutions such as burial and incineration technologies for waste management (Soliz 2021).

In Ecuador, the waste situation has the same structure and logic as that of developing countries, in which municipalities are responsible for the integral management of waste. However, we can say that in most cases it fails to be integral as such, as it does not consider affected communities and grassroots recyclers as part of the model, exposing these sectors to constant discrimination, vulnerability, and labor precariousness. The current rate of waste production is 0.9 kg/hab/day, which implies that each Ecuadorian produces an average of 0.31 tons of waste per year (Franco et al. 2023). This number tends to increase every year. It is also worrying that

this management is focused on providing solutions related to the final disposal of waste, instead of the root of the problem, persisting and sustaining the linear extractivist model that ends the metabolic cycle in sacrificial territories related to landfills, sanitary landfills, and/or incineration and co-processing plants.

Organic Waste:Tthe Cornerstone to Start Closing Cycles

The organic component of waste has a marked relevance as it is directly related to the emission of greenhouse gasses that cause climate change. The inadequate management of this type of waste and its presence in final disposal sites make the waste sector the third-largest source of methane emissions. Methane is a greenhouse gas with the potential to store 82 times more heat than CO2, and when it degrades can release other greenhouse gasses. It is also relevant to consider that if we continue to have an exponential relationship in the way we generate waste, it is predicted that, in Latin America, waste will grow more than twice as much as its population growth by 2050, doubling methane emissions (Maasakkers 2022). In this sense, composting in Ecuador – considering that more than %50 of the waste generated is organic – is an urgent and simple solution to mitigate climate change, by avoiding in its process the emission of methane and trapping atmospheric carbon in soils with its regenerative potential.

There are almost no policies that require separation at source in Ecuador, and very few municipalities have managed to establish centralized composting plants. Any progress toward Sumak Kawsay that has arisen is because, since the years of the pandemic, many private and collective citizen initiatives for decentralized organic waste management have emerged in the main cities. It should also be mentioned that agroecological and permacultural movements have trained and influenced many people to position home composting as a cornerstone for urban agriculture. However, decentralized composting practices as a solution to the problem of waste have always been considered; for example, for Indigenous peoples, the right of organic waste to return to the earth for the return of soil nutrients is an obvious and necessary act that responds to their relationship with the Pachamama,[4] because it enables relationships of balance and circularity in the cycles of planting, cultivation, harvesting, and feeding (Soliz 2021).

Case Study on People-led Actions

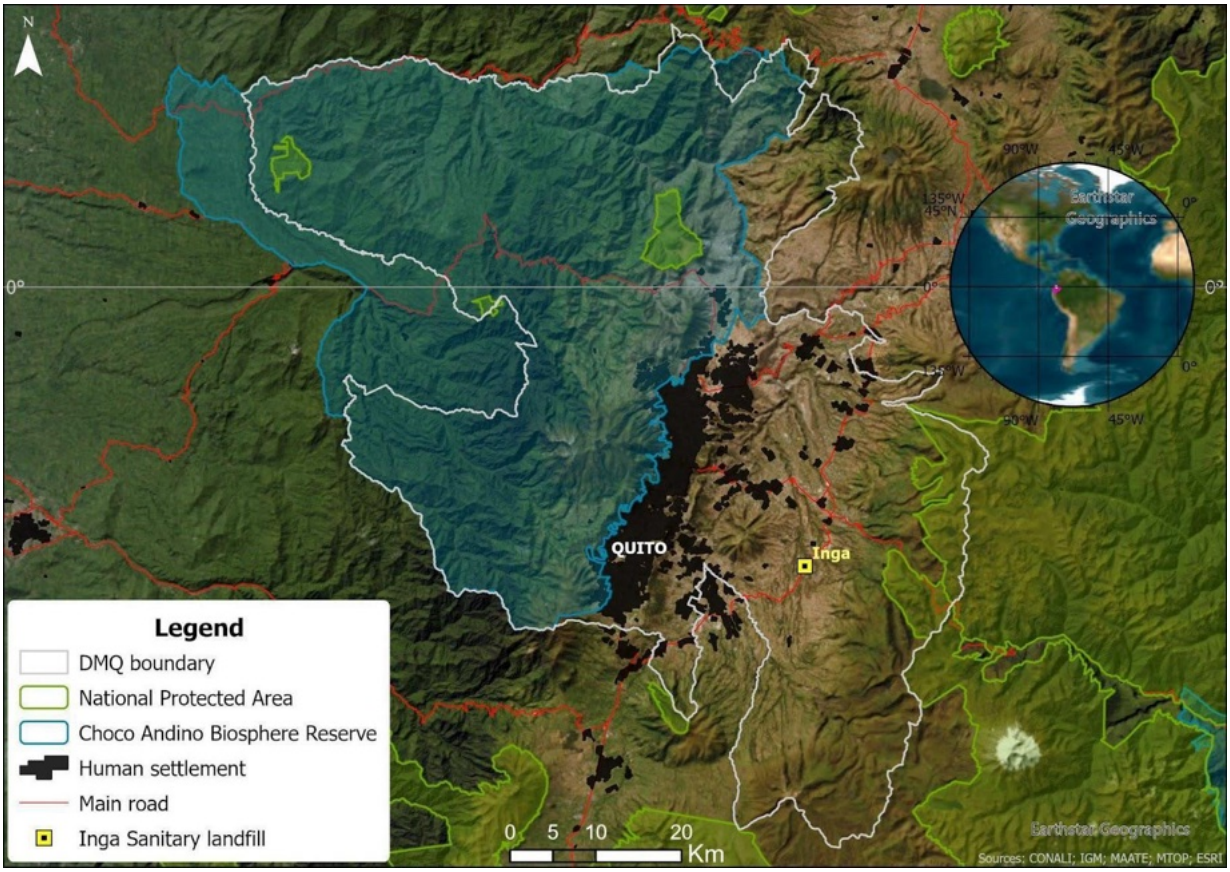
Quito: An Expression of the Dominant Paradigm on Waste Management

The Metropolitan District of Quito (abbreviated DMQ), the capital of Ecuador, consists of 420 thousand hectares of both urban and rural parishes that encompass vast cultural and ecosystem diversity. The city is located in the tropical Andes, a biodiversity hotspot, and its extension includes 22 different types of ecosystems, from tropical forests at 500 m.a.s.l to paramos[5] at more than 4000 m.a.s.l., including eight protected natural areas (Secretaría

4 Kichwa word that is used to name the goddess who represents the Earth, the soil and its fertility.

5 A mountain ecosystem (tundra-like), located in the Andes mountain range, over 3000 meters above sea level (in Ecuador), characterized by flora and fauna adapted to a cold climate and strong winds (Paz Cardona, 2023).

de Ambiente, Fundación Cóndor Andino 2023). Of its 2.8 million inhabitants, %73.2 live in urban areas, and %26.8 in rural ones (Quito Cómo Vamos 2023).



In the DMQ, more than 2,300 tons of solid waste are produced every day, of which %64.36 is organic waste and %35.64 is inorganic. On average, each inhabitant of the DMQ generates 0.88 kg of solid waste per day (INEC 2021). Currently, there is no formal system for source separation and differentiated collection of waste. Waste pickers work informally on the sidewalk, recovering materials under precarious conditions. The waste is collected by the municipal company EMASEO, part of this waste is transported to two transfer stations where waste pickers make efforts to rescue recyclable waste, and everything is finally buried in the El Inga Sanitary Landfill, which is managed by the metropolitan company EMGIRS.

The situation in the DMQ represents the dominant model of solid waste management proposed for the country. It is a centralized model that excludes the most vulnerable actors, the grassroots recyclers, and where waste is mixed at the source and then buried in a sanitary landfill. For more than two decades, there has been a shift from disposing of waste in open dumps, streams, and waterways to burying it in sanitary landfills, falling back on a stubborn commitment to bury waste as a “stopgap solution” to the garbage crisis, instead of proposing structural solutions (Solíz Torres et al. 2020).

Trashified Areas of the DMQ

The urban areas of the DMQ generate more than %90 of the waste, however, the management model from the beginning has implied that the rural territories are sacrificed, hiding the garbage from the city and sacrificing the rights of these communities of the peripheries that produce the least amount of garbage. From 1977 to 2002, the first open-air garbage dump in Quito operated in the parish of Zámbiza. It was violently imposed and caused serious consequences for its inhabitants, who were marginalized and stigmatized (Ortiz Zambrano 2021).

After Zámbiza, a sanitary landfill was planned for Quito, which, after being rejected by the population in two places on the outskirts of the capital, was installed without consultation in the area of El Inga Bajo. A sanitary landfill is a space designated for the burial of waste, which produces two main pollutants: methane and leachates, which are supposed to be technically managed to avoid ecological and social impacts. However, the amount of garbage produced by the city continues to increase and the sanitary landfill, which officials promised would not repeat the situation of Zámbiza, has been far from achieving this (Solíz et al. 2023). A total of eleven neighboring communities have been confronted for more than 20 years with foul odors, the presence of vultures, soil and water contamination, the invisibility of the problem and the sacrifice of their rights. The residents of the surrounding communities have reported that toxic leachate (discussed further in the next section) is dumped untreated directly into the Inga River, and the bad odors resulting from poor management affect villages up to 10 km away.

Toxic Leachates and Methane Emissions: The Result of Burying Waste

The vast majority of Quito's garbage (more than %60) is organic waste, which when buried undergoes anaerobic decomposition, releasing large amounts of methane, a potent greenhouse gas 84 to 87 times more potent than CO2 over 20 years. A recent study estimated that 31,460 tons of methane were emitted from the El Inga landfill in 2023, corresponding to 880,647 tons of CO2 equivalent released into the atmosphere. This is %16 of the total methane emissions from disposal sites in the country (Franco et al. 2023). On the other hand, the rain that infiltrates this site, where all types of mixed waste are deposited, joins with the liquids resulting from the decomposition of organic waste and generates very toxic liquids called leachates, which carry all kinds of harmful substances, many of them carcinogenic.

Toxic Leachates and Methane Emissions: The Result of Burying Waste

The garbage crisis continues today and, in fact, the Inga Landfill has already exceeded its useful life and has reached collapse. In 2023, the Municipality of Quito announced the construction of an Environmental Complex, a new place for the capital's garbage treatment. It includes the implementation of source separation and differentiated collection for the DMQ, which, if achieved, will be a great step forward for the city. However, this new plan continues with the logic of “patchwork solutions” and proposes to continue burying the vast majority of the garbage. It complements this proposal with specific strategies such as the use of bio-digestion and a composting plant. However, these will process at most only %30 of the more than 1,400 tons of organic waste generated daily, and the rest would continue to be buried (EMGIRS 2024).

Beyond this, the proposal involves the incineration of waste through RDF (refuse-derived fuels) technology, also called co-processing, which is a disguised form of incineration. This consists of burning waste with caloric potential in large furnaces as part of the process to produce another material, usually cement. Co-processing is a type of incineration that has serious environmental and social effects, generates air pollution with dioxins and furans, and one of its by-products is toxic ash that requires special landfills for hazardous waste.

The Environmental Complex, as it has been proposed so far, presents false solutions, one of its most perverse proposals is the privatization of garbage management. To guarantee the business model, the municipality commits itself to deliver 2,000 tons of garbage daily to the company that will manage the complex, for a period of 10 or 20 years, which means that, if the amount of garbage from the inhabitants of Quito is reduced, the municipality would have to pay the company in compensation. This agreement would stagnate the garbage situation in the DMQ, preventing the development of a systemic strategy to reduce garbage as the main and most effective measure to solve this crisis.

The Rise of Grassroots Solutions

Historical Context of the Environmental Struggle in Quito

Given the premise of the political-environmental situation in Ecuador and its relationship with colonizing and extractivist processes, it is easy to understand the inevitable reaction of the affected social sectors in the different cities of the country, with the city of Quito being a key point in these struggles. It was in the 1970s and 1980s that these movements began to emerge, and, among several demands with social and political sense, they demanded actions to ensure the protection of the environment in its different areas. Years later, non-governmental organizations formed, giving more formality to these socio-environmental concerns which through different fronts and work methodologies cover an important space for research, analysis, and formulation (Varea 1997).

A key site of the participatory and active struggle for equitable and sustainable resolution of environmental conflicts throughout the country, Quito's internal conflicts were initially related mainly to pollution caused by the increase in industrial activity, driven by the oil boom in the late sixties and early seventies. Continuing with the processes of modernization and human growth in the city, under a capitalist logic of hyper-consumption, waste, and discarding, which demanded the expansion of cement and the indiscriminate generation of waste, there were also struggles – which continue to this day – for the defense of green areas, the protection of water sources and air quality, adequate waste management, and the final disposal of solid waste.

