

# **GALAPAGOS FARMERS: RISK AND THE COEXISTENTIAL RIFT**

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## ABSTRACT

Galapagos farmers are generally invisible in global discourses and remain understudied from an anthropological perspective. Drawing on a year of ethnographic fieldwork during the 2020-2021 global pandemic, this thesis focuses on their main worries and livelihood challenges. The liminal period created during the Covid-19 pandemic brought back many aspects of life prior to the arrival of the archipelago's tourism industry and led farmers to yearn for a nostalgic, utopian past when they coexisted more harmoniously with each other and the environment. Unfortunately, many elements of that idealized life are currently unattainable due to compounding risks, including pests, climate change, and Covid-19. The everyday threats to farmers' livelihoods have led to market dependence, indebtedness, alienation, and cumulative anxiety. I explore each risk ethnographically, whilst also showing the ways in which they are part of a causal framework that alters farmers' values and behaviours. This thesis formulates the *coexistential rift* concept to explain how both the materiality of risks and their perception accelerate a treadmill syndrome where farmers must focus on making money to lessen their insecurity. This vicious cycle is reinforced by the slow violence of political abandonment, economic inequality, fortress conservation, legal and bureaucratic obstacles, and predominant metanarratives that blame and exclude the archipelago's inhabitants. Both Galapagueño society and the environment would benefit from addressing the agricultural sector's long-standing problems. Finally, this thesis points to how human and political ecological studies can better conceptualize and incorporate risks into their analysis and causal frameworks to elucidate their impact on everyday life.

Keywords: risk, coexistential rift, climate change, pests, Covid-19, farmers, Galapagos Islands

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## ACRONYMS AND KEY TERMS

**ABG:** Agencia de Regulación y Control de la Bioseguridad y Cuarentena para Galápagos, the main biosecurity agency that deals with introduced species

**Afuereño:** Outsider

**Aguacero:** Downpour

**Arraigo:** Cultural belonging; rootedness

**Bono:** Financial support

**Buen vivir:** From the Quichua *sumak kawsay*, it means ‘living well’ and is a key concept of the Ecuadorian 2008 Constitution

**CAF:** Development Bank of Latin America

**Campo:** Literally meaning ‘field’, it also describes the countryside, rural areas, land, farms, etc.

**Carapachudo:** ‘Shellback’, a zoomorphic term used by long-time residents to describe *real* Galapagueños

**CDF:** Charles Darwin Foundation

**CGREG:** Consejo de Gobierno de Régimen Especial de Galápagos, the central governing institution, which used to be known as INGALA (Instituto Nacional Galápagos)

**Chacra:** Originally from Quichua, it is used to describe gardens, fields, and other farm plots

**CI:** Conservation International

**Competencia:** Jurisdiction

**Convivir:** Meaning ‘living together’ or ‘coexisting’, this concept emerged in the field as a primary inspiration for my concept of the *coexistential rift*

**COP 26:** Glasgow United Nations Climate Change Conference

**Covid-19:** Coronavirus disease 2019 is a respiratory illness caused by the SARS-CoV-2 virus and is often used as a metonym of the global pandemic

**Cupo:** A supposedly non-transferable permit that tour boats, taxis, and fishers require in order to legally operate

**Encañada:** Creek

**ENSO:** El Niño-Southern Oscillation, a climate pattern of Pacific Ocean warming and cooling, with the warming phase known as ‘El Niño’ and the cooling phase as ‘La Niña’

**Facilismo:** Meaning ‘easy living’, this slang sometimes implies nepotism and corruption

**FAO:** Food and Agriculture Organization

**FEIG:** Fondo para el Control de las Especies Invasoras de Galápagos, a fund for controlling invasive species

**FUNDAR:** Fundación para el Desarrollo Alternativo Responsable, a local NGO

**Garúa:** A light misty rain, common in the dry/cold period from June to November; *llovizna*

**GCF:** Green Climate Fund

**GNP:** Galapagos National Park

**GNPD:** Galapagos National Park Directorate, the institution that manages the GNP

**GMR:** Galapagos Marine Reserve

**Helada:** Frost or plant stress due to temperature fluctuations; sometimes refers to fungal blight

**Huerto:** Vegetable patch

**IC:** Island Conservation

**IERAC:** Instituto Ecuatoriano de Reforma Agraria y Colonización, an institution of land reform

**INAMHI:** Instituto Nacional de Meteorología e Hidrología, Ecuador’s national meteorological and hydrological institute

**INEC:** National Institute of Statistics and Censuses

**Introducido:** The scientific terminology of species introduction is used colloquially for humans

**ITCZ:** Inter-Tropical Convergence Zone, the area where northeast and southeast trade winds converge



**IUCN:** International Union for Conservation of Nature

**Junta Parroquial:** Parish government

**Kit alimenticio:** Food basket provided to those in need

**LOREG:** Ley Orgánica de Régimen Especial de la Provincia de Galápagos, a set of laws established for the archipelago in 1998 with the intention of restricting migration and granting privileges to the local population; it was altered and renewed in 2015

**MAG:** Ministerio de Agricultura y Ganadería (Ministry of Agriculture), formerly known as MAGAP

**Minga:** A Quichua term for reciprocal communal labour, usually on infrastructure projects

**NGO:** Nongovernmental Organization

**NOAA:** National Oceanic and Atmospheric Administration

**Oficio:** Formal letters between institutions

**ORSTOM:** L'Office de la Recherche Scientifique et Technique Outre-Mer

**Palanca:** Favouritism

**Parma:** Fishing permit

**Plaga:** Pest or plague

**Quemeimportismo:** Literally 'not-caring-ism', slang for indifference

**SES:** Socio-Ecological System

**Técnicos:** In agricultural circles it refers to veterinarians and agronomists

**Todólogo:** Jack-of-all-trades

**UNESCO:** United Nations Educational, Scientific and Cultural Organization

**UNDP:** United Nations Development Programme

**UNFCCC:** United Nations Framework Convention on Climate Change

**Viveza criolla:** Creole cunning, a Latin American cultural phenomenon of trickery

**WWF:** World Wildlife Fund

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# 1. INTRODUCTION: GALAPAGOS IN CRISIS

## 1.1 Galapagos and the agency of risk

Covid has brought economic problems and domestic problems, like the question of what I am going to eat today. Let's say the Municipality hosts a meeting and we ask people right now: 'what's your opinion about climate change?' They're going to say that we should go to hell. They'll say, 'My family didn't eat yesterday. Don't come here to talk about climate change'...Oh, it may be really hot next March. Who cares?...We have to fix this other issue first. Now it's an issue of survival. – Municipality staff member, Santa Cruz Island

If you're a tourist, I'll take you to the touristy spots and you'll see paradise, but you won't find out about the social problems here. – Shopkeeper, Isabela Island

In 2020 I arrived in the Galapagos Islands<sup>1</sup> with the initial aim of conducting ethnographic research on different social sectors' understanding, perception and reaction to climate change. Unsurprisingly, this was not the most pressing concern, since most Galapagueños were anxious<sup>2</sup> about Covid-19 and the archipelago's economic collapse. After deciding to focus on the agricultural sector, it became apparent that listening intently to Galapagos farmers' complaints and worries would reveal important insights about their everyday problems. Originally intended as a 'climate ethnography' (Crate & Nuttall 2009), this thesis could be defined more broadly as an ethnography of risk.

One of the salient concepts that emerged from my fieldwork was the emic term *convivir*, which means to 'live together' or coexist. Whether they were farmers, tour guides, conservationists, or

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<sup>1</sup> The archipelago is a province of Ecuador and is located approximately 1,000 km off the coast of South America.

<sup>2</sup> I use the word anxiety to describe the conglomerate of similar emotions encapsulated by angst, precarity, fear, worry, concern, grief, misfortune, etc. Rather than complicate matters by giving each of these a separate meaning, I argue that when people respond to the question 'What are you worried about?' they are expressing one or more of these forms of anxiety. Additionally, I see anxiety as 'embodied risk' and one of the central emotions behind alienation.

fishers, my participants highlighted that this way of life existed in the past and spoke of it as an ideal for the future of the archipelago, even if there is no clear path to achieving it. The idea of coexistence could be thought of as linked to global discourses of ‘sustainable development’ but is probably mostly inspired by the concept of ‘good living’ (*buen vivir*<sup>3</sup> or *sumak kawsay*), which is incorporated into the country’s Constitution.

Due to the pandemic, a liminal space opened up during my fieldwork, allowing participants to reflect nostalgically about a utopian past that was more egalitarian, communal, and bountiful. While some aspects of this lifestyle reappeared, the historical moment also showed farmers that indebtedness and market dependence prevented them from transforming their present and future into this ideal tranquil lifestyle. This thesis will expand on this yearning for greater coexistence and propose a causal framework that demonstrates how compounding risks amplify alienation, change farmers’ values and behaviours, increase anxiety, and create an ever-widening vicious cycle I call the *coexistential rift*.

Ulrich Beck defines risk as “*a systematic way of dealing with hazards and insecurities induced and introduced by modernization itself*. Risks, as opposed to older dangers, are consequences which relate to the threatening force of modernization and to its globalization of doubt. They are *politically reflexive*” (Beck 1992: 21, emphasis in original). In this thesis I stand by Beck’s vision of risk but use it as a synonym for ‘threat’ or ‘danger’. Although Luhmann (1993: 23) and Giddens (1999a: 40) are correct in stating that danger is a material manifestation and risk has connotations of uncertainty, decision-making, and assessment of the future, I argue that the distinction is not analytically helpful. When Galapagueño farmers speak about their worries, they seem to be talking

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<sup>3</sup> See Merino (2016) and Chassagne (2021) for more information about the link between *buen vivir* and sustainable development.

about ‘risk’, because ‘danger’ would suggest something unmediated by perception. However, while the ontological (danger) is distinct from the epistemological (risk), using different terminology does not improve our understanding of why certain dangers are deemed riskier than others. Neither does the use of distinct words explain how risks transform human values and behaviours, which is the central focus of my analysis. Throughout this paper, risk and its synonyms are used interchangeably to denote both material reality and the perception of reality, highlighting that many risks are physically created by capitalism and are generating real changes in society regardless of human perception. When people become aware of risks, either through the media or the environment, they often become embodied as anxieties and deepen human alienation, further entrenching people in a capitalist system that generates these dangers in the first place.

Bruno Latour’s posthumanist emphasis on nonhuman agency is particularly useful to this way of conceptualizing risk. He claims that historically the ‘modernist project’ of creating universal laws based on ideal conditions led to scientists adopting “a view from nowhere” (Latour 2021b), meaning that they saw themselves as separate from the world they attempted to describe. As part of his longstanding argument that science is situated as part of social relationships (Latour & Woolgar 1986), he argued that Covid-19 had helped shift this cosmology<sup>4</sup> because viruses have shaped the world and science is now “inserted into all the controversies” (Latour 2021b). Living in the Anthropocene forces us to rethink the way science is conducted (Latour 2021a). Contrary to billionaires who are attempting to escape into space, he argues that humans are terrestrial beings

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<sup>4</sup> Latour describes cosmology as a “structure that distributes agencies” (2021b). This definition is clearer: a cosmology is “any composition or cultural construct relating to the structure or process of systems of creation: the origins of physical elements of earthly or astronomical spheres, the genesis of the material world, the order and function of the observable universe” (Destro 2010: 227). As explained by Allan (2018), a cosmology is not a totality, but an array of elements that are woven together into powerful narratives about “humanity’s place in the universe” and therefore “infuse the beliefs and institutions that order collective life with meaning” (Allan 2018: 12).

who have encountered a ‘cosmological crisis’ during the pandemic, causing most of us to reexamine our everyday relationship to the Earth and realize that we are inhabitants of a world that we cannot escape (Latour 2021a 2021b). Most importantly, Latour highlights that both Covid-19 and the climate are rapidly changing the world due to “our actions”, but we too are being forced to react quickly to “their actions” (Latour 2021b).

In other words, Latour refers to both climate change and Covid-19 as *material entities*. On a fundamental level, there are greenhouse gas molecules and infectious microbes, which are both abstract risks, or ‘hyperobjects’ (Morton 2013), due to their unfathomable extension in space and time. Although both may be invisible to the naked eye and somewhat abstract for the mind to understand, their impact<sup>5</sup> can be felt, whether it be by the countless people who have gotten sick and died or through record-breaking temperatures recorded all over the world every subsequent year. Admittedly, Covid-19 is perceived as a much more immediate threat than climate change, but this may have more to say about how we understand *causation* than about their actual deadly and ever-present danger, since it is easier to attribute a death scientifically to a virus than it is to conceptualize every flood and drought in terms of global climate systems. However, when we refer to the ways in which Covid-19 and climate change impact people, we are referring to the *agency of risks*, to their capacity to reformulate human values and behaviours.

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<sup>5</sup>Mediation of reality through statistics and the TV has as great an impact on our behaviour as the reality itself. For this reason, multiple academics (Hulme 2011; Rudiak-Gould 2011; de Wit 2016) have called for anthropological attention towards the way in which ‘climate change’ is a traveling concept that alters social life. Although I agree, there are methodological questions concerning climatic observations that can be separated from reception of information about the concept of climate change. Ultimately, everything we perceive is mediated in one way or another, whether it is through what we read, what someone tells us, or even the sense organs as the intermediary between reality and ourselves (See Chapter 5). What makes Covid-19 and climate change distinct from invasive species, for example, is that their invisibility puts scientists and the media into a position of power over the narrative that is told.

Since politics is inherently connected to economics, and nature constitutes the primary source of all capitalist value, my ethnography seeks to untangle these intricate interrelationships. It is most closely aligned with political ecology because I “attempt to understand the political sources, conditions and ramifications of environmental change” (Bryant 1992: 13). Political ecology has typically focused on the ways in which development is exclusionary and marginalizing, but often by imposing *a priori* judgements and without exploring the “complex and contingent interactions of factors whereby actual environmental changes often are produced” (Vayda & Walters 1999: 167). Although some scholarship does “make rigorous and explicit the causal connections between the logics and dynamics of capitalist growth and specific environmental outcomes” (Watts & Peet 2002: 12), to my knowledge a causal framework that broadly links capitalism, risk, and anxiety is a novel idea. Furthermore, while much has been written in the fields of hazards research and political ecology, the intersection of the two is still uncommon (Westcoat 2015, Wisner & Walker 2005). My thesis contributes to filling this gap in scholarship by developing a ‘political ecology of risk’ and using causal explanations to elucidate the ways in which risks have agency and affect people’s everyday lives.

## 1.2 *Mise-en-scène*

It is difficult to grasp the magnitude of the Covid-19 crisis in Galapagos. As the tourism industry collapsed overnight due to the pandemic, by the time I arrived in the archipelago in September 2020 many people – primarily temporary residents and stranded tourists – had already left on humanitarian flights and so they could not be interviewed for this qualitative study. Although some people assured me that the situation in Galapagos was less dire than in mainland Ecuador because of community solidarity, food baskets, and the generally bountiful agriculture of

the highlands, other people, especially those living in urban areas, described a different reality: one of hunger, desperation, and even some merchants committing suicide because they had accrued enormous debts that they couldn't pay back. One of the farm stays that I had planned for my fieldwork was cancelled because the farm was sold due to financial difficulties. Thus, it is no mystery that economic woes and the ongoing pandemic were the participants' primary concerns. Everyone I spoke to agreed this was the biggest crisis of their lives, even worse than the 2016 drought, the dollarization crisis in 1999, and the devastating 1982 El Niño (ENSO).

My primary research questions thus shifted to address more urgent and pragmatic issues: What challenges do Galapagueño farmers currently face, how do Covid-19 and climate change intersect with other worries, and what should be done to tackle these problems? In this ethnography I hope to not only build a picture of what life was like for these farmers during the biggest crisis they have ever experienced, but also to examine their interrelationships with each other and the environment, and how specific metanarratives demonstrate the ways in which current problems are incorporated into established stories of social and environmental decline.

Moreover, I intend to elucidate the lives of people who are doubly invisible: firstly, the worldwide media portrays Galapagos as a pristine, paradisiacal nature sanctuary devoid of humans, and conservation efforts are focused almost exclusively on the flora and fauna; secondly, smallholder farmers worldwide are subaltern citizens excluded from mainstream society. As one participant summarized, "They deny our existence because of the publicity that there are only animals here." Even if people outside the archipelago realize that Galapagueño farmers exist, my participants talked about how 'abandoned' they feel by authorities who prioritize tourism, conservation, the bureaucratic public sector, or even the vilified fishers.



Contrary to Bocci (2022), who claims that Galapagos farmers have a strong sense of rootedness (*arraigo*), I argue that their coexistence is under threat from a number of external risks and structural factors. While there is no clear-cut solution for dealing with risks that are products of the capitalist system itself, providing economic incentives and strengthening a sense of *belonging and care* could be extremely beneficial. Supporting the agricultural sector would help environmental conservation initiatives by reducing the arrival of imported goods and the unintentionally introduced species that come with them. Furthermore, addressing the problems of agriculture has the potential to solve a myriad of other socio-environmental problems, such as youth unemployment, migration, pesticide use, and healing the ‘metabolic rift’ (Marx 1990 [1867]) between humans and nature by ensuring that nutrients are recycled and integrated into a human economy.

As Thomas Hylland Eriksen (2001) explains, the role of social and cultural anthropology is to think about big issues in small places. Because of the historical link between Galapagos and Darwin’s theory of evolution (1859), it is a fascinating location to think about conservation, sustainable development, and the human-environment nexus, in addition to biological research on its unique endemic flora and fauna. As a participant said, “social issues are linked to environmental ones. Just look at Covid. It’s linked. Poverty indices have increased...so where are we going if we don’t have a healthy environment?” People’s perceptions of reality and what they are worried about are often intermingled, making it difficult to ascertain when beliefs were acquired and how they are connected as part of a web of associated concepts. For instance, a conversation with a farmer might start out talking about the Covid-19 pandemic and end up going through the social and environmental changes they have witnessed in their lifetimes, inserting all of the negative trends within existing metanarratives of decline and destruction.

Furthermore, the issues faced are both complex and paradoxical. For example, the same participants might complain that migrants have destroyed Galapagos, but also hope for migratory reform so they can hire farm labourers more easily. Farmers might criticize businessmen and tour guides for being greedy, selfish, and having no savings mentality, but ultimately, they also want tourism to return to Galapagos to reactivate the economy. ‘Conservationists’ and government institutions are blamed either for not eradicating invasive species or for spending too much money on this issue, but the farmers do not recognize their personal responsibility in bringing some of those species into the archipelago. Even though the climate is changing and increasingly unpredictable, farmers paradoxically state that Galapagos is like a ‘bubble’ and its insulation reduces negative impacts from outside the archipelago. Many of these contradictory behaviours and discourses highlight how Galapagueños deal with daily risks by allocating blame externally. Many locals feel like they’re living in a “beautiful prison”, one with privileges but also scarce employment, poor governance, endless bureaucracy, and countless restrictions for the ‘benefit of the environment’. In this thesis, I highlight the ways in which climate change, Covid-19, invasive species, fortress conservation, political abandonment, bureaucracy, economic precarity, debt, globalized flows, and migration are all interlinked challenges that amplify farmers’ daily worries/risks and I then suggest what could be done to ameliorate their lives.

This ethnography focuses on three *manufactured risks*<sup>6</sup> (Giddens 1999b): Covid-19, climate change, and pests<sup>7</sup> (Chapters 4 to 6), highlighting the voices and experiences of Galapagos farmers.

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<sup>6</sup>*Manufactured risks* are threats that have been created by human technological development. They include nuclear accidents/war, climate change, ozone depletion, air/water pollution, pandemics, and the side-effects of pesticides or new medicines.

<sup>7</sup> This risk is not abstract or invisible, but it is similar to Covid-19 in that the accelerated flows of globalization have made it equally expansive through space and time, causing farmers to despair and use pesticides in an attempt to keep their crops safe.

All three risks are forms of ‘slow violence’ (Nixon 2011) since they aggravate structural inequalities and also create a *treadmill syndrome* (Eriksen 2016), where farmers must work harder to support their livelihood. While Chapter 2 outlines my research questions and methodology, Chapter 3 explores the academic literature on Galapagos, agriculture, risk, and globalization. The heart of my theoretical argument about risk and the *coexistential rift* is elaborated in Chapter 7, which is then followed by an exploration of the context of the ‘negligent hegemonic state’ (Stimson 2016) in Galapagos. Finally, in Chapter 9 I propose practical changes that could be implemented to ameliorate the lives of Galapagos farmers.

## 2. METHODOLOGY AND PARTICIPANT CHARACTERISTICS

### 2.1 Methodology and research questions

This thesis is based on a year of multi-sited ethnographic research on the four inhabited islands of Galapagos (Santa Cruz, San Cristóbal, Floreana, and Isabela) from September 2020 to August 2021. As mentioned previously, the investigation originally centred on how different social groups perceive, understand, and respond to climate change. However, like most ethnographic studies, this project prioritized the issues participants found important. Once I focused on farmers, I decided to listen attentively to their central worries, which included Covid-19, pests (*plagas*), and an increasingly unpredictable climate.

Not only has agriculture been understudied from an anthropological perspective, but the people in the rural areas were the most open<sup>8</sup> to my research. As this investigation evolved, I realized that the marginalized agricultural sector has a huge potential to solve many of Galapagos' problems if only farmers' voices were heard. If nothing is done to support this economic sector, this will not only result in greater social inequality, abandoned land, and the introduction of more invasive species, but it will also impact food security (Burke 2021, Sampedro et al. 2020). Hence, I chose to focus on the multiple challenges that farmers were facing during the exceptional period of the Covid-19 pandemic. More specifically, the following research questions emerged:

1. What challenges/risks do Galapagueño farmers face and how are they confronted?
2. How do risks affect people's relationship to each other and with the environment?
3. What social, political, or economic factors aggravate farmers' problems?
4. What practical measures should be taken to tackle these challenges?

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<sup>8</sup> Fishers in Galapagos experience research fatigue and are also worried that research will be used against them. Even though many of my initial contacts were scientists and tourism guides, I found these social circles harder to break into during the pandemic.



Images 1 & 2. Closed businesses and empty streets were common during the first couple months of fieldwork.

When Covid-19 lockdowns occurred worldwide, the Galapagos Islands followed suit in March 2020 and were closed off until June. When I arrived in September 2020 the stores were still closed and the streets were ghostly quiet compared to the bustling tourist towns I had experienced in 2014 and 2017, when I had previously worked in the communications department of the Charles Darwin Foundation (CDF). Methodologically, the pandemic made contacting potential participants more challenging. I was primarily able to identify and communicate with them by sending WhatsApp messages to my former contacts to begin snowball<sup>9</sup> sampling. Fortunately, a staff member from the Ministry of Agriculture (MAG) gave me access to farm visitations that agronomists conduct daily and also recommended farmers who I should interview. Over the course of the year, I was therefore able to speak with 219 participants, of which 150 were farmers. According to the MAG

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<sup>9</sup> I used snowball sampling, so my participants may not be representative of all farmers in Galapagos. Furthermore, farmers without a phone or those who didn't use WhatsApp were mostly not represented in this study. Finally, the farmers on the original list I was provided for this study were those who had signed a 'conservation agreement' with Conservation International, from which it can be inferred that these participants have a certain degree of interest in conservation work and openness to researchers. To broaden the sample's diversity, I conducted door-to-door farm visits and relied on word-of-mouth to engage with a more varied group of farmers.

census (León 2014), there are 755 ‘Units of Agricultural Production’, so my study covered individuals from approximately 20% of Galapagos’ agricultural area.

Although the majority of my data from this thesis is based on one-on-one interviews with farmers, which I recorded<sup>10</sup>, I also conducted three farm stays on the islands of San Cristóbal, Floreana, and Isabela. I found it more difficult to find a farmer willing to host me on Santa Cruz Island, so I was unable to conduct a farm stay there. However, I frequently visited a farmer and a cattle rancher who were receptive to my research, and the fact that I was living in Puerto Ayora (the largest town on that island) made it easier for me to meet with many Santa Cruz farmers. As fieldwork was carried out during the pandemic, and prior to the development of Covid-19 vaccines, meetings with participants were held outdoors, adhering to social distancing and face mask guidelines. Fortunately, I was able to have four in-depth relationships with farmers in addition to ample interview data from the four inhabited islands. In Map 1 I have highlighted the populated islands I visited (in red) and the town of Puerto Ayora (in orange).

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<sup>10</sup> A recorder is less intrusive than taking notes (Davies 1999: 114).

Map 1: The inhabited islands of Galapagos<sup>11</sup>



In 2015, 25,244 people inhabited Galapagos (INEC 2015), and the projected population for 2020 was 33,042 (INEC n.d.). These numbers are probably inaccurate due to out-migration during the pandemic. Although this thesis mainly focuses on farmers, due to the overlap in people's professions (with farmers also working part time in other sectors such as fishing and tourism) and the relatively small population of the archipelago, many of the central topics are also relevant to the general population.

<sup>11</sup> This map was adapted from Wikipedia (Gaba 2011).

The semi-structured interview questions (Appendix I) were roughly inspired by Kempton et al.'s work on environmental values (1995: 248-253). My research was carried out in accordance with the University of Oxford's Central Research Ethics Committee (CUREC), and my one-year temporary residency in Galapagos was sponsored by the CDF, meaning I was considered a 'visiting scientist'. In general, I presented myself as an 'Oxford researcher' to avoid any association with CDF due to the negative perception of scientists among some social groups. As I am an Ecuadorian citizen who lived in Galapagos on two prior occasions<sup>12</sup> before the pandemic, it was relatively easy to establish relations of trust despite the other methodological challenges of conducting research during the Covid-19 public health emergency. Although it is hard to ascertain the impact of my positionality, given the fact that I am white skinned and Euro-American (due to being the son of a Spaniard and an American), my cultural inbetweenness could have the opposite effect of making participants trust me less than someone of Ecuadorian or Galapagueño descent. As suggested by Rudiak-Gould (2014), I did not introduce myself as a 'climate change researcher' but instead asked people to talk about change more generally, as a way of broadening the field of study and allowing the topics of environmental and climatic change to emerge more naturally in the interview process. Galapagueños are generally sceptical of researchers because the view is that they gather data, write reports, and then nothing changes in people's everyday lives. In the words of my participants, "they take photos, take data and then they leave and forget about us". My intention is to make this study not only ethnographically and theoretically rich, but to propose practical recommendations and share my findings with the different institutions of the archipelago.

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<sup>12</sup> Having worked previously as a videographer for the Lindblad Expeditions-National Geographic ships that cruise around Galapagos, and as a communication officer for CDF, I am aware of what the islands looked like in 2014 and 2017-18.



The qualitative data collected for this study was translated, transcribed, and coded thematically with NVivo software. Grounded theory was used for the creation of new concepts like the *coexistential rift* because what the farmers' numerous complaints and worries all had in common was the centrality of desiring tranquil coexistence. The word *convivir* (coexist; live together) emerged emically and was later conceptualized as part of a causal framework, also based on interview data. In Chapter 5, qualitative data is compared to quantitative studies of the climate to develop a more holistic understanding of climate change in Galapagos.

From a meta-theoretical perspective, I consider myself a critical realist (Bhaskar et al. 2010) because this approach allows us to acknowledge the importance of perceptions and concepts, but also their biophysical reality. Multiple authors point out that social constructivism and critical realism are compatible frameworks (Beck 2000: 212, Forsyth 2003: 14). One of the advantages of critical realism is that it allows us to study what is understood about a real phenomenon (epistemology) and the occurrence itself (ontology), contrary to other approaches that may disregard biophysical reality in favour of social constructivism. Finally, I agree with Bhaskar et al. (2010) that reality is *laminated*, meaning that any phenomenon can only be understood when looked at from many angles and on different scales.

## 2.2 Participant demographics

The first and most fundamental question about this ethnography is 'Who are my participants?' Although I decided to interview 'farmers', as Ahassi (2007a) points out, people hold hyphenated identities (*identidades compuestas*) in Galapagos. While Galapagos residents are often associated with their economic sector, such as fishing, farming, tourism, conservation, or the public sector, they also migrated from different parts of Ecuador, have specific ethnic or linguistic

characteristics, and hold different religious beliefs. It was also difficult to determine whether farming was a participant's main activity or source of income because many people work multiple jobs to make a living. I spoke with people who were tour guides who had just started farming, farmers who owned touristic 'tortoise farms', farmers with hotels and eco-tourism cabins, hydroponic farmers, large landowning ranchers, poor smallholders, fishers who are also farmers, etc. Additionally, only a small percentage of farmers actually live in the highlands where their farms are (also noted by Brewington 2018), as many have another job in the port towns where they have a different job. The more active farmers drive to the highlands daily, whereas others only visit their *fincas* on the weekends (particularly on Isabela and San Cristóbal islands).

Out of a total of 219 participants, 150 (68%) had at least some amount of farming as part of their livelihood, whereas 69 (32%) were solely tourism guides, scientists, public servants, retired, unemployed, students, or from other professions. Additionally, only 58 individuals who self-identified as farmers had no secondary profession, meaning that 61% of the 150 'farmers' that I spoke to also had other forms of income, which supports claims by the MAG that the agricultural sector is not economically self-sufficient. Amongst non-farmers, half had multiple jobs, meaning that this way of earning a living also exists outside of the agricultural sector. Throughout this thesis I will highlight the profession of a participant if it is contextually relevant. The average age of the farmers (N=150) was 55 years old, 69% were men and 31% were women. It is worth noting that I met no female cattle ranchers during my fieldwork, while many of my female participants solely cultivated vegetables and a few were pig and chicken farmers. The 41 men who self-identified as cattle ranchers were typically more economically well off compared to other types of farmers, but they claimed that the sector was no longer profitable and that nowadays the poultry sector is doing

better. Some ranchers also had somewhat lucrative coffee plantations as an alternative source of income. Those farmers who mainly cultivated produce appeared to be the least financially solvent.

Since I spent most of my time on Santa Cruz Island and already had pre-existing contacts there at the MAG, I conducted the majority of my farm visits and interviews there and even though I snowball sampled, I ended up interviewing more men than women, not only because the agricultural area has a larger ratio of men to women (León 2014), but also because as a male researcher it was easier to gain access to speak with men. Finally, I only spoke to two illegal migrants during my fieldwork, whereas everyone else was a permanent resident of the archipelago. For more information about the demographics of my participants, consult Table 1.

**Table 1: Participant demographics<sup>13</sup>**

Characteristic		Farmers (N=150)	Non-Farmers (N=69)	Total Participants (N=219)
Island	Santa Cruz	<b>84 (56%)</b>	<b>39 (56%)</b>	<b>123 (56%)</b>
	San Cristóbal	33 (22%)	15 (22%)	48 (22%)
	Isabela	18 (12%)	7 (10%)	25 (11%)
	Floreana	15 (10%)	8 (12%)	23 (11%)
Gender	Male	<b>104 (69%)</b>	32 (46%)	<b>136 (62%)</b>
	Female	46 (31%)	<b>37 (54%)</b>	83 (38%)
Education	University	39 (26%)	<b>35 (51%)</b>	<b>74 (34%)</b>
	Secondary	<b>54 (36%)</b>	18 (26%)	72 (33%)
	Primary	34 (23%)	0 (0%)	34 (15%)
	Unknown	23 (15%)	16 (23%)	39 (18%)
Religion	Catholic	<b>113 (75%)</b>	<b>29 (42%)</b>	<b>142 (65%)</b>
	Atheist/None	12 (8%)	17 (25%)	29 (13%)
	Evangelical	5 (3%)	1 (1%)	6 (3%)
	Jehovah's Witness	3 (2%)	1 (1%)	4 (2%)
	Seventh Day Adventist	1 (<1%)	0 (0%)	1 (<1%)
	Mormon	1 (<1%)	2 (3%)	3 (1%)
	Unknown	15 (10%)	19 (28%)	34 (15%)
Birthplace	Galapagos	<b>67 (45%)</b>	<b>37 (54%)</b>	<b>104 (48%)</b>
	Elsewhere	65 (43%)	21 (30%)	86 (39%)

<sup>13</sup> I have bolded the highest values to make this information easier to interpret.