The increased presence of the movements and demands that originated in the city have dual significance. On the one hand, it reflects the importance and scope of citizen participation in cases of urban origin, which, due to the greater amount of resources in these areas (informative, educational, political), have been able to achieve more participatory, alternative, and legitimate strategies. On the other hand, the presence of these movements also highlights the existing gap between the observed achievements and their equity objectives. It is the upper middle sectors, with a good level of public and economic relations, which have received more attention by the

Government, Municipality, and environmental institutions. Situations in which only more privileged classes are empowered to aspirations may be considered examples of "elitist environmentalism." In such examples, "authority responds to the concern of middle and upper sectors of society, without claiming a position that questions the structural causes of the conflict" (Varea 1997).

The present conjuncture can be considered the birth or take-off of different networks, alliances, collectives, and movements that currently have managed to have an important impact through the community gaining strength to lead processes of political and social transformation. We focus on these manifestations, which continue to be built and strengthened via advances in different fields, such as agroecology, food sovereignty, the defense of garbage communities territories, the vindication of grassroots recyclers, the civil demand for proper waste management. These manifestations converge, intentionally and unintentionally, in soil regeneration. It is in this context that we propose composting as a path.

Alianza Basura Cero del Ecuador[6] as a Participatory Response from the City to the Grassroots

Concerning the final disposal of solid waste, an internal conflict arises in the city, which evidences socioeconomic differences in determining which territories will be used for the final disposal of solid waste. The lack of political incidence, in terms of legal tools to regulate waste production, the lack of a culture and environmental education focused on reduction, and a non-reciprocal relationship between the countryside and the city, have unleashed a series of socio-environmental problems One of the most serious and neglected is the transformation of disadvantaged territories into sacrificial zones: ecosystems and communities where the most basic human and environmental rights have been violated, as the end point of the metabolic process of capitalism (Soliz Torres et al. 2023).

In response to this problem and to the Acción Ecológica campaign "Political Ecology of Garbage," Alianza Basura Cero del Ecuador was born in 2015. This is a network of different organizations with the commitment to promote a political ecology approach to the garbage that rejects its commercialization and claims it as a common good and part of nature.

An important accomplishment of this network has been to articulate the efforts of various groups such as the recycling movement, the garbage communities, collectives, and the Government, in the search for a Zero Waste Ecuador with attention to social, environmental, and gender justice. Its work in Quito has achieved an important impact by maintaining public advocacy and addressing specific cases concerning the territories affected by the Inga Sanitary Landfill and the future Environmental Complex proposed by the Municipality, giving important emphasis and attention to the management of organic solid waste and decentralized composting as an affordable and priority solution to the waste crisis that the city is going through. Thus, following the first Thematic Meeting on the Prevention and Management of Organic Waste, in 2022, the Ecuador Composting Network was formed, made up of 12 initiatives that, through the installation of home and community composters and the management of medium-scale composting of door-to-door collection services, have recovered around 3,769.72 tons of organic waste per month (Rocha 2024).

6 Zero Waste Alliance of Ecuador. Visit https://www.alianzabasuraceroecuador.com/

7 Ecuadorian environmental organization in defense of the rights of people, communities and nature against the extractivist model. Visit https://www.accionecologica.org/

Members of Alianza Basura Cero del Ecuador in the last Nacional Meeting (May 2024 ,10)

Soil and Compost as Regenerators of the Rural-Urban Relationship through Agroecological Networks

Healthy soil, healthy plant, healthy human being.

Ana Primavesi

Government, Municipality, and environmental institutions. Situations in which only more privileged classes are empowered to aspirations may be considered examples of "elitist environmentalism." In such examples, "authority responds to the concern of middle and upper sectors of society, without claiming a position that questions the structural causes of the conflict" (Varea 1997).

The present conjuncture can be considered the birth or take-off of different networks, alliances, collectives, and movements that currently have managed to have an important impact through the community gaining strength to lead processes of political and social transformation. We focus on these manifestations, which continue to be built and strengthened via advances in different fields, such as agroecology, food sovereignty, the defense of garbage communities territories, the vindication of grassroots recyclers, the civil demand for proper waste management. These manifestations converge, intentionally and unintentionally, in soil regeneration. It is in this context that we propose composting as a path.

The threats related to waste generation and extractive agricultural production connect rural and urban practices that follow a linear capitalist logic, where processes of production end in a waste stage that cannot return the energy and resources to the beginning. This rural-urban relationship can and needs to be healed by the establishment of more reciprocal relationships that intrinsically connect soil and human health through food management. We propose a view of soil not only as a threatened resource, but as an ecosystem that sustains terrestrial life and through which, in the action of its protection and conservation, we manage to link important socioeconomic processes. In this sense, agroecology arises as a response to land, soil, and water colonization and pillage, the monopoly of marketing, and a model of capitalist accumulation in the countryside (Peña and Daza 2014). It is also in this sense that we see compost as an indispensable tool of change.

The definitions of soil and compost generally lie in the description of the process and its composition in terms of minerals and nutrients. For example, "Composting is an aerobic biological process that breaks down organic materials, transforming them into a nutrient-rich amendment that can improve soil health" (Zhang, et al. 2019). The phrase "can improve soil health" implies an essential component: microorganisms. Both the soil and the compost are undoubtedly nothing without the contribution of the microbiota, which restore vitality to the soil. For us, it is important to add the microbial component to this definition. Therefore, composting is the process of transforming organic waste through an aerobic process that passes through thermophilic and mesophilic temperatures, which allows the viability of pathogens and weed seeds to be significantly reduced, stabilizing carbon in a beneficial way for plant growth. Compost is a probiotic that contains minerals, organic matter, and beneficial microorganisms for soil restoration.

The Challenge of Composting in Agroecology through the Eyes and Work of the Colectivo Agroecológico del Ecuador

Colectivo Agroecológico del Ecuador was formed in 2007, a de facto network that arises from the joint work of different groups in the country with a focus on agroecology, to generate coordinated actions and better impacts on Ecuadorian society through agroecological processes, food sovereignty, and solidarity economy. The work of this collective has a strong impact by supporting the construction of public policies that recognize food sovereignty and promoting agroecology as a strategy to achieve it. This work is reflected in the current Constitution of Ecuador, the Organic Law of the Food Sovereignty Regime, the Popular Economy, Consumer Protection, Water Law, Seed Law, and the Proposed Law of Agrobiodiversity and Agroecological Promotion, among others. The network has led training processes, workshops, festivals, conferences, and campaigns that seek civic appropriation of the relationship between the countryside and the city through the management of food.[8]

Since agroecology is a movement focused on a pragmatic change in the way we produce food, explains Eduar Pinzón Cano, an active member of the Agroecological Collective, it defends the care of the soil as a principle, by promoting practices linked to its integral health at its three levels:

8 Eduar Pinzón Cano, member of the Colectivo Agroecológico del Ecuador, September 2024 ,10.

9 Within the philosophy of agroecology, we have as a first step to cultivate the mind, as a second step, to cultivate the soil in order to reach the third level, that of growing food

physical, chemical and biological. Agroecology recognizes that the soil is the elemental basis for life. The challenge is to expand the knowledge that exists concerning the soil and to regain the right to advance the different ways of producing fertilizers within an agroecological practice. In other words, the challenge is to improve and implement practices that reflect a full comprehension of the importance of the proportions between carbon and nitrogen, as well as the relationship between bacteria and fungi and other interrelations of the soil ecosystem. This is where composting comes in as a practice that goes beyond feeding plants: when we compost, we are cultivating soil. Therefore, agroecological practice must respond to this logic and also think about the future. From the perspective of bio-intensive agriculture, composting is the real and only fertilizer. A consequent imperative is the production of biomass necessary for the production of fertilizer to take place in the space of each farm. This would approach the amount of biomass produced by the ancestral forest of the locality, which also poses the need for the work not to be limited to the production of short-cycle crops, but to replicate the structure of healthy ecosystems.

Red de Guardianes de Semillas and Soil Regeneration through Nutrient Recovery

The Seed Guardians Network is another example of an independent organization, initially formed by a small group of organic producers from the Tumbaco Valley, a peri-urban parish in the city of Quito. "This network was formed in 2002, with a holistic approach, working from permaculture, agroecology, bioconstruction, food sovereignty, solidarity economy, alternatives in education and appropriate technologies to recover nutrient cycles and regenerate ecosystems, transitioning towards a sustainable society." At the moment, around 180 families from different provinces of Ecuador are part of this network.

For the members of this network, the discourse of composting is presented to us as a rescue of nutrients and the generation of ideal conditions to favor life in the soil. Part of its impact goes hand in hand with training processes in permaculture, where some of its members focus on understanding the soil and the knowledge and application of different composting and fertilizer production processes to improve quality and increase life in the soil. Like the principles of agroecology, the soil is understood as a living ecosystem, on which the growth of healthy plants depends on sustainable food production over time. Composting has grown strongly in recent years, alongside permaculture and decentralized waste management, which pose composting as the heart of the farm or a home. Composting is seen as the path to close cycles, return nutrients, seek self-sufficiency, and connect with the land. The discourse transcends agricultural practice and a decentralized waste management decision as such to recognize its human, spiritual, and holistic dimensions. In the words of Alicia Franco, founding member of La Cuica Cósmica: Composting makes us more human. Understanding the etymology of the word human – which comes from the earth – and its relationship with the word humility, we are seen as the beings that belong to and lean toward the earth. This discourse, hand in hand with practice, is propagated by the Seed Guardians Network, which views environmental education as indispensable to healing the human-soil relationship.

Workshop on Ecosystem-based Solutions for Water Treatment by Yakunina, in Mashpi. (Picture by Red de guardianes de Semillas)

Within the network, composting is not limited to the generation of fertilizers through household waste or other organic fertilizer production techniques. The nutrients that we humans produce are also valued. Dry toilets, vermifilter systems, and other ecosystem-based processes allow us to recover nutrients while reducing waste and water pollution. In this way, it has been possible to implement and disseminate wastewater treatment systems based on processes that occur naturally in ecosystems. "A good wastewater treatment would allow (...) fertilizing soils with economically costly nutrients such as nitrogen, phosphorus, potassium, and many micronutrients" (Lasso and Torske, 2024), thus raising the possibility of generating a fertilizer of high nutritional quality, through the decentralized management of our waste.

Decentralized Composting and the Possibility of Zero Waste Territories: Red de escuelas Basura Cero del Chocó Andino

Chocó Andino is located in the foothills of the western Andes mountain range, northwest of the Metropolitan District of Quito (DMQ), an area of high biodiversity and endemism but at the same time very threatened, and home to an important cultural heritage. This territory has proposed a model of development in harmony with the environment, and one of its dimensions includes solid waste management. Currently, this management is carried out with great difficulties that are related to practices such as burning or burying garbage, contamination of streams and water courses, and greenhouse gas emissions, among others.

Compost bins built at the Pacto parish school by Fundación Imaymana. (Picture by La Cuica Cómica)

In 2022, an initiative is being launched to improve the situation of solid waste disposal in the Chocó Andino community, through the project for the Promotion of Responsible Management of Solid Waste in the Chocó Andino. This proposal was led by the Imaymana Foundation, La Cuica Cósmica, and the National Polytechnic School, with the support of the 17D01 Education District of the Northwest of Quito. The project worked with the seven most important public educational units in the Andean Chocó. The vision was to consolidate models of integral management of solid waste, both organic and inorganic, in the Educational Units (EU), with the objective that the practices of waste separation, recycling, and composting can, at first, be established in each EU and, in the future, be expanded to the wider educational community and the nearby population center. In addition, the project was proposed seeking to influence the education of the youngest as a strategy to achieve a cultural change on a territorial scale.

Andean ceremony as part of the inauguration of the waste management centers at the Gualea parish school. (Pictur by: La Cuica Cósmica)

With this project, the foundation was established to move towards a Zero Waste model in the territory. The importance of responsible waste management was positioned among educational and district authorities, students, and parents. Infrastructure was built: seven collection centers for plastics, cardboard, and tetra pack and six composting centers (composters or worm farms), and capacities were strengthened for comprehensive management of solid waste. However, these types of changes require constant efforts and monitoring to be able to bear fruits that are sustained over time. With this in mind, La Cuica Cósmica proposed a project for the installation of a school composter in a model school in Chocó Andino, the Fiscal School Río Mashpi; and for the strengthening of the capacities and motivations of eight Educational Units through the creation of the Zero Waste School Network of Chocó Andino.

The objective of the creation of this network, formed by student and teacher representatives from these educational centers in Chocó, was to consolidate the correct use of school composters/ vermicomposters and collection centers, making the members key actors and promoters of this practice. It was achieved to position composters as a powerful pedagogical tool, through the delivery of workshops where it was possible to develop skills and content related to the physical and chemical properties of the composting process, the diversity of life and trophic relationships of micro and macro organisms in the soil, the understanding of biogeochemical cycles that allow us to understand the relationship between composting and climate change, the calculation and transformation of measurements when calculating avoided methane emissions, as well as the reflection of the crisis we are experiencing and the actions we can carry out and achieve as a community.

Left: Record of the weight of organic waste collected.
Right: Calculation of methane emissions avoided per quantity of waste recovered. (Picture by La Cuica Cómica)

Part of this process was the creation of a protocol for managing and collecting data to be applied by the members of the network and shared, tracking the amount of compost generated and the amount of methane emissions avoided in the atmosphere. Beyond these specific objectives, the intention of creating this network is to strengthen the ties of the community with its territory, both in the educational and social spheres, to connect the children, young people, and teachers who are

part of this community in the encounter of diverse forms of working with nature that converge in a common struggle, the search for a sustainable and dignified present and future.

Members or the Red de escuelas Basura Cero del Chocó Andino and La Cuica Cósmica at the closing of the workshops-meetings. Picture: La Cuica Cómica

Research: Decentralized Composting by Grassroots Networks and Citizens

As we have seen, organic residues not only represent more than %60 of all waste at the DMQ, but they can be easily transformed into compost, where nutrients return to the soil in a closed virtuous cycle. Many community and individual initiatives have emerged, proposing a diversity of strategies for the decentralized management of organic residues, which comprise the most efficient and low-cost solutions. However, the municipal government of Quito has focused its efforts on bigger-scale "false solutions" that perpetuate the problem without looking for structural and systemic change. That is why, in the context of a new project for final disposal of waste at the DMQ, it is of vital importance to make visible how these networks and citizens are self-organizing to transform their organic waste into compost and show how decentralized composting is not only a viable solution but one that is already taking place.

The diverse people-led initiatives use different composting techniques and methods, with varying results in compost quality. To prove the viability of decentralized composting, there is a need to understand and evaluate the various ways decentralized composting is being made. This is the

first step in identifying how to improve these processes so that they optimize carbon fixation and biological richness through aerobic composting processes. We carried out a study aimed at generating local knowledge on composting processes through:

- Survey of local initiatives and the different composting techniques being used by them, adapted to local resources and climatic conditions.
- Participatory action research focused on democratizing the tools to improve composting techniques and quality with grassroots composting networks.

Methodology

To address our first research objective, we conducted an online survey which was shared with the networks and collectives described in the previous section: Red de Guardianes de Semillas, Alianza Basura Cero Ecuador, Red de Compostaje del Ecuador, Colectivo Agroecológico y Red de Escuelas Basura Cero del Chocó Andino. But it was also opened to the wider public to better understand who is composting and how are they doing it.

Invitation shared with grassroots networks and citizens to fill out the online survey.

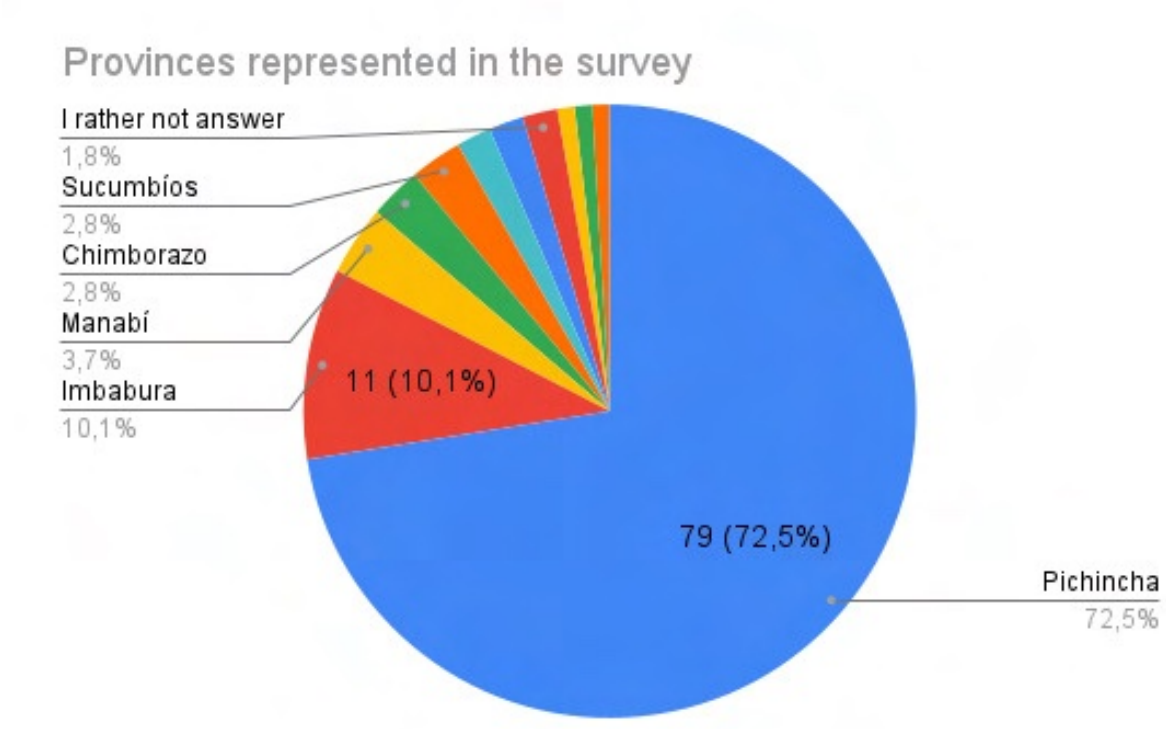
The survey had three sections: the first one was about general information and demographic data, the name of the networks from which the surveyed are part, and the type and scale of composting practices. The second section was focused on the composting techniques and methods: the kind of fresh organic material and dry organic material, the proportions used, the quantity of residues processed, the amount of water used, the number of times that the compost is aerated and the time it takes to be ready. Finally, the third section is about the motivations, learnings, hardships and improvement points for decentralized composting. All the questions associated with the technical components of compost were multiple choice, except for the quantity of residues processed, and there was always an option to include other answers.

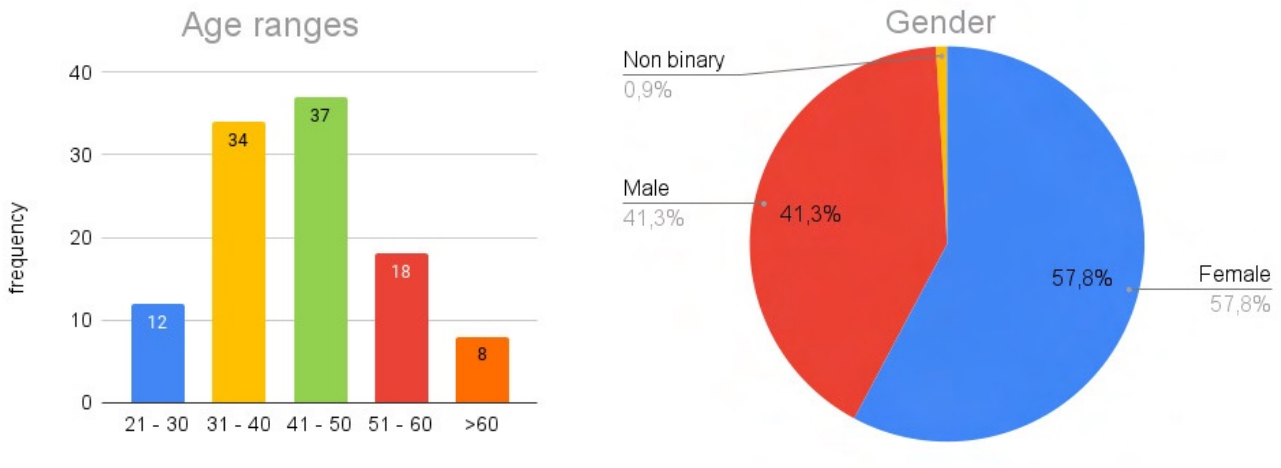
We carried out an initial cleaning of the data to include only the answers of people who do their own composting (rather than sending their residues to an external service); then a standardization of the answers was made for the open questions of section 1 and of the "other" category in the multiple-choice ones. For example, for the question about belonging to a network the answers "In my own house," "I don't belong to a network," and "No" were put together in the category "N/A." All the answers that were written in "others" were grouped in the category of the same name to create graphs about each question, except for the question about fresh organic matter, in which the reply "human waste" (in various forms) was representative, so this new category was created. Finally, with this data, pie charts and other figures were created to better understand the percentages and trends.

Survey Results

Who Is Doing Decentralized Composting?

We received a total of 109 answers to the survey. %72 originated from the DMQ, province of Pichincha, and the rest belonged to other provinces of Ecuador. Most of the respondents were female (%58), and they were mainly between the ages of 31 to %65) 50).





Survey respondents' demographic data: age (left) and gender (right)

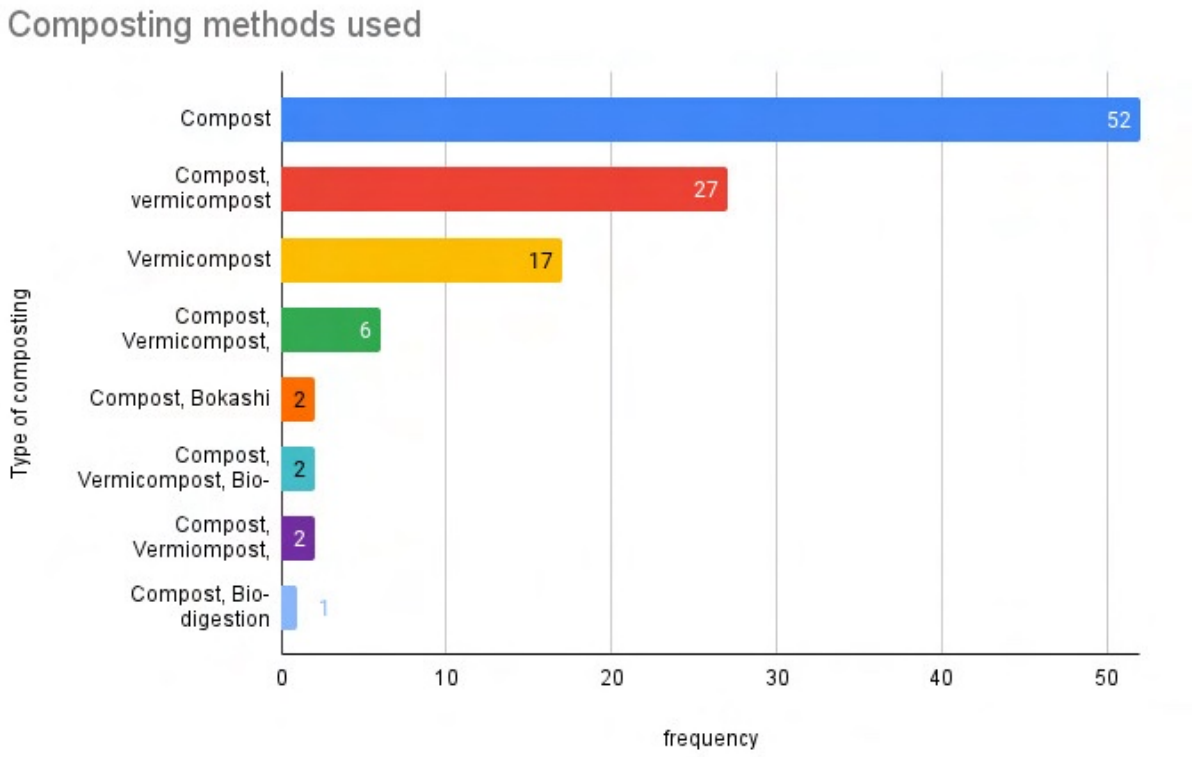
Fifty percent of the respondents did not belong to a grassroots network, while the other half did. %17 were part of Red de Guardianes de Semillas, %8 of Alianza Basura Cero Ecuador, %8 belonged to Red de Compostaje, followed by %6 from Colectivo Agroecológico, and the other %17 were part of a total of 13 grassroots networks with a variety of focal areas related to sustainable production and consumption as shown in the following table.