	Unknown	18 (12%)	11 (16%)	29 (13%)
Time lived in Galapagos (years)	<20	7 (5%)	4 (6%)	11 (5%)
	20-40	40 (27%)	<b>31 (45%)</b>	71 (32%)
	40-60	<b>59 (39%)</b>	16 (23%)	<b>75 (34%)</b>
	60+	27 (18%)	5 (7%)	32 (15%)
	Unknown	17 (11%)	13 (19%)	30 (14%)
Average age (years old)		55	47	53

Prior to the pandemic, over 80% of the labour force worked directly or indirectly in the tourism industry (Pizzitutti et al. 2016). Espin et al. (2019) claim that 10% of Galapagos inhabitants work in agriculture, cattle and fishing, while 11% work in the public sector (Ibid: 103) and only 2% work solely in fishing (Quiroga 2013: 33). Scientists and conservationists must also be a minority because the total number of staff members at the Charles Darwin Foundation hovers at around 100, and other NGOs also don't have many personnel. According to an agricultural census in 2014, the agricultural zone is composed of 755 agricultural plots ('Units of Agricultural Production' larger than 500 m<sup>2</sup>) worked by 568 men and 187 women. These statistics would imply that closer to 2 or 3% of the total archipelago's population (c. 30,000 people) work in farming/ranching. However, not only do many inhabitants have multiple jobs, but many people working on these agricultural areas are not accounted for in the census, making it harder to determine an accurate number of farmers in Galapagos. In general, my participants were smallholders who owned a small number of farm animals or had *chacras* (gardens) they worked on, but some had large greenhouses, hundreds of cows, numerous pigsties, and wanted to expand their agricultural businesses.

### 2.3 Dramatis personae

Throughout this thesis, my 219 participants remain anonymous, though I will highlight people's profession and island of residence. Since I conducted two long farm stays on Floreana and San Cristóbal islands, in addition to frequently revisiting two participants on Santa Cruz Island, I will introduce four main characters<sup>14</sup> under different pseudonyms. Although I am aware this might potentially expose the identity of some participants to those who know the archipelago well, to aid in following the narrative of this thesis, it is helpful to have a few main 'characters' to return to. Furthermore, these participants said on multiple occasions that they didn't care if they were anonymous or not; however, I am refraining from using their real names due to ethical obligations (CUREC).

1) **Mariana, Santa Cruz Island:** She is a smallholder with an upbeat attitude, a generous heart, and a broad smile. This individual is actually an amalgam of two female farmers from Santa Cruz Island, who I have combined due to the proximity in their views and to make it easier for the reader to keep track of the four central characters. She has an intimate connection with the environment, is practically organic in her agricultural planting techniques (apart from the treatment of ants with cypermethrin), and is currently struggling financially, when compared with the other participants. She believes the government *should* support farmers more, but thinks they never will, so she had to find innovative ways to fund a shade house and greenhouse on her small plot of land. It is important to note that her perceived economic status and more communal mindset differentiate her from the following three participants who are more individualistic.

2) **Daniel, Santa Cruz Island:** Somewhat portly with a booming voice and large mischievous eyes, this loquacious cattle rancher and hotel owner goes everywhere with his mongrel dog.

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<sup>14</sup> I conducted a third short farm stay on Isabela Island but decided not to include a central character related to it in this thesis because the farm labourer had only recently arrived to the archipelago and didn't have much to say about the topic of my research.

He is of Norwegian heritage and his family was among the first in the agricultural sector. Furthermore, he is jovial and relatively well-off, but speaks often about economic struggles during the pandemic and about persevering with ranching despite the many hardships he encounters. He loves the work he does in the field and wants to prove that it is economically viable, but he says times are tough due to the pandemic and corrupt politicians. He has lost faith in the public sector and doesn't believe in farming associations either, preferring to do everything himself.

3) **Felipe, San Cristóbal Island:** A strong young man who is soft spoken and assertive, this rancher and hotel manager is also intelligent and determined, the perfect qualities of an entrepreneur. He also hosts international volunteers, is starting an innovative goat cheese production project, and is planning larger agrotourism projects on his farm. Felipe owns an extensive amount of land due to partnering with a hedge fund manager he met while surfing. Felipe's progressive and entrepreneurial frame of mind is oriented towards practical conservation projects and ways of making them economically viable. He has faith in an individual's ability to work hard to achieve their goals, rather than expecting anything from the 'incompetent' public sector. Like Daniel, he thinks one must struggle alone to get ahead.

4) **Lucas, Floreana Island:** A tall slender man with a big, bushy white beard, often quiet and pensive, but also generous and warm, he is a well-known cattle rancher, farmer, and hotel owner because his family was amongst the first residents of the island. His last name is encountered all over the archipelago in positions of power because he and his siblings have held multiple leadership positions in government and conservation organizations. Lucas used to be the director of the Galapagos National Park on Floreana Island and has been active in building cabins for the burgeoning tourism industry on the island. He has always worked in ranching and farming but was especially oriented towards these activities during the pandemic. As a jack-of-all-trades, he is able to produce many milk-based products, vegetables, meat, and even wine.

Lucas, Felipe, Daniel, and Mariana will be recurring characters in this thesis in order to make their stories more personable, but hundreds of other voices are also referred to anonymously. As in a play, the dramatis personae section is here for reference in case the characters become hard to differentiate.

### 3. HISTORICAL AND ANTHROPOLOGICAL CONTEXT

#### 3.1 Galapagos history: paradise, laboratory, or lifeworld?

Nietzsche (1957 [1874]) explained that history can be ‘abused’ when people instrumentalize facts to support their worldview. In Galapagos, there are two central ways of using history to legitimize one’s right to live in the archipelago: conservationists focusing on Darwin’s legacy and the idea of a pristine uninhabited place; and some farmers and fishers asserting that the archipelago has centuries of human history that are purposely ignored (See Chapter 8.1). However, given that the conservationist interpretation aligns well with a global *conservationist paradigm*, recent migrants must assert that they are stewards and carers of the archipelago to convincingly argue that they have as much right to live in Galapagos as long-time residents or the staff of conservationist organizations. Since identity and legitimacy are so linked to the residents’ order of arrival, it is worth outlining the basic history of the archipelago.

The most important point about Galapagos’ history is that ever since the archipelago was ‘discovered’ in 1535 it became entangled in human networks, whether those visits were by whalers and pirates in the 17<sup>th</sup> and 18<sup>th</sup> centuries, or by those who attempted to set up agricultural plantations in the 19<sup>th</sup> century. By the time Charles Darwin arrived in 1835, the archipelago already had human inhabitants, many introduced species (goats, rats, pigs, donkeys, cows), and had already belonged to Ecuador for three years. The “Darwin-Galapagos legend”, which posits the idea that Darwin had a ‘eureka moment’ in Galapagos that led to his theory of evolution, was allegedly actually created by scientists as a way of rallying support for conservation (Sulloway 1984, Hennessy 2017). Hennessy argues that the Darwin-Galapagos connection motivated “the initial

wave of a neocolonial conservation land grab orchestrated through international nongovernmental organizations” (2018b: 485) and ultimately led to an exclusionary governance model<sup>15</sup>.



Image 3: Cows have been in the archipelago for hundreds of years.

In 1891 palaeontologist Georg Baur visited the archipelago and highlighted the urgent need for scientific research before it is too late. This was followed by William Beebe’s 1924 book *Galapagos: World’s End*, which started the idea that Galapagos was a pristine place removed from human influence. Scientists who visited the islands in the 1930s were also of these opinions and the conservationist movement grew in the 1950s after Irenäus Eibl-Eibesfeldt and Robert

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<sup>15</sup> Although I personally know many passionate conservationists who have good intentions, it is important to highlight the colonial origin of the fortress conservation model, in addition to the enduring consequences of de-prioritizing human problems or fantasizing about taking Galapagos back to its uninhabited ‘pristine’ origins.



Bowman's scientific expeditions brought public awareness to the need to conserve the archipelago. Eibl-Eibesfeldt wrote a letter to the International Union for Conservation of Nature (IUCN) which caught the attention of Julian Huxley, first director of UNESCO, one of the founders of the World Wildlife Fund (WWF) and a creator of various East African national parks as part of the British Colonial Office.

In his book on Galapagos, Eibl-Eibesfeldt (1960) maintains a dualistic vision of humans and nature and categorizes humans as an invasive species: “the archipelago is a Garden of Eden, or rather, it was so until one day Man, the most dangerous of all living creatures, set foot on these strange shores” (Eibl-Eibesfeldt 1960: 19). In a chapter titled ‘The Wasting of Paradise’ he recounts finding the bodies of six sea lions and a pelican, which had been brutally killed “without rhyme or reason and just for the sheer lust of slaughter” (Ibid: 178), further cementing the notion that the locals on the islands were savages. Finally, he concludes the vision of the Galapagos as a world apart from the woes of modernity by stating: “[s]lowly but surely we men are covering our planet with asphalt and concrete and we can see how, in a few decades, natural beauty which has lasted for millions of years, has been destroyed forever...Let us, then, do our best to see that at least the economically worthless Galapagos Islands, that are so rich in natural marvels, are kept undisturbed for ourselves and for those that come after us” (Ibid: 183).

Some decades later, Salcedo (2008: 23) and Ospina (2006: 54-58) explained how a long-term conservation plan called ‘A Biodiversity Vision for the Galapagos Islands’ (Bensted-Smith 2002) demonstrates that biologists are intentionally exclusionary. The document states that the only way to save Galapagos wildlife would be to reduce the human inhabitants and suggests having only two ports in Galapagos, which would require relocating everyone from the less populated islands

to the two more populous ones. As an ex-director of the Galapagos National Park made clear, among conservationists the idea of bringing back a pristine archipelago is still alive:

When they're selling Galapagos as pristine, it's pure marketing. It has been very affected by people for a very long time, but because it has been so distant from the economic and industrial evolution of the rest of the world, there is at least something left. In the rest of the world, there's nothing left.

The reason why the idea of 'pristine' nature is so dangerous to Galapagueños and people living in protected areas is that neocolonial structures can be imposed on people in the name of science<sup>16</sup>. Since Galapagos doesn't have a colonial past like the rest of Latin America, the 'pristine myth' (Denevan 1992), or the idea that pre-Hispanic America was untouched by humans, is still perpetuated by natural scientists who desire the archipelago to return to a utopian paradise. Other locations, such as Amazonia, have been proven to have not been as untouched as previously assumed, but Galapagos is able to retain the idea of pristine nature because it was uninhabited prior to 1535, ultimately justifying conservationist agendas over human priorities. The new myth of 'scientific discovery' and its association with Darwin's secular theory of evolution virtually erased human history (Mayorga 2019: 2) and centuries of whalers, pirates and Ecuadorian settlers; the archipelago had been reconceptualised as a recently discovered laboratory or some sort of secular biological Mecca. The earliest mention of the Galapagos Islands as a laboratory of evolution came in 1933 from the ornithologist Harry Swarth (Barrow 2009: 176), who argued that humans were a threat and the archipelago should be a 'wildlife sanctuary'. Other researchers who came afterwards claimed that Galapagos was a "living laboratory for the study of evolutionary processes" (Von

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<sup>16</sup> Ramírez (2004: 237) highlights three components of the neocolonial relationship between conservation organizations and Galapagos: (1) denying that environmental degradation is a responsibility of all (including scientists living on the archipelago); (2) placing the blame for environmental degradation on the 'irrational' behaviour of the poor from the 'third world'; (3) prioritizing natural science over other forms of knowledge.

Hagen 1940: 96). These geographical metaphors led directly to the creation of the Galapagos National Park (GNP) and the Charles Darwin Foundation (CDF) in 1959, commemorating a hundred years after Charles Darwin published *On the Origin of Species* (1859). When the Galapagos National Park Directorate and Charles Darwin Research Station headquarters were built in 1964, a new *conservationist paradigm* was imposed upon the inhabitants of the islands.

Additionally, it is important to note the colonial conservationist background of the first president of the CDF, Victor Van Straelen. He had previously founded the Albert National Park in the Belgian Congo, a place that was “allegedly the first park uniquely devoted to science” (Bocci 2017a: 97), but also an inhabited location. Setting up the park involved the eviction of Hutus and Tutsis, leaving only a small group of ‘pygmies’ (Batwa) to be ‘preserved’ on the land. Conservationist models worldwide have been compared to Yellowstone, but Bocci (2017a) claims that Galapagos is more similar to the Antarctic model (a pristine place reserved for science) and there is also a historical link: Ecuador signed the Antarctic Treaty in 1959 and used this opportunity to argue the importance of a research station in Galapagos. Clearly both the Yellowstone model and the Antarctic model involve ‘fortress conservation’ policies (Brockington 2002) that extricate humans from areas deemed pristine. O’Reilly (2017) presents Antarctica as an apolitical area dedicated solely to scientific research, but politics plays a significant role in the region. Similarly, the Galapagos archipelago is often portrayed as an area where science and policy are kept separate, but in truth, these two realms are closely intertwined. The CDF was able to transform biological studies into policies until the late 1980s without these actions being disputed for being political; however, nowadays, with more competition for resources from other NGOs, the link between science and politics is more evident (Salcedo 2008: 19). Furthermore, in the 1990s and early 2000s

there was social conflict<sup>17</sup> between conservationists and the local community, including the killing of tortoises and torching of CDF offices on Isabela Island (1994), kidnapping of tortoises on Isabela (2000), paralysation of flights at the San Cristobal airport (2000), killing of sea lions on San Cristobal Island (2001), and strikes against prohibitions to sea cucumber fishing (2002 and 2004). After the implementation of the 1998 LOREG law, which restricted migration to the archipelago, I would argue that the Galapagos has entered a new historical period: a bureaucratic era. Bureaucracy has become the main arbiter of privileges for elite politicians, tourism magnates, and their nepotistic relationships, while simultaneously being used to exclude migrants, fishers, farmers, and marginalized citizens.

In the Galapagos, as in many other parts of the world, conservation work is well aligned with neoliberalism<sup>18</sup> in the sense that ‘hybrid governance’ systems are created to ensure profitable ‘ecotourism’, unlimited growth, and re-territorialization that usually involves ‘fence and fine’ strategies for locals living inside national parks (Igoe & Brockington 2007). The imposition of a *conservationist paradigm* commodifies nature, alters human relations, and restricts the market because a new set of rules is established regarding appropriate ways of making money off the environment (West 2006, Wolford et al. 2012). National parks are actually a form of ‘primitive accumulation’ (Marx 1990 [1867]) because, even though the intention may be to protect the environment, nature has been commodified for the financial benefit of NGOs and tourism

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<sup>17</sup> Elsewhere, national parks have ironically led to environmental destruction, because locals protest restrictions by killing chimpanzees in Tanzania and felling forests in Nicaragua, Nepal, Norway, and China (Brockington et al. 2008: 83).

<sup>18</sup> Neoliberalism is “a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices” (Harvey 2005: 2).

companies (Kelly 2011). Furthermore, a complex series of rules and regulations are imposed on the population (together with an enormous amount of paperwork), restricting access to lucrative jobs in tourism and making it hard for people to migrate, but paradoxically opening up the island to a constant flow of goods, finance, information, etc. To paraphrase Grenier (2007 [2000]), Galapagos went from being a 'closed system' to an archipelago that is open to globalized threats.

Grenier (2007 [2000]: 24) succinctly states that “[t]he history of Galapagos is one of the spatial transformation of its nature due to the networks of capitalism”. In his scathing critique of tourism and conservation in the archipelago, the geographer highlights the inherent contradiction of tourism: its growth leads to the expansion of transnational networks, greater migration, and development, but environmental conservation NGOs also rely on the tourism sector’s donations in order to operate. He suggests that this ‘Galapagos System’ is a form of ‘classic imperialism’ (Grenier & de Miras 1994: 665) that intentionally leads to economic expansion for international tourism companies but also provides greater Ecuadorian sovereignty over the islands.

This system depends on the portrayal of the Galapagos Islands through a dual myth: as a pristine ‘last paradise’ for tourists and biologists and as an ‘El Dorado’ for Ecuadorian migrants who seek tranquillity and higher paid work. Grenier further argues that the geographical ‘opening’ of the archipelago to a globalized capitalist world has made the islands increasingly dependent on ever-increasing flows (migrants, finance, media, and commodities such as sea cucumber demand from Asian markets), and he suggests that the main way to protect Galapagos would be to reduce its exposure to external flows. In order to implement a “true ecotourism” (Grenier 2007 [2000]: 437), the authorities should reduce the number of tourists that visit the islands, lengthen their average stay, reduce the number of cruise operators, and increase the amount of land-based tourism to benefit the local economy. Although his recommendations could have positive consequences,

under the current neoliberal logic of constant growth, none of these actions have been implemented and it seems unlikely that the politicians and tourism sector would be interested in doing so.

To conclude, in the mid-20<sup>th</sup> century the Galapagos Islands were rebranded as a location for conservation and tourism. When Fray Tomás de Berlanga randomly drifted off course and found the islands in 1535 he described a hostile and ‘worthless’ place (Latorre 1999). Originally conceptualized as a hellish lava landscape, they later became associated with convicts, but also with centuries of small farming colonies. Up until 1959, there was still an operational penal colony on Isabela Island, leading many migrants to continue to view the archipelago as the backwaters of Ecuador, or a place not to be visited. This vision of the archipelago changed over time, due both to scientific desires to preserve the unique endemic species, and to efforts to brand the location as a tourist destination.



Image 4. Galapagos’ volcanic landscapes evoke both hell and paradise.

In other words, Galapagos started out being conceptually linked with hell, became associated with paradise, and eventually was rebranded as a ‘laboratory’ – a place to be managed by scientists. To this day, scientists continue to use the laboratory analogy without concern for the implicit neocolonial conservationism of this sentiment:

Currently, Galapagos is still a natural laboratory of evolution, but it could also principally become a world laboratory of sustainability: a region where it is possible to experiment, study, register and eventually achieve in practice a more harmonic coexistence between human beings and fragile ecosystems. (Tapia et al. 2009: 178)

The same authors have argued that Galapagos should be conceptualized as a Socio-Ecological System (SES) and highlighted the priority of studying social issues in tandem with biological research (Tapia et al. 2009), but the laboratory metaphor continues to perpetuate the idea that Galapagos is primarily a place where research is conducted, whether or not it’s about people or nature. Recently, the archipelago has been “framed as a living laboratory not just of evolution, but also of invasive species eradication, climate change, and sustainable development, among other things” (Hennessy 2018b: 500). We should re-think how nature is conceptualized (Hennessy & McCleary 2011) and rather than branding the archipelago’s utopian state as a place without humans, people should be included in idealized visions of the Galapagos.

In an attempt to reconcile human and non-human actors of Galapagos and to rebrand it as a refuge, Laso (2020) suggests that we think of Galapagos as a garden. Although this is better than the laboratory analogy, because it incorporates the idea of growing food, it still implies a place that is managed by humans. I suggest that we abandon branding the archipelago altogether, because each metaphor carries intellectual baggage. However, if we must use a metaphor, I propose labelling Galapagos as a *lifeworld*. Ingold uses this term to describe humans inhabiting the world “in a way that does not...reduce them to mere objects of nature” (2000: 90) and which emphasizes

a “dwelt-in world” (Ingold 1993: 40) in addition to entangled relationships between living and non-living entities. In other words, Galapagos is a place like other locations on earth, filled with a rich environmental and human history, and which cannot be reduced to being a mere laboratory: it is not merely a place to be studied, but also one where humans live. Given that this thesis is an academic work on the study of people, it is necessary to overview the relatively scarce social science research conducted in Galapagos.

### 3.2 Social science research in Galapagos

Galapagos has been primarily studied from a natural science perspective. Ethnographic methods are becoming an important component<sup>19</sup> of social inquiry in Galapagos, but primarily qualitative ethnographic accounts of the Galapagos Islands are still extremely rare. The best examples of ethnographic/qualitative research<sup>20</sup> in Galapagos are still greatly outnumbered by studies that rely on survey data, statistics, and secondary sources<sup>21</sup>. Even though Galapagos is the most researched area of Ecuador (Ramírez 2004: 11; Tapia et al. 2009: 158), only 3% of 7,531 studies conducted from 1535 to 1995, as compiled in a CDF bibliography (Snell et al. 1996), focused on socio-economic issues. More recently, a group of researchers compiled a database of research conducted in Galapagos and determined that 17% of studies until 2009 were written by

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<sup>19</sup> Literature that uses ethnographic methods includes: Borja & Pérez 2000; Burke 2021; Cairns 2011; Cairns et al. 2014; Hennessy 2010, 2014, 2017, 2018a, 2018b, 2019; Hunt et al. 2022, 2023; Laso et al. 2019; Laso 2020, 2021; Lu et al. 2013; Mathis & Rose 2016; Meltzoff 2012; Stacey & Fuks 2007; Valdivia et al. 2014; Wolford et al. 2012.

<sup>20</sup> More traditional ethnographies include: Andrada et al. 2010, 2015; Bassett 2009; Burke 2012, 2016; Bocci 2017a; Guribye 2000; Ospina 2005, 2006; Ramírez 2004.

<sup>21</sup> Quantitative and survey-based research includes: Andrade 1995; Epler 2007; Tapia et al. 2009; Kerr et al. 2004; Quiroga & Ospina 2009, 2013; Walsh & Mena 2013.



social scientists, and over half those papers were written in a non-English language<sup>22</sup> (Santander et al. 2009: 82-84).

Pablo Ospina, an Ecuadorian historian and anthropologist, is possibly the only academic to have written extensively about social issues in Galapagos (Ospina 2001, 2003a, 2003b, 2006; Ospina & Falconí 2007) and to have compiled a series of life histories of the early Ecuadorian colonizers (Ospina 2005). He states that “[u]ntil 1991 social studies were practically nonexistent” (Ospina & Falconí 2007: 23), whereas naturalist research is abundant. In Ospina’s attempt to create a ‘baseline’ for the social sciences, he also makes reference (2006: 128) to a small number of anthropological studies conducted in the past, including Sylva (1984a), Andrade (1995), and MacDonald (1997). Apart from the last article by MacDonald, which was influential in creating changes to governance of the Galapagos Marine Reserve in 1998 (Ospina 2006: 129), the rest of these papers do not go into great ethnographic detail<sup>23</sup>.

Notable contributions to Galapagueño anthropology include Ramírez’ (2004) thesis on how fishers negotiate power and their strained relationships with the conservationist sector, which captures a unique conflictive moment in Galapagos’ history. Furthermore, Ahassi (2007a, 2007b) agrees with Ospina (2001) that Galapagueños create their identities in opposition to outsider

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<sup>22</sup> It is also problematic when English and Spanish literature don’t engage with the same sources, because this could create two parallel dialogues about Galapagos. Lu et al. (2013) is an example of an English paper that cites no relevant Spanish literature.

<sup>23</sup> Sylva’s short article states that the Galapagos are a micro example of how exposing “society to mercantile relations can asymmetrically reorder different sectors, in which tensions and conflicts emerge” (Sylva 1984a: 144). However, she also claims that “there is no evidence that the number of risks to the natural ecosystem has increased as a direct consequence of the increase in human population” (Sylva 1984a: 145), an assertion that has been contested by subsequent research on migration (Borja & Pérez 2000, Kerr et al. 2004). Andrade (1995), while having conducted 40 hours of interviews and participant observation, primarily focused on quantitative census data about the growth of Galapagos’ fishing fleet.

groups (recent arrivals/foreigners) and she suggests that people cope with their dislocation, fragmented migrant identities, and rapid globalization/modernization through the production of regional Ecuadorian foods from their places of origin. For migrants, the non-endemic crops and animals that are used to prepare these foods have positive nurturing connotations, but to conservationists the species are simply invasive species. Also, while eating tortoises and endemic species historically helped humans survive in the archipelago, these behaviours became stigmatized by conservationists. The differences in people's symbolic valuation of food highlights the introduction of a *conservationist paradigm* in which everything that allowed humans to adapt to the archipelago and make it habitable is treated pejoratively (Ahassi 2007b: 203), whereas for inhabitants, introduced foods are a source of life and a link to cultures on the mainland.

In the history of social science research in Galapagos it is also important to highlight the arrival of French geographers (ORSTOM) in the 1990s, leading to some of the most influential research penned by Christophe Grenier (2007 [2000], 2010, 2012). Recent examples of anthropological and geographical publications<sup>24</sup> demonstrate that there is renewed interest in social science research, despite a general lack of 'thick description' (Geertz 1973). Some of the themes covered by these recent works include: Jehovah's witnesses being environmentally friendly *due to* their eschatological beliefs (Bocci 2019), locals of Isabela contesting the conservationist eradication of introduced goats in order to 'care' for endemic giant tortoises (Bocci 2017b), the survival and unique positionality of illegal immigrants (Bocci 2017a), the contradiction between a government/UNESCO narrative of Galapagos as 'at risk' and discourses of 'nature as paradise' and 'nature as a laboratory' (Hennessy 2010, 2018a), the performativity of precarious fishers who

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<sup>24</sup> These include: Arbin 2019; Bocci 2017a, 2017b, 2019, 2022; Burke 2012, 2016; Hennessy 2010, 2018a, 2018b, 2019; Hunt et al. 2022, 2023; Laso et al. 2019; Laso 2020, 2021; Lu et al. 2013; Mathis & Rose 2016.

negotiate power with the GNPD (Burke 2016), and conflicts of interest over resources (Lu et al. 2013, Mathis & Rose 2016, Arbin 2019).

The book *Floreana: Islamundo en Galápagos* (Andrada et al. 2015) is a recent ethnographic account that includes brief portraits of the everyday lives of people on Floreana Island and an extension of the authors' earlier work about inhabiting Galapagos (2010). A more in-depth collection of life histories was compiled by Ospina (2005), who transcribed lengthy interviews with six Galapagueño *colonos* (settlers), some of whom were born on the archipelago and others who migrated in different decades (mainly the 1950s and 1960s). The detailed life stories encompass everything from life in Isabela's prison colony to farmers and fishers; without exception, the interviewees spoke with nostalgia about a simpler, calmer time in Galapagos. The life histories also highlight opinions that scientists are destroying nature to be able to conserve it (Jarrín & Herrera's biographical portraits in Ospina 2005), that newer migrants are destroying the social fabric of the islands, and that there aren't enough jobs for locals.

In summary, even though there is a growing interest in ethnographic methods, anthropological fieldwork in Galapagos is not common. After the Charles Darwin Foundation's (CDF) director, Graham Watkins (2008), wrote about the need for a 'paradigm shift' including new viewpoints about geography, economics, human resource management, and politics, the 2008 financial crisis occurred and CDF decided to shut down its social science department. When I worked at CDF in 2018 the communication work I was involved with tended to be aimed at international donors, with a minor component being geared towards informing the community through an open house. The Charles Darwin Foundation is slowly improving its social science exposure and most recently has had a renewed push in this direction due to a science coordinator with a human geography background who began working there in 2018. However, the amount of attention given to social

issues and the incorporation of ethnographic methods is still minimal. At the Galapagos Science Center<sup>25</sup> (a research institute on San Cristóbal Island) there has also been an increasing focus on issues relating to human health (see, for example, Thompson et al. 2022). Finally, it is important to note that most of the academic work produced in the islands is still from the natural science perspective and it is nearly obligatory for work to be carried out using more quantitative methods in order to not be criticized disparagingly for being part of the ‘soft sciences’ and generating qualitative research that is pure “bla bla bla” (Cairns 2011: 180). This nearly hegemonic control of the natural sciences, the critique of the social sciences, and the negligence of politicians may be contributing factors for social science not being used substantially in policy development. One of my participants who used to work in the Consejo de Gobierno claimed that plenty of social science research has been conducted but it is useless in shaping the archipelago’s policies. However, I see this criticism as a way for people in power to shift the blame for inaction onto researchers. In the following section we shall see how much research has been done in agriculture and how little has actually been acted upon.

### **3.3 An overview of Galapagueño agriculture**

The history of Galapagos is closely linked to agriculture and fishing (Bozzano 1989). After a period of whaling, fur seal hunting, and pirate activity in the 17<sup>th</sup> and 18<sup>th</sup> centuries, the Ecuadorian government annexed the islands in 1832 and sent exiled soldiers and convicts to farm on Floreana.

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<sup>25</sup> The GSC (Galapagos Science Center) is a research institute of the Universidad San Francisco de Quito that was founded in 2002 in partnership with the University of North Carolina at Chapel Hill and has a physical campus on San Cristóbal Island. In the last two decades the Charles Darwin Foundation has been struggling to retain its monopoly of scientific research in the archipelago because of the increasing presence of universities and NGOs like Conservation International, the World Wildlife Fund, Galapagos Conservancy, The Galapagos Conservation Trust, Island Conservation, etc.

One migrant, Manuel J. Cobos, ran a tyrannical sugar plantation from 1869 until his assassination in 1904. Antonio Gil successfully colonized Isabela Island in 1897 to establish cattle ranching and fishing activities. Finally, Norwegians settled Santa Cruz Island in 1925 to create a fish canning industry, but upon its failure the Ecuadorian government incentivized migrants to colonize the highland agricultural area of Bella Vista. All of these original agricultural activities suffered many challenges, due to both water scarcity and worker upheavals. While my participants like to highlight that farming and fishing came before the *conservationist paradigm*, it is important to note that the ‘extractive’ nature of these activities has also been used by conservationists as a way of legitimizing the argument that humans in the archipelago are problematic. Such assertions illustrate the neocolonial and exclusionary attitude of conservation organizations that want to return the islands to a pristine state but were unfortunately confronted with an archipelago that already had humans living on it (Grenier 2007 [2000], Ospina 2006, Ramírez 2004, Salcedo 2008).

Ospina pointed out that the study of agriculture in Galapagos “has been understudied despite its central role in the conservation of the archipelago” (Ospina & Falconí 2007: 19). The earliest research on agriculture and fishing in Galapagos was most likely Samandaroff & Chalons’ (1937) report about the climatic, geographic, and economic viability of the archipelago, based on an intentional desire to make it viable for farming, ranching, and fishing. What is interesting about this study is that it emerged prior to the creation of the Galapagos National Park (1964) and so it expressed no qualms about unabashedly treating the islands – previously viewed as barren and useless – as a place with resources which could be transformed by humanity into a location for production and capital accumulation. When speaking of the challenges, it highlights the scarcity of water, but states that the earth is fertile and ideal for a wide variety of fruits and vegetables. The numerous farm animals already in existence on the islands (cows, goats, donkeys, horses, cows,

pigs) are all described in detail and there is discussion of cattle having formed a Galapagos breed (Samandaroff & Chalons 1937: 17). The report also discusses expanding cattle ranching due to favourable climatic conditions, foresees the possibility that the government should regulate what species enter the archipelago because they may be a threat to farming and ranching, and surprisingly it predicted the possibility of the islands being a tourism attraction and a place for scientific research. In conclusion, the report states that “the *colonos* (settlers) who go to the islands will undoubtedly do so for the purpose not only of seeking subsistence, but also of creating a future for themselves; in other words to achieve financial gain from their work” (Ibid: 52). This demonstrates that a ‘money-making mentality’ existed in the archipelago for centuries, but under the current *conservationist paradigm* any form of extractivist economy is frowned upon.