Table 1. Board of Directors - Founders

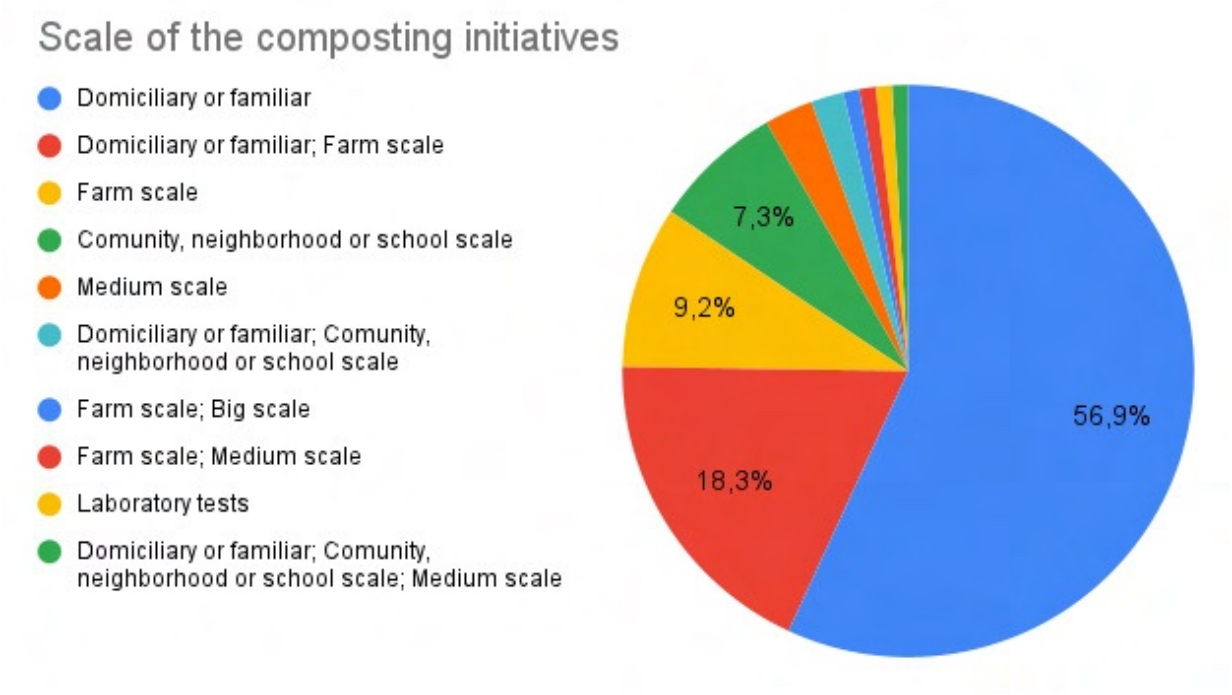
Grassroots Network	# of Answers
N/A	63
Red de Guardianes de Semillas	21
Alianza Basura Cero Ecuador	10
Red de Compostaje del Ecuador	10
Colectivo Agroecologico del Ecuador	8
Red de Escuelas Basura Cero del Choco Andino	3
Red Pedagogica de Educacion Ambiental en Mindo	1
Pacto Agroalimentario Quito	1
Red Agricultura Urbana	1
Red de Bosques Escuelas	1
Lunas Ecologia Femenina	1
Red en rojo	1
Messe	1
Slow Food	1
MAELA	1
Compaña Nacional de Consumo Responsable	1
Comite de Usuarias y Usuarios del Mercado	1
Clinical Ambiental	1

How Are People and Networks Composting?

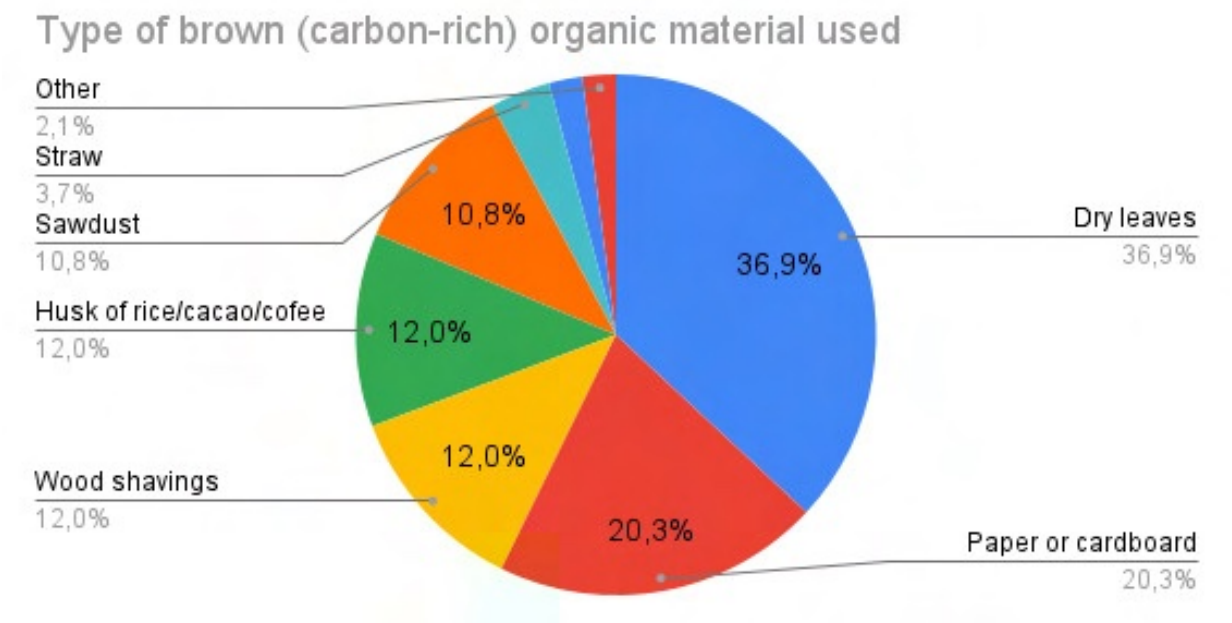
Type of composting: Regarding the type of method, there were 4 options to choose from regular compost, vermicompost, bokashi, and bio-digestion. %63 of people used just one method for composting, while the rest used two or more. Regular compost is the preferred method (%48), while the combination of compost and vermicompost is the second most commonly used (%25), followed by just vermicompost (%15). Nobody used only bokashi or bio-digestion as their sole method for processing their residues, and %85 of people used regular compost alone or alongside other methods. Regular compost is the main way of processing organic residues.



Composting scale: The majority of the respondents are composting solely on a domiciliary or family scale (57 %), while 18 % are doing it both at a family and farm scale, 9 % only at farm scale, followed by 7 % of community, neighborhood or school; the remaining 9 % include various scales at the same time and also middle and big scale composting operations.

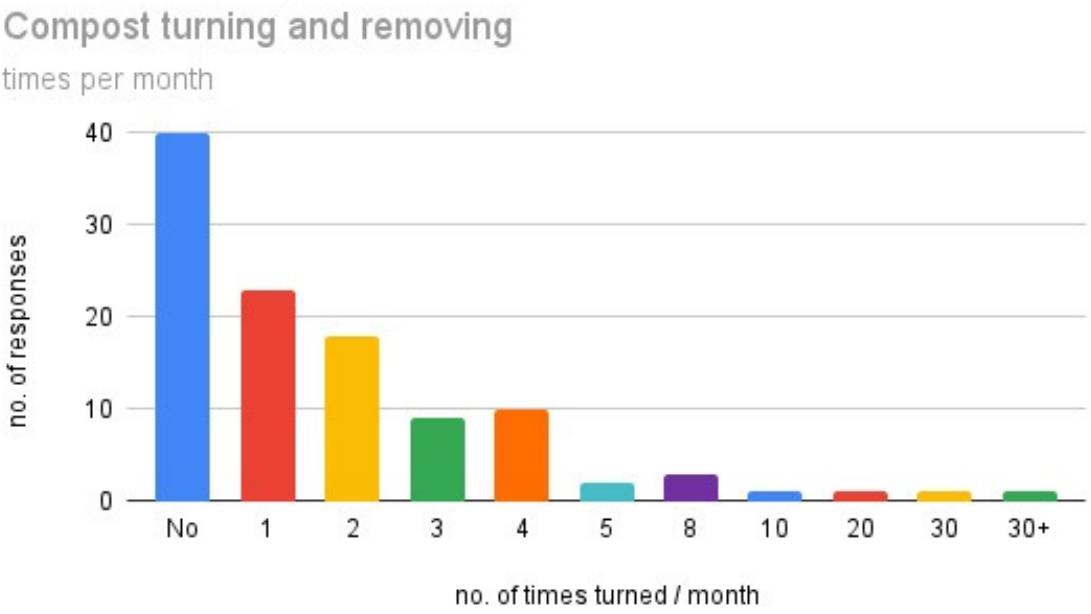


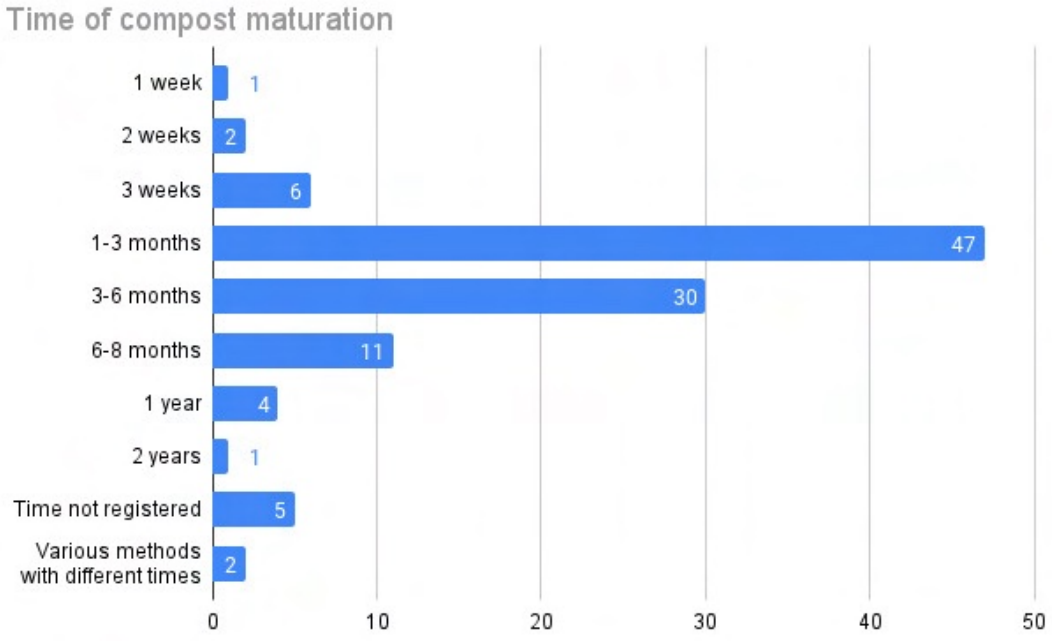
Type of residues: Kitchen waste was the main nitrogen-rich waste used in composting (42 %), followed closely by plant residues (from pruning and weeding) (36 %), and also animal manure (17 %). On the other hand, dry leaves are the carbon-rich material most commonly used (%37), followed by paper or cardboard (20 %), wood shavings (12 %), and husks of cacao, coffee, or rice (12 %). Most of the people who answered the survey use 1 to 3 different carbon-rich materials.