When the Galapagos National Park was established in 1964, there was a radical shift in governance in the archipelago. Salcedo describes this as the imposition of an “external cosmovision” (2008: 9) by scientists and conservationists. The changes that ensued led to conflict between locals and international NGOs that follow the ‘cult of wilderness’ (Martinez-Alier 2002) and are driven by the idea of taking Galapagos back to a biocentric pristine utopia prior to 1535. Coincidentally, 1964 was also the year that the Ecuadorian government's military junta created the law of ‘agrarian reform and colonization’ and an institution called IERAC (Instituto Ecuatoriano de Reforma Agraria y Colonización), which would oversee the process of giving landless farmers the ability to colonize<sup>26</sup> ‘empty lands’. Although the new law was roughly based on an earlier law

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<sup>26</sup> The term *colono* (colonizer) is not pejorative in Galapagos, because people are proud of having been the founders of human presence on the islands. The term *pionero* (pioneer) is also used. However, because there were fewer than 2000 people inhabiting the islands in 1950, only a small number can consider themselves part of the original cohort of migrants and this definition is constantly shifting and disputed by the oldest migrants. One participant explained the migration process as follows: “Groups of people, or *colonias* (colonies), arrived. So my mother and her dad came in the ‘Colonia Velasco Ibarra’ and with other families they established themselves in different parts of Santa Cruz. So

from 1936, it resulted in much more rapid change in land use. State-sponsored land reform was one of the primary causes for the reduction of native vegetation land coverage on Santa Cruz Island, which decreased from 94% in 1961 to just 7% in 2018 (Alomía Herrera et al. 2022).

By the end of the 60s the agricultural frontier was established (Rodríguez 1989), and in 1974, the Galapagos National Park<sup>27</sup> devised the first management plan for the archipelago, which implemented a zoning system that would ensure that 97% of the archipelago became a protected area. In other words, the Ecuadorian government had two contradictory policies (Salcedo 2008: 28) occurring during the 1960s: a push to protect the archipelago and restrict access, and a state-sponsored drive for landless farmers to colonize the agricultural frontier, somewhat motivated by the need to reaffirm national sovereignty when confronted by potential threats from Peru (which went to war with Ecuador in 1941, 1981, and 1995). It was also during the 1960s that tourism was born as a major new economic sector in Galapagos. In 1968 the National Financial Corporation funded a tourism economic feasibility study that unleashed the beginning of the tourism era. The growth of the tourism industry was also bolstered by the recent oil boom, since in 1964 the Texaco-Gulf consortium was given permission to prospect for oil in the Ecuadorian Amazon and this would lead to rapid economic development throughout the entire country.

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the government would come through the IERAC and it would assign you a property. One of the factors for why the government promoted people living here was that there was a foreign presence here. There were Germans and Norwegians, so the colonization was done for that reason: to have an Ecuadorian presence on the islands.”

<sup>27</sup> Notably, it wasn't until 1996 that the Ministry of Environment was created and the Galapagos National Park placed under it. Previously, from 1968 onwards, the Galapagos National Park had been administered by the Ministry of Agriculture. The contradictory nature of treating the land as a national park but also as an agricultural resource has been described by my participants as a case of the park having all the power and the agricultural sector being abandoned from the very beginning, even when landless farmers were migrating to the area. However, the exact nature of this contradictory relationship is not entirely clear and could be researched further.

There appears to be a paucity of research regarding Galapagueño agriculture until a government census in 1986, followed by two short overviews of agricultural challenges (Rodríguez 1989a, 1989b). The main issues described include: depopulation of farms, inadequate production methods, lack of studies on maximizing production, insufficient technical and financial assistance, a deficient land ownership structure, precarious commercialization systems, and deficient basic services (housing, healthcare, water, education, transportation, communication, energy, recreation). In the 1990s two agronomists published theses (Chavez 1993, Bonilla 1998) that provide detailed information about these same problems. As we shall see in the following overview of the relevant agricultural literature, there is great concurrence in the analysis of agricultural problems and proposed solutions, but few recommendations seem to have been implemented and studies aren't based on in-depth ethnographic research, meaning farming voices are scarcely heard.



Image 5. Most of Galapagos' farmers are smallholders and plant tiny corn plots like this one.



Chavez's (1993) comprehensive agronomist thesis, based on surveys of 163 farms on the four inhabited islands, concluded the following: growing vegetables wasn't profitable, farmers didn't receive enough technical assistance, the rural area was becoming depopulated<sup>28</sup>, crops were impacted by invasive species, 69% of soils received no fertilizer, 75% had no watering systems, 57% of food cultivated was for self-consumption, produce could only be transported<sup>29</sup> to town by renting trucks, the cost of labour was high, imported produce was cheaper than local produce, there was an oversupply of some crops due to lack of agricultural organization, 70% of Santa Cruz farmers had to rely on water tankers (and the percentage increased to 94% on Isabela), and only 29% had access to credit. Stunningly, even though Chavez's thesis was written in 1993, it still accurately describes many of the problems currently faced by farmers. My qualitative study cannot confirm how these percentages have changed, but it does show that those problems still exist and cause anxiety to farmers who feel abandoned. Bonilla (1998) repeated many of the same points Chavez made, but also pointed out that the tourism industry is responsible for greater food demand and the introduction of invasive species, in addition to highlighting the problem of youth abandoning agriculture.

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<sup>28</sup> In 1974, 42% of inhabitants lived in rural areas, whereas in 2010 that number had reduced to 17% (Quiroga 2018: xviii). Due to the fear of in-migration agriculture wasn't supported by the state, but when tourism opportunities opened up, many farmers abandoned their *fincas* and moved to the towns. Although there were many reasons for de-ruralization, one participant attributes it to the growth of the public sector: "Since 1982, which was when the Instituto Nacional Galápagos (INGALA) was formed, many people from the highlands came down to work in the public sector. The municipality also hired a lot of people...Only now (in the pandemic) are people going back to the highlands because there's no work." According to some participants, during the Correa presidencies (2007-2017), there was a push to support agriculture due to a call for food sovereignty and this led to an influx of infrastructure, workshops, and other projects. However, farmers still complain that the sector has been abandoned and the distribution of these benefits was unequal.

<sup>29</sup> Zapata (2015) reiterated the issue of limited transportation and argued that the high cost of pesticides and fertilizers is problematic.

Chavez' (1993) thesis concluded with a series of recommendations that would still be useful today, including: preventing the entry of toxic pesticides, stricter control to prevent *plagas* and diseases, incentivizing reforestation with economically beneficial tree species like *teca* (*Tectona grandis*) and *nogal* (*Juglans neotropica*) or with endemic species, supporting the establishment of silvopastoral systems, researching invasives, expanding technical assistance, and creating small agroindustries to preserve fruits and vegetables. Over a decade later, Chiriboga et al. (2007) and Maignan (2007) highlighted many of Chavez' initial observations. While the latter recommended payment for environmental services, institutional reform, and the reorientation of scientific research, Chiriboga et al. (2007) suggested implementing a price cap on agricultural products, adopting a green seal system for local produce, incentivizing water infrastructure, improving the quarantine system, and promoting a preference for local produce at the marketplace. Furthermore, Chiriboga et al. (2007) argued that the biggest problem for Galapagos agriculture was that farmers lacked capital and cheap labour to make it profitable, and he criticized conservation efforts that don't take into account social problems: "a population that lacks legitimate economic opportunities is not compatible with the objective of preserving and maintaining natural resources" (2007: 146).

A few government-sponsored agricultural studies exist, such as an agricultural census (León 2014) and a 'bioagricultural plan' (Guzmán & Poma 2015), which outlined the current statistics on the agricultural area and suggested the use of eco-friendly agroforestry methods. In the 2009 strategic plan by the Ministry of Agriculture, they claimed that the reason it wasn't possible to deal with problems of commercialization and competition was because of seasonality and lack of planning that led to competition amongst farmers (MAGAP 2009). They went on to list a series of objectives including strengthening production, determining key species, genetic improvement, implementing processes to give added value to produce, fighting invasive species, creating laws

to regulate imports, and new ways of hiring migrants, in addition to strengthening technical support, institutional alliances, and the protection of water resources. Zapata (2009) recommended that farmers should focus on ten marketable products, use greenhouses, implement watering systems, and create associative mechanisms for commercialization.

The economist Cesar Viteri (2014) recommended taxing imported goods and creating subsidies for locally-grown food. He argued that any additional cost to the consumer could be transferred to tourism service providers and tourists visiting the archipelago (Viteri 2014: 15) and if there were any additional cost to locals this could be offset by allocating the tax revenues gained from imported produce to the affected population (Ibid: 24). In addition, this would help to compensate the farmers' cost of combatting invasive species, which amounted to \$2.8 million in 2014 (Toledo 2014). To conclude, multiple authors (Bonilla 1998, Maignan 2007) emphasize that more political will is necessary for these recommendations to be implemented.

Apart from some natural scientific studies<sup>30</sup> conducted about the agricultural area, research that incorporates a social component regarding farmers is still rare. Bocci (2017a, 2017b, 2019, 2022) is probably<sup>31</sup> the only ethnographer to have conducted in-depth research on farmers. He elucidates the difficult lives of illegal farmers who do the necessary farm labour in the archipelago and are a “symptom of a conservationist paradigm in crisis” (2017a: iii). He also highlights the

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<sup>30</sup> Some natural science papers about agriculture include: Moreno (2001), O'Connor & d'Ozouville (2015), and Riascos-Flores et al. (2020) on pesticides, Trelles & Trelles (1988) on soil fertility, Laegaard & Pozo (2004) on invasive grasses, Lundh (2006) on introduced plants in the agricultural area, and Lincango et al. (2005) on terrestrial invertebrates. This is not an exhaustive list, but it demonstrates that even though there is valuable research on agriculture, social issues are rarely taken into account.

<sup>31</sup> Other ethnographers have lived with and interviewed farmers, but few have conducted extensive fieldwork. For instance, Arbin's (2019) thesis is based on six weeks of fieldwork. She uses Foucault's governmentality to explain how all sectors of society have had to adapt to the overarching conservationist paradigm.

xenophobic undertones of conservationist attitudes towards invasive species and the parallels with illegal migrants, and analyzes the complex multispecies entanglements that people have with goats and invasive plants. Bocci (2017b) further studied Project Isabela, an ambitious eradication and restoration project, questioning the dominant idea that scientists are *caring* for endemic tortoises by *killing* introduced species. He recognizes that Galapagueños desire to *coexist* with nature instead of following the utopian conservationist idea of restoring Galapagos to its pristine state. Finally, in his more recent publication, Bocci (2022) explains that the archipelago has potential for “convivial conservation” (Büscher and Fletcher 2019), meaning that it could be a location where humans are considered *dwellers* instead of *aliens*. Importantly, he argues that failure to recognize that strengthening farming is helpful to conservation, and that it does not definitively lead to in-migration, has contributed to Galapagos’ overreliance on tourism:

Meaningful state support to farmers would disturb a key tenet in local conservation because it ostensibly drives in-migration. This approach rests on a false equivalency, assuming that if agriculture in the past caused in-migration from the mainland, then limiting agriculture today would have a similar effect albeit in reverse. However, the limited support for agriculture today has not led to the desired result of curbing in-migration, which continues to be driven by tourism. As a result, farmers have been forced to abandon cultivation on their lands, with negative ecological repercussions for the highlands and increased economic insecurity due to higher reliance on tourism...the policy approach and the conservation measures around invasive species and in-migration in the highlands failed because they continued to regard farmers as responsible for in-migration and other ecological crises. (Bocci 2022: 109)

My ethnographic fieldwork coincidentally builds upon Bocci’s observation of farmers’ desire for a deeper coexistence, or what he calls *arraigo* (cultural belonging) or *rooting* – a strong sense of attachment to the archipelago, which opposes the conservationist assumptions (GNP 2005: 82) that the “islands are only a place to visit” (Bocci 2022: 104). While my participants’ strong desire for belonging and coexistence is consistent with Bocci’s assessment of farmers’ deeper sense of

dwelling, I do not see that ‘convivial conservation’ will be possible unless: (a) farmers are supported economically, since most are struggling with indebtedness; (b) there is a huge political shift, because farmers believe current policies are only making their lives more difficult. The current challenges that farmers face are a direct attack on their sense of belonging, with some eventually forced to sell their land and return to the mainland.

Therefore, my thesis explores some of the central questions regarding *coexistence* by examining the many risks that Galapagueños face in their daily lives. I will then elaborate on my concept of the *coexistential rift*, which explains the negative cycle of alienation and market dependence that is created when farmers are confronted with an extended onslaught of cumulative, cascading, and compounding risks. To investigate this multiplicity of issues, I conducted possibly<sup>32</sup> the most in-depth anthropological study of farmers in the archipelago to date, based on a year of ethnographic fieldwork, interviews with 219 people, and extensive participant observation during three farm stays.

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<sup>32</sup> Bocci’s (2017a, 2022) fieldwork lasted two years between 2008-2018 during numerous “fieldwork stints” (2022: 106) and involved 80 farmers and over 200 interviews. So, both Bocci and I would appear to have a similar amount of qualitative data from different time periods, as my fieldwork was collected during an entire year of research from 2020-2021.



Image 6. This was one of my many interviews of farmers in the highlands of Santa Cruz Island.

When I asked one of my farming participants why there was so little research in agriculture, he tritely replied, “nobody cares about us or is even interested”. It is within this context of general abandonment that my thesis can illuminate the challenges faced by farmers and give their voices more prominence. We should care about farmers not only because they can help solve conservationist problems and create greater food security and sovereignty, but mostly because they are people and should be taken into account. As Andrada et al. (2010: 126) have pointed out, agriculture has been understudied, but it is where the solution for many Galapagos problems can be found. In the following section I will summarize some of the aforementioned agricultural challenges, which emerged from my own participant observation during fieldwork.

### 3.4 My finca is my life: farming livelihood challenges

On a daily basis the *técnicos* (veterinarians and agronomists) from the Ministry of Agriculture (MAG) visit different farmlands. I participated in many of these trips to farms, where the *técnicos* would take notes about the property, suggest which pesticides to use, castrate pigs, help inseminate cows, or engage in agricultural tasks such as fumigation and weeding, among other forms of practical support. Although they are sometimes criticized for ‘being an additional day labourer’ instead of providing technical advice<sup>33</sup>, they don’t consider farm work beneath them and one important benefit of their collaborative farm work is that, as in participant observation, it allows them to learn from the farmers. It is also positive that staff at the MAG speak of ‘knowledge exchange’ with farmers and advise them about organic alternatives to pesticides, but not exclusively, tailoring their recommendations to what the farmer wants. During my farm stays I helped with weeding, trimming the large grasses that grew around fragile passion fruit stems, milking cows, refilling the water for the chickens, mixing molasses with food for the pigs, etc.

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<sup>33</sup> A few ranchers complained that there are too many technicians who spend time at the office and aren’t really interested in helping out, or that they aren’t well trained and have even damaged cows during artificial insemination. One staff member is apparently nicknamed “mata vacas” (cow killer). A rancher told me that the MAG’s artificial insemination program sadly came to an end because they ran out of nitrogen to keep the semen straws cold. Thus, those who can afford to use private means prefer not to ask the MAG for support. Others complain about their going to farms to get forms signed or take pictures for reports, which aren’t helpful to farmers, but not being willing to work after hours if a cow gives birth after 5pm or on weekends. Finally, one participant noted that the MAG gathers a lot of data from the marketplace every Saturday, when they go by and ask how much people are producing, but the farmers are unsure where all that data goes and how it’s of use. On one occasion, a farmer accused the MAG of purposely lying about its data to inflate its successes: “The other day the Minister of Productivity and External Commerce came and said ‘how much is the production of coffee here?’ and the MAG replied ‘3000 sacks’ and I stayed silent because I didn’t want them to look bad. The MAG manages the census, but I know that it’s not 3000 sacks. Maybe one day in the past it was that way because we didn’t have pests like *roya* (fungus) or *broca* (coffee borer) but now, to produce quality coffee, it’s much less.”



Image 7. This was taken during one of my many visits to pigsties with veterinarians who castrated them.

As my participants like to highlight, there is never a day of vacation in agriculture, not even on Christmas. Galapagos farmers wake up early, go to their farms in the highlands, tend to the animals and crops, and return home to port at sundown. In many cases farmers live in the port towns and commute to their farms daily because they have secondary jobs and there is greater access to urban amenities, but this lifestyle is a luxury to those farmers who live in the highlands. As one highlands farmer said, “If you're a farmer you need to work every day. Every day you need to be there, or else the plants resent it. If you leave it for one or two days the plant dies”. It is a hard life with little economic reward, and during the Covid-19 pandemic many farmers complained to me about feeling abandoned and desperate, hoping to sell their lands or to find some way to pay off their debts<sup>34</sup>. Others couldn't care less about the global health crisis and claimed that rural life

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<sup>34</sup>The degree of desperation is in direct relation to the amount of debt held by the farmer, which will be covered in Chapter 8.6.



hadn't changed that much, compared to life in the port towns. Although this thesis focuses on just three risks, it is important to contextualize farmers within a broader context of pre-existing challenges to their livelihoods.

Their problems were addressed at a meeting<sup>35</sup> I attended with the Ministry of Agriculture (MAG) and Conservation International (CI), and also at a series of meetings/workshops the MAG held with the farmers themselves, subdivided into their specializations<sup>36</sup>: pigs, chickens, cows, tomatoes, coffee, and vegetables. The MAG meetings had been set up by the new government in July 2021 as a way of learning about agricultural problems from the farmers firsthand, but the farmers criticized them as being a repetitive political theatre that would lead to no actual changes – and a year later some participants informed me that the MAG hadn't lived up to their promises. During the meetings staff from the MAG would ask the farmers if they could live solely off agriculture and there would be a resounding “No!”, which the staff then used to affirm that the agricultural sector was not economically sustainable. Based on this reasoning, they asked participants to list and prioritize their challenges by placing colourful stickers next to the most pressing challenges. Some farmers directly criticized the MAG and cited specific legal articles they disputed, including the “Acuerdo Ministerial 058”, in order to give legitimacy to their call for

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<sup>35</sup> What was surprising at this meeting was that even though a complicated flowchart of agricultural challenges was created, in the end a communication strategy aimed at consumers was determined to be the main objective of their intervention. The idea is that if consumers had more knowledge about invasive species coming from imported goods, they would support local agriculture. Furthermore, all the attendees from CI and the MAG were people who had formerly worked/volunteered at the Charles Darwin Foundation, meaning that in theory we were all ‘conservationists’ talking about the productive farming sector.

<sup>36</sup> The tomato, coffee, and chicken producers seemed to have more profitable businesses than the ranchers and vegetable growers. I am making this assumption based on complaints about profitability in each sector.

looser restrictions on butchering<sup>37</sup> their animals. In other words, in order to be listened to the farmers must use legalistic or bureaucratic language.

Some of the central challenges they identified in Galapagos included:

- *Economic Conditions:* Farmers have a high cost of production as a result of expensive labour, goods, and services, including having to spend money on water tankers (in times of water scarcity), fertilizers, equipment rental, and pesticides (due to their ongoing struggle with pests). Furthermore, produce prices are not regulated and the market is flooded with cheaper imported goods. Smallholder farmers often produce the same vegetables in excess and that lowers their price, or they are competing with a few large-scale producers that dominate the market. Farmers also find it nearly impossible to get credit from a bank or cooperative. Finally, farmers usually don't own cars and must pay for costly transportation from the highlands to sell their goods in town, which reduces their profit margin.
- *Pests & Drought:* Poor land management, lack of technology, incorrect use of pesticides, lack of knowledge about invasive species, and insufficient labour to combat them all lead to the proliferation of pests. Furthermore, farmers are worried about there not being sufficient water reservoirs during periods of drought.
- *Disengaged Youth:* Most young people don't want to work in farming and would prefer easier and more lucrative work in tourism. Many farmers confirmed this trope during the pandemic, saying that even when they sought workers, young people wouldn't come and that locals from town are 'lazy'.

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<sup>37</sup> There is some controversy in Galapagos surrounding slaughterhouses. Some participants slaughter their animals in non-designated locations and later have difficulties selling the meat, especially to tourism ships. The communally-managed slaughterhouse costs the ranchers because they must have a veterinarian present. Some have decided to build private slaughterhouses, but they may not pass the health code. Additionally, on Isabela the ranchers are upset that they used to be able to transport their cows to sell on other islands, but this is no longer possible because the transportation ships were changed twenty years ago and no longer have space to hold cattle. In general, the ranching sector is upset because prior to dollarization meat from Galapagos was cheap enough to be sold on the mainland and now those days are long gone and people must sell on the internal market only. Some ranchers are trying to change this, but I wasn't aware of a successful project to sell meat outside the archipelago.

- Communal Distrust: When mentioning the few ‘farmer associations’ on the islands, my participants agreed that they mostly fail and people just seek personal gain, instead of communal prosperity. They claim that as soon as infrastructure or equipment is obtained, the associations are dissolved. While some maintain that they should try to be united, others say that realistically in Galapagos it’s “every man for himself”.
- Restrictions: Farmers complain that they are not allowed to import many kinds of seeds or vegetables, but later they find these products being sold by merchants in town. They understand the need to protect the environment but consider the restrictions on seed importations an unfair policy that benefits intermediaries and merchants. For instance, merchants can import papayas but farmers can’t bring in papaya seeds. Farmers want the Galapagos Biosecurity Agency (ABG) to create a communal seed bank and to update its seed lists to allow them to plant other produce (like thyme). Nevertheless, the ABG says that this bureaucratic process takes time. Meanwhile, ranchers are frustrated that they can’t bring in seeds for grasses already existing in the archipelago. Also, certain vaccines, such as one against bovine mastitis, are prohibited in the archipelago.
- Migration: A highly migratory population increases the risk of invasive species, leads to difficulties in finding reliable labour, and makes environmental education campaigns quickly obsolete amongst the mobile consumer population. Additionally, a five-year temporary residency rule is still in place which forces temporary workers to leave the archipelago and not return for two years, even if they have been well trained and have been good at their jobs. Some farmers get around this difficulty by hiring the farmer’s wife after the five-year limit, or simply by giving the job to an illegal worker.
- Technology<sup>38</sup> & Técnicos: Farmers would like more greenhouses, geomembranes, drip watering systems, tractors, and other equipment. Although some have received support in

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<sup>38</sup> Having newer agricultural technologies may lead to improved farming productivity in Galapagos, which would be beneficial given the fact that most of the food in the archipelago is imported. However, two important questions remain: (a) Will these new technologies make the produce cheaper, when compared to produce from the mainland? (b) How will people avoid overproducing crops (tomatoes, for instance), which leads to a decrease in price and reduced profitability? In the long term, farming may follow ‘Jevon’s paradox’, which shows that increased efficiency leads to greater consumption, which eventually diminishes the possibility of “sustainability based on technological fixes” (Clark & York 2005: 397).

this regard in the past, farmers claim that their agricultural methods are very ‘backwards’. They would like more technical advice from specialized *técnicos* (agronomists). Also, farmers produce crops on farms with very little topsoil and lots of volcanic rock, making mechanization of agriculture more challenging. Moreover, many smallholders don’t have enough money to mechanize their farms.

This is not a comprehensive summary of the challenges that farmers face, but it does highlight some of the main points raised during four meetings that I attended. As stated previously, Chiriboga et al. (2007), Chavez (1993), and Bonilla (1998) found very similar problems in the archipelago, which don’t seem to have changed much over the decades. In this thesis I cannot focus on all of these troubles. Instead, I will discuss the main three issues that farmers brought up with me when I visited their farms or asked about their worries: Covid-19, the climate, and *plagas*. In the following section I outline some of the essential theories of risk and globalization, as a framework for understanding the challenges facing the agricultural sector in Galapagos.



Image 8. The farmers would write their concerns on cards and later vote with stickers to indicate their priorities. Unfortunately, multiple participants informed me in 2022 that the MAG didn’t accomplish what they had promised.

### 3.5 Risk and globalization

Most people in the world feel insecure: fewer than 1 in 7 people at the global level feel secure or relatively secure. (UNDP 2022: 16)

A mother needs neither statistics on mortality rates nor a concept of risk to know the dangers and to feel worry, care, and uncertainty about her children's health. (Whyte 1997: 149)

It is often stated that nothing is certain except death and taxes. I disagree. While death is inevitable, the only real certainty in life is that human beings are born randomly into time and space and must confront *uncertainty*, which sometimes poses a *risk* to survival. *Uncertainty* is part of a “complex semantic field” including “insecurity, indeterminacy, risk, ambiguity, ambivalence, obscurity, opaqueness, invisibility, mystery, confusion, doubtfulness, scepticism, chance, possibility, subjunctivity, and hope” (Cooper and Pratten 2015: 1). When uncertainty “has a positive flavour we speak of ‘luck’ or good ‘fortune’ and when uncertainty is tainted by dismal or catastrophic expectations we speak of ‘risk’” (Dein 2016: 1)<sup>39</sup>. Since I spent a year listening to people's complaints and worries in Galapagos, during a highly anxious period of the pandemic, for the remainder of this thesis I will focus specifically on the concept of *risk*. I define ‘worry’ and ‘anxiety’ as ‘embodied risk’, where risk acts as *generative mechanism* (Bhaskar et al. 2010), meaning that it has *transformative agency* and produces phenomena that can be perceived empirically. While this thesis will elaborate on the concept of *risk* theoretically (Chapters 3 & 7), it also focuses on ethnographic thick description of the *risks* of Covid-19, climate change, and pests (Chapters 4 to 6) and what can be learned about their impact on the social world of Galapagos. As I will explain further on, my aim is to study risk (a) ethnographically, emphasizing

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<sup>39</sup> Admittedly, there are caveats to this understanding of risk: when people gamble or go surfing they willingly take risks and it is enjoyable for them, so long as they're ‘lucky’.

thick description and letting participants' voices be heard, but also (b) as part of a process, which in my case involves an eco-Marxist interpretation.

As stated previously, humans throughout history have had their existence threatened. Threats can take many forms, including sickness, crime, economic downturn, natural disasters, and food insecurity. Arguably, all ethnographies must inevitably deal with how humans face adversity, regardless of whether the term *risk* or its cognitive synonyms are used. The classic text *Argonauts of the Western Pacific* (Malinowski 1922) analyses how Trobriand Islanders risked their lives to acquire Kula valuables for asserting hierarchical status. Similarly, Evans-Pritchard's (1937) seminal ethnography amongst the Azande examines how witchcraft is able to provide explanations for inexplicable occurrences, such as granary roofs falling and killing certain people. More recently, Moore & Sanders (2001) have argued that in postcolonial Africa there has been an increase in accusations of witchcraft due to disillusionment, uncertainty, and stress under neoliberal capitalism and 'failed states'. This assertion reinforces Evans-Pritchard's (1937) argument that people will seek to allocate blame<sup>40</sup> for the inexplicable.

The topic of risk has been extensively explored in sociological and anthropological literature, with volumes<sup>41</sup> and ethnographic accounts<sup>42</sup> offering diverse perspectives. Lupton (2013) outlines three central approaches, each of which is answering one of the following questions:

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<sup>40</sup>Although Joffé (1999) suggests that across cultures people blame outsiders for risks, some anthropologists argue that communities blame themselves for misfortune. For example, both Rudiak-Gould (2012) and Smith (2020) have shown how the Marshallese and the Palawans blame themselves for climate change, and de Wit (2020) highlights how the Maasai interpret the weather as religious retribution for moral decay in traditional life.

<sup>41</sup>See: Beck 1992 [1986], 1999, 2004, 2009; Boholm 2015; Caplan 2000; Douglas 2003 [1966]; Douglas & Wildavsky 1983; Douglas 2003 [1992]; Joffé 1999; Krinsky & Golding 1992; Lash et al. 1998; Lupton 2013; Olofsson & Zinn 2019; Samimian-Darash & Rabinow 2015; Tulloch & Lupton 2003; Zinn 2009.

<sup>42</sup>See: Brown & Zinn 2022, Calkins 2016, Cooper & Pratten 2015, Haram & Yamba 2009, Holbraad & Pedersen 2013, Whyte 1997.

### **1. Why do people consider one thing riskier than another?**

The *cultural theory* approach pioneered by Douglas & Wildavsky (1983), based on their grid-group typology, demonstrates how people's *a priori* cultural models<sup>43</sup> make them perceive risks differently.

### **2. What makes contemporary risks different from risks of the past?**

The *risk society* perspective, proposed by Beck (1992 [1986]) and Giddens (1999b), involves *manufactured risks* and a "society increasingly preoccupied with the future" (Giddens 1999b: 3).

### **3. How do risks alter human values and behaviours?**

The *governmentality* standpoint introduced by Foucault (2008), even though the author didn't explicitly write about risk, argues that people self-regulate their behaviour based on top-down norms that are imposed through disciplinary power over 'docile bodies'.

While all of the above questions are important, my thesis will be focusing on the last question, emphasizing how risks travel globally and alter values and behaviours. Rather than use a Foucauldian approach, I choose to highlight economic factors since my participants spoke of their economic woes. Furthermore, I introduce a causal framework to understand risk and consider the different structural factors that are affecting everyday life. Geographers Müller-Mahn & Everts (2013) introduced the concept of *riskscapes* to integrate both temporal and spatial elements into the study of risk and to bridge the constructivist/materialist divide, but this concept still doesn't

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<sup>43</sup> "Cultural models incorporate both beliefs and values, with beliefs referring to what people think the world is like and values referring to what they think is moral, desirable, or just (Kempton et al. 1995: 12). Cultural models are made of smaller units called schema, which are more bounded, distinct, and unitary (D'Andrade 1995)...The mental models by which individuals orient personal behaviours are informed by cultural models that represent widely held beliefs and values. Schemas, networks of strongly connected cognitive elements that are largely built up through human experience, provide an organized framework for objects and relations and thereby mediate many of the cognitive processes of individuals" (Schelhas & Pfeffer 2009: 16).

explain how risks are causally linked to broader natural and social processes. As a result, my singular contribution to the study of risk is to conceptualize how its material presence is part of a causal framework that impacts everyday life.