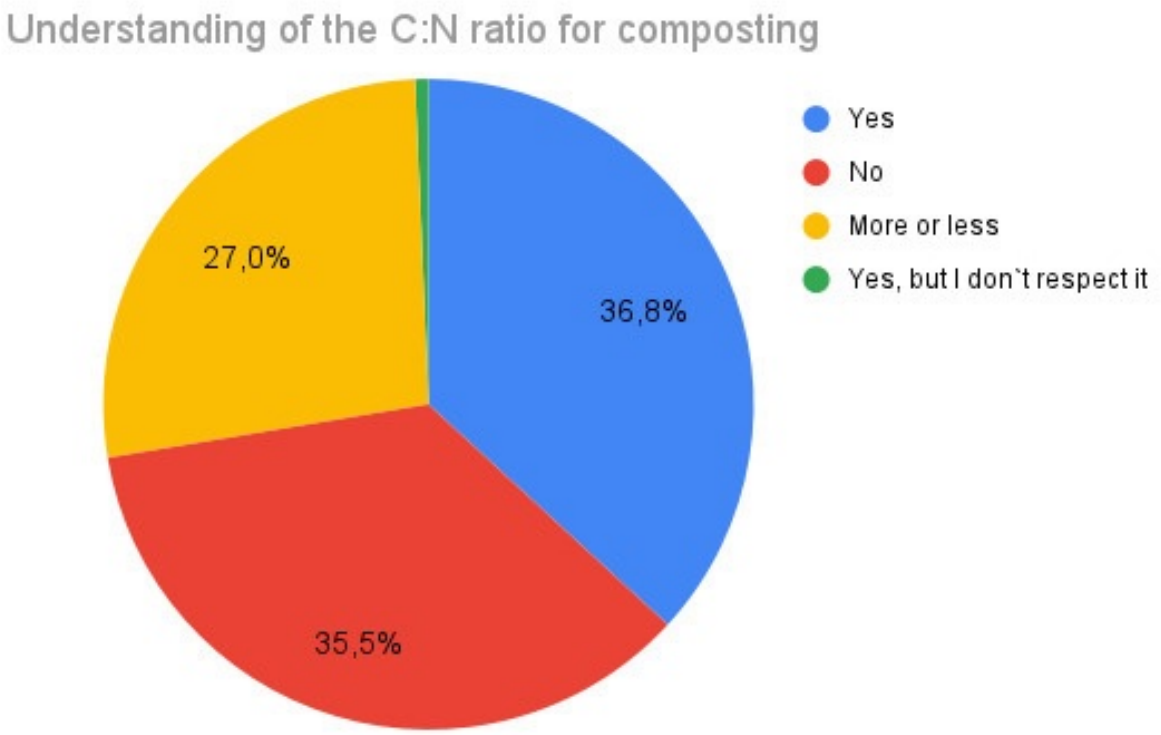
Composting Process

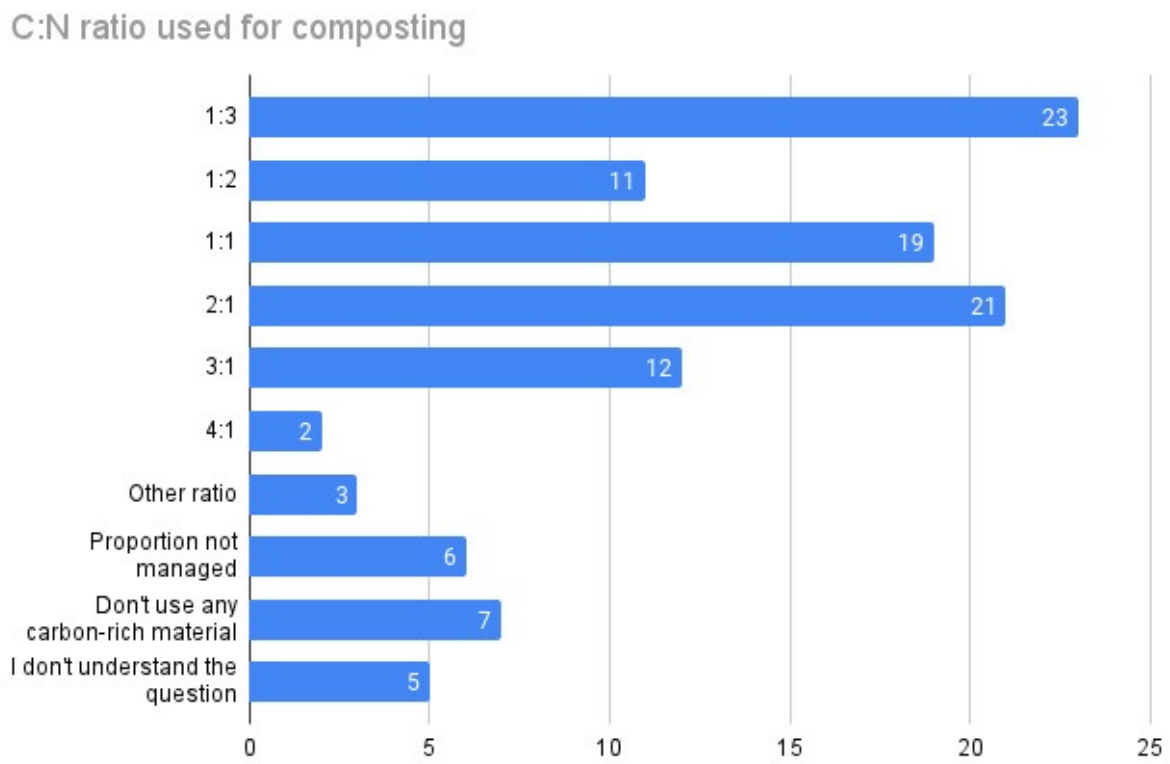
The quality of the composting process highly depends on maintaining the right conditions for microorganisms, which include the proper humidity and oxygenation for an aerobic process. 40 % of the surveyed manage humidity by checking the compost periodically and adding water if necessary, 29 % do not add water and 10 % add water at the start of the process; just 14 % of the surveyed protected their compost from rain whether using a roof or plastic. On the other hand, 36 % of respondents do not turn or remove their compost to oxygenate it, while most of those who do this turn it only once a month (21 %) or twice (16 %).





According to the survey, even if 37 % understand the importance of maintaining the C:N ratio and 27 % have some understanding of it, only 32 % of the surveyed maintain a ratio of 2:1 or higher (up to 4:1) in their compost. Whereas 48 % of them are not using enough carbon-rich materials in their compost (C:N of 1:1 and lower). A pair of answers in the "other" category explained their worry because they do not always have enough dry material to maintain an optimal proportion, but 6 % did not particularly care for maintaining the proportion, putting in the compost all carbon-rich material that they can gather in their spaces and nothing more. Regardless of the C:N ratio not always being optimal, the great majority of people have an estimate or a precise quantity of the organic residues that they manage (69 %), and the time that their compost takes to be ready (95 %), which is for the most part 1 to 3 months (43 %). The vast majority (90 %) use their compost for their gardens, trees, and for their crops; just 6 % sell it, and 3 % use and share it in communities like schools or a group of families.





But, how much waste are these initiatives composting? 46 of the 109 survey responses report how many kilograms they compost every week, these amounts go from 2 to 3000 kg, and they add up to 5,910 kg per week, with an average of 128.5 kg/week. If we extrapolate this to the 79 initiatives from the DMQ, we can estimate around 10,150 kg of organic waste getting composted every week by a tiny number of people-led initiatives, which would amount to 40.5 tonnes monthly.

Motivations, Learnings, Hardships, and Improvement Points in People-led Composting

The third section of the survey consisted of open-answer questions, so we qualitatively systematized them to give a general view of the views shared by the respondents.

Motivations

When asked about why they have decided to start composting, for a few of the surveyed composting was already practiced by their parents or in their farms, but the majority had their own reason, the variety of answers fit into the following motivations:

Organic fertilization for food production and soil regeneration: 26 % of the surveyed reported the need for good quality compost for agroecological food production as their main motivation to start composting. The reasons include reducing external inputs for their home gardens, community gardens, and food production systems, not using synthetic fertilizers, and also taking advantage of available resources to improve soil quality. In these cases, organic waste is seen as a **valuable resource.**

"It hurts when the peels that are full of so much life end up in the filthy garbage dump" *Paola Ortiz, home composter, Morona Santiago.*

Environmental consciousness regarding waste: on the other hand, 27 % of respondents declared that they started composting because of their consciousness related to the waste crisis, reducing the amount of domestic "trash", desperation about mixing trash and sending it into the landfill.

"Waste is a problem I was constantly observing, and it can only be solved by the people, no regulation will be able to accomplish this if we don't work with the community. I wanted to make a change in the world and waste is everywhere, it is an environmental and social problem"
Alisson Pérez, Mutare Mundo home pick-up and composting service, Alianza Basura Cero Ecuador.

Both consciousness regarding the waste crisis and organic matter as a valuable resource for food production and soil regeneration: the majority of participants (33 %) integrates both of the above reasons, and their responses show a clear understanding of the interconnection between the organic waste crisis and the loss of soil fertility and need for good quality organic fertilizers.

Difficulties and Improvement Opportunities

Understanding the common issues decentralized composters are faced with, allows us to seek solutions that contribute to the continuation and spread of this practice. The problems reported on the survey include:

- Lack of carbon-rich organic matter
- Presence of rodents, fruit flies, and ants
- Social difficulties: neighbors or family members having issues or not open to the initiative
- Lack of time to manage the process properly
- Difficulties in harvesting the compost
- Problems with managing humidity
- Not being able to produce enough compost for the farm
- Not achieving a fast decomposition

Some of the answers allow us to illustrate not only these difficulties but also the reflections and solutions people are proposing and trying out to solve them:

> At the beginning it did not process well and the waste would rot, emitting bad odors, until I understood how to mix in the dry material, in this case wood shavings with the residues. Now the smell is even pleasant and it gets processed pretty quickly, this has allowed me to fertilize the garden and the trees in a better way. I love how it is processed and all the life that is generated at the compost bin, it is actually a waste to throw away our residues when they are an invaluable resource
>
> **– Juanchi Pérez, family scale composter, DMQ.**

> Maintaining the students' motivation to participate and bring their organic waste is one of the main challenges, including that they bring it well sourced without plastic. Slowly, the process is taking root into the psyche of the students and we hope there will be a knowledge transmission from one generation to the next one as promoters, since as time goes by new people continue leading the process
>
> **– Leonardo Tapia, Teacher of 24 de Julio School, Red de Escuelas Basura Cero del Chocó Andino.**

When asked about how decentralized composting can be improved, the surveyed point primarily at education, raising awareness about how composting is a great tool to address the waste crisis while promoting healthy soils, plants and humans. Other proposed solutions include the implementation of incentives for people who compost, creating networks of people who compost to strengthen knowledge and experience sharing, and supporting ongoing processes. Still other solutions were more practical like improving access to the inputs required for composting and giving physical spaces where people can compost. Some of the participant's reflections were:

> Access to simplified knowledge, access to physical spaces to carry out composting. Ecosystems where it is clear how compost is integrated into broader processes of social transformation
>
> **- Guillermo Gómez-Urrego, home and farm scale composter, Colectivo Agroecológico del Ecuador**

> Having some kind of system to pick up and recognize the value of compost made by people, that doesn't have a proper use at the place and to incentivize their work. Seek possibilities of working with waste pickers to give them another activity and income complementary to their work in recycling, while improving their work conditions
>
> **- Jefferson Metcham, Red de Guardianes de Semillas.**

Mapping families and spaces for composting and gardens, to accompany family and community processes to make a reality a healthy diet and care for the environment, using waste and learning cycles for sowing, taking care and harvesting

- Wilma Pijao, Red de Agricultura Urbana

Participatory Action Research to Improve Compost Quality

Our second research goal was to promote the improvement of the composting processes and the resulting compost quality, by democratizing the knowledge and tools to understand key factors affecting the biological process of organic matter decomposition through composting and tools to monitor the process. With this aim, we conducted a series of workshops: two with the teachers of Red de Escuelas Basura Cero del Chocó Andino, and one with Red de Compostaje and Alianza Basura Cero del Ecuador.

During these workshops, we shared the physical and chemical properties and parameters desirable for good compost quality and also taught about the importance of seeing compost as a seed of life. Students learned that the best compost is one that has a complete and living web of soil life, and started to recognize these creatures and the desirable amounts to have to create the best biologically active soil regenerator, a living compost.

Challenges and Opportunities

The various citizen-led initiatives embarked on and directed in different ways towards the protection and regeneration of soils, as well as waste management through decentralized composting, face social, economic and political obstacles. In terms of composting, the economic capacity of people is not really a limiting factor, as these are processes that do not require major investment and have various ways of being carried out. However, there is still some skepticism regarding the transformative impact of composting as an ecosystem-based solution on the part of the general public. Although there is a tendency to give greater value and strength to these practices, there is a certain rejection of assuming them as a local action because it involves a change of paradigms, a deconstruction and rejection of the linear and polluting processes that the system has offered us for years and because, in a certain way, they lead to a discomfort that many people are not willing to face.

At the DMQ level, although pilots of differentiated collection have been initiated and large-scale centralized composting has been proposed, the prioritized solutions do not address the root of the problem, nor do they take into account these local and individual actors who can offer knowledge, training and management of the problem. The solutions are large-scale, arranged in large public contracts that always smell like under-the-table negotiations and that always favor corporations over communities. In this sense, the country's political system and its deficiencies are presented as an enormous barrier and with a lot of influence on community actions. However, these same threats have strengthened groups such as the Alianza Basura Cero del Ecuador, the recycling movement and the conscious population in general to exert pressure from the collective, demanding spaces for participation and transparent communication. In this sense,

research, public advocacy and activism actions have been fundamental. Despite how difficult it can be to sustain community participatory activism financially, there are national and international organizations that provide support, both in training and in giving economic, political and social support to maintain and strengthen these citizen and popular initiatives and projects. It is worth mentioning the Alianza Basura Cero del Ecuador itself, the national NGO Acción Ecológica, and international organizations such as the Global Alliance for Incineration Alternatives GAIA [10] and Clean Air Task Force CATF. [11]

The challenge in the Andean Chocó territory remains, both because the work within public institutions, such as public education in Ecuador, raise greater challenges than the simple intention of motivating composting: dealing with a lethargic bureaucracy, the lack of political will, the workload of teachers and the poor quality of education related to the amount of resources that educational units receive. On the other hand, from this planted seed, the effort to expand decentralized composting has led us to expand our work towards political advocacy: the coordinated work of collectives, organizations with the autonomous governments of each parrish (GADs by its acronym in Spanish) and public institutions to achieve greater impact from the decisions made from above. Therefore, the work in this territory poses a multidirectional challenge that is supported by collectives and citizen intentions that demand healthier logics of life and relationships with ecosystems and coherent actions appropriate to the crises and needs we are currently experiencing. The strength of this territory lies in its connection with its profound relationship with the ecosystem and the media power it has developed, as well as the presence of organizations that provide support such as the Imaymana Foundation [12], the Quito Sin Minería collective, among others.