The study of risk has become an enormous academic endeavour, largely due to the growing contemporary Western obsession with quantifying threats, minimizing exposure, and maximizing profits. Indeed, as Boholm (2015: 4) points out, the very etymology of risk originates from trade and insurance in medieval Europe's maritime navigation. When researching the field of *risk* outside of Sociology and Anthropology, one finds a proliferation of publications on the subject, usually concerning finding ways to calculate, account for, and prevent risks from affecting people economically. The "field of risk research has been developed to a point where it is possible to devote an entire career to analysing the bearing of distinct components of risk" (Wilkinson 2009: 7). Furthermore, since so much of Anthropology deals implicitly with issues of risk, it is difficult to generalize about the ways in which risk *has* or *has not* been studied before. Nevertheless, I will outline the three main approaches identified by Lupton (2013) and explain why all are insufficient for understanding how risk has affected people in Galapagos:

- 1) Cultural Theory: Douglas & Wildavsky start out by claiming that risk is the product of "*knowledge* about the future and *consent* about the most desired prospects" (1983: 5, emphasis in original) and that "[c]ommon values lead to common fears...[whereas]...real dangers aren't known until afterward" (Ibid: 8). According to this logic, what we consider a *risk* is mostly dependent upon our cultural biases<sup>44</sup> and our degree of social

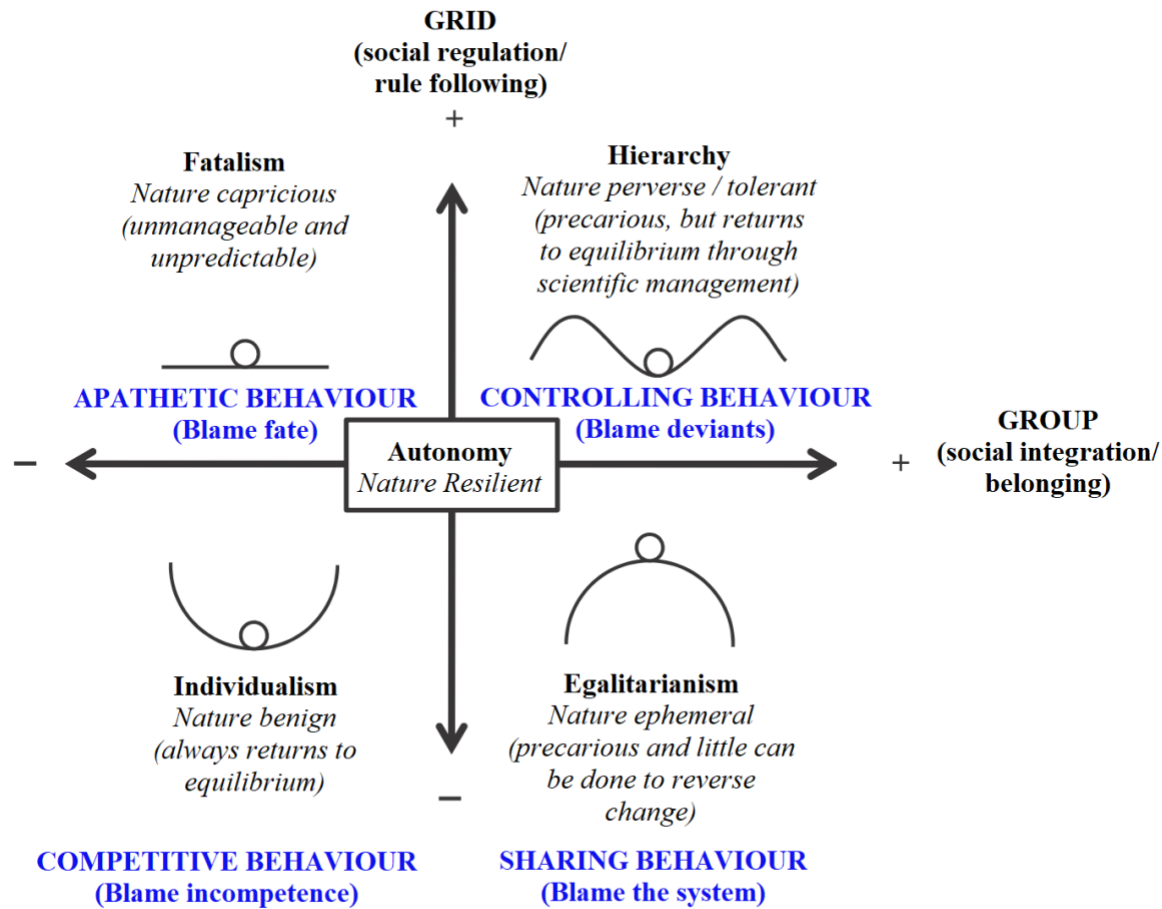
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<sup>44</sup> This is a central idea throughout Douglas' works because it affects how risks are perceived. Douglas makes a distinction between 'danger' and 'risk' that I disagree with, since for her dangers become risks when people worry about them, whereas I see risk as something that can be embodied as anxiety and consider 'danger' to be a synonym of risk. Other arguments throughout her work include the ways in which boundaries, taboos, and the symbolic ordering



regulation/integration, therefore also influencing our views about nature. To improve comprehension of Bellamy & Hulme’s (2011) diagram that overlays risk perception with ‘myths of nature,’ I have added some explanatory remarks to grid-group typology (Diagram 1) and then discuss it the context of Galapagos.

**Diagram 1: Myths of nature and grid-group typology**



(Adapted from Bellamy & Hulme 2011; Caulkins 1999; Douglas 1970; Thompson et al. 1990; Thompson and Rayner 1998)

According to this typology, people’s ‘ways of life’ fluctuate between four main categories (fatalism, hierarchy, individualism, and egalitarianism), each with a series of

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of insiders and outsiders are central to the identification of risks (2003 [1966]). Furthermore, blame (Douglas 2003) is also conceptualized as being linked to cultural theory.

associated stereotypes. In the context of Galapagos, fishers and farmers are probably ‘individualists’ (nature benign) and ‘egalitarians’ (nature ephemeral), whereas the tourism sector and scientists/conservationists are more ‘hierarchical’ (nature perverse/tolerant). However, in reality people are constantly moving in between these categories and therefore the utility of this typology is questionable. The only way in which it may actually be useful is in broadly conceptualizing a shift to the left, towards less group integration (more individualization) as a general consequence of neoliberal capitalism. In other words, farmers who were previously egalitarian become more individualistic out of necessity (and because that’s the ‘culture of neoliberalism’), whereas ‘hierarchical’ scientists could potentially become fatalistic because the many scientific studies they produce may not actually prevent the environmental degradation of the Galapagos Islands. I argue that these methods of categorization are too speculative and attribute *a priori* beliefs to the perception of risk rather than taking into account the ethnographic detail of people’s everyday responses to risks.

Boholm (1996, 2015) has criticized Douglas & Wildavsky for their functionalism and determinism, but in defence of their ideas Rayner and others (Tansey 2004) made a convincing argument that cultural theory has been misinterpreted as a “psychological theory of personality types” (Rayner 1992: 107). Rayner argues that grid-group analysis assumes “first, that cultural bias is unavoidable and, second, that there is a limited number of cultural packages from which people are free to choose when they settle for any particular style of social organization” (Ibid). He adds that there are two main hypotheses about how the typology works: (a) according to the *stability hypothesis*, “individuals will seek to homogenize their experience of social structure in different areas of their lives” (Ibid), and (b) according to the *mobility hypothesis*, people move between contexts and are able to change their arguments and position in the typology depending on the situation. Rayner prefers the latter hypothesis because the former “veers too closely toward cultural determinism” (Ibid). However, even in his defence of grid-group typology, Rayner admits that it has had limited practical applications (Ibid: 84). I agree with Boholm that the central problem with the cultural theory of risk is that it “assumes the existence of detached world views, conceptualized as bounded, consistent, self-supporting and self-explaining yet

mutually incompatible perspectives” (2015: 65), while people are actually constantly switching viewpoints.

Some anthropologists have incorporated cultural theory into their analysis, such as Lazrus (2015) in her study of climate change risk in Tuvalu, which looks at culturally informed perceptions of risk and of appropriate climate adaptation responses. However, I didn't find the grid-group typology to be revealing of how climate risks impact farmers' lives in Galapagos, mainly because the majority of my participants were either uninterested in climate change or focused more on other risks they were encountering. Their choice in focusing more on one risk (pests) over another (climate change) has more to do with the degree of abstractness of the latter. However, both flooding and an invasion of armyworms will have a noticeable impact no matter whether someone is an 'individualist' or an 'egalitarian'. Additionally, regardless of which typology group my participants might fall under, they mainly laid the blame for their various problems on the outside world and outsiders.

Based on my research, the only ways in which grid-group typology seemed to fit the context of Galapagos were the following: first, farmers who are more individualistic/competitive (believe in the free market) blame others' failures on their lack of hard work, whereas those who are more egalitarian blame lack of government support and pine for a more communal time; and secondly, scientists with a 'hierarchical' view will probably defend the legitimacy of their work by explaining that nature must be managed and studied in order to keep it in equilibrium. Mapping the 'myths of nature' onto grid-group typology was not helpful in my research context because some individualists definitely saw nature as 'ephemeral', 'capricious', or 'perverse/tolerant' and few seemed to think of it as 'benign'. Furthermore, the typology doesn't provide insight into the everyday impact of risks, their emotional impact, the ways in which they alter everyday behaviour/actions, or how they even came about in the first place. As Alaszewski points out, “the emphasis tends to be on the underlying social processes and symbolism rather than on the active role of the individual” (2015: 217). Caulkins (1999) believes that grid-group theory must be improved before it can be properly used for cross-cultural research, whereas I think we should engage with the topic of risk from a materialist standpoint and through a causal framework, as discussed in Chapter 7.

2) *Risk Society*: Beck dedicated his career to researching risk (Beck 1992 [1986]; Beck 1987, 1994, 1996, 1999, 2000, 2008, 2009, 2013, 2018). He succinctly describes his theories as follows: “[w]hat signifies the risk society are manufactured uncertainties which tend to be intangible to our senses. The theory of world risk society as a new Critical Theory assumes three characteristics of global risks: delocalization, uncalculability, and non-compensatability” (Beck 2008: 1). He claims that contemporary ‘reflexive modernity’ is divided into three components: individualization, multi-dimensional globalization (cosmopolitanization), and the *risk society*. By individualization he means the capacity of modern institutions to individualize citizens; cosmopolitanization involves people viewing “themselves simultaneously as part of a threatened world and as part of their local situations and histories” (Ibid: 4); and by *risk society* he means that people are hyperaware of new *manufactured risks* that span across space and time. Under ‘reflexive modernity’ people feel “bouts of existential anxiety” (Beck 1994: 46), are “obsessively preoccupied with apprehension of possible risks” (Giddens 1991: 53), and are unable to act upon pervasive anxieties (Lupton 2013: 89).

Mythen (2004), Dickens (1992), and other authors have criticized Beck’s ‘grand theory’ for being Eurocentric and not based on empirical evidence, or for being overly simplistic when dealing with cultural complexity (Irwin et al. 1999). Even though Douglas based her work ethnographically on the Lele of the Belgian Congo, both she and Beck have been criticized for making little effort “to consider the validity of their theories” (Wilkinson 2001a: 2) and for having political biases built into them. Van Voorst (2015) attempted to apply Beck’s theories to ethnographic fieldwork concerning flooding in Indonesia and found that participants didn’t consider flooding to be either an ‘old risk’ or a ‘manufactured risk’, but rather a fusion of the two, and that they certainly didn’t find flooding ‘democratic’<sup>45</sup>. She concludes that “risk is primarily a matter of power and a means to

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<sup>45</sup>This criticism does not seem well founded, because Beck acknowledges that “[r]isk and social inequality, indeed, risk and power, are two sides of the same coin” (2008: 7), indicating that he is aware that power dynamics and socioeconomic vulnerability play a role. What Beck is trying to argue is that some risks (like microplastics in the water) are uninsurable even by the wealthy. Furthermore, he states that “the *same* pollutants can have quite *different*

blame and exclude the vulnerable” (Van Voorst 2015: 260). Although I agree somewhat with these critiques of both Douglas and Beck, I see the utility of assessing how people’s *a priori* biases may influence the way they perceive risks, and also of conceptualizing contemporary risks as categorically distinct due to their ability to affect people globally while remaining incalculable and uninsurable. As stated previously, I think Douglas and Beck are simply answering different questions. In the context of Galapagos, the idea of the ‘risk society’ is only useful in the sense that contemporary *manufactured risks* like Covid-19 and climate change have widespread impacts over time and space, but must be conceptually translated by experts because they are invisible to the naked eye. To find out how risks affect people, Lupton (2013) has suggested a third way of studying risk: governmentality.

- 3) Governmentality: Although Foucault (2008) didn’t focus his work specifically on risk, the idea that it can be used by governments as a form of regulation and control has been influential. O’Malley (2008) explains that governmentality became influential “during the period in which Marxist theory lost favour and ‘critical’ social theorists were seeking an alternative framework that provided a new way of grasping issues of politics and power” (Ibid: 52). Many academics (Castel 1991, Dean 1998, Ewald 1991, O’Malley 2008) have used a Foucauldian lens when studying the relationship between risk, governance, law, insurance, etc. As Dean (1998) states, the idea that the world can be governed with ‘calculative rationality’ is an essential part of contemporary quantitative risk analysis. Similar to Beck, who saw risks mediated by experts and the media, Foucauldian scholars emphasize “the role of expert knowledges in the constitution of late modern subjectivity” (Lupton 2013: 116).

Although Foucault’s ideas can be used to understand how governments discipline, regulate, and even create the self, his top-down approach can deny people’s agency or lead to unwarranted criticism of necessary life-saving government actions. During the pandemic one might be tempted to draw on Foucault to show how governments used the virus as a

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meanings for *different* people” (Beck 1992: 26), so he recognizes that risks aren’t understood by everyone in the same way.

pretext to control people, but this is an unproductive criticism, especially when mathematical modelling shows that nearly 20 million deaths were averted by the implementation of Covid-19 vaccines (Watson et al. 2022) and many additional lives were saved by quarantine measures. Furthermore, Foucault's concept of governmentality deemphasizes the role of individual agency to resist technologies of domination. As Derek Kerr explains, Foucault's view of power is top-down and it "not only beheads the King; it also beheads social subjectivity, and in the process gives rise to the notion that humanity can never escape from systems of power and governmentality" (Kerr 1999: 175). In my master's thesis (Stimson 2016), I argued an alternative interpretation, which is that Ecuador is a 'negligent hegemonic state', meaning that the government wishes to expand its power and control over resources without caring about local populations. There is no evil mastermind, nor even a *panopticon*, but simply an expansion of integration into the capitalist system.

Contrary to the three aforementioned schools of thought, I propose a new approach, which emphasizes two aspects of risk: (a) Firstly, as anthropologists, our commitment is to thick description and having our ethnographic data reveal a progressively contextualized understanding of our subjects and location; (b) Risk needs to be understood more holistically, in terms of structures and processes<sup>46</sup>, by combining Beck's risk society with eco-Marxist ideas and particularly highlighting the *transformative agency of risk*. This is what I have developed into the concept of the *coexistential rift* (Chapter 7). However, prior to delving into this and ethnographic descriptions in the next three chapters, it is vital to frame the way this study will address

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<sup>46</sup> Although Beck and Douglas have been criticized for being reductionist or deterministic, I think there is value in creating theories that explain the ways in which risk inserts itself into our lives. Of course, there will be drawbacks and anthropologists are wary of generalizing, but without this attempt it is hard to engage in comparative discussions of risk.

*globalization*, since without Galapagos being interconnected with the global system its inhabitants would not be facing the risks of Covid-19, introduced species, or the ‘threat’ posed by migrants.

In the Anthropocene, humans are experiencing a triple crisis of identity, environment, and economy (Eriksen 2016: 1). Moreover, these crises are amplified by globalization’s “intensification of transnational connectedness” (Eriksen 2007: 18), which involves disembedded social relations, accelerated change, pressures of standardization, increasingly interconnected societies, greater human mobility, increased ‘cultural mixing’, and more predominant invisible, abstract, and pervasive global risks (Eriksen 2007). Giddens (1990, 1996, 1999a, 1999b) believes that globalization is responsible for creating rapid social, economic, and political change in our “runaway world”. As globalization is unevenly distributed geographically (Beck 1999), this leads to risk affecting people unequally. Additionally, since neoliberalism places responsibility for misfortune on individuals and is aimed at the “methodological destruction of collectives” (Bourdieu 1998: 2), people have become atomized worldwide. Along these lines, Falk (1999) explains that we are currently experiencing “predatory globalization”, where neoliberal capitalism leads to boom and bust cycles and our state of perpetual crisis. As Conway & Heynen state:

Neoliberalism’s ascendancy and globalization’s emergence and consolidation was, and is, the sociohistorical path that has led us to our present state of global crisis; its unacceptable levels of social inequality, of poverty and social insecurity, and its lack of comprehensive healthcare delivery systems, its lack of gainful employment opportunities, and its lack of social responsibility for the powerless, the needy – the ‘losers’. (2006: 34)

Evidently, the study of risk, especially in the context of a worldwide *risk* society, would be incomplete without incorporating the concept of globalization. Conway & Heynen (2006) espouse ‘alternative globalizations’ and ‘globalization from below’ as a way of confronting the negative effects of globalization from above. Bauman argues that negative globalization is “the prime cause

of injustice, and so, obliquely, of conflict and violence” (2007: 7-8). In fact, because *risks* travel along global flows, they are a form of slow violence (Nixon 2011) and affect people along both spatial and temporal lines. As Waltz (2020) shows in her ethnography of farmers in Kenya, people will knowingly expose themselves to toxic pesticides in order to reduce future precarity, showing that *risk* has both a spatial and temporal component, and people must carefully weigh the risk and reward of their choices<sup>47</sup>.

In Grenier’s geohistorical overview of Galapagos (2012), he outlines how in the 1940s the Galapagos Islands entered a process of “geographical opening”, exposing them to outside flows and integrating the archipelago into the ‘world system,’ contributing to migrant inflow into the expanding agricultural frontier, leading to a boom in tourism in the 1980s, and to exposure to ‘continentalization’ (loss of singularity and increased influence from mainland Ecuador) from the 1990s onwards (Grenier 2010). Grenier is correct in tracking flows into and outside the archipelago, and by doing so systematically we can better understand the interplay between globalization and risk.

There is no doubt that globalization and risk are impacting cultures worldwide, but how exactly does this happen as a process? In Chapter 7.2 we shall see that the *coexistential rift* is a theoretical lens for understanding the connection between neoliberal capitalism, risk, anxiety, and alienation. However, prior to exploring that concept, we shall delve into an ethnographic understanding of the risks most commonly cited by farmers during my research: Covid-19 (Chapter 4), climate change (Chapter 5), and pests (Chapter 6).

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<sup>47</sup> Also see Methaphat 2009.



## 4. COVID-19: PARADISE AND THE APOCALYPSE

### 4.1 Emotions and religion

Home to around 15,000 people, the town of Puerto Ayora on Santa Cruz Island is the most populous city of Galapagos, but the once bustling Charles Darwin Avenue, previously filled with boisterous tourists shopping for t-shirts and going to bars, was deserted when I arrived in September 2020. It felt like a ghost town. Numerous disinfection systems were installed at the ports, airports, and hotels in the hopes of making tourists feel Galapagos was safe to visit. One particular device would spray cars leaving Puerto Ayora, potentially serving more as a biosecurity performance than actually disinfecting vehicles. Since news had travelled that Covid-19 can survive on the soles of shoes, the firemen sprayed the streets and disinfection mats were placed outside of the few businesses that were still open. People wore hazmat suits, gloves, masks, and other gear that are all too familiar around the globe. As isolated as Galapagos seems when it is depicted in the media, it is actually remarkably well connected to flows of tourists, viruses, invasive species, and commodities.

Emotionally, the Covid-19 pandemic has been extremely traumatic: “It really terrifies us! The virus really terrifies us and we have no idea when tourism will normalize.” One participant explained that the beginning of the Covid-19 pandemic, in March 2020, was ‘like Armageddon’; when the news of the virus first emerged, there was “cyber-driven panic”: total chaos and confusion, with tourists leaving the archipelago and a few getting stranded during lockdown until the humanitarian flights could get them out. During the months that ensued, thousands of illegal and temporary residents boarded humanitarian flights, and the exact number of people who left during this exodus is still unknown. Finally, by the time I arrived in September 2020 the islands had opened up to flights again but people lived with a chronic sense of *precarity* and *liminality*.

The economic fallout due to the temporary collapse of the tourism industry and the disruption of everyday rhythms have certainly caused permanent changes in Galapagos. “Without a vision of the future, the present becomes hollow”, explained one depressed resident. This feeling of uncertainty during a *liminal* moment is expressed in both positive and negative ways.



Image 9. A banner on Santa Cruz Island: 'Tortoises carry their house wherever they go. You don't. Stay home'.

The uncertainty of the pandemic has led to a high degree of stress and anxiety. By January 1, 2022, 2,321 people in Galapagos had gotten infected and 25 had died, out of a population of roughly 30,000. Two of my participants lost elderly parents due to Covid-19. One of the families visited their father at his deathbed and all 15 siblings contracted Covid-19 in the process, which they admit was careless, the result of losing their fear of the virus and becoming “distanced from reality”. Since the children weren't allowed to attend a funeral and the body was buried in an area far from the cemetery, they were distraught because they couldn't even give a final farewell. In the rural highlands, as a farmer was relaxing in a hammock he said to me, “that dog is howling because it's announcing that someone is going to die...It's a belief from here. The old people from Galapagos say that”. Covid-19 obliterated all other fears and worries to the point that multiple

people commented that they had never had any worries before the pandemic<sup>48</sup>. A health professional at the Puerto Ayora hospital reflected on what she was witnessing:

It really worries me how it is impacting the youth. Galapagos doesn't have many options for adolescents. They have limited options and now they're locked in. Maximum one day at the beach and then back to being locked in. My son is that age and he rarely goes out...There's more depression and particularly more intrafamily violence. In fact, we even had a murder during the pandemic. It was a femicide and is the first known case in Galapagos...At the hospital there have been some attempted suicides...What's really weird is that people seem to have decided not to get sick. Before the hospital was full and now it's empty<sup>49</sup>. Here we've had a few people hospitalized, but for other diseases there haven't been too many people coming in. Only pregnant people going to give birth. What we have had are cases of violence, attempted suicides. We've always had these problems, but now we see it a bit more.

As seen from this excerpt, the pandemic has exacerbated intrafamily violence, suicides, and mental health issues. As noted by my participants, most residents had financial worries, because in the hopes of improving farms or expanding businesses they accrued debts which they thought they could pay back. Galapagueños said they felt desperate, because “nobody thought this would happen” and banks were only refinancing loans, but still expected people to pay. As Galapagos is the most affluent<sup>50</sup> region of Ecuador, its residents were used to a strong economy based on the certainty that tourists would always come. As a survival strategy and emotional escape valve, some naturalist guides I used to work with ended up growing food on plots of land they owned in the highlands but had never had the time to work on. As one guide explained, “If we weren't doing

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<sup>48</sup> However, some participants admitted that in the past they worried about unemployment, poor healthcare, education, and migration.

<sup>49</sup> I heard from other sources that at times the hospital was completely full with Covid-19 patients, which is why people avoided getting other health issues checked.

<sup>50</sup> A farmer on Floreana Island told me: “The pandemic took a veil off our eyes and made us realize a lot of fallacies. For instance, I had no idea that there was such extreme poverty in Galapagos...there were people that didn't have money for the airplane ticket” to leave during the pandemic.

this, we would be watching TV for six hours and would be screwed...One has to accept that things have changed and we have to manage things differently now...I think having goats is therapeutic. They're curing us emotionally. We also have meat and maybe even milk...My son surfs and that helps psychologically with the pandemic”.

For many, religion is both a coping mechanism and a way of understanding the current crisis. Since most of my participants are Catholic, Evangelical, Seventh Day Adventists or Jehovah's Witnesses, it was not uncommon to hear eschatological interpretations of the pandemic, such as:

1. 'With Covid, God is testing us to make us repent all those stupid things (*pendejadas*) we've been doing. Just look at some father who killed his two children and wife. Is that OK? You see so many things these days! I think the one upstairs is getting tired...I think we're close.' Me: 'Close to what?' 'Close to the end time...we are all sinners.' – Rancher, San Cristóbal Island
2. I'm an Evangelical Christian and we're not frightened by the pandemic because it's written and we know that all of that will happen. There will be earthquakes, hunger, pandemics, and all of this has to happen – Farmer, Santa Cruz Island
3. I think here in Galapagos we're blessed by God because, as an example, just look at Covid. So many people have died and continue to die in our own country. Here in Galapagos few people have gotten sick. There have been some cases on Isabela, but not extreme symptoms. I had Covid, my wife had Covid, but we're fine. If we had gotten terribly sick, we'd be dead. Same on the other islands because our healthcare system is bad. – Farmer, Isabela Island

These quotes show that, when trying to determine a causal relationship or find someone to blame for the crisis, farmers place responsibility on God and His divine plan, especially since they claim we are getting near to the apocalypse. When I attended a Franciscan church service, the priest prayed for the scientists to find a cure and urged everyone to get vaccinated so people could go back to earning the daily bread for their families, showing the important community role of religion during the pandemic. One Santa Cruz rancher commented that:

Churches provided more support than the government itself... The food baskets the churches made were much bigger than the government's. We gave away rice, meat, chicken, everything. The people became aware that they were OK because of the community<sup>51</sup> and not because of the government. The government gave us crumbs.

Furthermore, while God may be in control, the lack of preparedness of the health system<sup>52</sup> and insufficient economic support are squarely the fault of poor governance. Despite the tragedy of the healthcare crisis, Galapagos residents still often say that the archipelago is 'blessed' or 'enchanted'<sup>53</sup> and that there is something special about the water, nutrients, or climate that is protecting people from the pandemic. This is associated with an omnipresent metanarrative of Galapagos being like 'paradise'. In other words, there's a view that Galapagueños are 'sinners'

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<sup>51</sup> Whether or not an NGO or the government were doing their part with the '*kits alimenticios*', ultimately it was the farmers who were donating food (or selling at a reduced price) to create the food baskets, so it truly was the community that showed solidarity. One farmer was criticized for throwing away his milk instead of gifting it, and accused of being "very capitalist and not very religious", showing an interesting opposition between capitalism and the communalism of religion.

<sup>52</sup> The complaint about having a badly equipped and staffed hospital in Puerto Ayora (Santa Cruz Island) is a long-standing issue and similar criticisms can be heard in Puerto Baquerizo Moreno (San Cristóbal Island), even though they had a much bigger hospital built in 2014 during the oil-rich Correa government. During my fieldwork, a woman told me she had tripped on her farm and broken her arm, which was operated on in San Cristóbal. Given her ongoing pain, she believes the procedure was improperly done and she wants to seek medical care on the mainland, but has postponed travel due to Covid-19. Other people referred to leaving the islands right now as "going out to look for death". It is very common for Galapagueñas to travel to the mainland to give birth due to distrust of the hospitals: "Here you're prohibited from getting sick, because going to the hospital is synonymous with death (laughs)". Many people explained to me that the three main reasons to travel to the mainland are medical checkups, shopping for clothing and technology, and briefly escaping from the isolation of the island. An ex-colleague from the Charles Darwin Foundation had a terrible life-threatening accident while surfing on Isabela Island and only survived because he was evacuated by panga boat. Finally, concerning the Covid-19 pandemic, one of my participants blamed the lack of transportation for someone's death: "Just a few days ago someone died of Covid because they had to be taken to another island...It's easier on the mainland. Here you have to wait for a plane or a ship. It's a lot more complicated."

<sup>53</sup> The Galapagos is also known as the 'Enchanted Islands', based on an 1854 novel by Herman Melville, but the term *encantadas* is used in this context as synonymous of 'blessed'.

who inhabit ‘paradise’ and are nearing the apocalypse. This is another reason why pests (*plagas*), climate change, and overpopulation are all easily incorporated within a broader narrative of socio-environmental degradation.



Images 10 & 11. The Franciscan church on Isabela Island depicts Jesus surrounded by Galapagueño animals and the stained glass windows are also of iconic species.

The concept of ‘paradise’ has been brought up by numerous authors (Ospina 2006, Ospina & Falconí 2007, Salcedo 2008) as a very prominent *romanticist* idea in all Galapagueño social sectors, although each one has its own nuances and differences. Amongst farmers and ranchers, this concept is only minimally based on the idea of Galapagos as something biologically pristine. ‘Paradise’, for them, is much more intertwined with the idea of living a tranquil and healthy life, free of crime and the social problems of the mainland, and also with a healthy climate and fresh air. From this perspective, migrants and politicians are seen as a threat to tranquillity. In their own words, my participants explained their views of paradise:

1. People understand that they live in Galapagos, a natural paradise. To live in Galapagos is a blessing, one could say. Here there isn't as much delinquency as elsewhere or as many social problems compared to other places. Here it's very tranquil, very healthy...The climate is healthy - there isn't contamination from industries or anything like that...I come from the city, from Santo Domingo, and in general all the cities in Ecuador have social problems - crime, drug addiction, corruption -

all of that generates stress and that stress causes disease. But not here! Here you can sleep with your doors and windows open. – Rancher, San Cristóbal Island

2. To me, the concept of being Galapagueño is very beautiful (laughs) – to live in paradise. Before there were only a few of us, until many people came. We used to help one another like one family. – Farmer and housewife, Santa Cruz Island
3. A: Maybe it's because we suffered in the time when we had very little. Before we lived in paradise, real paradise...B: In those times we lacked many things, but we were happy. Our childhood had no luxuries, but we were free and we played in the brush (*monte*). It was calm. If they asked me what time I'd like to go back to, I'd say 'my childhood'. – Two long-time naturalist guides, the latter of whom is also a rancher, Santa Cruz Island
4. To the eyes of the world, Galapagos is paradise, but the reality for us is not like that. Because here we have many people who instead of giving people a better life, they are destroying Galapagos. Politicians should fight for Galapagos...They're destroying it. – Farmer, Santa Cruz Island

Despite these statements about present-day life, Galapagos was not always perceived as paradise. During much of its history it was seen as Ecuador's backwaters, a place to send convicts to the penal colony on Isabela Island, which lasted until 1946. A long-time Santa Cruz resident explained:

Around 1940 my mother came from Guayaquil and she thought she was going to paradise...but when she arrived it was just fishermen. It was really difficult for her to get used to life here...There wasn't food from a city or the necessary tools for the house, farming, or fishing...my father used to make traps to catch wild pigs or donkeys, or we would adapt to eating wild chickens or even tortoises.

Even today, paradise can be seen to exist side by side with hell. “Every paradise has its hell!” exclaimed a staff member of the Ministry of Agriculture when referring to social problems of nepotism, corruption, and political apathy. Other participants, such as the president of a Parish Government (Junta Parroquial), commented that the pandemic was responsible for destroying paradise and that he cannot remember being worried about anything before the pandemic:

It seems like we've been living in paradise (laughs). We didn't have worries before. Everything was good. We had water, there was sunshine, there was food for the animals... There was work because tourism moved the economy. In other words, we were doing well. Nobody worried about anything. But now because of the pandemic we're worried. – President of a Junta Parroquial, San Cristóbal Island

Thus, historically Galapagos has transitioned from hell to paradise, but it might be sliding back into hell due to an increase in drug trafficking, rape, domestic violence, and theft<sup>54</sup> (although these crimes<sup>55</sup> are actually rare, compared to the mainland). That transition away from paradise had been going on for some time, as documented by Idrovo (2005: 213), but is accentuated by the pandemic. Paradise lost is the result of political mismanagement, religious interpretations of an inevitable apocalypse, or simply a pandemic that is wrecking a once prosperous local economy. However, despite the few accounts of health-induced anxiety, the majority of highland farmers I spoke to were less worried about the health impact of the pandemic than about its economic repercussions.

Galapagueño perceptions and reactions to Covid-19 were linked to the influx of global news. On my first day in the archipelago, the taxi driver from the airport had joked that there were few Covid-19 cases because Galapagos doesn't have a 5G network yet. Prior to my arrival, many people got infected either because people had travelled to the islands with fake PCR test results, or as a result of attending large parties. It was during Halloween 2020 when I first became aware

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<sup>54</sup> Although theft is rare, one participant told me his nephew's house was broken into and the TV was stolen. A Santa Cruz farmer summarized this change in Galapagos: "Back then people were healthy, honest, sincere, hard-working, and very respectful. You never heard of what we're hearing today: crime, delinquency, theft, drug addiction, prostitution. None of that! I remember when I lived in Bellavista we would leave the door just tied with a rope and we'd go on vacation and when we returned we would find everything the same. Nothing was stolen."

<sup>55</sup> Another reputed crime is that fishers allegedly took fuel and food to the Chinese fleet fishing outside the Galapagos Marine Reserve, and/or to drug trafficking ships. 'Environmental crimes', such as fishing without a permit, eating Sally Lightfoot crabs, or chopping down endemic trees are also occurring, but aren't interpreted by farmers or fishers as reasons for the deterioration of paradise. The loss of paradise is associated with social problems.



of highland farms being used as social gathering locations for parties<sup>56</sup>. Similar to controversy in the UK about politicians meeting socially and going against their own mandates, authorities on multiple islands were criticized for congregating in the highlands. Many participants were sceptical about receiving the vaccines because they were afraid of being injected with a tracking chip, and others believed they might become infertile or it would give their children autism.

Though these global parallels may highlight something universal about politicians and people's willingness to believe conspiracy theories<sup>57</sup>, they also demonstrate how interconnected Galapagos is and how the media was capable of alerting everyone to an imminent danger, modifying people's behaviour, and then prompting resistance from a population that feels it already has enough restrictions imposed by conservationists. For farmers who are alienated by the *conservationist paradigm*, "a conservationist is someone who takes things from you". Some participants preferred to switch off from the news entirely: "I almost don't watch TV anymore. It affects my mood because one becomes aware that they put horror music on and create drama during the news. And during the pandemic it started to affect me." Another participant said that he no longer believed the news on TV, so he switched over to Facebook and the Internet, and one farmer emphatically said that he prefers to turn off the radio and listen to good music instead. Finally, there were those who had no other choice: "Due to debt they've cut off my TV, so I don't

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<sup>56</sup> Multiple parties were probably super-spreader events, as it was rumoured that a *quinceañera* (a coming-of-age fifteenth birthday party) with around 200 guests led to a massive outbreak, including many people in public-sector jobs.

<sup>57</sup> The owner of a bar on San Cristóbal told me that he drank lemongrass tea and herbs to keep himself safe: "it's stress that's killing people, because there's media warfare and we're living with a boogeyman (*cuco*)...what's actually going to affect us is purely economic. All of this is about eliminating our freedom by forcing us to have a vaccine." Also, a Santa Cruz farmer said that he thought "the virus reaches the people who are afraid. I barely even wear a mask. I just wear it in town so I don't get fined."

have news.”

Uncertainty prevailed throughout my entire year of fieldwork. A farmer on Floreana Island told me that she hoped the vaccine, once it arrived, might last for at least a year so that tourists might feel confident to travel, since they are central to the local economy. She added that she worried she might still get sick or possibly infect her mother, who was adamant about not being vaccinated. By the end of June 2021, just one month prior to my departure, the Consejo de Gobierno (Galapagos Government Council) conducted a successful campaign that vaccinated 99% of the population. However, with the rise of Omicron and other variants, both in Galapagos and worldwide, the feeling of uncertainty continued.

#### **4.2 Liminality: the Covid time machine**

As stated previously, not everything about the pandemic was bad for Galapagueños. Participants spoke of having the opportunity to reflect upon their lives, spend time with family, get “closer to God”, begin an urban garden in the port, or start planting in the highlands, etc. These Covid-induced social changes were interpreted nostalgically<sup>58</sup> by residents as a ‘time machine’ that transported them to a time with less tourism, emptier streets, and a slower pace of life. During the pandemic the government took the opportunity to work on improving roads and installing stormwater drainage. When I spoke to one resident at a coffee shop near a street that had been ripped up, she was pleased by the sight: “I would say people are now feeling what Galapagos used to be. Look at this empty street. This is what it was like 40 years ago...Many streets have been

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<sup>58</sup> Ospina (2006) also found people were nostalgic for earlier times with communal relationships, and where people had greater freedoms to hunt and fish, prior to restrictions imposed by the Galapagos National Park Directorate. What differentiates previous nostalgia from the liminal period of Covid-19 was that people literally felt they were reliving the past.

ripped up for six months and that reminds one of Galapagos forty years ago. Dirt roads! It's like we're going back in time!” Obviously, people actually want their streets repaired, as well as potable water and sewage services (long-unsatisfied demands), but the physical appearance of dirt roads further contributed to this feeling that Covid-19 brought back nostalgic elements of the past.



Image 12. This was one of the construction projects that evoked a sense of nostalgia.

In his classic ethnography, ‘The Rites of Passage’, Arnold van Gennep (1960 [1909]: 18) explains that *liminality* involves wavering “between two worlds”, to be suspended in a different sort of time. The Covid-19 pandemic, like a time machine, created an altered reality, which has both positive and negative elements. The following table summarizes elements of my participants’

nostalgic recollections of aspects of the utopian past<sup>59</sup> compared with recent pre-pandemic life and perceptions of which aspects of life stayed the same and which ones reverted to the olden days:

**Table 2: The liminality of Covid-19 in Galapagos**

Nostalgic / Utopian Past	Pre-Pandemic Life	Covid-19 Pandemic
‘Endemic’ first migrants / Insider ‘shellbacks’ ( <i>Carapachudos</i> )	Introduced migrants / Outsiders ( <i>Introducidos / afuereños</i> )	These aspects of pre-pandemic life returned temporarily to how they were in the utopian past.
Communalism (Strong sense of community)	Individualism (Disunited)	
Cooperative work ( <i>mingas</i> )	Selfishness / Lazy youth / Alienated work	
Barter / Human Economy	Market economy	
Suffering and hard life	Comfortable and easy life	
Less tourism	Excessive tourism	
Religion <sup>60</sup>	Science / <i>Conservationist paradigm</i>	These aspects of pre-pandemic life persist, in spite of the Covid-19 ‘time machine’.
Bountiful agriculture	<i>Plagas</i> and pesticides	
Freedom / Care	Restrictions / Fortress conservation	
Less politics	More political and bureaucratic	
Stable climate	Unstable climate	
‘Baseline communism’ (Graeber 2011: 98)	Neoliberal capitalism / Debt	

As can be seen from the table of oppositions above, while the pandemic was a *liminal* moment in some aspects, it wasn’t a complete return to the past nor did it affect everyone equally. For a

<sup>59</sup> In this thesis, ‘utopian past’ generally refers to how life was in Galapagos prior to the development of the tourism industry in the 70s, but it has many different meanings to people of different ages. Younger inhabitants spoke of a more peaceful life in the 90s.

<sup>60</sup> Most of my participants are Catholic and are nostalgic about a time prior to the *conservationist paradigm*, before the arrival of scientists and prevalent Darwinist discourse. Farmers associate religion with a strong sense of community, and the current disenchanted period with selfishness and greed. During the pandemic churches supported the community, so people were reminded of the importance of religion. However, the prevalent secular *conservationist paradigm* continues to dominate everyday life in the archipelago. Hence, while religion may not be considered an element of the past, because many people are still very religious, their beliefs are overshadowed by the predominant ideologies of science, conservation, and neoliberalism.

brief period of time there was a feeling of *communitas* (Turner 1969), a heightened sense of community where people shared food and cared for one another, but as the pandemic dragged on, people began to worry more about debt and their individual feelings of insecurity. Some farmers claimed that the pandemic hardly affected them at all, because they rarely received tourism money and had felt abandoned long ago. Many migrants departed together with the tourists, some people were more communal and less selfish, barter and credit<sup>61</sup> re-emerged, and life became harder once again. It is noteworthy that science still holds hegemonic legitimacy under the *conservationist paradigm* and invasive species are increasingly problematic, ‘forcing’ farmers to use pesticides. Furthermore, people still feel controlled by a model of restrictions and fortress conservation, the political and bureaucratic system is underfunded but alive, the climate has been destabilized, and there is no escaping debt.

### 4.3 Now everyone’s a farmer: empathy and resentment

Back in 2018, when I worked as a videographer for the Lindblad Expeditions-National Geographic cruise ships in Galapagos, the number of tourists was steadily increasing. Over 275,000 tourists arrived that year, and ship tourism personnel spoke of being burnt out from working too hard and not seeing their families. This feeling of the economy moving too quickly was also felt by farmers who were expanding their production. Commenting on this, some of my participants said that God created the pandemic as a sort of ‘reset’ or ‘pause’ for people to reconnect with their loved ones and the environment. While some spoke of family unity<sup>62</sup>, others

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<sup>61</sup> On Isabela Island a farmer told me he had allowed someone to pay *fiado* (on credit), but that they hadn’t paid him back yet. At a rural store in Santa Cruz I found a couple that still sold on credit, but only to people they trust.

<sup>62</sup> “Personally I’m grateful Covid came. I think it has taught us about solidarity, because we had a very comfortable life...I have my family and we’re in tourism with a lot of resources, but with Covid we have had to pause and see that

felt it was too much: “during the pandemic we spend all our time together and it gets boring to see the same person all day. It gets tiring...because you're not allowed to leave your house. Families started developing psychological problems. It was chaos. In that sense it made me so happy to have my garden plot (*huerto*) to work in.”

Although social sectors in Galapagos used to have more conflicts in the late 1990s and early 2000s, especially involving fishers and the Galapagos National Park, the resentment and distrust between fishers, farmers, the tourism industry, and conservationists continues. The pandemic put people to a moral test and exposed both those “who don’t help the needy” and “others who showed their good side.” Covid-19 led to people making moralistic judgments about the more socio-economically privileged sectors of society, such as the tourism sector, because “money from tourism was too easy.” My participants commented that naturalist guides used to be able to afford expensive trips to New York or Paris, but now during the pandemic are requesting financial support (*bonos*) of \$100/month. As one president of a Parish Government (Junta Parroquial) explained, their institutional jurisdiction covers infrastructure and they couldn’t simply give out *bonos*. “If we had savings<sup>63</sup> I don’t think we would be in this scenario of unemployed people looking for jobs everywhere”, stated the Parish president. The Galapagos National Park ended up allowing guides to make money by taking guests to sites that were previously accessible to tourists without a guide, such as ‘Las Grietas’ and the ‘Giant Tortoise Breeding Centre’, which many non-guides claimed

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life is very short and fragile and it has helped me to become closer to my work, to my family. I think there was an enormous benefit.” – Rancher and hotel owner, San Cristóbal Island

<sup>63</sup> Although some people may not have a savings mentality, the pandemic dragged on for so many months that it seemed socio-economically insensitive for this politician to be ‘blaming the victim’. One farmer I interviewed explained that he had run through his savings and had to devise new business plans, such as setting up a bicycle repair shop. He speculated that even people with a lot of savings were going to be put to the test in 2022.

was unfair, as it was seen as giving money to the wealthier sectors of society. One rancher from San Cristóbal was merciless in his criticism:

I haven't felt...[the pandemic] really. You can't go to the beach much. I don't like to go to parties (*pachangas*) anyway...these people in port drink, eat, dance, dress well. And I say, 'Son of a bitch. How?!' I say, 'I would like a drought to come to see if they could survive here'...How much do you think a captain earns? Let's say it's just \$2,500 a month. A sailor earns \$1,500. And then a pandemic hit and they have no money. How come? Because people don't know how to save.

Social class resentment was palpable in the farmers' complaints during the pandemic. On Floreana Island I talked to one farmer who spoke with glee about the fact that naturalist guides were no longer flying around the world and buying fancy clothing; instead, they were so desperate that they sold him their shoes! This temporary 'role reversal', or at least the perception that the rich can suffer too (Turner 1969), is even woven into the mythological stories repeated about the islands. A number of Galapagos residents told me that humans who treat the archipelago well are allowed to return, but those who are greedy and have the wrong values will eventually receive retribution for their actions. Furthermore, because people in town and the highlands started planting their own produce (with varying levels of success), they began to empathize with other socio-economic classes and to understand how difficult it is to be a farmer.

As one young naturalist and farmer explained, "the good thing is that people have learned to appreciate the small things and stop being ostentatious and consumerist." Mariana stated that she likes that people are growing their own produce because it "means they value agriculture". Another farmer told me she was happy people were asking her how to plant food and were taking up urban

gardens, showing a new appreciation for agriculture<sup>64</sup>, even though their success meant less income for the farmers. Those same people who once haggled with the farmers, and who didn't acknowledge the amount of time spent or "how much one suffers" to produce, would later admit their own personal failure to harvest (due to pests or the weather) and the farmers would say, "Well, now I hope you value the *campo*." In the words of someone who worked at the Consejo de Gobierno, the pandemic created the "opportunity to look inside ourselves as a community and to generate some new ways of relating or trusting or appreciating. With that there's a new appreciation of the agricultural sector. You know, there's a new appreciation of living with less, rather than always wanting more."

However, there was also the recognition that this move towards agriculture from all sectors of society was going to be short lived, due both to the difficulty of planting and to the eventual return of tourism when the pandemic subsided, and that it was not without negative consequences:

People have returned to the fields out of fear, but they haven't realized that life is in the fields, that the economic centre is there, and that agriculture isn't easy. It's really tough! Many people have dedicated themselves to agriculture right now, but they work for 3-4 months and then once they realize that it's hard they abandon the land. But they damage the marketplace for the farmers! They harvest those 3 months, go and sell and then they abandon it. – Farmer, San Cristóbal Island

In summary, the pandemic disrupted the economy to such an extent that even non-farmers began planting, and while this helped farmers feel seen, it also led to lower income, aggravating pre-existing social resentments with the tourism and conservation sectors.

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<sup>64</sup> Galapagueños told me that "just now in the pandemic people began valuing agriculture". Furthermore, there are agricultural initiatives from Conservation International and the government to ensure food security. However, most farmers still feel abandoned.



#### 4.4 The migrant exodus

Some permanent resident participants were glad that temporary and illegal migrants had left at the start of the Covid crisis, as there is a great deal of concern about the Galapagos' 'carrying capacity' – the idea that Galapagos has already grown too quickly and there “aren't enough beds” for so many people, both in terms of urban expansion and employment. As one farmer on Santa Cruz explained:

Now there are few people, so you see the people who are really from here and their descendants. There are just the *colonos*. Those from the outside have left...It's both good and bad. It's bad because people who work in tourism won't have workers, so they will have to hire new staff again...It's positive that there are fewer people and the negative part is the economic aspect, since we're broke.

Another participant explained that “the majority who left are from town....Few people from the *campo* have left, because here we've always needed workers.” Finally, one Santa Cruz resident bluntly said that she was glad people had left during the pandemic because “we Galapagueños feel invaded”. Floreana and Isabela Islands were exceptions, where participants claimed that they actually had extended family members arriving, rather than leaving, during the pandemic.

The main five arguments made about migrant labour and their exodus during the pandemic are as follows: 1) Migrants consumed resources, so they were 'bad for the environment'; 2) They took jobs away from qualified Galapagueños or there was no money left to pay them; 3) Some residents were sad the migrants had left, because it meant there were fewer people to sell to or who are renting apartments; 4) Migrants often do construction work or farm labour, which are jobs few Galapagueños want to do, so there are many open vacancies that aren't filled<sup>65</sup>; 5) Migrants can

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<sup>65</sup> This is still a big problem for farmers. A coffee farmer who sells exclusively to a Japanese buyer told me the buyer was hesitating to buy more: “This keeps me awake at night. The lack of certainty of the external buyer causes a lot of stress...many workers from Loja went back to the mainland and now we don't have labourers. Although we may have

sometimes produce crops cheaply, especially if they work on someone else's land, so they are in direct competition with farmers who have invested more in their farm operations.

In other words, migrants are valued for their money and their work, but they are considered a threat to qualified labour and environmental degradation. One Galapagos-born farm labourer told me he was hoping Donald Trump would win the 2020 US election because he is 'tough on migrants' and in Galapagos there should be someone similar to protect people's jobs. My participants explained that migration increased since the 1990s because volunteers, police, students, military, and other individuals who visited the islands liked it so much that they found various methods to stay. Others explained that the increase was due to Galapagueños hiring outsiders as labourers (legally or illegally) because they are a cheaper workforce and are considered more responsible. One final explanation for the migrant boom is the LOREG law itself, which was implemented in 1998 to try to stop migration, but which made the archipelago seem exclusive when "previously people weren't interested in Galapagos".

A number of the anti-migrant arguments I heard had racist undertones, associated with the fact that many recent immigrants are from the Salasaca indigenous community. Some established residents are alienated by their speaking Quichua, maintaining their traditional dress and festivities, and sending money to their families on the mainland. Often, the racism is generalized to any indigenous person, who is generally assumed to have an illegal resident status: "When officials come to do a census, the migrants are like rats, hiding in the houses. And there's Otavalos like you have no idea." A clear example of the use of environmental rhetoric to cover up for xenophobic sentiments was expressed by an NGO worker:

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day workers for ranching and pig farming, we don't have enough to harvest the coffee. What do I do tomorrow?...People here work little and earn a lot...Galapagueños abroad returned to the islands and the migrants who actually work have left. Now I have no workers."

The good thing is that many temporary and illegal workers left because many of them are Salasacas who have their families and lands back in the mainland...Hopefully we can prevent the return of these people if this becomes a touristy place again. I don't think as many people will come as before. For me, the pandemic has been terrible, but it has been great for nature.

Privileged conservationists often voiced similar Malthusian views concerning overpopulation and the need to reduce migration for the 'good of nature'. A tour guide also expressed the opinion that the children of older migrants, who are usually more skilled and privileged, have left the islands to look for work elsewhere, whereas the Salasacas are coming in, marrying Galapagueños, and leading to the creation of a "mediocre society." Although migration in Galapagos is a complex issue that requires further research, which my fieldwork did not delve far into, my investigation clearly showed that because Covid-19 had created economic hardship, recent migrants were often perceived as a risk and become scapegoats for the problems that exist in Galapagos.

#### **4.5 Economic and political aspects of the pandemic**

In addition to the widespread use of masks, there were alcohol dispensers in public spaces and businesses sprayed down the dollar bills and coins they received. One entrepreneurial farmer I encountered who normally produced sugar cane alcohol (moonshine) decided to market a higher proof alcohol for hand sanitizing. Small entrepreneurship projects, such as preparing and selling fast food from home, became commonplace in the port towns. Small countryside shops were opened to profit from selling goods to rural neighbourhoods. In the words of a naturalist guide who started cultivating his land during the pandemic:

The invisible and invincible virus is affecting the world's economy. If you had land and didn't cultivate, how would you feel<sup>66</sup>? Look, Charles Darwin said it clearly. This land is not for the smartest (*más sabido*) or the strongest or the most cunning (*vivo*). It's for the one who adapts. You either adapt, are creative and evolve, or you're finished...In this critical moment you have to think 'what am I doing to survive, compared to what you used to do?'

Darwinism seems to have impacted people's way of thinking, expressing themselves, or gaining legitimacy in everyday discourse<sup>67</sup>, since they commonly said they were 'adapting' or 'evolving' to the environment, the climate, or the new socio-economic conditions.

However, for many long-time residents, the ability to adapt and stay afloat seemed to be in direct relation to their indebtedness<sup>68</sup>:

Covid is like having a time machine, which is really cool because you can access the Galapagos of the past, where you lived more calmly with the community and had a slower routine, giving importance to

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<sup>66</sup> It is important to note that most long-term farmers, those who treated it as a hobby/secondary activity, and the 'new farmers' are all people who work more than one job at a time: hotel/restaurant owners, accountants, taxi drivers, tour operators, public servants, etc. "People have multiple jobs in Galapagos because it's a survival strategy", explained a teacher-farmer from San Cristóbal Island.

<sup>67</sup> Interestingly, Marx and Engels asserted that 'double transference' had occurred between social and biological theories in Darwin's theory of evolution (Foster et al. 2010, Taylor 1989). They were inspired by Darwin's thoughts and saw the struggle between classes represented in Darwin's 'survival of the fittest'. Engels explains: "The whole Darwinian theory of the struggle for existence is simply the transference from society to organic nature of Hobbes' theory of *bellum omnium contra omnes* and of the economic theory of competition, as well as the Malthusian theory of population...it is very easy to transfer these theories back again from natural history to the history of society" (Engels [1875] cited by Foster et al. 2010: 309). Foster et al. (2010) argues that Engels' remarks were not a critique of Darwin or his ideas but highlighted the possibility of 'social Darwinist' discourse and the ability of Darwinist ideas to impact society and politics because natural science can be used as a source of legitimacy. In Galapagos, science is often appropriated in anti-migrant discourses and 'transference' even occurs when people discuss how to best adapt to the pandemic.

<sup>68</sup> In addition to large debts associated with farm equipment, constructions and other pre-pandemic projects, many people owed money for basic services like electricity, water, and cellphone service. I heard of two people who could not receive credit due to mobile phone companies reporting small unpaid debts and reducing their credit scores. Access to credit is also a lengthy and bureaucratic process, and few people succeed in obtaining it (See Chapter 8.6).

very basic things but with technology and Internet. It's like having technology and going to the past, but the problem is that you travelled back in time and took your debts with you! – Ex-director of the Galapagos National Park, San Cristóbal Island

I do feel uncomfortable because I have debts...In reality, it was a reason for feeling very demotivated and stressed. If I started to think about it, I would say 'What do I do if I don't sell?'...I'd say 'Well, I owe money, but they're not going to throw me in jail, right?...'Now I need to work because if I sit around I will get old and sick doing nothing. So I go work. If someone asks me for something, fine. If not, I use what I produce to feed my chickens or give it to my brother for his pigs or the neighbour for their chickens; and what's rotten makes compost because the soil also needs to regenerate...So I try to be positive, even though I know I have so many debts...Here Galapagos is very different to the mainland. There's nowhere you can escape. Because I would escape due to debt. I would! (laughs) It's funny, but it's true. By God, I would run away because of my debt. But where would I go? – Mariana, Santa Cruz Island

Even people who were critical of the tourism industry realized that its absence in Galapagos was 'lethal'. Almost everyone depends either directly or indirectly on tourism income (Pizzitutti et al. 2016). While some farmers prefer to sell most of their produce directly to ships, leaving only what is left over to be sold in town, others have diversified their farms by offering attractions such as giant tortoise visits or agrotourism.

Out of desperation some people were subdividing their lands into smaller lots for sale and were only slowed down by the 2015 Land Law ('Ley de Tierras'), which prevented land smaller than a hectare from being divided and sold. Even so, it is likely that land changed ownership during the pandemic, sometimes with illegal subdivisions that, while not legally recognized, were currently being utilized. Other farms were simply abandoned, filling up with invasive species.



Image 13. Protests against the government prior to my arrival, in July 2020. The sign reads 'Galapagos in crisis. S.O.S. There is no work, there is no money, there is no health, and the government doesn't care!!', 3/7/2020, @expatgalapagos [Facebook page].

Even though the government provided food baskets (*kits alimenticios*) for people in need identified based on survey data, I heard numerous accounts of people who hadn't received any nutritional support even though they were eligible for aid. They complained that politicians were giving out the food to family and friends, or to those who had voted for them. NGOs like Conservation International and Frente Insular also stepped in to provide people with food, although it is difficult to judge their success qualitatively. A Santa Cruz rancher commented that it was really the community that stood up for one another and that the government "gave out some food baskets, but they were just a cosmetic cover-up (*maquillaje*) to look good, since they last just two days!...Let's hope the new government<sup>69</sup> can help us out, although I doubt it, because if they invested \$1 million in the campaign, they need to recover the money! And not just one million, but more. That's the mentality of the politicians here." When I mentioned to a park guard and rancher on Isabela Island that a report published by the Consejo de Gobierno (Wray 2021) listed

<sup>69</sup> This interview took place on June 1<sup>st</sup> 2021, which was after President Guillermo Lasso came to power. Most of my fieldwork took place during the presidency of Lenin Moreno.

the credits and *bonos* that they supposedly provided in Galapagos, he said: “That’s bullshit. They write what’s convenient to them. Why don’t they consult people to know how they’re actually doing? Because the criticisms would be harsh!”

Due to the lack of substantive support from the government, some people who were left unemployed as a result of the pandemic wanted to be allowed to fish without a fishing permit (*parma*), at least while the crisis ensued. One naturalist guide told me that because his father was a fisherman, and the fishing permit is passed down within fishing families, he wanted to go out during the pandemic but was held up and prevented from doing so by a complicated bureaucratic process with the Consejo de Gobierno to change the old fishing *cupo* (permit) to his new boat. Due to his father’s problematic relationship with the authorities, he said they could have been purposefully withholding the necessary paperwork, and that it was inhumane to prevent people from fishing during this crisis.

It was commonly rumoured that people were illegally eating Sally Lightfoot crabs, which is a serious violation of the Galapagos National Park rules, and could face sanctions if caught. In a place with so many conservationist restrictions and such a limited job market, desperate people can either leave the archipelago or break the rules<sup>70</sup>. A coffee farmer told me that he came across at least 10 endemic *matazarno* trees chopped down when he went hunting because the “delinquent has to eat. Nowadays even those without a fishing permit (*parma*) are fishing lobster”. Another farmer corroborated the felling of these endemic trees, mentioning having heard chainsaws at night

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<sup>70</sup> This also led to increased pressure on the Ministry of Environment to open up the sea cucumber fishing season, which occurred just a few weeks before I left in 2021 and was meant to inject the economy with money. A fisherman I spoke to said it would help him pay off his greenhouse debts, but other more cynical ranchers said the fishers would spend the money on prostitutes and alcohol, which is one of the common stories about the 1990s sea cucumber boom.

and reporting it to the Galapagos National Park. The delinquents rarely get caught red handed, especially now during the pandemic because “the authorities have gone into hiding”.

In fact, there were rumours that people had eaten giant tortoises on Santa Cruz Island, but I was unable to verify if this had actually happened. It seemed unlikely that killing tortoises would be due to pandemic-induced desperation because farmers explained that there is still bountiful produce in the highlands and there are close family and friend networks in Galapagos, so almost nobody goes hungry<sup>71</sup>. In the words of a rancher from San Cristóbal:

“I tell you that here there is no poverty in all of Galapagos! If you come up from the port in orange season at least along the road you can pick four oranges! During avocado season you just find avocados somewhere...And outside [Galapagos], who will give you anything? In Ambato they wouldn't even gift you a glass of water...and then they'd rob you.”

Other farmers disputed this view, stating that even though there was a brief period of solidarity, the pandemic amplified individualism. I witnessed greenhouses filled with tomatoes left to rot and fields of uncultivated potatoes and vegetables also abandoned because the money made from dismal sales in the port towns wasn't worth the cost of hiring labourers and transportation: “We sell 30% of what we bring to market, when before we sold 80%<sup>72</sup>.” However, back in port

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<sup>71</sup>During the beginning of the pandemic, cargo ships to Puerto Ayora, Santa Cruz Island became more infrequent and they completely stopped going to Puerto Baquerizo Moreno, San Cristóbal Island. Floreana and Isabela islands received even more infrequent cargo ships, but their residents are more used to this because of historically being more disconnected. Fortunately, the weather in 2020 was particularly rainy and ideal for the archipelago's bountiful agriculture, so farmers were left with a large surplus of food that they normally sold to tourists. In contrast, in 2021 farmers complained that the weather was too unpredictable and damaged crops. One organic farmer from San Cristóbal observed that between February and April 2021 crops were affected by an outbreak of armyworms, which usually occurs “once every five years”.

<sup>72</sup> A San Cristóbal farmer said this: “We are restricting our production...because everyone who had abandoned their lands [to perform other jobs] returned to the field and started planting so they can have food for self-consumption...I used to sell ten crates of tomatoes on Wednesdays. Now I don't sell a single crate.”



people spoke of tightening their belt and reducing their dinner to a lemongrass tea. Farmers said they allowed people to come take food from their land if they needed it, but it simply wasn't financially feasible to hire a truck to carry the produce down to port. For many people that I interviewed, the costs of pesticides, fertilizers, water, and labour were so high that agriculture was no longer profitable<sup>73</sup>, which is a huge problem if coupled with debt related to greenhouses, geomembranes, or other farm improvements.

Farmers and ranchers dropped the prices of their products but still struggled to break even. “What's the point of having good production here if the prices are in the gutter?” Their products were sold for the “price of a sick chicken” (*precio de gallina enferma*): a pound of tomatoes had been \$1 but went down to 25 cents, chickens previously sold for \$40 were now worth \$25, coffee that cost \$16/pound went down to \$10/pound, beef previously priced at \$2.25/pound was now sold to butchers (*terceneros*) for \$1.50. To the annoyance of ranchers and farmers, the intermediaries and merchants took advantage of the pandemic by keeping their prices at pre-pandemic levels, even though they had managed to buy them more cheaply. As one participant explained:

Farmers get demoralized because you wait three months to have your tomatoes and then you sell them for 50 cents or 25 cents...The tomatoes are hard to care for: they get mildew, mites, white flies, aphids...if you're selling at 25 cents, it's at a loss....The worst part is that if you sell it at 50 cents to a merchant and they increase it to \$1, they are speculating and ripping off their customers...I've been near merchants sometimes and I hear them respond to the customers when they complain about the price.

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<sup>73</sup> Although some farmers speak of the agricultural sector being in a shambles prior to the pandemic and being unable to make any money, a participant from Isabela told me that he could make \$700 from selling produce during one market day before the pandemic and now he scarcely makes \$50; furthermore, he admitted that “A watermelon on the mainland costs \$3 maximum, but here when I was producing I was able to sell it for up to \$25, so can you imagine if I sold 3,000-4,000 watermelons? Imagine just multiplying by ten!” Another rancher on Santa Cruz spoke of \$50,000 - \$350,000 loans that were paid back relatively quickly with the sale of cattle. There is great socio-economic disparity within farming/ranching sectors.

The merchant says, 'I'm selling this expensively because the *chacreros* are selling it expensively'. They make us look bad and don't even realize we're there and can hear that. – Farmer, Santa Cruz Island

A second issue regarding merchants concerns the fact that they often import produce from outside the archipelago. They do so because it is cheaper due to expensive labour costs in Galapagos, a general lack of technological innovation in agriculture, irregular land plots that cannot be mechanized, the need for brackish water to be brought in by tankers, etc. A farmer from Isabela Island explained why this a problem:

We can never compete with the merchants because it's a lot cheaper to bring things from the mainland. If you plant carrots here, you sell them in the market for \$1 a pound. What do the merchants do? If you go down to the market on Saturday at 5am to sell at the market, the merchants are also selling carrots for \$1. What do the consumers say? They say, 'what's the point of going at 5 am when I can buy it from the merchant at \$1 later or sometimes cheaper than what the farmer sells for?' But the merchant is buying carrots from the mainland for 17 or 14 cents. Maybe with transportation they arrive here for 50 cents, so he's earning 50 cents on each carrot. What does this do? It bankrupts the local producers. So we stop producing carrots and then the merchant gets to say 'Isabela doesn't produce local carrots.' Now carrots are worth \$1.75 per pound. But if they had policies to support Isabela farmers to produce and sell their product, people would go back to planting.

During the pandemic smallholder farmers were either giving away tomatoes, letting them rot in greenhouses, or feeding their animals the excess that could not be sold. Also, some larger, semi-industrial farmers were able to undercut<sup>74</sup> the prices of the smaller farmers, leading to criticism of

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<sup>74</sup> Not only were some farmers with large greenhouses able to supply the tourism industry and then sell their excess to the market at a cheaper price than smallholders, but the smallholder farmers also noted that there are some people who don't work exclusively in agriculture but also work in hotels, restaurants, and other sectors and can afford to sell their produce more cheaply. In 2020 there were also two new forms of commercialization of produce using phones: an App designed by the MAG and a WhatsApp group that sells organic produce. The latter group's members were able to sell produce at higher prices to a very niche group of people, but the farmers are still unconvinced that large-scale organic farming would be feasible for most of the archipelago.