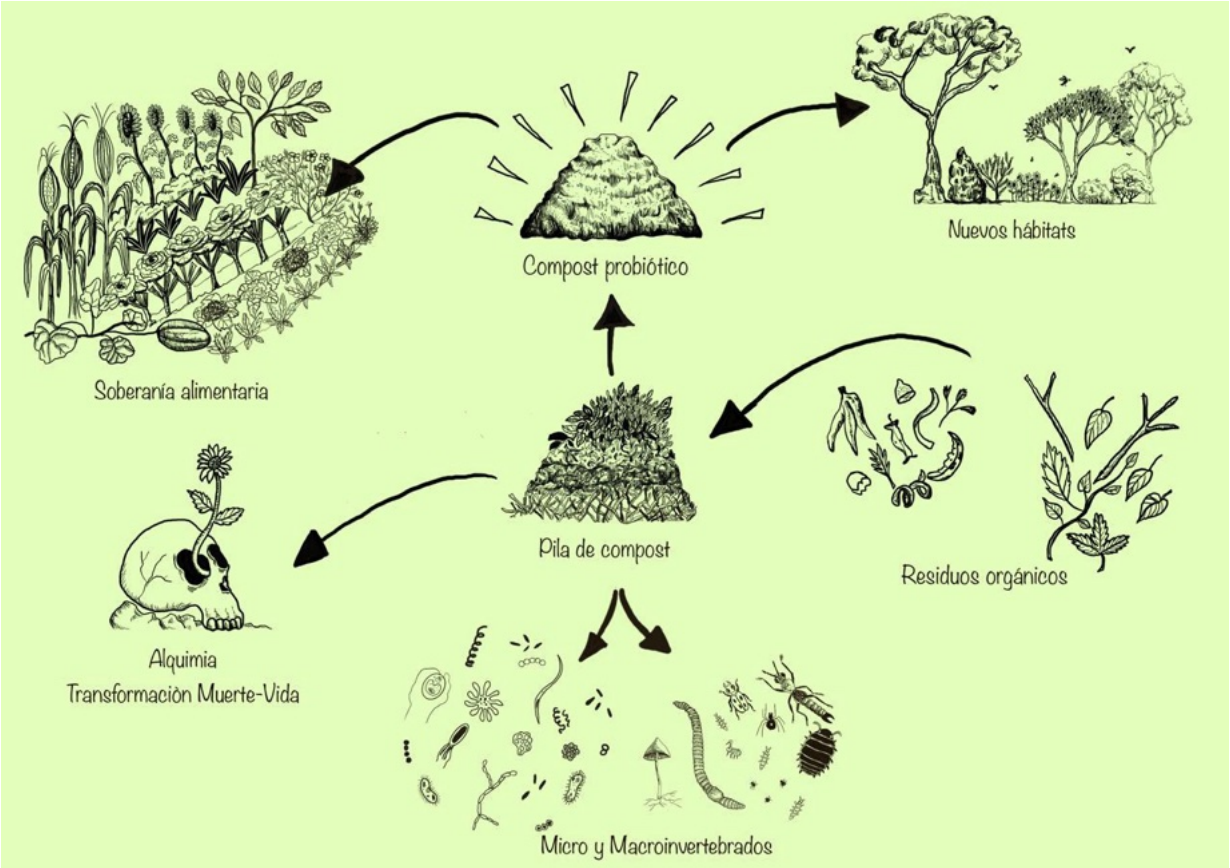
In general terms, the challenge is for compost to be the driving force of transition, both for the recycling movement (in relation to its economic activity related to the plastics sector), for the affected communities, for educational spaces, and for the population in general in this exercise of recovering "garbage" as nature (Soliz 2023). To direct the search for self-sufficiency from destructive linear processes, understanding the nutrient cycle and the interspecific relationships that composting poses to us, as another way of relating to our environment. The knowledge that exists concerning compost must be democratized and practiced locally, for all that it means and because it encompasses an opportunity in itself. Seen more deeply, composting presents itself not only as an opportunity for regeneration or education, but for relationality, as it allows for more-than-human encounters, where “there is the opportunity to recognize and work with one’s own complicity and involvement in systems that have been destructive to themselves and to other forms of life on this planet, while creating the conditions necessary to think, imagine and live something new.” (Todd 2024).

10 Visit https://www.no-burn.org/

11 Visit https://www.catf.us/

Conclusion: Compost is a Cornerstone for Systemic Change

Compost is a new way of learning to relate to other beings. As Donna Haraway (2016) mentions, this need to build a future where the reconciliation of humanity with nature is essential, and doing so requires that we can feel part of it and reach commitments to be able to live in harmony: Could compost be a vehicle for social transformation? The answer is yes, and it does so in many ways. As we have mentioned, compost is a solution to this waste crisis, because if we do it we avoid methane emissions and we fix carbon. On the other hand, it helps us solve the second crisis, returning nutrients to the soil. But these two virtues of compost are dependent on a good technique that results in good quality compost.



We see that the quality of compost is more viable and feasible when we manage to have a relationship that goes beyond the rational functionality of composting and makes us build an affective relationship of kinship (Haraway 2016), but also helps us integrate the truth that the soil is not only composed of minerals and organic matter: it is a network of interconnection, trophic networks of microorganisms (fungi and bacteria), micro and macro invertebrates that coexist, feed and generate relationships that make the soil alive and therefore functional in the health of plants and the oncoming wide trophic relationships. Here, compost acquires this potential to be a probiotic for the soil. This makes us think about how human beings relate because in the end we are responsible for disposing of our organic

12 Visit https://fundacion-imaymana.org/

waste, with the opportunity to generate a probiotic for the restoration or regeneration of new soils. So this new relationship that human beings acquire – or remember – can help us build urban spaces that are healthier and more sustainable, because it opens up the possibility of the urgency of regreening urban areas. The creation of urban gardens, edible forests and the regeneration of streams are essential for the recovery of social web, healthy spaces for recreation, but also as an improvement to the urban landscape – in climatic terms: more carbon capture. The creation and relationship with urban gardens breaks down the barrier between city and country dwellers, rethinking food and energy sovereignty. Where does my food come from? And how can I eat more healthily? This can even lead to the reflection of how much food I am wasting, because the compost is fed with it as a last resource.

In general, the greatest opposition that people have to composting is the fear of flies and other insects coming near, in addition to the smells that ultimately distance us from the relationship that we have built with death, dirt and the underworld. Devilish themes that lie in the context of the negative. However, death ultimately means transformation and alchemy, the necessity of death for the continuity of life. And how necessary it is for humanity to learn to live with these very natural phenomena.

Synthesis and Recommendations

The authors of case studies contained in this book have shed light on important aspects of peoples' rights. They also bring attention to urgent campaigns for the protection of these rights, which are an enabling condition of the continued people-powered sustainable development practices that are essential for the thriving, and frequently also the subsistence, of their respective communities. The authors, moreover, describe these practices in such detail that readers may well feel empowered to become practitioners of sustainable development in their own communities. This is to say, the knowledge contributed by this book is meant to translate into action. Now that community actions have been analyzed in detail, this brief final chapter offers recommendations for government and intergovernmental organizations.

First, Indigenous Peoples' understandings of the land must be respected. It is also the responsibility of the government to protect and promote their rights to act in accord with these understandings, especially when these acts contribute to the sustainability of the ecosystem. Focusing on the production link of the commodity chain, the Philippine case study suggests that fulfillment of this responsibility would entail the Republic of the Philippines ending criminalization of Isnag agricultural practices. More specifically, it should suspend PD 705 or the Revised Forestry Code of the Philippines, Chapter IV, Section 69, which imposes a fine ranging from PHP 500 to PHP 20,000 for practicing kaingin (i.e., the Isnag mode of swidden farming). Taking action to protect Indigenous Peoples' productive practices is one way for governments to respect the peoples' right to self-determination.

Second, a related way to advance people's rights is to ensure that marginalized populations and the natural environment are enabled to thrive. Focusing on the waste resulting from the commodity chain, the Ecuadorian case study shows that mismanagement of this waste can result in disastrous human and environmental costs, and points to patterns of discrimination that must be confronted. In particular, the pattern of urban areas of the Metropolitan District of Quito producing most of its waste, while the district's rural areas are designated as sites for its disposal, testifies to significant uneven geographic development. The resultant exposure of the rural poor to toxic leachates and methane emissions entails alarming health implications. The dominant waste management paradigm, which excludes the most vulnerable actors from input into decision-making processes, must be overcome. The broad network of civil society actors campaigning for a zero-waste Ecuador have proposed solutions in terms of composting practices that would constitute valuable elements of this overcoming.

Third, governments should pursue and be empowered to pursue economic development agendas that reduce inequality through promotion of community decision-making. Toward this end, international development organizations can recognize, and governments can support, practices of self-management. Examining the matter with attention to the consumption link of the commodity chain, the Chilean case study finds a civil society turn to self-management to be part of an effort to survive in an economic context in which the population finds it more difficult to afford replacements for non-functioning goods. In Chile, respecting, protecting, and promoting the right to repair is just one way that governments can support. Communal governance of agricultural production among the Isnag in the

Philippines and community-led composting initiatives as alternatives to the dominant waste management practices in Ecuador may both be considered as further examples of self-management that governments should promote. The problem of inequality can be best addressed when vulnerable populations are empowered as decision-makers.

Fourth, governments and intergovernmental organizations should be more attentive to, and actively promote, people-powered sustainability innovations. An enabling environment for practices of self-management helps foster such innovations, as the sustainable outcomes of Isnag agriculture in the Philippines, Reparemos's assertions of the right to repair in Chile, and the interventions of the zero-waste movement in Ecuador evidence. Intergovernmental organizations have a special responsibility to ensure that their technical recommendations are not understood as universal laws, as this may contribute to the disregard of community-created alternatives that do not conform to these recommendations. For example, UN Framework Convention on Climate Change (UNFCCC) statements on swidden farming have been interpreted as justification for the above-mentioned criminalization of the practice without due consideration of local conditions. The Philippine case study, examining kaingin, suggests that the environmental impact of swidden farming practices can vary significantly with context and the particularities of implementation. The selective use of kaingin by the Isnag community is clearly undertaken with both subsistence and sustainability aims. The UNFCCC should speak out against the discriminatory laws that threaten them. Finally, both governmental and intergovernmental organizations should work to ensure that development agendas are not overrun by corporate interests. In Chile, self-management practices arise in a context of industrial precariousness and neoliberal economic policy that has allowed corporations to impose premature product obsolescence that serves as a barrier to people seeking to use increasingly constrained household budgets to meet needs. In addition to promotion of self-management, other policy options that restrict corporate influence over the economy should be explored to ensure that these needs are met. In the case of Ecuador, waste management solutions have been predominantly arranged by large-scale public contracts shaped by under-the-table negotiations that deprive vulnerable populations of representation, and sideline community-led solutions. More open and participatory decision-making processes that privilege impacted communities should govern waste-management policy. The zero-waste Ecuador movement, with its wealth of experience, would be an ideal partner for such processes. In the Philippines, where dam construction threatens to displace the Isnag, the government should call for immediate cessation of the Pan Pacific Renewable Power Philippines Corporation's operations concerning the construction of the Gened 1 and Gened 2 dams proposed for the municipality of Kabugao, given clear community opposition and pending public and participatory investigation of the project's social and ecological impacts.

In summary, the recommended actions are as follows:

1. **Respect for indigenous understandings and protection of peoples' actions for sustainable development guided by these understandings;**
2. **Measures to actively ensure the thriving of currently marginalized populations and of the natural environment;**
3. **Promotion of community decision-making in the pursuit of addressing inequality;**
4. **Promotion of people-powered sustainability innovations; and**
5. **Protection of the right to development from the disproportionate influence of corporate actors.**

Each of these represents a vital supplement to the SDGs that currently guide the international development community. Adoption of these recommendations would indicate greater adherence to a rights-based development framework. In such a framework, governments and intergovernmental actors occupy the position of duty-bearers, that is, obligated to respect, promote, and realise rights. The recommendations offered here are intended to guide them in performing this role.

References

———. 2020. “United Nations Support for Self-Determination Remains Source of Pride, Crucial Pillar, Says Secretary-General, as Special Committee Opens 2020 Session | Meetings Coverage and Press Releases.” 2020. https://press.un.org/en/2020/gacol3342.doc.htm.

———. 2023b. “Wide Spaces and Long Fallows: Rotational Shifting Cultivation among the Isnag of Kabugao, Apayao.” Baguio City, Cordillera Administrative Region, Philippines: Aliansa Dagiti Pesante iti Kordiliera.

———. n.d.-b. “Yield per Hectare.” Accessed November 2024 ,7. https://www.philrice.gov.ph/ricelytics/estyields.

“Comisión Valech - Instituto Nacional de Derechos Humanos.” n.d. INDH (blog). Accessed November 2024 ,7. https://www.indh.cl/destacados/comision-valech/.
“Industrialización por sustitución de importaciones.” 2024. In Wikipedia, la enciclopedia libre. https://es.wikipedia.org/w/index.php?title=Industrializaci%C%3B3n_por_sustituci%C%3B3n_de_importaciones&oldid=162690622.

“La Autogestión Social en la Práctica Comunitaria: Encuentros, Resistencias y Participación.” n.d.

“La Reforma Agraria (1973-1962) - Memoria Chilena.” n.d. Memoria Chilena: Portal. Accessed November 2024 ,7. https://www.memoriachilena.gob.cl/602/w-3article3536-.html.
“Plan Cóndor.” 2024. In Wikipedia, la enciclopedia libre. https://es.wikipedia.org/w/index.php?title=Plan_C%C%3B3ndor&oldid=163459351.