‘unfair competition’<sup>75</sup> and demands for the Ministry of Agriculture (MAG) to ensure price controls<sup>76</sup> for produce. The MAG staff claim it isn’t within the scope of their jurisdiction (*competencia*) – supposedly the police should oversee ‘controlling’ and the Consejo de Gobierno should be in charge of ‘regulating’ (policies) – but my participants suggested that all of this only occurs in theory, whereas the reality is that both farmers and merchants can set any price for their produce.

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<sup>75</sup> The term ‘*competencia desleal*’ (unfair competition) was frequently used by smaller farmers who find it hard to compete with the larger ones, who plant in giant greenhouses and can inundate the market. There is also a frustration that now everybody is a farmer: “It turns out that the hotel owners and tour agency people and guides are also farmers now...And if they weren’t, people are so cunning that they would bring in produce from the mainland, because if they can’t sell tours, they have to sell something.” Although often the larger farmers were blamed for intentionally trying to squash the smaller ones, during a meeting at the Ministry of Agriculture, a wealthier rancher explained that he wasn’t trying to destroy the market: he had to sell his cows for a cheaper price because he has debts to pay and has no alternative.

<sup>76</sup> In addition to price controls, there were prohibitions on the importation of products like coffee, meat, and yoghurt. There was also a temporary ban on importing tomatoes and mozzarella cheese. Farmers would like more prohibitions, or at least for there to be a regulatory mechanism for when there’s overproduction of specific produce. Daniel highlighted a ‘double discourse’ where Galapagueños want access to a large variety of products from outside the archipelago, but don’t want foreigners coming and taking their jobs. A small minority of the farmers I interviewed believe it is not right to restrict the market because they say the quality of yoghurt and other products in Galapagos needs to improve.



Image 14. Tomatoes rotting in a greenhouse, while people in port were going hungry.

Even if prices were regulated, during the pandemic consumers weren't buying as much, leading some farmers to reduce production or return to subsistence farming. Moreover, although many individuals I spoke to were already mostly subsistence farmers, they used to sell at least some of their produce and now they have no income. Among the immediate tangible effects of an economic downturn, such as people's concern about how they will pay for food, housing, and education, the Covid-19 crisis reduced people's savings and eliminated the ability to earn a living wage. This translated to a visceral existential crisis, which was aggravated by the dominant global ethos of neoliberal capitalism, where one's very identity and self-worth seem to be wrapped up in how much money one makes and having a livelihood to provide for one's family. In other words,

besides creating a practical threat for people's subsistence, the pandemic also attacked people's sense of self.

As money became scarce, people started bartering, both online (on newly created Facebook pages) and also within their real-life social networks. The importance of barter in this unique historical moment is not trivial. As a Santa Cruz rancher explained to me, “the heart of the old folk (*el corazón antiguo*) is born through barter...Before the *finquero* would go down to the port with bananas, avocado, and chickens and exchange them at the store for some rice...That's something we used to do and people are now doing it again. Those are the things that made us talk to one another, so it became a sociable economy. We hadn't done that for a long time.” As people's relationship to the environment changed due to the virus, bringing about a return to the fields and planting, so did their relationship with each other as a result of the revival of bartering and the creation of a new kind of ‘human economy’, even though my participants believed it would probably be short-lived. Farmers from all four inhabited islands told me that barter had always been commonplace<sup>77</sup> in the *campo* but had become popular in the towns as well due to the pandemic. Some Puerto Ayora residents said that bartering on Facebook<sup>78</sup> had also helped them make new friendships, although others preferred to keep it offline and one rancher from San Cristóbal said barter was nothing new for him but was novel<sup>79</sup> in the towns.

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<sup>77</sup> Carpenters received wood in exchange for making furniture. Another example involved providing food for a pig all year and then getting a piece of the meat for New Year's.

<sup>78</sup> WhatsApp also became important for the barter or sale of produce: due to the lockdown, people used their phones to sell. The Ministry of Agriculture also reportedly helped take farmers' produce down to port during lockdown.

<sup>79</sup> A city-dwelling naturalist guide told me: “I think we've gone back in time forty years in this pandemic, with barter. All social media use the word 'barter'. In a way it's cool, because something that doesn't mean much to you might be valuable for someone else.”

David Graeber argues that when the Tiv of Nigeria ensured that “everyone was slightly in debt to one another, they actually created human society... a delicate web made up of obligation” (2011: 122); in the same sense, one could potentially interpret the return to barter as the creation of a greater sense of community in Galapagos. However, as a Santa Cruz farmer pointed out, barter today is different from how it used to be in the past because people nowadays make a mental calculation<sup>80</sup> of how much something is worth. Before, exchange involved imprecise value, either out of generosity or based on satisfying the other person’s needs. A staff member for the Ministry of Agriculture said there were exceptions, though, where he would actually get more than he asked for when bartering. The degree to which one calculates the barter is likely an indicator of the degree of equality and closeness between people exchanging because, as Graeber explains, “refusing to measure or remember who had given what to whom...[avoids creating]...a world where we began ‘comparing power with power, measuring, calculating’ and reducing each other to slaves or dogs through debt” (2011: 79). Debt in the past was not simply based on cold economic calculations, but demonstrated people’s care for one another, and my participants worried that now these values are being lost. During the pandemic there was a temporary and incomplete shift to a barter system, which opened a window into how an alternative human economy might be, before returning to the

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<sup>80</sup> Similarly, on Floreana Island a participant noted that before people would bring food to communal work projects (*mingas*) but nowadays people prefer to contribute monetarily. Before they would help and participate, but now they just give towards a cause. When Spanish anthropologists (Andrada et al. 2010) visited Floreana they described a more united community, but when I arrived people stated that this had changed because of new political divisions that had split the island into two factions. As a participant commented, “back when the other anthropologists were here, we were united. We would get together, cook, and eat, dance, whatever. Not anymore.” Lucas said that even though he used to be president of the Junta Parroquial on the island, he did so out of patriotic duty at a time when there was no wage associated with the role, but that after 2008 these local officials started earning a salary and “where there’s money involved, people start to look at each other differently”. As will be explained in Chapter 7, it is also possible that this change in community spirit is symptomatic of the *coexistential rift*. As another Floreana resident put it, “I perceive that the values in coexistence are being lost – the ‘saludo’ (greeting) and the interrelationship with others”.

same individualistic, unequal, neoliberal model based on money from the tourism industry. Unfortunately, barter did not satisfy all economic problems: “There are things we do need money for, like education, debts with government entities like electricity, water, telephone, and so on.”



Image 15. A mural in the town of Puerto Ayora, depicting the barter relationship between fishers and farmers prior to the arrival of the tourism industry in the 1970s, but reawakened during the pandemic.

Barter and gifting from farmers and fishers to the rest of the population also became part of the lore that they told about how different social sectors confronted the crisis. Tour guides and conservationists were described as selfish, even though NGOs did donate personal protective gear and Conservation International played an important role with the food baskets. In the eyes of the farmers and fishers, they themselves were the real heroes. Fishers sponsored fishing trips and donated their catch to the needy, while farmers used police and municipality trucks to bring down their produce for donation. Due to the pandemic people have “finally realized that farmers and ranchers have value”, exclaimed one of my participants. A pineapple farmer from Santa Cruz concurred and explained how they are selfless ‘heroes’:

Before, here in Galapagos, being a farmer was to be the 'last wheel of the cart'. People were just like 'they should plant and live however they can'. The pandemic came and so I say we're heroes without a cape. One day my wife and children and I said, 'money doesn't matter. Let's give food away to people', without thinking about money and instead thinking that tomorrow the same thing could happen to us. So, the people in the *campo* had a banana, a chicken, and were able to survive well, but people in lockdown didn't have income or as much food as us. So when we had an overproduction of pineapples we went down to town to give them away, obviously to those who don't have enough. – Farmer, Santa Cruz Island

This solidarity was short lived, however, with both farmers and fishers explaining that they eventually had to focus on the economic hardship caused by the pandemic. Furthermore, as discussed in Chapter 3.4, much of the economic hardship experienced by farmers actually preceded Covid-19:

The agricultural and fishing sectors have been collapsing for quite some time now. The pandemic was just the last nail in the coffin...Now it even affected the people with money and has scared them...We at least are used to not having money, but not them...that's why they're asking to open up the airport, so they can start making money again – Farmer, Isabela Island

In accordance with the individualizing ethos of neoliberalism, a staff member at the Ministry of Agriculture told me that she knew someone who worked really hard and contracted debts in order to build a greenhouse, expand his chicken production, and set up a country store in an old cargo container: she touted him as an exemplary entrepreneurial spirit who gets criticized by the community because they do not know how much debt he took on to 'get ahead'. For the majority of my participants, getting indebted led them down a road of despair since they didn't know how to pay back their loans during the pandemic, especially as there is no low-interest credit they can access.



Mariana, from Santa Cruz, built what she calls her “pandemic shade house” because she obtained the funds by taking care of someone infected with Covid-19. She also bartered banana variety stubs with someone who had bamboo, with the rest being made from recycled material. This demonstrates the resilience<sup>81</sup> people have even when the government provides limited support. Mariana hoped she might get something from the government because she let the Minister of Agriculture take pictures of her shade house for Facebook promotion, along with other photographs of the Ministry’s work. In other words, it’s all right for the MAG to take false credit, so long as this puts farmers in their good graces so they might receive support in the future.

One’s resilience to the pandemic was related to the ability to grow food, but this did not follow a strict urban-rural divide. Many farmers live in port and commute to the highlands, on all the islands. This has to do with their having other jobs, subsidized gasoline prices, and access to better basic services in the port towns. Overall, Floreana and San Cristóbal islands were able to stay afloat better than Isabela and Santa Cruz because of ample public servant jobs. This led to political criticisms by farmers and other people who relied directly on tourism income. One farmer had a donkey named *Nombramiento*, meaning ‘designated’ or ‘appointed’, after the way many public servant jobs are assigned for life. Since the employers are unlikely to pay expensive severance, people in those positions are able to retain their jobs without necessarily being the most skilled or hard working<sup>82</sup>, and it is often assumed they must be friends or family of a politician to be in that role. Obviously, I am unable to verify these political rumours, which were mainly circulated by

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<sup>81</sup>A politician and agrotourism farmer found the lack of tourists difficult but explained that old folks who lived in times before tourism took off in Galapagos in the 1970s had a greater “capacity of resilience” because “back then there wasn't even money. At least now there's money.”

<sup>82</sup> The director of the Galapagos National Park admitted that many public servants received ‘nombramientos’ in 2012 and he was concerned that it wasn’t easy to fire them when they become complacent.

individuals who took pride in having worked hard in the private sector to improve their own quality of life.



Image 16. 'Galapagueños looking for work without favouritism<sup>83</sup>' (*palancas*), anonymous Facebook post.

Politicians worldwide have been blamed for the way they have dealt with the Covid-19 pandemic and Galapagos is no exception. Although there is an element of scapegoating in saying that governments 'could have done more', in Galapagos there is a pervasive feeling of distrust and abandonment regarding politicians, and to some degree it is merited. Regarding the pandemic, however, the Consejo de Gobierno was actually responsible for shutting down the archipelago from March to June 2020. Furthermore, they were extremely successful in receiving vaccines

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<sup>83</sup> An ex-director of the Galapagos National Park explained the origin of nepotism on the islands as follows: "Look, if you have a cousin, you give him a job. It's a small town, everyone is family. What can you expect from that? It isn't a big city. If it isn't your family, it's the family of your wife or cousin, the neighbour, the colleague from school. In many ways you're related to everyone."

quickly and vaccinating the entire population between March and June 2021. Municipalities, the Ministry of Public Health, and NGOs worked together in public-private cooperation to address the crisis with food, personal protective gear, Covid-19 tests, and so on. Many civil servants lost their jobs and others worked half time for less pay. Some farmers recognized this situation, saying, “people think everything is the fault of the authorities, but what can they do?” or “I think the government is more broke (*chiro*) than we are.” Nevertheless, the overwhelming majority of my participants did complain about those in power, claiming that they are living off their salaries while feeling indifference (*quemeimportismo*) towards the community. Political complaints have more to do with pre-pandemic nepotism, corruption, incompetence, and bureaucracy (See Chapter 8) than they do with the management of the pandemic itself. To some extent it is universal for people to look for someone to blame, like those who claimed the Chinese were to blame for overfishing Galapagos’ waters, releasing the virus, and having power over Ecuador because of large national debt to China.

During my farm stay on San Cristóbal Island, I asked Felipe if he thought tourism would return after the pandemic and he bluntly said, “Well, that’s an illusion.” Throughout my year in the Galapagos Islands people expressed different views of the future, but they all recognized that life would be more difficult now and there was no easy way out of the pandemic because tourists would return little by little. I witnessed a more relaxed attitude towards the pandemic around Halloween 2020 and an increase in travellers during the Christmas holidays, but there was still much less tourism than there used to be and so the entire society continued to struggle. People seemed more hopeful around the time when I left, in August 2021, because the vaccination campaign had been successful. However, with news of new Covid variants, people were still uncertain about the future. Some seemed pessimistic about the global repercussions: “Maybe by

2025 the economy will have recovered. Until then poor people [worldwide] will continue to die of hunger.” Luckily, as one participant highlighted, the very name ‘Galapagos’ attracts tourists worldwide; one hotel owner asserted that he was booked out for all of 2022 and cruise ships also rebooked passengers for the next couple of years. However, since many cruise line land operations involving tourists visiting inhabited towns had also been cancelled, it is questionable whether this kind of ship tourism would actually benefit most inhabitants in the future. Despite all the pessimism surrounding this, some farmers tried to remain hopeful and light-hearted:

Since I'm smart, I'm going to make a money-printing machine, but I forgot the screws so I won't able to finish it! (laughs)...One shouldn't get bitter. We need to be positive, no matter what happens! You have to stand up for yourself. Life goes on!...That's the problem: lots of people just give up, but I'm going to continue moving forward. – Farmer, Santa Cruz Island

#### 4.6 Promiscuous corroboration

Peter Rudiak-Gould uses the term ‘promiscuous corroboration’ (2012) to describe how people will actively see evidence for climate change everywhere they look, even if there’s an ‘illusory correlation’ between what is observed and the concept being conjured into existence. With confirmation bias, people select information to bolster already held beliefs and ignore information that contradicts these views, whereas with ‘promiscuous corroboration’ belief in climate change is unnecessary for one to begin to see evidence of it everywhere. Connell explains it more simply as the “all-embracing garbage can” (2003: 105) of climate change, meaning that plastic contamination, overfishing, the hole in the ozone layer, and even Covid-19 are linked to climate change.

Although most Galapagos farmers are only vaguely familiar with the scientific concepts of climate change, they made comments about how the arrival of this latest *plaga* (Covid-19) was

connected to the climate. One participant told me that because we were destroying the environment and the climate was getting worse, Covid-19 was likely just the first of many pandemics. Others commented as follows:

1. It's grey and by this time in November we normally have strong sunshine...I like it. It's like the whole scheme of things was broken, as if the crisis had an impact on the climate! Three months after the lockdown the climate had changed...so the air may have recovered its movement patterns.<sup>84</sup> – Naturalist guide and sailor, Santa Cruz Island
2. I was reading that scientists were blaming the livestock sector [for climate change], but now in the pandemic they realized the cattle didn't go into quarantine, but cars did. And just look at how the carbon dioxide was cleaned! Right then it was verified that cattle don't contaminate as much as factories and cars. There was a great cleaning on a global scale. – Rancher, Santa Cruz Island
3. With the pandemic it's as if the environment and peace and tranquillity of the animals have recovered a bit. Nature is very wise and generous...I think the strong sun favours us because the winds and the heat kill the virus. The virus doesn't like heat. So, the climate is in our favour. – Retired farmer, Santa Cruz Island

In these excerpts we see how Galapagueños try to make sense of the changing climate and the Covid-19 crisis in tandem. Some attributed not getting sick to the climate, others believed the pandemic had cleaned up the air and led to bountiful agriculture and more regular seasonality, and still others believed it was conclusive evidence for eliminating the responsibility of cattle ranching in the production of greenhouse gasses. Furthermore, I heard accounts that linked the climate, the pandemic, changes to the environment, international narratives of ecosystem recovery,<sup>85</sup> and memories of the abundance of nature during their childhood:

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<sup>84</sup> Others explained that the pandemic year had rainy weather as in the past (See Chapter 5).

<sup>85</sup> Actually, the influx of people into agriculture could potentially be beneficial to the environment, as they will be eliminating invasive species from abandoned plots of land.

With this pandemic, we stopped producing CO<sup>2</sup> because we were confined. It was interesting to see what was happening around the world. When did we have dolphins and sea lions swimming together at the Station Beach? In my 52 years of life, I've never seen that. When did we see a humpback whale with its baby in Academy Bay? This didn't just happen here in Galapagos, but everywhere. So, we notice that if we'd just stop, even for a week, we could take care of the ozone layer. – Naturalist and farmer, Santa Cruz Island

Naturalist guides spoke of returning to tourist destinations that hadn't been visited by humans for a long time and observing that baby sea lions were particularly frightened because they hadn't seen people before, but later became curious. In addition to people's interpretations of the climate and environment in relation to Covid-19, the pandemic also strengthened the metanarrative that conservationists don't care about people and value animals more highly than humans. The brother of one of my participants died of Covid-19 and his sister was also sick, so he was indignant that the Consejo de Gobierno gave \$4 million to the Galapagos National Park to fight invasive species, rather than spending it on medical supplies, healthcare, and the hospitals. In summary, the liminality of the pandemic substantially affected people's lives in the archipelago and was perceptually intermingled with other risks, but it also provided a unique window to the utopian past and a desired future.

## 5. CLIMATE CHANGE CONUNDRUMS

### 5.1 A Galapagos climate ethnography

Real solutions will require knowledge and insight from the social sciences and humanities, not only from the natural sciences. Climate change is not a natural problem, it is a human problem. (American Anthropological Association 2015)

Anthropogenic climate change is a difficult topic to research in quotidian worlds, for it is often a peripheral or suppressed concern, brought to awareness by the process of being a subject in a research project. (Connor 2016: 90)

In addition to Covid-19, climate change is also a *manufactured risk* (Giddens 1999b) that challenges the lives of farmers because, even though it is seemingly invisible, it acts as a ‘threat multiplier’. Although many natural scientists have studied climate change in Galapagos, this thesis is the first to approach climate change in the archipelago from an anthropological point of view. My aim is to take into account the everyday perceptions and understandings of farmers and to demonstrate that local knowledge can make a valuable contribution to our comprehension of how the archipelago is changing.

Even though ‘climate change’ has been an important concept for the last thirty years, it has become even more pervasive after the 2016 UNFCCC’s Paris Climate Agreement and growing social movements such as Greta Thunberg’s Fridays for Future climate strikes and the Extinction Rebellion. The ubiquity of climate change discourses does not, however, entail their homogeneity (Hulme 2009). Rudiak-Gould (2011) asserted that instead of conducting ‘observation studies’ of climate change, academics should focus on ‘reception studies’. In other words, he explained that in addition to documenting how people “observe, interpret and respond” to global warming, anthropologists should also study how people “receive, interpret, understand, adopt, reject and utilize” (Ibid: 9) climate change as a discourse. A third approach, recommended by Baer & Singer

(2014), is to conduct 'critical anthropology' of climate change, prioritizing globalization, politics, economics, and history. While Crate & Nuttall (2009) took an 'observation studies' stance in their research, more recently Stensrud & Eriksen (2016) have conducted analyses from a more critical anthropological approach. My study of the anthropology of climate change in Galapagos involves the aforementioned approaches and uses ethnography to understand the interrelationships between macro forces and everyday life.

In this chapter I discuss how Galapagos farmers perceive, understand, and respond to climate change, in addition to focusing on their detailed descriptions of how plants and animals are being affected by environmental change. Furthermore, I situate my participants within global processes, discuss their 'bubble mentality', and their distrust for scientists and conservationists. Finally, I engage with natural science research of climate change, not because their knowledge is more valid than farmer viewpoints, but because in order for climate change anthropologists to be taken seriously (in the archipelago, and in academic circles) it is helpful for social science approaches to incorporate interdisciplinary perspectives. As shown by other scholars<sup>86</sup>, interdisciplinary approaches that synthesize natural and social science research can provide a more holistic understanding of the changing environment and can give voice to local knowledge and viewpoints across academic disciplines. Accordingly, while my research aims to allow the ethnographic data to speak for itself, it also compares the qualitative data with prior climate change studies in an attempt to promote and advocate for greater scientific inclusion of farmers' viewpoints. All forms of change may pose an existential risk and can aggravate farmers' anxiety, which is part of the *coexistential rift* described in Chapter 7.

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<sup>86</sup> Similar approaches are undertaken by: Guodaar et al. 2021, Hameso 2018, Kichamu et al. 2018, Orlove et al. 2002, Sollod 1990, West & Vásquez-León 2003.



## 5.2 Living in a bubble

As I began writing this chapter in early 2022, Good Morning America was developing a climate change series on the Galapagos Islands. Since the production crew was on a Lindblad Expeditions ship where I knew some of the staff, my naturalist friends onboard asked me if I had any advice for them. Apart from sending them some natural science papers about the topic, I suggested that they point out that humans live in Galapagos and are affected by climate change. Sadly, despite the naturalists bringing up this issue during their interviews for the series, all mentions of human problems were cut from the videos, which instead focus on the animals and beautiful landscapes. This is indicative of much of the media generated in Galapagos, which is intended for external audiences and is more interested in attracting tourists through the trope of conserving the ‘wilderness’ than in genuinely solving social and environmental problems. Likewise, in December 2021, the Galapagos Conservation Trust produced video interviews about residents’ perceptions of climate change in the context of the UN Climate Change Conference (COP 26), but the media was directed outwards and is unlikely to have much impact on solving the archipelago’s complex social and environmental issues.

None of my participants checked the weather online, and only a few received extreme weather updates from the INAMHI (Instituto Nacional de Meteorología e Hidrología). This is probably because online weather sites generally predict rain for the archipelago, as they do not provide location-specific forecasts for Galapagos’ many microclimates; it could be raining in the highlands but not on the coast. Furthermore, even though everyone I spoke to watched TV or checked radio or Internet news to some extent, farmers explained that they aren’t very interested in climate change in Galapagos “because hurricanes don’t pass through here”. Also, they barely watch the news because their “daily routine is to do things in the *campo*, give the animals food and go to

sleep. That's everyone's routine... We don't really listen to the news or find out what is going on. We find out late!" Some long-time urban residents of San Cristóbal Island expressed that they "feel far away from the world and forget that the world is in chaos" and that "it's as if everything is just paralyzed in time and things that affect other people in the rest of the world don't affect us". These examples demonstrate that the Galapagos is a place where media is mostly generated for viewership outside the archipelago, and where residents admit to feeling somewhat distant from what is occurring externally.

A politician and farmer on San Cristóbal Island explained that this pervasive feeling of being disconnected from the world could be thought of as a 'Galapagos bubble' and that it emerged from the archipelago's historical trajectory. Prior to the 1970s there were few tourists and connectivity with the outside world was limited so that as a child he lived "like the 'non-contacted peoples' (of the Amazon), without knowing anybody and running away from visitors". A younger farmer told me how when he was growing up politicians would provide free access to TV channels as part of the campaign. Then, regardless of whether they won or lost, access would be removed, but for a brief moment people had a glimpse of international films and media. In general, the minority of farmers who live in the highlands, rather than commute daily to and from the port cities of the four inhabited islands, live in a more 'disconnected' manner due to more limited Internet and TV, getting most of their news from the local radio station or from word of mouth. However, even participants who live in urban areas and have more access to external news spoke of Galapagos as a place that is far away from the rest of the world.

The 'bubble' metaphor illuminates how Galapagueños understand their geographical isolation, recognize their somewhat limited access to information, assign blame for the arrival of external threats, and yearn for an idyllic archipelago that is shielded from external influences. Also, this

metaphor was sometimes utilized by more powerful sectors of society to accuse farmers of being ignorant. For instance, a participant who owns eco-lodges in the highlands of Santa Cruz told me that the locals “don't see the links between global problems and the reality here.” Moreover, an NGO worker complained that “people here don't have a global vision. They think only about the community.” These statements tend to disparage farmers’ ability to learn about what is going on in the world, whereas the crux of the issue may be that many farmers don’t think they are affected by far away occurrences. Farmers rebuke these criticisms by claiming that conservationists live in a bubble separate from the community and don’t care about people.

From the conservationist viewpoint, protecting the ‘bubble’ of nearly ‘pristine nature’ by reducing the inflow of negative risks to the archipelago is a powerful motivation for their work. An employee of an NGO working to support farmers explained the goals of his organization as follows:

People still think that because we live in Galapagos we live in a bubble and nothing bad will happen to us. But in reality, we are in a very fragile ecosystem where when anything minimally disruptive happens on the other side of the world, it will affect us directly or indirectly...With our [food security and agricultural sustainability] project I want to create my own bubble, so that what's around me won't be affected when things get worse.

Anthropologists have also engaged with the bubble metaphor, using the term ‘ecotourism bubble’ (Brockington et al. 2008, Quiroga & Ospina 2009) to explain how ‘pristine nature’ is replicated for cruise visitors to the archipelago by almost entirely missing the settled areas. As Debord (1995 [1967]) argued, experiences can be fetishized to the point where life becomes the accumulation of spectacles from the world’s ‘tourist playgrounds’. Clearly, the tourism sector also wishes to insulate Galapagos from external threats to nature, as this is the source of their income. Thus, the desire to protect the archipelago is driven by different reasons for different sectors of

society. Many participants stated that they desired to be protected from external influences and threats. For instance, on Floreana Island, which at the time I visited in early 2021 had no Covid cases, one farmer told me that “here things are as they always were” and another said “we’re protected within a bubble”, expressing a desire for the island to avoid contagion, in addition to not suffering from the major transformations related to the rapid development of the tourism industry on other islands, such as Santa Cruz.

This imagined bubble burst with the Covid-19 pandemic, when Galapagueños realized that the archipelago, once abundant and protected by its remoteness, was highly dependent on tourism and vulnerable to external crises. And yet, some participants commented that the Galapagos Islands truly are ‘enchanted’ because there were very few deaths from Covid-19. It is important to note that the pandemic was not the first threat to the ‘bubble’, because for a long time locals have been hoping to insulate themselves from the threat of migration<sup>87</sup> and invasive species, while accepting the ‘positive’ influences of the media, new technologies<sup>88</sup>, and wealth.

In sum, the concept of a ‘bubble’ was discussed by my participants in three main ways:

- 1) People recognized that they live in a metaphorical bubble because they are both intentionally and unintentionally disconnected from information about the outside world.

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<sup>87</sup> Interestingly, climatic events like El Niño and natural disasters such as volcanic eruptions and earthquakes have been some of the main reasons why farmers migrated from mainland Ecuador to Galapagos. So, the climate is also an agent of sending this migratory ‘threat’ to the archipelago. Furthermore, the climate of Galapagos has been described as ‘blessed’ and ‘enchanted’ and so it is also one of the attractive features of the islands. Despite the farmers’ complaints, they recognize that Galapagos can produce bountiful agriculture, even with the challenges of scarce water and planting on thin topsoil.

<sup>88</sup> According to more innovative farmers, there are ‘traditionalists’ who resist using newer agricultural technologies, haven’t travelled outside of the archipelago, and are potentially closed to new ideas. Due to their social and geographic isolation, they feel like they “have everything and it will never come to an end”.

- 2) Different social sectors accused each other of living in a bubble, including farmers blaming conservationists for not taking the community into account, and conservationists asserting that farmers are ignorant of what happens globally.
- 3) Galapagueños paradoxically wished they were protected by a bubble to prevent them from being harmed by external influences, yet also yearned for more global flows of positive external influences, such as technology and money.

What is most salient about the metaphor of the ‘bubble’ is that it establishes an invisible, fictitious barrier between Galapagos and the rest of the world, which many residents wish could be a semi-permeable membrane only allowing positive flows into the archipelago and preventing the arrival of perceived compounding dangers, such as pests, Covid-19, migrants, and an erratic climate. This links to my conceptualization of how risks are altering everyday life in the archipelago (See Chapter 7).

Furthermore, in considering whether the news has an impact on people’s perceptions, it is important to note the difference between having no access to information, which is rarely the case, and the effects of feeling isolation and disconnection. In reality, Galapagos is hyper-connected with the world, but events outside the archipelago are sometimes not interpreted as having an effect on the inside. The fact that many farmers did not recognize the global phenomena of ‘climate change’ as a direct cause for why ‘the climate is changing’, despite most people being vaguely familiar with the global discourse of climate change, could also be partly explained by their long-held view that Galapagos is protected by its insularity.

When asked directly if they were aware of the effects of climate change because of the news coverage or through their daily perceptions, some farmers stated that their observations are “based on what we’re perceiving, what we’re living” or that “it’s like the news is explaining what we’re

living.” This would suggest that when global climate change discourse does transcend the bubble, it is used to make sense of what farmers are already witnessing.

Shortly after I first arrived in October 2020, a renowned wildlife photographer from the archipelago told me that “everyone will tell you the climate isn’t what it used to be.” However, she later added that the effects of climate change were subtle and she was “amazed by how little we’re feeling the climate change here, actually...We’re definitely seeing it happening here, but you have to look pretty carefully.” She concluded, “to be honest, a lot of people’s minds just aren’t focused on the subtleties<sup>89</sup> of nature” and “Galapagos’ climate is erratic. We’ve had droughts and we’ve always had El Niños.” In other words, many Galapagueños (including farmers) who see the archipelago as a ‘bubble’ feel a sense of *isolated stability*, where the climate has always been irregular; this could explain why during a pandemic the threat of ‘climate change’ isn’t really on people’s minds.

After conducting a year of fieldwork and comparing qualitative perceptions to the quantitative climate data, I agree with her statements about the changes being subtle and also about the difficulty of approaching the subject when Galapagos’ meteorological data shows how unstable the climate has been every year since records started being kept in 1965. However, the subtlety or irregularity of climate conditions does not invalidate, but rather reaffirms, the importance of gathering qualitative information on how people perceive the climate and what they think causes climate change. Farmers’ perceptions of the climate are extremely valuable because they witness

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<sup>89</sup> Two other participants claimed that the lack of perception of change is because “lives are more artificial”, referring to a greater number of people now having air conditioning and hotter cement houses. Before they “had wooden houses with zinc roofs and you had to put buckets to collect water from the leaks.” This transition in how people live could also distort their perceptions. Some participants spoke about how their parents used to look at the clouds, the leaves moving in the wind, or other small details as a way of predicting the weather, but agree that this forecasting knowledge has been lost.

changes daily. The ethnographic data gathered can provide important complementary knowledge to that generated by climate science models, particularly since these models often focus on the long-term future and on averages, rather than the nuances and subtleties (Yager 2015: 171). Furthermore, engaging with local knowledge opens up the conversation with people who feel scientific knowledge is not beneficial to them.

Rudiak-Gould's (2011) call for attention to the importance of 'reception studies' and Hulme's (2011) emphasis on the 'travelling idea' of climate change underline the need to remain attentive to the ways in which our participants mediate the information they receive, but it is not clear how we can disentangle 'reception' from 'observation' – everything external to us is perceived and becomes intermingled in our understanding of the world. From my fieldwork, I would argue that the individuals who spoke to me about changes to the climate were doing so empirically and that the only ways in which their perceptions might be clouded by any larger narrative of 'climate change' relate to what they view as the cause for these changes (See Chapter 5.4). Prior to delving into the farmers' perceptions of the climate and how they compare to quantitative data, it is first important to situate the study of "climate change" within Galapagos' social and political contexts and what Galapagueños know about the standard climate change discourse.