“Project Cybersyn.” 2024. In Wikipedia. https://en.wikipedia.org/w/index.php?title=Project_Cybersyn&oldid=1253857806.

“Right to Repair: Making Repair Easier and More Appealing to Consumers | News | European Parliament.” 2024. April 2024 ,23. https://www.europarl.europa.eu/news/en/press-room/20240419IPR20590/right-to-repair-making-repair-easier-and-more-appealing-to-consumers.

Abu Qdais, Hani, Christoph Wuensch, Christina Dornack, and Abdallah Nassour. 2019. “The Role of Solid Waste Composting in Mitigating Climate Change in Jordan.” Waste Management & Research 42–833 :(8) 37. https://doi.org/0734242/10.1177X19855424.

Acker, Joan. 1990. “Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations.” Gender and Society 58–139 :(2) 4. https://www.jstor.org/stable/189609.

Alguacil Gómez, Julio. 2005. “Los desafíos del nuevo poder local: la participación como estrategia relacional en el gobierno local.” Polis. Revista Latinoamericana, no. 12 (December). https://journals.openedition.org/polis/5614.

Alianza para el Progreso. 1961. “Alianza para el Progreso : documentos básicos - Memoria Chilena.” Memoria Chilena: Portal. 1961. https://www.memoriachilena.gob.cl/602/w-3article8789-.html. Annosi, Maria Carmela, Luca Giustiniano, Federica Brunetta, and Mats Magnusson. 2018.

“The Emergence of New Organization Designs. Evidences from Self-Managed Team-Based Organizations.” In Learning and Innovation in Hybrid Organizations: Strategic and Organizational Insights, edited by Paolo Boccardelli, Maria Carmela Annosi, Federica Brunetta, and Mats Magnusson, 68–255. Cham: Springer International Publishing. https://doi.org/-3-978/10.1007 13_9-62467-319.

Arias, Fidias. 2023. “El paradigma pragmático como fundamento epistemológico de la investigación mixta. Revisión sistematizada.” Educación, Arte, Comunicación: Revista Académica e Investigativa 24–11 :(2) 12. https://doi.org/10.54753/eac.v12i2.2020.

Bagyan, Fernando, and Lulu Gimenez. 2005. “Aggressive GMO Promotion Is Making Ifugao Corn Farmers Poorer.” Bulatlat, October 2005 ,23. https://www.bulatlat.org/news/-37-5/37-5corn.htm.

Baigorrotegui, Gloria, Dominique González, and Cristian Parker. 2023. “Energy Communities of Repair in Remote Infrastructures: A Study of Puerto Edén in the Chilean Patagonia.” Sustainability in Debate 14 (December):39–122. https://doi.org/10.18472/SustDeb.v14n3.2023.50672.

Barkley, Elisabeth F., and D. P. Cross. 2013. Técnicas de aprendizaje colaborativo: Manual para el profesorado universitario. Ediciones Morata.

Barría, Cecilia. 2022. “Riqueza extrema: Chile, el país donde los ultrarricos tienen el patrimonio más grande de América Latina.” BBC News Mundo, February 2022 ,21. https://www.bbc.com/mundo/noticias60396723-.

Batlle Lathrop, Antonio José, Pedro Álvarez Caselli, Antonio José Batlle Lathrop, and Pedro Álvarez Caselli. 2019. “Reparación de Objetos Domésticos Como Resistencia al Diseño Desechable.” Revista 180, no. 43 (August), 74–66. https://doi.org/10.32995/rev180.num2019).43-).art565-.

Benchetrit, Jenna. 2024. “Apple to Pay up to 14.4$M in iPhone Throttling Settlement Approved by B.C. Judge.” CBC News, March 2024 ,4. https://www.cbc.ca/news/business/apple-settlement-british-columbia-supreme-court1.7098096-.

Butt, Matti Ullah, Yu Hou, Kamran Ahmed Soomro, and Daniela Acquadro Maran. 2017. “The ABCE Model of Volunteer Motivation.” Journal of Social Service Research 608–593 :(5) 43. https://doi.org/01488376.2017.1355867/10.1080.

Cabrera-Darias, Marcial, and Rosario J. Marrero-Quevedo. 2015. “Motivos, personalidad y bienestar subjetivo en el voluntariado.” Anales de Psicología / Annals of Psychology –791 :(3) 31 801. https://doi.org/10.6018/analesps.31.3.180921.

Calayan, Mark Moises. 2023. “Apayao Logs P147.9M Initial Damage to Crops Due to Typhoon ‘Egay.’” GuruPress Cordillera. July 2023 ,27. https://www.gurupress-cordillera.com/post/apayao-logs-p9-147m-initial-damage-to-crops-due-to-typhoon-egay.

Cao, Xiaoxia, Paul N. Williams, Yuanhang Zhan, Scott A. Coughlin, John W. McGrath, Jason P. Chin, and Yingjian Xu. 2023. “Municipal Solid Waste Compost: Global Trends and Biogeochemical Cycling.” Soil & Environmental Health 100038 :(4) 1. https://doi.org/10.1016/j.seh.2023.100038.

Catalán, Mario Alberto Catalán. 2019. “Propuesta teórico-conceptual para el abordaje de la participación comunitaria desde la Psicología Comunitaria.” Revista Liminales. Escritos sobre Psicología y Sociedad 27–9 :(15) 8. https://doi.org/10.54255/lim.vol8.num15.315.

Catindig, Jo. n.d. “Rice Bug - IRRI Rice Knowledge Bank.” Accessed November 2024 ,7. http://www.knowledgebank.irri.org/training/fact-sheets/pest-management/insects/item/rice-bug.

Cavalcante, Carlos Eduardo, Washington José de Souza, Anderson Luiz Rezende Mol, and Juarez Azevedo de Paiva. 2015. “Motivação Para Entrada de Voluntários Em ONG Brasileira.” Revista de Administração 40–523 :(4) 50. https://doi.org/10.5700/rausp1217.

Charlton, Alistair. 2023. “BMW Drops Controversial Heated Seats Subscription, To Refocus On Software Services.” Forbes, September 2023 ,7, sec. Cars & Bikes. https://www.forbes.com/sites/alistaircharlton/07/09/2023/bmw-drops-controversial-heated-seats-subscription-to-refocus-on-software-services/.

Chile, BCN Biblioteca del Congreso Nacional de. 2021. “Comparador de Constituciones. Proceso Constituyente | Biblioteca del Congreso Nacional de Chile.” Text. bcn.cl. BCN. Biblioteca del Congreso Nacional de Chile. 2021. http://www.bcn.cl/procesoconstituyente/comparadordeconstituciones/home.

Collins, Patrick. 2021. “People-Powered Planning: Planning from the Bottom up in a Top-down System.” European Spatial Research and Policy 28 (December):50–227. https://doi.org/1952.28.2.13-1231/10.18778.

Comanda, Zaldy. 2023. “Apayao Logs P-546.8M Agriculture Damage from ‘Egay.’” Manila Bulletin, August 2023 ,3. https://mb.com.ph/3/8/2023/apayao-logs-p-8-546m-agriculture-damage-from-egay.

Daza, Deisy Peña y Esteban. 2014. Agroecología en el Ecuador: apuntes para su reflexión. Instituto de Estudios Ecuatorianos (IEE): Observatorio del Cambio Rural. https://biblio.flacsoandes.edu.ec/libros/-150608opac.

Dressler, Wolfram, David Wilson, Jessica Clendenning, Rob Cramb, Sango Mahanty, Rodel Lasco, Rodney Keenan, Phuc To, and Dixon Gevana. n.d. “Examining How Long Fallow Swidden Systems Impact upon Livelihood and Ecosystem Services Outcomes Compared with Alternative Land-Uses in the Uplands of Southeast Asia.”

Durán, Patricio. 2020. “La red social Twitter y el proceso constituyente: el caso de las cuentas anómalas.” CIPER Chile (blog). October 2020 ,18. https://www.ciperchile.cl/17/10/2020/la-red-social-twitter-y-el-proceso-constituyente-el-caso-de-las-cuentas-anomalas/.

Ferrero, Andrea, Nidia De Andrea, and Flavia Lucero. 2019. “La importancia del Consentimiento

Informado y el Asentimiento en Psicología." Anuario de Investigaciones de la Facultad de Psicología 40–31 :(2) 4. https://revistas.unc.edu.ar/index.php/aifp/article/view/25186.

Flick, Uwe. 2012. Introducción a la investigación cualitativa. Ediciones Morata, S.L.
Fox, Jefferson, Yayoi Fujita, Dimbab Ngidang, Nancy Peluso, Lesley Potter, Niken Sakuntaladewi, Janet Sturgeon, and David Thomas. 2009. "Policies, Political-Economy, and Swidden in Southeast Asia." Human Ecology 22–305 :(3) 37. https://doi.org/10.1007/s7-9240-009-10745.

Franco, Alicia. n.d. "Sistematizaciónde Iniciativas Que Gestionan Residuos Orgánicos En El País." In Metano: Contaminación y Mitigación, Desde Una Mirada Basura Cero, edited by Rocha Viviana, Solano Solano, and osé Ricardo Guamán. Accessed November 2024 ,7. https://www.alianzabasuraceroecuador.com/wp-content/uploads/05/2024/Boletin-Metanoweb100524-.pdf.
García Saltos, Mario, Patricio Mena Vásconez, and David Parra Puente. 2014. El país de la biodiversidad. Fundación Botánica de los Andes. http://repositoriointerculturalidad.ec/jspui/handle/37505/123456789.

Garfinkel, Harold. 2006. Estudios en etnometodología. Anthropos Editorial.

Giddens, Anthony. 1986. The Constitution of Society: Outline of the Theory of Structuration. New Ed edition. Berkeley Los Angeles: University of California Press
.
Gimenez, Lulu. 2023a. "The Current Projects to Dam the Apayao River and Its Tributaries." Aliansa Dagiti Pesante Iti Kordiliera. Baguio City, Cordillera Administrative Region, Philippines.

Hans George Gadamer. 2015. Hans Georg Gadamer, Verdad Y Metodo Tomo 1. http://archive.org/details/hans-georg-gadamer-verdad-y-metodo-tomo1-.

Haraway, Donna J. 2016. Staying with the Trouble: Making Kin in the Chthulucene. Duke University Press. https://doi.org/10.2307/j.ctv11cw25q.

Hickel, Jason. 2019. "The Contradiction of the Sustainable Development Goals: Growth versus Ecology on a Finite Planet." Sustainable Development 84–873 :(5) 27. https://doi.org/10.1002/sd.1947.

International Rice Research Institute. n.d.-a. "Rice Consumption." Accessed November 2024 ,7. https://www.philrice.gov.ph/ricelytics/consumption.

Jimenez, Marcela. 2021. "Paulo Freire. Los Años Del Exilio En Chile." Pedagogía y Saberes 55 (July):23–11. https://doi.org/10.17227/pys.num12407-55.

Joignant, Alfredo, and Nicolás M. Somma. 2024. "Introduction: Making Sense of Collective Action and Protests." In Social Protest and Conflict in Radical Neoliberalism: Chile, 2020–2008, edited by Alfredo Joignant and Nicolás M. Somma, 8–1. Cham: Springer Nature Switzerland. https://doi.org/1_8-58132-031-3-978/10.1007.

Joignant, Alfredo, Nicolás M. Somma, Matías Garretón, Felipe Olivares, and Tomás Campos. 2024. "The Singularity of the Social Uprising." In Social Protest and Conflict in Radical Neoliberalism:

Chile, 2020–2008, edited by Alfredo Joignant and Nicolás M. Somma, 48–33. Cham: Springer Nature Switzerland. https://doi.org/3_8-58132-031-3-978/10.1007.

Jones, Peter. 1999. “Human Rights, Group Rights, and Peoples’ Rights.” Human Rights Quarterly 21 107–80 :(1). https://www.jstor.org/stable/762737.

Kowalska, Aneta, Anna Grobelak, Åsgeir R. Almås, and Bal Ram Singh. 2020. “Effect of Biowastes on Soil Remediation, Plant Productivity and Soil Organic Carbon Sequestration: A Review.” Energies 5813 :(21) 13. https://doi.org/10.3390/en13215813.

Kuurti, Kan. 1995. “Activity Theory as a Potential Framework for Human-Computer Interaction Research,” November. https://doi.org/10.7551/mitpress/2137.003.0006.

Lapniten, Karlston. 2022. “Collusion, Corruption Allegations Hound Dam Projects in Last Nature Frontier of the Cordillera.” PCIJ.Org. September 2022 ,10. http://pcij.org/10/09/2022/collusion-corruption-allegations-hound-dam-projects-in-last-nature-frontier-of-the-cordillera/.