### 5.3 'They call me Mafia'

All 'real' Galapagueños have a nickname and the old folks assert it is even part of Galapagueño culture, in the sense that all *carapachudos*<sup>90</sup> ('shellbacks' or locals) have one. On San Cristóbal

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<sup>90</sup> Note that the term '*carapachudo*' links the 'real' Galapagueño to the giant tortoise. People's legitimacy hinges on how long they have lived in the archipelago, so comparing themselves to an endemic species is helpful in this discourse. Similarly, illegal migrants and temporary residents are often referred to as '*introducidos*', meaning that they are like the many invasive species destroying Galapagos.

Island, I met a man who introduced himself as ‘Mafia’. “I used to work for a conservationist”, he explained. Throughout my year in the archipelago, I heard about how politicians, large tour operators, conservationists, and coffee growers were all part of ‘mafia’ groups because of rumoured corruption or nepotism amongst powerful sectors of society. This one term highlights a deep distrust between different economic sectors and reinforces the idea that everyone ‘takes water to their own mill’ (a Spanish idiom for working situations to one’s advantage). When I talked to people about climate change, most participants were disinterested and unconcerned about the topic. Some people assumed my questions about this issue were not actually born out of true academic inquiry or environmental concern, but were instead part of a new global wave of efforts to attract funds for researchers.

Although much of the global/local interest in climate change affecting this ‘natural laboratory of evolution’ must be genuine, media attention in the past (including videos I produced for the Charles Darwin Foundation in 2017) has been interpreted cynically by farmers in Galapagos as the newest strategy created by conservationists to capture global funding, rather than being the result of their actually *caring* about Galapagos. As mentioned previously, this fits within farmers’ narrative of defining themselves as *carers*, and contrasting this role with that of greedy conservationists:

Currently conservation is green. Green not because of the colour of nature, but due to the colour of the dollar. They know very well that it's a great business. Conserving nature is a great business. – Rancher, San Cristóbal Island

When I spoke to staff at the Municipality of Santa Cruz, I was told that some Spanish researchers had already conducted a climate change study (Batalla et al. 2019), but nothing had been acted upon, in part because Covid-19 had diverted attention and funding. This participant



called the mayor a ‘fool’ for not realizing how much money can be attracted by climate change. Although I couldn’t verify what money had been turned down, comments such as these suggest that climate change research is perceived as motivated not only by ‘disinterested conservationism’, but also by economic interests. My participants highlighted that conservationists “are making money off our land”, so they should disseminate the results of their work and ensure it has pragmatic social repercussions for the inhabitants of Galapagos, rather than just creating knowledge for its own sake. Many farmers expressed the view that research only serves one purpose: self-perpetuating the very existence of the scientists and conservationists who wish to live in or continually return to Galapagos. This critique of conservation work has also been observed elsewhere, such as Papua New Guinea, where “research as business” (West 2006: 210) exacerbates existing inequalities.

In late 2019, the World Wildlife Fund (WWF), the Food and Agriculture Organization (FAO), the Development Bank of Latin America (CAF), and government institutions submitted a proposal to the Green Climate Fund (GCF) for \$117.6 million to invest in climate change resilience in Galapagos. Among many ambitious goals, including building a photovoltaic plant, reducing energy consumption, restoring endemic forests, and improving management of marine resources, the proposal claims to “improve the livelihoods of farmers and rehabilitate ecosystem services through agricultural food production and water management systems that are resilient to the climate” (Alberdi 2021: 3). The proposal was purportedly designed by “reaching out to the local community” (Ministerio del Ambiente 2019). In the summer of 2022, the funds were provided to the WWF and the FAO, with the latter being responsible for the agricultural component of the project. The money will be spent on providing additional training, reducing invasive species and chemical use, improving the vegetable and livestock value chain, and implementing a climate

resilient crop management system (CAF et al. 2022). These ambitious goals demonstrate a commitment towards supporting local agriculture, if the funds are correctly allocated. However, it is still unclear whether these NGOs will adequately support farming interests, since the last time I reached out to Mariana in April 2023 she had still not seen any investment by the FAO in the highlands.

The Galapagos Islands, climate change, Ecuadorian national debt, and the Galapagos Marine Reserve (GMR) also recently entered the field of international politics at the Glasgow United Nations Climate Change Conference (COP 26) in 2021. President Guillermo Lasso proposed the world's largest 'debt-for-nature swap', exchanging \$1.1 billion of national debt for the expansion of the GMR by 60,000 km to a new total area of 198,000 km. The new 'Reserva Marina Hermandad' will help conserve the Eastern Tropical Pacific Marine Corridor, allowing the migration of sharks and preventing bycatch of seabirds and turtles. Although the creation of the new marine reserve occurred in January 2022, after I had finalized my fieldwork in Galapagos, it had been a controversial topic of conversation among locals for some time. Fishers had felt betrayed by conservationists in the past zoning of the marine reserve and were opposed to the alliance of conservationists, the tourism industry, and politicians, who they often lump into the same category. Residents often repeat that Galapagos is being managed politically from outside the archipelago. Unfortunately, this doesn't seem to be a conspiracy theory, given that the head of the Consejo de Gobierno is not elected locally and that a prominent tourism magnate was chosen in 2020 to be part of a new 'private-public partnership' that will work towards the conservation of the Galapagos Islands. A local politician on San Cristóbal Island noted that allowing international funds to go to the tourism magnate who exerts his power over Galapagos is extremely unfair:

New technologies (like solar panels) should arrive, but with a commitment to society, not like how it

is now, where...the owner of businesses in Galapagos is given the investment (money) for Baltra's energy system for Puerto Ayora...Right now, with the pandemic, it has been demonstrated that there are fragile sectors of society: transport and energy. If 'international cooperation' (global funds) are being managed by a superstructure, by one single company, one single owner, then what are you doing? You are gifting money from all the inhabitants of the planet to one single person.

The feeling of being 'managed' from outside the archipelago does not end with investment money for new projects in Galapagos. When I was living on Floreana Island, Leonardo DiCaprio went diving on the other side of the island and the residents were not surprised that he hadn't visited the community since he had only come to see nature. Some participants reported that he even requested to fly off in his helicopter to "eat a hamburger", which would be contradictory behaviour coming from the producer of 'Cowspiracy', a film about how cows are destroying the planet. Leonardo DiCaprio was launching a \$43-million project by the Re:wild organization aimed at collaborating on conservation initiatives with the Galapagos National Park Directorate (GNPD) and Island Conservation (IC). The director of the GNPD assured me there would be social aspects to the conservationist projects (which focus on the Floreana mockingbird and the pink iguana). He argued that you have to 'hook' your donors with conservation issues: you "can't just go to a donor and say, 'I want to improve the schools'. They're going to say that's the responsibility of the state." As Brockington explained, celebrities are a "lubricant in the negotiation machinery [of charity donations]" (2014: 118) because they attract attention and speed up negotiations. Staff from the Consejo de Gobierno has also highlighted that education and healthcare are not within its jurisdiction, even though they do find ways of channelling funds to those issues. Despite any institutional efforts, there is a perceived lack of investment in education and healthcare and this is precisely what locals complain about, since they feel abandoned by the government and the

nonprofits only seem tangentially interested in the humans living in the archipelago. As one Floreana resident said:

They are going to spend between 18-20 million dollars here in Floreana. A lot of that money goes to infrastructure to protect the animals. But the Amazonas School, the only school here, had its printer break a month ago - a printer that was bought by parents through instalments - and there is no money for ink or for paper. So much money is spent on conservation and they don't think about education.

On Santa Cruz Island the complaints continued:

Leonardo DiCaprio even came. It wouldn't have cost him much to say, 'we're going to make a mega-hospital for Galapagos' and so that way we could give more work to local people and also save some lives. Just a few days ago someone died of Covid because they had to be taken to another island...It's easier on the mainland. – Mariana, Santa Cruz Island

Additionally, a staff member from the Ministry of Agriculture admitted to me that it's not just the ordinary people in Galapagos who seemingly have little interest in climate change, but that the decision makers think "maybe it's something that will happen or maybe not." Regardless of the uncertainties regarding the impact climate change will have in Galapagos, she claims that politicians are disinterested in the topic:

There's a lack of personal awareness to do things well that will generate change...Political interests are tied to economic interests and are much stronger than 'ecological awareness'...There are many politicians who speak with a 'double discourse' of taking care and conserving, but they do the opposite. So, there is no coherence between what they say and what they do.

She explained how a few years ago the head of the Consejo de Gobierno was going to support local agricultural production to reduce the archipelago's carbon footprint and the introduction of invasive species, but instead he negotiated allowing more cargo ships to bring goods to Galapagos more cheaply. She concluded that "there is no political will to change things in Galapagos." One

participant I interviewed during the political season in San Cristóbal, when politicians drive around in pickup trucks with loudspeakers, said that he was embarrassed by politics in Galapagos and Ecuador:

The country has become a circus for these clowns who are acting out a burlesque in politics and treat us like we're retarded and then we go out to applaud their political caravan, reminiscent of the 19th century or before. – Long-time inhabitant of San Cristóbal Island

One final example of how politicians seem disinterested in helping ameliorate the lives of farmers in the archipelago revolves around water. During Rafael Correa's government (2007-2017), some farmers were pleased because it was one of the first times they had seen a direct investment in water reservoirs, greenhouses, and other infrastructure. However, not all of the projects were completed and many people complained that only the farmers with larger plots of land or those politically aligned with the government received these benefits. Although islands like Santa Cruz and Floreana have huge troubles due to a lack of fresh water, San Cristóbal has the opposite problem: "There's so much water that it's wasted and goes to the sea. Why don't we develop storage systems so that we can store it in one spot and then we can have watering systems for agriculture?" Currently, due to lack of political will, water is not diverted towards agricultural purposes.

During one of my farm stays on San Cristóbal Island I participated in two *mingas* (communal labour events), carrying bags of sand and rocks to a small creek (*encañada*) together with the community in order to help build a dam for the people of San Joaquín, a drier part of the island.



Images 17-19. Although participants claimed that *mingas* were a practice of the past due to people's excessive individualism, participant observation showed that communal practices are occasionally still alive.

This event showed how the community gets things done without much political support. While they are resorting to traditional forms of labour, such as *mingas*, the fact that people must provide public services themselves fits within the standard ethos of neoliberalism, where responsibility is shifted onto individuals. It is not surprising that the community wonders why millions of dollars are spent on conservation while not even \$10,000 are invested in providing farmers with water. Instead, locals often spend between \$300-400 per month on hiring water tankers<sup>91</sup> whose water is brackish and harmful to the soil. While the last two decades have been 45% drier than 1981-2000 (Paltán et al. 2021), farmers still suffer from scarce irrigation systems and the government expects them to put in the manual labour to ensure water reaches their farms.

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<sup>91</sup> There is evidence of underground water reservoirs on Santa Cruz Island between the rural areas of Santa Rosa and El Carmen, and one naturalist guide told me that there is now a political dispute over control of that region, which the people of the town of Bellavista argue should be theirs. Still, many politicians have passed through and not invested in drilling for the available resources. Farmers get frustrated by the scarcity of tankers and their high cost, leading some people to pay for 'pirate' (illegal) tankers that cost even more. Allegedly, the illegal tanker operators selling the water are actually public servants engaged in covert deals.

#### 5.4 Mental models of climate change causation

As explained previously, Connell (2003: 105) describes the concept of ‘climate change’ as an “all-embracing garbage can” of environmental causality because people associate the term with other environmental crises and concerns. Kempton et al.’s (1995) study of Americans’ perception of climate change suggests that “[p]eople in the same culture often construct the same [causal] models, even though many fundamental mental models are never discussed explicitly” (1995: 11). Therefore, when people try to understand climate change, they interpret it in terms of pre-existing understandings of phenomena such as ozone depletion, air pollution, photosynthesis, and respiration, as well as seasonal and geographic temperature variation. My interviews with Galapagos residents bore this out. They used pre-conceived categories for understanding climate change and their explanations show to what degree they are receptive to the media or the scientific conservationist community’s campaigns in the archipelago. Based on open-ended interview questions about climate change causation, the following table summarizes my participants’ explanations<sup>92</sup> for why climate change is occurring.

**Table 3: Explanations for the causes of climate change**

What causes climate change?	Number of times (%) explanation was used (N= 164)
Contamination	40 (24%)
CO <sup>2</sup> emissions	37 (23%)
Hole in the ozone layer	22 (13%)
Rubbish	19 (12%)
Doesn't know why	17 (10%)

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<sup>92</sup> Note that 55 participants, 30 of whom were farmers, were either not asked about the causes of climate change or avoided the topic. The remaining 164 individuals’ opinions are summarized in this table. The data shows the sum of all explanations given, with some individuals giving more than one. Some participants offered explanations that are consequences of climate change, highlighting that people link ideas conceptually by association.

Deforestation	17 (10%)
Poles and glaciers are melting <sup>93</sup>	16 (10%)
Global industries	14 (9%)
Chemicals/pesticides	12 (7%)
Burning rubbish	8 (5%)
The currents are affected	7 (4%)
Human damage to nature	6 (4%)
Natural phenomena, like volcanoes	5 (3%)
Plastic (local, but also from Chinese fishing fleet)	5 (3%)
Local deforestation	4 (2%)
Overpopulation	4 (2%)
Rising sea levels	4 (2%)
Fossil fuels	4 (2%)
Covid-19	3 (2%)
World powers consuming resources	3 (2%)
Natural cycles (the climate as a cyclical system)	3 (2%)
More imported goods	2 (1%)
Water consumption/contamination	2 (1%)
Exploitation of the soil, industries, fumigation	2 (1%)
Movement of the Earth	2 (1%)
Burning weeds	1 (<1%)
Poles have shifted	1 (<1%)
3G Internet	1 (<1%)
Oil wells and burning chemicals	1 (<1%)
Consumerism	1 (<1%)
Technology damages the ecosystem	1 (<1%)
Scientists don't know why	1 (<1%)

Looking at demographic data, 49% of participants with a university degree named CO<sup>2</sup> as a cause of climate change, as compared to only 8% of those with secondary education or lower. However, attributing climate change to the hole in the ozone layer was similar across all education groups (11% of university-educated participants versus 13% of those with a secondary education or less). This would indicate that higher education is positively associated with knowledge of greenhouse gasses as a cause of climate change, but it is still noteworthy that knowledge of the

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<sup>93</sup> Some of these responses sound like consequences rather than causes, but were verbatim replies to the question “what is changing the climate?”



standard discourse of climate change was low across all groups. A couple of the most interesting qualitative excerpts about the causes of climate change illustrate some of the more commonly expressed worries in the archipelago:

Before they said the sun's rays didn't affect you and now they do and it gives you cancer...They don't say why it's changing, but the mountains are losing their ice due to the heat. – Farmer, San Cristóbal Island

They say it's because of the hole in the ozone layer and because we burn too much rubbish, so that hurts the ozone layer. Instead we should recycle, but here we often burn it. – Farmer, San Cristóbal Island

In addition to expressing worries about the hole in the ozone layer and the possibility of running out of water, the participants voiced concerns about rubbish, plastic pollution, burning trash, and contamination from the Chinese fleet that has been fishing right outside the Galapagos Marine Reserve for many years. These comments highlight how current environmental worries are related to the threats Galapagos residents observe directly as well as those that become subjects of conservationist campaigns in the archipelago, such as the ban on plastic bags a few years ago.

Although most participants acknowledged that the climate was changing, the majority (apart from four participants who mentioned local deforestation) blamed external polluters, such as China and the United States. While some acknowledged that they personally could be doing more in terms of recycling, they also wonder what actual influence they can have to mitigate the impacts of climate change. Electric vehicles are seen as a form of greenwashing because the electrical grid in Galapagos is largely based on diesel. Furthermore, some residents blamed politicians for not implementing radical changes, both to reduce dependence on fossil fuels and to adapt to future changes through better infrastructure and planning based on different climate models. It is

important to note that, contrary to Rudiak-Gould's (2012) fieldwork in the Marshall Islands, where locals blamed themselves for climate change, Galapagueños tend to focus all their blame on politicians, migrants, outsiders, or the outside world.

In summary, Galapagueños aren't very concerned about "climate change" in general but are worried about the impacts and risks of a changing climate on their livelihoods. Farmers' scepticism of politicians, conservationists, and the tourism sector stems from distrust that the powerful elite are controlling the archipelago's natural resources and not focusing on equity and social issues. As Beck explains, not only have science and technology been responsible for the creation of the 'risk society', but their "*monopoly on rationality is broken*" (1992 [1986]: 29, emphasis in original) due to their not having all the answers about risks and to the existence of different "competing and conflicting claims, interests and viewpoints of the various agents of modernity and affected groups" (Ibid). Furthermore, scepticism of scientists stems from the fact that climate change is relatively subtle in Galapagos compared to other regions, like the melting Arctic.

Despite the existence of a few scientific papers about climate change in Galapagos (which most residents are unlikely to read), I agree with the view of most farmers that even scientists have insufficient knowledge about how climate change will affect Galapagos. Furthermore, when the climate models' projected La Niña impacts in Galapagos don't occur as expected<sup>94</sup>, with farmers experiencing heavy rains instead of the predicted drought, scientists lose credibility. In general, farmers aren't sure what they are supposed to do to deal with this long-term problem: "with climate change I don't think even God or the Devil can do anything (laughs). It's here!". In the following

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<sup>94</sup> A "triple-dip" La Niña phenomenon was recently reported (King 2022), showing that for the last three years there has been irregular weather worldwide, including increased rainfall in Australia and droughts in East Africa. Farmers' perceptions of irregularly cold and rainy weather during my fieldwork are indicative of this phenomenon. However, farmers tend to equate heavy rains with El Niño, so a La Niña with heavy rains is confusing.

section I will navigate the complex perceptions Galapagueños have about the changing climate and compare them with meteorological data provided by the Charles Darwin Foundation, which I have also represented in numerous graphs and tables in Appendix II.

### 5.5 Listen to the farmers!

It was disheartening when a former colleague at the Charles Darwin Foundation (CDF) told me that farmers' observations of the climate were unreliable and that the only 'scientific' way of studying climate change was by looking at quantitative data, because people's subjective perceptions can't be trusted. Even though she had spoken to farmers herself, she said that:

Their observations are really random when they say things are changing. They keep on saying that 'in October it used to change from the *garúa*<sup>95</sup> weather to hotter weather and that, you know, all of October was really miserable' ... But they say that it's different than it used to be and I have to say that I remember many miserable Octobers and Novembers just over the last 22 years.

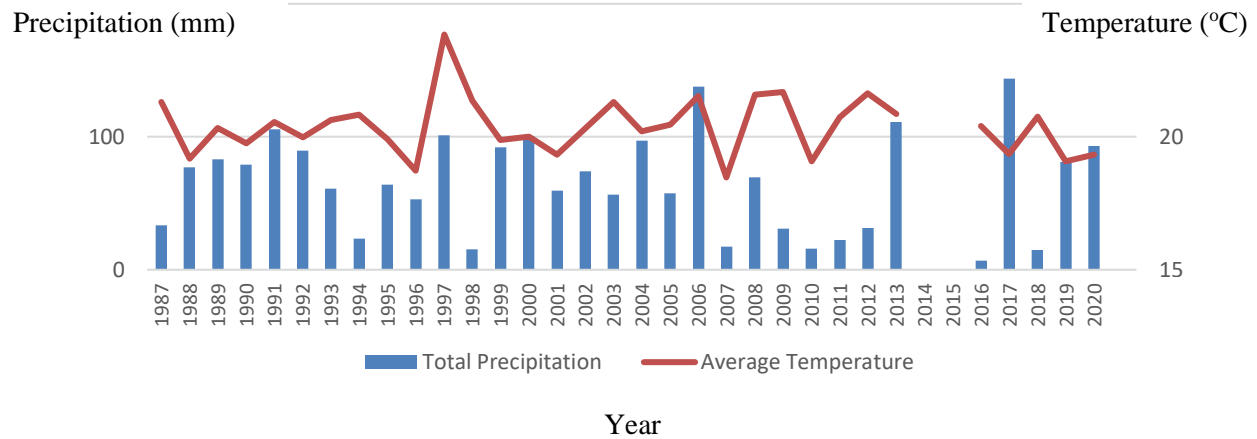
I was curious about how the farmers' perceptions compared with the quantitative data, so I proceeded to graph<sup>96</sup> the average temperature and total precipitation using CDF's meteorological data from the highland town of Bellavista:

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<sup>95</sup> *Garúa* is a term for a steady, light, misty rain.

<sup>96</sup> I used an updated internal climate database from CDF, but it is very similar to data found here: <https://www.darwinfoundation.org/en/datazone/climate/bellavista>

**Graph 1: Total precipitation and average temperature in October (Bellavista, Santa Cruz) from 1987-2020**



Looking at the last 22 years, one notices that the times the average temperature was approximately as low as in 2020 were in 2001, 2007, 2010, 2017, and 2019 – all but one of which were La Niña years. So the scientist would be right in claiming that farmers have experienced cold and miserable Octobers over the last couple of decades, but their complaints actually highlight that they were experiencing a La Niña year. I disagree that (a) farmers’ observations are ‘random’ and (b) we can’t learn from speaking to farmers about the subtleties of the climate, including the transition of the seasons and the impact on their crops. Local perceptions add nuance to quantitative climatic averages. As Ingold states, “scientific and inhabitant knowledge occupy two poles in a hierarchy of power, with science at the top and inhabitants at the bottom...where the flow is unilateral from the 'top down' rather than the 'bottom up'” (2013: 236). Since I used to work as a communications officer at the Charles Darwin Foundation, I am familiar with the critical remarks made by some scientists about the community. During one conversation, a biologist said that interviewing farmers was exasperating because they would ramble, making it difficult to obtain short answers to close-ended questions. Additionally, in Jäger et al. (2018), while the authors claim to be ‘learning from farmers’, they not only deny them a voice but they blame them for inadvertently causing plant resistance to pesticides due to improper use. While this may be true, it

could also be interpreted as victim blaming of individuals who see no economically viable (or time sensitive) alternative but to use pesticides to make their farms productive. Couenberg & Poma (2017) more successfully overview some innovative Galapagueño agricultural methods, marking an important step in the right direction of providing a platform where farmers can share their knowledge. However, true knowledge exchange between scientists and farmers is lacking<sup>97</sup>.

In the following sections I will look at (1) how people understand the seasons and ‘normal’ Galapagos climate, (2) whether people think the climate is changing and *how* they think it is changing, (3) a discussion of rain modelling, (4) an empirical depiction of rain from the farmers’ perspective, and (5) an example of how listening to farmers can help us understand changes to their crops and better inform policy decisions. Just as Latour & Woolgar’s *Laboratory Life* (1986) explained how scientific facts are socially constructed by the tribe of scientists, Lupton states that “[e]xperts, in seeking validity for their knowledge claims, do not tend to acknowledge the situated and localized nature of their risk calculations and prognoses, however, preferring to represent them as objective universal truths. Neither do they acknowledge that their knowledges are culturally shaped” (2013: 46). Farmers in Galapagos consistently highlight how conservationists in Galapagos are allied with the powerful tourism industry and political power. Rather than dispel this tourism-conservationist alliance as a ‘conspiracy theory’, scientists and NGOs should admit that their work has cultural and political biases and implications.

There are numerous conservation organizations in Galapagos that must navigate politics in order to operate, including constantly sending *oficios* (official paperwork) to the Galapagos National Park to obtain permits for scientific investigations. The most salient example of how

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<sup>97</sup> Admittedly, new science coordination at CDF since 2016 is including a social component in the study of fisheries and there is a move towards using ‘citizen science’, but many projects in the natural sciences only include a social component tangentially and farmers still complain about elitist behaviour or projects that don’t benefit them.

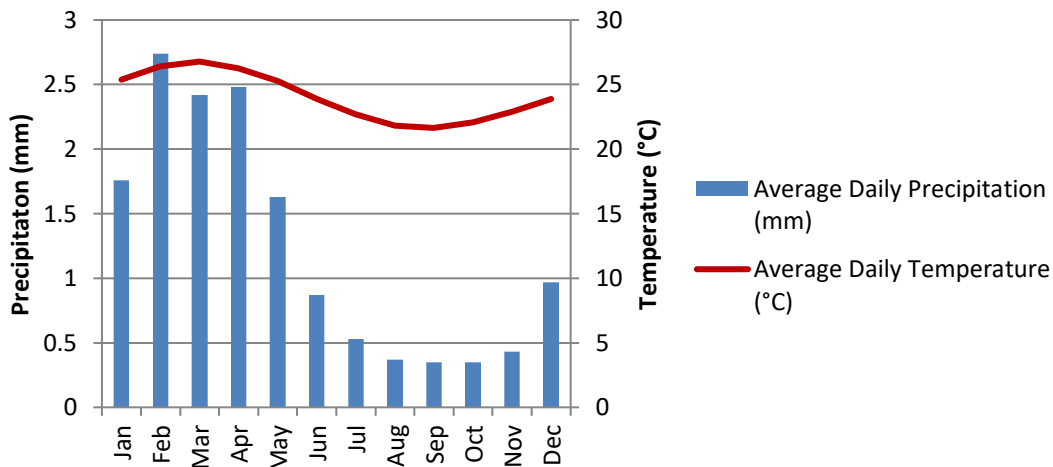
politics permeates science comes from when I was a communications intern at the Charles Darwin Foundation (CDF) in 2014. I was in charge of posting news on social media and had just encountered a scientific paper (Anchundia et al. 2014) that claimed the population of blue-footed boobies had diminished by 50% since the 1960s. I was informed by someone high up in the organization that I couldn't post this news because Correa's government had strictly prohibited the dissemination of negative news about Galapagos in international media. This censorship of science could have also been motivated by three reasons: (a) not wanting Galapagos to fall back into the UNESCO 'List of World Heritage in Danger'; (b) in 2016 CDF was renewing its contract with the Ecuadorian government to operate for another 25 years and it didn't want to damage its relationship; (c) Article 77 of Correa's 2013 communications law (Ley Orgánica de Comunicación) allows a 'state of exception' in which people's 'freedom of information' can be suspended. Defamation of the government was punishable and so negative press was cautiously self-censored. Furthermore, a CDF staff member informed me during my fieldwork that the Galapagos National Park did not act on the information in this scientific paper: "I think reports are written, they aren't read and then there's no action. When Dr. Anderson presented his report...he received no 'thank you, we'll look into it' from the park. It just stayed there". This is particularly worrisome considering that the CDF's role is to advise the park so they can take action. If advice isn't acted upon, what is the use of researching and writing up scientific studies?

## **5.6 Understanding Galapagos' seasons**

The most influential climate change studies about the Galapagos Islands assert that climate change is definitely impacting Galapagos and that the archipelago is vulnerable to a number of

threats, including rising sea levels<sup>98</sup>, ocean acidification, increased heat, and *increased* rainfall (Batalla et al. 2019; Sachs & Ladd 2010; Salinas-de-León et al. 2020; Trueman & d'Ozouville 2010, 2011; Larrea & Di Carlo 2011a, 2011b; Paltán et al. 2021). However, before looking at how the climate is changing, one must understand what is considered ‘normal’ in the archipelago. Using data from the Charles Darwin Foundation (CDF) meteorological station in Puerto Ayora, I have plotted the average daily temperature (°C) and average daily precipitation (mm) from 1965-2021 to both confirm prior academic studies on seasonality and to compare this quantitative data with what my participants told me.

**Graph 2: Average daily precipitation and average daily temperature in Puerto Ayora, Santa Cruz Island from 1965-2021**



As can be seen here, there are two main seasons in Galapagos: the hot/rainy period from December to May and the dry/ cold period from June to November. In the hot/rainy period there are *aguaceros* (downpours) and in the dry/cold period there is light rain called *garúa*. Furthermore,

<sup>98</sup> Four naturalist guides mentioned that they have noticed a change in the sea level, in relation to the position of mangroves. One seemed particularly worried about the impact this could have on sea turtle nesting sites. Nevertheless, they say the changes are very subtle. One hotel owner who has his business on the coastline of Puerto Ayora stated that he had raised some foundations in case of sea level rise.

approximately every 2-7 years there is an ENSO event, meaning that there is a really hot/rainy El Niño, typically followed by a dry/cold La Niña.

Galapagos' climate depends on oceanic currents and trade winds. The Inter-Tropical Convergence Zone (ITCZ) is normally north of Galapagos and so the southeast trade winds bring cool air to the archipelago during the 'cold/dry' season (June-November), but when the ITCZ moves south, closer to Galapagos, the "trade winds are reduced, warmer ocean currents from the north arrive, and conditions in the archipelago are tropical" (Trueman & d'Ozouville 2010: 27), producing what is termed the 'hot/wet season' (December-May). Most of my participants spoke of these two periods as the 'normal' seasons and explained that they were marked and predictable in the past, but that this was no longer the case.

Some farmers defined the seasons in a more easily perceivable manner, asserting that the *garúa* season is from June-September and then there are heavy rains from October-January. Additionally, others claimed that to speak of 'regular seasonality' in Galapagos is an oxymoron because every year is different:

In literature they say we have a rainy season from January to May<sup>99</sup> and a *garúa* season from June to December. That's bullshit. In thirty something years that I've lived here I've seen thirty different climates. It's not six months of rain and six months of *garúa*. Every year is different and unique. – Long-time resident, San Cristóbal Island

Apart from admitting that every year is somewhat different, participants often commented that there was a definite rift between the 'normal seasons' and the current 'crazy' weather, claiming that changes started happening anywhere between 5 and 20 years ago. Whether they referred to

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<sup>99</sup>Paltán et al. (2021) state the seasons as December-May and June-November, but earlier papers refer to them as January-May and June-December.



the latter or the former time frames, in both cases the transitional climate period matched an ENSO event, potentially meaning that they are using that as a marker for when the weather became unpredictable. When asked when the climate changed, 15-20 years ago was the most common response:

In my parents' time the climate was very stable. If it had to rain, it rained. When it was cold it was cold...Around 15-20 years ago the climate changed. Sometimes there are heavy rains, other times there aren't, instead there are strong winds, it's hot and cold and everything is variable. A lot of us farmers are now working under greenhouses because it's more secure due to the change in climate, because the plants feel it...The climate is crazy. – Farmer, San Cristóbal Island

Another farmer gave an account of the weather in the 1940s and hoped that the less dry weather would return:

I think the 'normal' weather might return sometime...For instance, my father used to tell me that in 1940 there was an impressive El Niño. There was a massive invasion of rats. The sunlight would come out and rats would emerge like a stampede to be in the sun. And my dad was showing the dogs how to kill rats...In 1982 a strong winter like that was repeated. Imagine how strong it must have rained that there were pine nut trees that were there since the first colonists and that year they died from too much water. So many winters they survived, but they died during that El Niño. Not a single pine nut tree remained...Now we are planting more. – Lucas, the farmer from Floreana Island

Specifically, many farmers remember that it used to rain much more during the hot/wet season (December-May). However, some warned that returning to the 'normal' weather wouldn't be beneficial to agriculture because of the ensuing flooding and *encañadas* (creeks).

Making the assumption that farmers probably are attentive to a really heavy downpour as the start of the hot/wet season, I made an experimental table (Table 7 in Appendix II) showing which month had the first daily total rain greater than 30 mm in the 32 years between 1989 and 2021. For

the most part, that date fell in February, but since 2003 there had been only four years when the rains arrived ‘on time’, backing up perceptions that the seasons had started changing around 15-20 years ago. However, looking at the quantitative data (See Graphs 3 and 4 in Appendix II), it certainly seems like the ‘normal seasonality’ of Galapagos has always fluctuated, in spite of February being the median peak rainiest month (Trueman & d'Ozouville 2010: 31).