Largo, Consuelo Contreras, Sebastián Donoso Rodríguez, Carlos Frontaura Rivera, Debbie Guerra Maldonado, Yerko Ljubetic Godoy, Branislav Marelic Rokov, Salvador Millaleo Hernández, et al. 2019. “INFORME ANUAL SITUACIÓN DE LOS DERECHOS HUMANOS EN CHILE 2019.” Instituto Nacional de Derechos Humanos.

Lasso Quintero, Paulina, and Miguel Vicente Torske Lombeida. 2024. Ecosistemas Filtrantes: Soluciones Basadas En La Naturaleza Para Limpiar Aguas Residuales ; Experiencias de Restauración Hídrica En El Bosque Modelo Del Chocó Andino , Ecuador. Canadá: Fundación Imaymana.
Li, Peng, Zhiming Feng, Luguang Jiang, Chenhua Liao, and Jinghua Zhang. 2014. “A Review of Swidden Agriculture in Southeast Asia.” Remote Sensing 83–1654 :(2) 6. https://doi.org/10.3390/rs6021654.

López, José Enrique Ema. 2004. “Del sujeto a la agencia (a través de lo político).” Athenea Digital. Revista de pensamiento e investigación social, May, 24–1. https://doi.org/10.5565/rev/athenead/v1n5.114.

Luhmann, Niklas. 1998. Sistemas sociales: lineamientos para una teoría general. Anthropos Editorial.

Maillet, Antoine, Mathilde Allain, Sebastián Carrasco, Gonzalo Delamaza, and Joaquín Rozas. 2024. “Socio-Territorial Mobilization in Chile in Light of the Analysis of Protest Events, 2020–2008.” In Social Protest and Conflict in Radical Neoliberalism: Chile, 2020–2008, edited by Alfredo Joignant and Nicolás M. Somma, 44–119. Cham: Springer Nature Switzerland. https://doi.org/-978/10.1007 7_8-58132-031-3.

Marcos, Ferdinand. n.d. Presidential Decree No. 705. Accessed November 2024 ,7. https://lawphil.net/statutes/presdecs/pd1975/pd_1975_705.html.

Martela, Frank. 2023. “Managers Matter Less than We Think: How Can Organizations Function without Any Middle Management?” Journal of Organization Design 25–19 :(1) 12. https://doi.

org/10.1007/s7-00133-022-41469.
Matus, Claudia, Valentina Errázuriz, and Luna Follegati. 2021. “Producción de Mujeres Como Sujetos de Segunda Categoría En El Espacio Escolar: Más Allá de Las Ideas Normativas de Género y Ciudadanía.” In .

Mawdsley, Emma. 2021. “Development Finance and the 2030 Goals.” The Palgrave Handbook of Development Cooperation for Achieving the 2030 Agenda: Contested Collaboration, 57–51. https://library.oapen.org/bitstream/handle/2021/1/43286/20.500.12657_Book_ThePalgraveHandbookOfDevelopme.pdf#page=77.

Miller, Monica. 2023. “US Farmers Win Right to Repair John Deere Equipment.” BBC News, January 2023 ,9. https://www.bbc.com/news/business64206913-.
Mindanao, Inquirer. 2016. “DENR to ARMM Farmers: Stop ‘Kaingin’ amid Drought.” INQUIRER. Net. February 2016 ,15. https://newsinfo.inquirer.net/764797/denr-to-armm-farmers-stop-kaingin-amid-drought.

Montenegro, Marisela, Alicia Rodríguez, and Joan Pujol. 2014. “La Psicología Social Comunitaria Ante Los Cambios En La Sociedad Contemporánea: De La Reificación de Lo Común a La Articulación de Las Diferencias.” Psicoperspectivas. Individuo y Sociedad 43–32 :(2) 13. https://doi.org/10.5027/psicoperspectivas-Vol-13Issue-2fulltext433-.

Montero, Alejandro. n.d. “La Autogestión Social En La Práctica Comunitaria: Encuentros, Resistencias y Participación.” Accessed November 2024 ,7. https://ilusionismosocial.org/mod/resource/view.php?id=593.

Montero, Maritza. 2008. Introducción a la psicología comunitaria: desarrollo, conceptos y procesos. Paidós.

Moreno Crossley, Juan Cristóbal. 2021. “On the Roadside? An Inventory of Self-Managed Habitat Strategies in Chile.” Revista INVI 301–279 :(102) 36. https://doi.org/10.4067/S-0718 83582021000200279.

Nacional, Biblioteca del Congreso. 1967. “Biblioteca del Congreso Nacional | Ley Chile.” www.bcn.cl/leychile. July 1967 ,28. https://www.bcn.cl/leychile.

Ocampo, Ronald O, and Rema Bascos-Ocampo. 2016. “On Farm Conservation Practices of Upland Rice Varieties in Selected Towns of Apayao” 3) 4).

Ortiz Zambrano, Gabriela Belén. 2021. “Espacios en disputa Estudio de caso: colectivos ‘TzamPiza Venimos del Agua’ y ‘Valle Hermoso de Zámbiza’ apropiándonos del Parque Central, del río Tolalá y del antiguo botadero de basura de Zámbiza.” MA Thesis, Quito, EC: Universidad Andina Simón Bolívar, Sede Ecuador. http://repositorio.uasb.edu.ec/handle/8382/10644.

Pasmanik, Diana, María Jesús Mejías Rodríguez, and Ricardo Ernst Montenegro. 2019. “El Ethos de Voluntarios de Colectivos de Educación No Formal Originados Desde La Sociedad Civil.” Psicoperspectivas 58–47 :(2) 18. https://doi.org/10.5027/psicoperspectivas-vol-18issue-2 fulltext1688-.

PawankaFund. 2021. “Swidden Cultivation in Gawaan, Balbalan and Limos, Pinukpuk, Kalinga.” Pawankafund (blog). November 2021 ,21. https://pawankafund.org/blog-news/swidden-cultivation-in-gawaan-balbalan-and-limos-pinukpuk-kalinga/.

Paz Cardona, Antonio José. 2023. “Ecuador decidió detener la explotación petrolera en el Yasuní y la minería en la Reserva del Chocó Andino.” Noticias ambientales. August 2023 ,22. https://es.mongabay.com/08/2023/ecuador-decidio-detener-explotacion-petrolera-en-yasuni-y-mineria-en-reserva-del-choco-andino/.

Pérez-Bustos, Tania, Alexandra Chocontá-Piraquive, Carolina Rincón-Rincón, and Eliana Sánchez-Aldana. 2019. “Hacer-se textil: cuestionando la feminización de los oficios textiles.” Tabula Rasa, no. 70–249 ,32. https://www.redalyc.org/articulo.oa?id=39661317012.

R, Humberto Maturana, and Humberto (Maturana Romesín Francisco J. (Varela. 2006. De Maquinas Y Seres Vivos. Editorial Universitaria.

Romero Fierro, Sebastián. 2023. “El desafío regulatorio de las nuevas tecnologías: análisis del uso de datos personales e inteligencia artificial en el contexto de campañas electorales. Una mirada nacional y comparada.” https://repositorio.uchile.cl/handle/194481/2250.

Sandoval-Obando, Eduardo, María Iturra, and María Paineñanco. 2022. “Voluntariado y Desarrollo Generativo En Jóvenes Universitarios Chilenos: Un Estudio Exploratorio.” Revista INFAD de Psicología. International Journal of Developmental and Educational Psychology. 1 (July):64–49. https://doi.org/10.17060/ijodaep.2022.n1.v1.2309.

Scott, Joan W., and Marta Lamas. 1992. “Igualdad versus Diferencia: Los Usos de La Teoría Postestructuralista.” Debate Feminista 104–5:85. https://www.jstor.org/stable/42624037.
Secretaría de Ambiente, Fundación Cóndor Andino. 2023. “Las Áreas Protegidas Del Distrito Metropolitano de Quito.” Quito, Ecuador: Subsistema Metropolitano de Áreas Naturales Protegidas. https://ambiente.quito.gob.ec/wp-content/uploads/05/2024/Las-areas-protegidas-del-Distrito-Metropolitano-de-Quito.pdf.

See, Dexter A. 2023. “Apayao Declared under State of Calamity.” The Manila Times. August ,1 2023. https://www.manilatimes.net/01/08/2023/regions/apayao-declared-under-state-of-calamity/1903301.

Seidl, David, and Dennis Schoeneborn. 2010. “Niklas Luhmann’s Autopoietic Theory of Organisations: Contributions, Limitations, and Future Prospects.” SSRN Scholarly Paper. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.1552847.

Soliz Torres, María Fernanda, Coni López Silva, and Doménica y otros Enríquez Cárdenas. 2023. Territorios en sacrificio: comunidades basurizadas. Quito, EC: Universidad Andina Simón Bolívar, Sede Ecuador / Aliana Basura Cero / VLIR-UOS / Ku Leuven / GAIA / IEETM. http://repositorio.uasb.edu.ec/handle/9362/10644.

Soliz Torres, María Fernanda, Juan Sebastián Durango Cordero, José Luis Solano Peláez, and Milena Alía Yépez Fuentes. 2020. Cartografía de los residuos sólidos en Ecuador, 2020. Quito, EC:

Universidad Andina Simón Bolívar, Sede Ecuador / INEC / VLIR-UOS / GAIA / Alianza Basura Cero Ecuador / Acción Ecológica. http://repositorio.uasb.edu.ec/handle/7773/10644.

Soto Barrientos, Francisco. 2014. "Asamblea Constituyente: la experiencia latinoamericana y el actual debate en Chile." https://repositorio.uchile.cl/handle/126985/2250.

The Free Software Foundation. n.d. "The GNU Operating System and the Free Software Movement." Accessed November 2024 ,7. https://www.gnu.org/home.en.html.

The Repair Association. n.d. "Learn About the Right to Repair." The Repair Association. Accessed November 2024 ,7. https://www.repair.org/stand-up.

Todd, Sharon. 2024. "Ecología de encuentros: la lógica del compostaje como respuesta educativa al colapso ambiental." Teoría de la Educación. Revista Interuniversitaria 58–43 :(2) 36. https://doi.org/10.14201/teri.31915.

UN General Assembly. 2013. "Self-Determination Integral to Basic Human Rights, Fundamental Freedoms, Third Committee Told as It Concludes General Discussion | Meetings Coverage and Press Releases." 2013. https://press.un.org/en/2013/gashc4085.doc.htm.

Undheim, Trond Arne. n.d. "Why We Need Open Manufacturing And What That Would Mean For You." Forbes. Accessed November 2024 ,7. https://www.forbes.com/sites/trondarneundheim/04/04/2022/why-we-need-open-manufacturing-and-what-that-would-mean-for-you/.

United Nations General Assembly. 1986. "Declaration on the Right to Development." https://www.ohchr.org/en/instruments-mechanisms/instruments/declaration-right-development.

Ussher, Margarita. 2008. "Complejidad de los procesos de participación comunitaria." In . Facultad de Psicología - Universidad de Buenos Aires. https://www.aacademica.org/488/032-000.
Vanoverbergh, Morice. 1941. The Isneg Farmer. Washington: Catholic Anthropological Conference.

Varea, Anamaría, Carmen Barrera, and Ana María Larrea, eds. 1997. Ecologismo ecuatorial: conflictos socioambientales y movimiento ecologista en Ecuador. Libro 1 .1. ed. Quito: Centro de Educación Popular CEDEP.

Warner, Katherine. 1991. Shifting Cultivators: Local Technical Knowledge and Natural Resource Management in the Humid Tropics. Food and Agriculture Organization of the United Nations. https://www.echocommunity.org/resources/a6d01ebc54-e4-9a4c694-8994-be4637d4b.
Wilson, John. 2012. "Volunteerism Research: A Review Essay." Nonprofit and Voluntary Sector Quarterly 212–176 :(2) 41. https://doi.org/089976401143455 8/10.1177.

Winkler, Inga T., and Carmel Williams. 2017. "The Sustainable Development Goals and Human Rights: A Critical Early Review." The International Journal of Human Rights 28–1023 :(8) 21. https://doi.org/13642987.2017.1348695/10.1080.

Wuerthele, Mike. 2024. “New York’s Weak Right to Repair Bill Is Now in Effect, and Changes Almost Nothing.” AppleInsider. January 2024 ,11. https://appleinsider.com/articles/11/01/24/new-yorks-weak-right-to-repair-bill-is-now-in-effect-and-changes-almost-nothing.

Yurén, Teresa, Luis García, Evelyn Moctezuma Ramírez, Silvia Agüero, and Ana Escalante Ferrer. 2018. “La Construcción Del Ethos Del Investigador En Educación: La Perspectiva de Estudiantes.” Education Policy Analysis Archives 26 (May):67. https://doi.org/10.14507/epaa.26.3362.

Zamora, José. 1997. “Th. W. Adorno y La Praxis Necesaria. Prolegómenos a Una Propuesta de Ética Negativa.” Enrahonar : Quaderns de Filosofia; Núm.: 28 28 (January). https://doi.org/10.5565/rev/enrahonar.472.


IBON
INTERNATIONAL