### 5.7 Is the climate changing? If so, how?

My participants’ observations on whether the climate is changing in Galapagos can be summarized as follows:

**Table 4: The visibility or invisibility of climate change**

Is Galapagos’ climate changing?	Number of times (%) explanation was used (N = 219)
Galapagos’ climate is changing long term	168 (77%)
The climate isn’t changing or is just naturally variable	18 (8%)
The climate is changing, but the changes are only slightly noticeable	17 (8%)
Had no opinion or weren’t questioned about the climate	13 (6%)
Climate change will only be perceivable in the future	2 (1%)
It is difficult to differentiate climate change from other anthropogenic factors	1 (0.5%)

Interestingly, only 68% of individuals who identified CO<sup>2</sup> as the cause of ‘climate change’ reported observing long-term changes in the Galapagos climate. Meanwhile, 87% of those who attributed changes in the climate to other causes perceived the climate to be changing. This would indicate that one does not need to know about the standard narrative of climate change to perceive changes and, conversely, that the knowledge of climate change causation doesn’t necessarily make it more visible. Additionally, participants from Isabela were least likely to report perceiving long-term changes in the climate (64%) and Santa Cruz inhabitants were most likely (88%). This could be due either to climatic differences between the two islands or, potentially, to inhabitants’ higher exposure to scientific narratives on Santa Cruz Island (because of the historical presence of

scientists), although this would contradict the earlier assertion of climate change knowledge not making it more visible. It is also possible that people interpret changes to society and the environment more generally in terms of climatic changes, since Santa Cruz is the island that has developed most rapidly.

Those who were scientists (N=3) believed climate research should be conducted exclusively with quantitative data because ‘perceptions are unreliable’. Furthermore, most participants also asserted that the climate in Galapagos has always been variable as well as continually affected by ENSO events, which makes studying the changes caused by “climate change” in Galapagos particularly difficult. Nevertheless, 85% of participants claim that Galapagos’ climate has been changing over the long-term course of their lives, irrespective of whether they understand the standard global narrative of climate change and greenhouse gasses. Of course, in that group there are both climate *visibilists* and *constructive visibilists*<sup>100</sup> (Rudiak-Gould 2013). The minority (N=17) who thought climate change couldn’t be perceived (*invisibilists*) believe, as one participant said, that “in relation to the universe we are very young and we die fast, so it’s not easy for us to see change.”

Still, when asking people generally what had changed during their time in Galapagos, people would mention, without prompting, that the climate was changing. The following statements of climate unpredictability are common: “Now it rains whenever it wants”, “the climate is crazy”, and “nowadays we can’t predict anything...Before it was great because we knew the climate and the times to plant.”

Regarding *how* Galapagos’ climate has changed, participants answered as follows:

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<sup>100</sup> Rudiak-Gould (2013) uses the latter term to describe how climate is *made visible* by experts and the media.

**Table 5: How is the climate changing?**

Perceptions of how Galapagos' climate is changing	Number of participants who assert <sup>101</sup> this (N=219)	Observation /representative quote
<b>Less rain (long term)</b>	106	<p>The majority of participants claim that Galapagos is getting drier. When questioned if it was <i>garúa</i> or the heavy downpours that were diminishing, most people stated that it was the latter. My participants also stated that the <i>garúa</i> has changed qualitatively, in the sense that it now falls intermittently when before it would rain all day and the misty water droplets used to be finer. Lucas, the Floreana rancher, gave this account:</p> <p>When we were kids, every year was an 'El Niño' year because there were water sources all over the place and that's how it was in 1982. You made a little hole in the ground on the <i>finca</i>...and water would come out so you could make a little lagoon (pond) and put your paper boats in there. There was water everywhere. I don't remember a single year that was dry. Every year it rained...The last few years have been dry so people have complained about lack of water...Ever since the irregular years started, the total amount of water has gone down, so that's a problem.</p>
<b>More rain (long term)</b>	1	<p>One pineapple farmer from Santa Cruz Island stated that he thought it was raining more over the long term:</p> <p>Before the vegetation was lower around 20 years ago because we didn't have <i>cedrela</i> [trees]. There were <i>guayabillo</i> [trees] and they are not so tall...I've noticed there's more humidity and more rain. Before it was drier because there was less vegetation...It's due to the <i>cedrela</i> because they provide good foliage. I have <i>cedrela</i> here because I notice that it's like a repellent, so that not many insects approach the pineapples.</p> <p>This anomaly may show that farmers with more trees witness a greater amount of rain due to the tree foliage capturing rainfall and condensation.</p>
<b>More rain in 2020 &amp; 2021</b>	12	<p>According to CDF quantitative data, 2020 and 2021 were rainier than preceding years. This trend is of particular interest to farmers who are still traumatized from the long 2016 drought (La Niña). A Santa Cruz farmer claimed that his cows had only just recovered this year. The La Niña</p>

<sup>101</sup> Not all questions were asked of every participant because the interviews were open-ended. Therefore, there are no denominators for the observations listed. Furthermore, participants often made multiple observations about the climate, which is why the total number of observations is higher than the total number of participants (N=219).

		<p>conditions are typically perceived as cold and dry, but in 2020 the conditions were cold with extended <i>garúa</i>:</p> <p>Look how the climate is now (it's mid-December 2020 and there's <i>garúa</i>). Before you knew that October would be hot, but look now: October has passed and we still have this cold! Now you can't plant any vegetables because they will all rot. We can't plant. Since I don't have a greenhouse, I haven't planted anything new because what I had already rotted...before, in October one knew it would be hot. Now it seems like it's August!...On the other hand, for ranchers it's very good (that there is regular <i>garúa</i>).</p> <p>Regardless of what natural scientists say about this not being 'abnormal weather', to farmers who have just lost all their produce, the La Niña years have been particularly challenging. In February and March 2021 farmers on Floreana were astounded by the amount of heavy rainfall, saying it was the highest amount they had experienced since the heavy rains of the 2015 El Niño. Some farmers were content that it was raining more in recent years, saying that it wasn't like the 'old days'. Since the <i>aguaceros</i> were not as strong as they used to be in the times when <i>encañadas</i> (creeks) would form on the hillsides every year and "drag chickens and dogs with them", farmers had more successful harvests.</p> <p>As will be explained later, the heavy rainfall was confusing to people who were expecting a dry La Niña year. In general, the problem Galapagos farmers are experiencing is the irregularity of the rains, which they say were more predictable in the past, so when May 2021 came, farmers were complaining that it was too dry and the <i>garúa</i> season should have started already.</p>
<b>Hotter overall (long term)</b>	41	<p>There was a consensus that the archipelago is getting hotter, since nobody asserted that Galapagos was colder over the long term:</p> <p>"In my mind I can group over 40 years in just a single moment and it's definitely hotter, there are fewer birds, fewer iguanas, fewer sea lions, less fauna...There are more pronounced droughts" – Farmer, guide, and artist, Santa Cruz Island</p>
<b>Hotter 'hot/wet season' (Dec-May)</b>	36	<p>I visited a farmer on San Cristóbal Island in January 2021 (during the hot/wet season) and, as he showed me the cracked earth of his land, he explained that he had lost his entire banana plantation (400-600 trees) during the 2016 drought and he had to replant. He explained that the hot/wet season was hotter than it used to be decades ago:</p> <p>Here what used to be an <i>encañada</i> passed by (he points to the cracked earth of a dry stream). By now this should be a river. Look how it is. Not a drop. What has caused this? It must be climate change. Here we used to know when it rained, when</p>

		<p>was the cold season, when it was hot, and based on that one could plan agriculture. You'd say, 'oh it's going to rain, you have to plant this thing' or 'the <i>helada</i> (frost) is coming so you need to plant these other things'. The cycles of cultivation worked that way, but now with climate change we don't know what is going on...There's too much heat...So now I need to change and I think we're going to use greenhouses. That's the way forward, I think.</p> <p>After this interview there were some heavy rains from January to March. In summary, at the end of the cold/dry (<i>garúa</i>) season in late 2020 it was still too cold and dry when it should have transitioned into the hot/wet (<i>aguacero</i>) season, and once that season arrived in early 2021 it was too hot while people waited for the heavy rains. By May/June 2021 the farmers were worried that the <i>garúa</i> hadn't started yet, meaning that the cold/dry (<i>garúa</i>) season was delayed again so they couldn't start planting. In other words, my participants claim it is hotter and both seasons are delayed.</p>
<b>Colder 'hot/wet season' (Dec-May) &amp; delayed arrival of this season</b>	<p>34 (colder)</p> <p>40 (delayed seasonal change)</p>	<p>Even though 34 participants perceived a colder hot/wet season, it is important to note that these comments were made in December 2020/January 2021 and later in May 2021. This could mean that even though they said the season was getting colder, they are actually observing a shift in the seasons – the heat arrived late and then lingered for longer than usual. Their observations are more consistent with the idea of delayed seasons, rather than contradicting the farmers who said the hot/wet season was hotter.</p>
<b>Colder 'cold/dry season' (Jun-Nov) &amp; delayed arrival of this season</b>	<p>47 (colder)</p> <p>18 (delayed seasonal change)</p>	<p>During both the cold/dry period that I witnessed in 2020 and the one I briefly saw in 2021, prior to departing in August, 47 participants complained that the cold was more intense. An additional 18 people complained that the cold/dry (<i>garúa</i>) season had been delayed in 2021, meaning that rain hadn't arrived for their crops and it was still too cold to plant.</p> <p>What makes these observations confusing is that even though farmers were being questioned about long-term trends, their responses often seemed to refer to what had been happening that year or the last. Furthermore, one of the biggest worries that people had is that recent temperature and rain fluctuations were more drastic and destroying their crops.</p> <p>One of the older participants I spoke to remembered that in the old days people used to have fireplaces in their houses because it got really cold. He said that in 2020 and 2021 it felt like those times had returned, but most people don't have a fireplace. Other people spoke of having to buy sweaters<sup>102</sup>.</p>

<sup>102</sup> To external audiences used to colder temperatures, it must be shocking to hear Galapagos residents complain about 11°C (one of the lowest temperatures on record) as being bone chilling.

<p><b>Summary</b></p>	<p>According to my participants, the climate has gotten hotter in the long term, it rains less, and the seasons are no longer regular, with the arrival of the two main seasons being delayed. The <i>garúa</i> rain and the heavy rains are no longer predictable and rapid fluctuations in temperature affect their produce. The last couple of years have been rainier and had a colder cold/dry season; at the same time, the hot season is perceived to be hotter than usual and farmers say that the sunshine wasn't this intense before.</p> <p>There is a great deal of congruence between qualitative statements and the quantitative study conducted by Paltán et al. (2021), although farmers provide more specificity regarding the effects on plants and their livelihoods. For instance, the Paltán et al. (2021) study claims that the “dry season in Santa Cruz over the last decade has shown a positive wetting trend, particularly in the highlands...However, a slightly wetter dry season [more <i>garúa</i>] may not be sufficient to compensate for the wet season losses...both islands were on average 45% drier during the first two decades of this century...results also suggest that the rainy season is both becoming drier and starting later” (Paltán et al. 2021: 2-4).</p> <p>Perfectly aligned with this statement, farmers observe that heavy rains have diminished in the hot/wet season (less intense/frequent <i>aguaceros</i>), there has been increased <i>garúa</i> in the last couple of years, and overall the archipelago is drier. Other observations include the <i>garúa</i> possibly falling only on certain areas of the island and for both shorter and longer periods of time. As a San Cristóbal rancher explained, “now it's different because it rains really hard [during the cold/dry <i>garúa</i> season] and we don't know if it's winter...now we don't know how long the <i>garúa</i> will last.”</p>
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## 5.8 Modelling and perceiving rain

Throughout my year of research in Galapagos I was confused about why 106 participants would tell me that the archipelago was getting drier over the long term, when the natural science papers published a decade ago predicted that the Galapagos would get rainier. Using sediment samples from Lake El Junco on San Cristóbal Island, Sachs et al. (2009) and Sachs & Ladd (2010) showed that the driest period in the last 1200 years was near the end of the 19<sup>th</sup> century and that the archipelago has still not recovered from this dry period, but has been getting wetter since the start of the Industrial Revolution. They also state that the IPCC (2007) confirms that there's over a 90% chance of increased precipitation in the Galapagos over the 21<sup>st</sup> century. Although some articles (Trueman & d'Ozouville 2010: 35) voice uncertainty about future precipitation during the cold/dry *garúa* season (June - November), in other articles the same authors state more assertively

that there will be increased precipitation (Sachs & Ladd 2010: 53, Trueman et al. 2011: 34). Hence, during much of my fieldwork I was perplexed by this apparent contradiction between the quantitative and qualitative data.

A month before departing Galapagos I found Paltán et al.'s (2021) recent publication, which stated that Galapagos was actually 45% drier from 2001-2021 than it had been from 1981-2000. Furthermore, they identified a 20-day delay in the arrival of the hot/wet *aguacero* season. Based on this new data, there was significant congruence between the natural sciences and my social science research. So why had the natural scientists in the past not mentioned that the archipelago had gotten drier? If we compare the temperature between 1991-2010, relative to the temperature between 1971-1990, there would actually not be any visible trend towards a wetter or drier archipelago, which would explain why natural scientists who published over a decade ago didn't mention a drying trend (Sachs et al. 2009, Sachs & Ladd 2010, Trueman & d'Ozouville 2010, Trueman et al. 2010, Larrea & Di Carlo 2011a, 2011b). A twenty-year comparison revealing a drier archipelago only became statistically noticeable ten years later.

Considering that most of the participants I spoke to (including non-farmers) were certain that the archipelago is getting drier, might this suggest that scientists are actually in their own research bubble and not talking to laymen? An ex-staff member of the Charles Darwin Foundation (CDF) seemed to suggest as much: "I feel that people live in a bubble. The bubble of conservation. Both CDF and the park. It's like they...don't realize what is happening in the community. Once you start getting to know the agricultural and fishing sectors you realize it's a different world." If scientists had noticed that farmers were experiencing a drier climate over time, wouldn't they have written about it in their publications? Since they are solely basing their knowledge on quantitative data, maybe they wouldn't have mentioned the drying even if they perceived it. It should be noted,



however, that even Paltán et al. (2021) predict a wetter future in the long term. In order to try to understand why farmers say the Galapagos is getting drier, I propose five speculative explanations:

1. It has been getting drier over the long term, and not just over the last 20 years. After all, some of my participants have 70-90 years of empirical perceptual data. We should not assume that quantitative models are more correct than local knowledge.
2. Galapagos farmers were traumatized by 2016 and other strong droughts, which made them more willing to focus on this phenomenon during our conversations.
3. The media, including films like *An Inconvenient Truth* (2006), influenced the way people think about the climate worldwide and therefore have made people more willing to attest to the changes they have observed in the climate over the last 15-20 years. Potentially, Galapagos farmers are somewhat sheltered from these global climate change narratives, but they are certainly present in national media since I heard two mentions of “climate change” on the TV and radio during my fieldwork.
4. After 1998, the year that the Galapagos Law (LOREG) passed, there was a huge increase in migration and the arrival of invasive species, which also coincided with numerous ENSO events. The shock of all these exterior threats caused people to be more aware of climatic changes that were occurring and to conclude that the climate system has changed.
5. A joint study by NASA and NOAA showed that “the rate of energy uptake by Earth” (Loeb et al. 2021: 1) has nearly doubled from 2005-2019. Although this is more a description of heat than rain, it would suggest that farmers are right in identifying dramatic changes in the last 15-20 years.

Soubry et al. (2020) found that out of 105 papers about farmers’ perceptions of climate change, 87% of the articles determined farmers’ perceptions to be “consistent with historical weather” (2020: 20). However, they also indicated that farmers in the Global South are rarely given a voice, perpetuating the idea of passive and vulnerable people who are not actively adapting. It appears that Galapagos is no different, given both the lack of farmer visibility and the fact that their

observations match quantitative historical data. Nevertheless, the long-term models up to 2060 continue to predict a wetter future, despite the recent past providing evidence for a drier Galapagos.

Often my participants told me that “the [natural science climate] models are wrong” and “nature is up to God’s will. Sometimes the scientists say one thing and God imposes another.” Additionally, they claim that scientists conduct research because it’s a way of making money and they only care about flora/fauna, but not about people. Biocentric academic articles validate this view when they recommend that policymakers “reduce the spread of invasive species”, maintain “native biodiversity within farms”, and “strengthen enforcement of laws or regulations” (Trueman et al. 2011: 43), focusing solely on biological conservation needs instead of also suggesting ways to make agriculture profitable and ameliorate climate change impacts on farmers’ lives. Hence, it is understandable that farmers would be sceptical of scientists when the natural science papers published prior to Paltán et al. (2021) described a climate scenario that has not occurred so far. As Jasanoff (2010) points out, the natural sciences have attempted to separate climate change from local realities to turn it into an abstract global phenomenon, but it is precisely this erasure of local specificity that often makes it clash with situated understandings.

Long-term studies should not lose sight of the problems currently facing farmers, who are witnessing a drying archipelago and droughts like that of 2016. Researchers and policymakers should take local viewpoints into account and base their policy recommendations on present as well as future impacts, rather than solely forecasting into the long-term future. An example of the latter approach is Mena et al. (2020), who focus on the intersect between climate and agriculture and conclude that food insecurity will increase due to climate change; apart from presenting a list of variables, they mention few tangible proposals for strengthening the agricultural sector and farmers are not given a voice. At least one Municipality worker recognized that the farmers and

ranchers were the real ‘experts’: “The ranchers and farmers know much more than the entire Ministry of Agriculture together. Why? Because...[disruptions of climate change] cost them money.” But will their viewpoints be taken into account?

### 5.9 Farmers as weather forecasters

During my fieldwork in Galapagos I was able to witness two cold/dry seasons and one hot/wet season. One farmer described recent rainfall patterns as follows:

Last year we had a constant rain that wouldn't let you plant. You'd go out and immediately be soaked. It was just *llovizna* (light rain), not an *aguacero* (downpour), but it was like that for some time. The climate is very odd. – Farmer, San Cristóbal Island

Others explained how the *garúa* (light rain) continued into December 2020 and January 2021, which was unusual and bad for growing vegetables, but beneficial to ranchers. Later, in January 2021, participants commented that the year seemed to be as rainy as 2020, contrary to the La Niña predictions by NOAA (National Oceanic and Atmospheric Administration) and the INAMHI (Instituto Nacional de Meteorología e Hidrología), which are normally associated with drought conditions in Galapagos. As explained before, climate models and scientific predictions aren't well regarded by farming communities who instead focus on empirical evidence, such as animal bioindicators.

Lucas, the Floreana farmer and rancher, interpreted the abundance of the highly endangered Galápagos endemic snail (*Naesiotus nux*) as evidence that rains were coming. He proudly explained that his method of observation had accurately predicted rain and had impressed an agronomist he had recently been texting. He also explained that blue-footed boobies and the Galapagos rail (*Laterallus spilonotus*; pachay) get more agitated before a downpour and move

around looking for food, and that the dark-billed cuckoo (*Coccyzus melacoryphus*; aguatero) starts singing when it knows the rain is coming. According to numerous participants, 2021 saw Galapagos experience its highest rainfall since the 2016 drought and almost as much as in the ‘old days’. In fact, the rain was so heavy that Lucas was unable to burn the husks of last year’s crops to clear the fields, and had to use a tractor and glyphosate instead. He commented that Saint Peter must have overdone the amount of rain he was providing them! However, after he had planted the corn in March 2021, the rain suddenly stopped. As he observed, the seasons are no longer marked and predictable, like they used to be.



Image 20. Blue-footed boobies’ behaviour is used as a bioindicator for rain.

By May 2021, Mariana, the farmer on Santa Cruz Island, stated that because scientists and agronomists had been predicting that a dry La Niña would arrive, she had “been preparing for a drought and planted [produce specific to these conditions]...but then they didn’t grow”; as a result, she lost her corn, radishes, cilantro, cabbage, beans, cucumber, and zucchini. She had placed plants

under a recently-built shade house, which was intended to make her crops more resilient if it was too hot and sunny. When the La Niña arrived, it was strangely rainy instead. This ended up compounding the problem, leading to excessive humidity and rotting produce. After the excessive rain, she explained her frustration at how the rains ceased suddenly:

There was too much water and then it was followed by a couple weeks of intense sun that split the earth. So what's going on? Then we heard a petrel (*Pterodroma phaeopygia*; pata pegada) singing and when they do, we know that they are announcing *garúa*. So that means we can plant without risk! It sang one night and then never again (laughs)...We had a few *garúas* and then it stopped...This last Saturday we heard the petrels again, so we think the *garúa* is finally coming. Good Lord, please bring the rain, because it's already May!...Maybe the petrel is also begging for it to rain! (laughs). The *garúa* comes and goes, so it's frustrating...We don't know if we should plant or not.

Harris (1970: 79) claimed that the inhabitants of Floreana Island witnessed petrels returning to land at the end of April for mating and then becoming scarce and returning to sea by October, indicating that the petrel's song does announce the rain. I have remained in touch with Mariana and she told me that in 2022 the petrel sang in March so she thought this was indicative of the cold and *garúa* season coming early, but it ended up also being a false alarm. They had strong *aguaceros* (downpours), but are still waiting for the *garúa*. Mariana also claimed that the *aguatero* (dark-billed cuckoo) announces the heavy rains and that the common seagull is an indicator of the arrival of heat around December.

In March 2022, Lucas informed me that it was raining heavily on Floreana Island and he was hoping<sup>103</sup> for some more *aguaceros*. In contrast, the heavy rains Mariana experienced on Santa Cruz Island were negative since extreme downpours had destroyed most of her crops. Luckily, she

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<sup>103</sup>One of the main differences, probably, is that Lucas is primarily a rancher for whom the rains are beneficial, whereas Mariana's outdoor smallholder agriculture is much more vulnerable to climatic changes.

was able to get a job at the Municipality of Santa Cruz. She also took out a loan to build a greenhouse (which can cost \$6,000-10,000) because she says this is the only solution to cope with such an unstable and unpredictable climate. She would like to apply for new greenhouses and geomembranes the Consejo de Gobierno is giving out, but she says that once they allocate the money to the Junta Parroquial, the people who receive the infrastructure need to be politically aligned, which she isn't. Furthermore, since her new job limited her to spending the weekends working on her farm, she had to hire a worker. Mariana could only pay him \$400 a month instead of the legally required \$30/day because it was costly. She had hoped to obtain a further loan to purchase a weed whacker so she would only have to hire workers occasionally, instead of as permanent wage labourers. In the summer of 2022, the Ministry of Agriculture posted on Facebook that they were offering credit to farmers, but Mariana said she is so indebted from the pandemic that she will not be able to get a new loan. Finally, by 2023, she had to change jobs and focus on paying back her debts. Since it was too costly to hire a labourer, she sold part of her land and had to abandon the rest, because she had no time to farm. All of this demonstrates the vulnerability<sup>104</sup> of farming under an unstable climate, how it is entangled with indebtedness and nepotistic politics, and the real consequences of the agricultural sector not receiving economic support.

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<sup>104</sup> I use the word 'vulnerability' in its everyday sense. In this thesis I purposely avoid the terms 'vulnerability' and 'adaptation', precisely because they are *etic* terms sometimes used to describe people, often denying their agency. While ethnography can tell us a lot about people's vulnerability and capacity for adaptation, I think we should understand people's worries with an *emic* approach, with a focus on "perception, knowledge, valuation, and response" (Roncoli et al. 2009).

## 5.10 The lifeworld of crops

The final chapter of Larrea & Di Carlo (2011b), ‘Dealing with Climate Change in the Galapagos: Adaptability of the Tourism and Fishing Sectors’ (Quiroga et al. 2011), addresses human issues to some extent, based on household surveys. Their analysis found that the key variables for local climate change adaptability include: “level of education, language skills, social and institutional support networks, access to alternative livelihoods, investment in the current sector, and Internet communication skills” (Ibid: 85). The idea that educating the community will solve conservation problems is what Rudiak-Gould refers to as the “deficit model of science communication” (2013: 123). Within Galapagos’ context, Cairns et al. (2014) have been critical of the assumption that climate change disagreement is due to lack of information or comprehension, rather than “genuinely divergent perspectives” (Ibid: 10) about nature, humanity and development. While these studies are important, they provide top-down biocentric recommendations about how people should protect wildlife to sustain their livelihoods, without giving a voice to Galapagueño farmers and the archipelago’s other inhabitants.

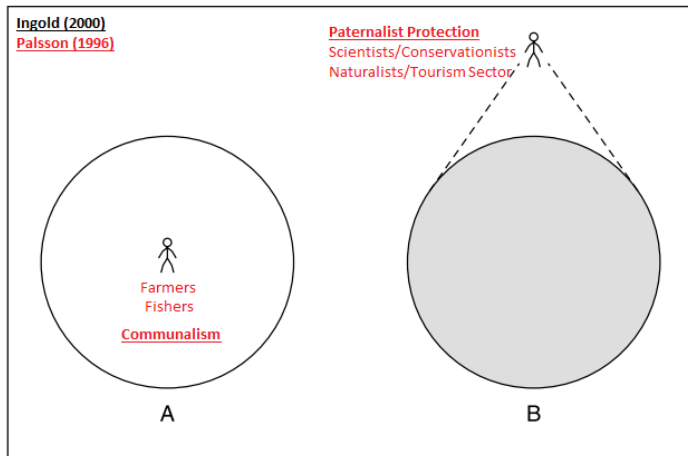
This leads me to an important distinction about how scientists, conservationists, naturalists, and the tourism sector view the Galapagos in contrast to farmers and fishers. As observed by Pálsson (1996) and Ingold (2000), there are different ways in which people position themselves in the world: as inhabitants of a ‘lifeworld’<sup>105</sup>, and as stewards of the ‘globe’ (Diagram 2). From my fieldwork in Galapagos, it appears that most conservationists, scientists, tourism operators, and politicians play the role of ‘paternalist protectors’ (Pálsson 1996) – hovering above planet Earth

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<sup>105</sup> In Chapter 3, I refrain from using Husserl’s phenomenological understanding of ‘lifeworld’ and instead think of it as a way of highlighting that humans are beings who are entangled in complex relationships with other living and non-living entities.

and staring down at it – while the farmers are more ‘communalist’ and attuned to the climate and environment.

**Diagram 2: Two positionalities: lifeworld and globe**



Two views of the environment: (A) as a lifeworld; (B) as a globe.

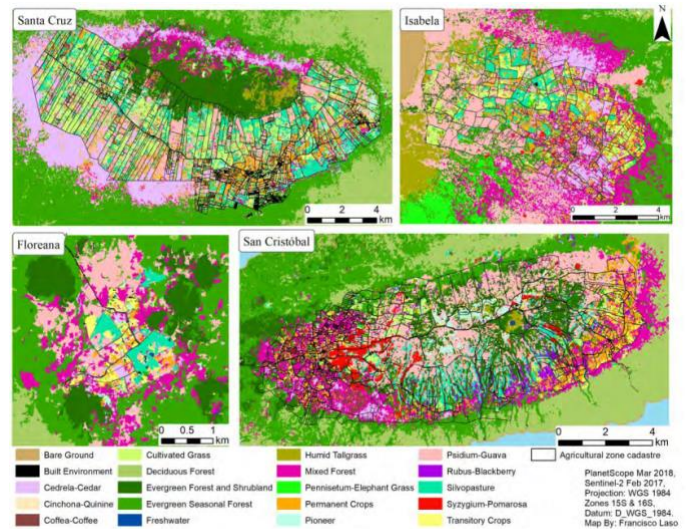


Figure 6. Land cover classification of the agricultural areas and surrounding humid highlands of the Galapagos. (Laso et al. 2019: 19)

In recent attempts to have conservationists and farmers collaborate on the issue of invasive species, researchers such as Laso et al. (2019) have focused on incorporating farmers’ viewpoints while mapping invasive species. Their mapping efforts are clearly geared at informing the Galapagos National Park and the Ministry of Agriculture about “priority areas for intervention to control invasive species” (2019: 28). This work was carried out using advanced technical tools, including the use of satellite images, to create a product that is literally top-down, regardless of how ‘inclusive’ these mapping methods are of farmers’ viewpoints. While these studies may be based on interviews, the voices of farmers are still absent. Although there is a call to give farmers a “seat at the negotiating table when crafting new legislation” (Laso 2020: 157), there is no indication of how this will happen. Ultimately, the natural scientific perspective still privileges



‘big data’ over farmers’ actual viewpoints, and the political and economic hurdles that farmers encounter seem unlikely to be resolved by a map.

When I asked farmers about their perceptions of the climate, their responses revealed much about their relationships to different species and how they are changing over time. Their views emphasize that Galapagos is a lifeworld – a place that is inhabited and lived in and where farmers are the experts when it comes to knowing how crops grow and how they are being affected by the climate. Farmers claim that Galapagos has a blessed climate because it allows people to plant produce from the Sierra (Andean highlands) and also from the Ecuadorian coast.

Listening attentively to farmers’ perceptions of planting potatoes revealed some of their general observations about how the climate has been changing and why this affects farmers adversely. In Ecuador, potatoes are typically grown in the colder and drier Andean climate. Multiple farmers I spoke with claimed that the increased heat and drought in the archipelago over the last couple of decades are making the potatoes grow smaller or in lesser quantities, and take longer to harvest. Before they were planted in May and ready to harvest by July, but now sometimes they are not ready until December. Similar trends were observed in papayas, melons, citrus, avocados, and cucumbers, which farmers say are all growing smaller and being affected by dramatic temperature fluctuations, leading to frost<sup>106</sup> (*helada*). On Floreana Island a farmer told me that potatoes used to grow well in the 1970s and until the 1983 El Niño. After that, the potatoes haven’t grown as well and are vulnerable to frost<sup>107</sup> (*helada*). Others explained that because

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<sup>106</sup> ‘*Helada*’ means ‘frost’, but since temperatures in Galapagos hardly ever get very low, it is likely that farmers are using the term to refer to a variety of other agricultural problems. When it rained hard and then the sun came out or there were rapid temperature fluctuations, farmers said the plants would be burnt (*quemadas*). They also referred to different types of black and white *heladas*, which probably refer to blight (fungal infections).

<sup>107</sup> Apparently, the fava bean is also very fragile, so it isn’t planted much.

potatoes like the cold season, the reason they haven't done well in the last couple of decades is because of higher temperatures. Lucas elaborated:

(In 1996) I planted potatoes and the *garúa* was hot, so all the potatoes died and the stems would be really thin...Before [the seasons] were very marked. By mid-May we would plant potatoes...there's a period of 15-20 days or maximum a month where the hot season would end and it would be a little dry, but there was still a little humidity to plant. So, by mid-May you planted and the *garúa* would come and the harvest would be good...This last year (2020) in particular was a good year for potatoes because it was cold...During the other years the *garúa* was too hot.

Mariana (from Santa Cruz Island) commented that her potatoes actually did well over the past three years, but that during the last growing season she was able to plant them in December of 2021 and harvest them in April 2022, which is the inverse of how they normally would be planted. She says she also had a good harvest from April 2020-December 2021 and that all of this is consistent with descriptions of abnormally cold weather from 2020 onwards. Considering that her potatoes have grown better over the last three years, she thinks that Lucas's observations of not having productive potato harvests since 1996 are more due to lack of interest or marketability on Floreana, or due to different microclimates on the two islands. She did agree with him that the potatoes are now smaller.

However, Mariana was upset that the *garúa* was colder than usual because it was bringing frost (*helada*) to her beans, corn, and other crops. Across the archipelago farmers complained about 'burnt' papayas due to frost, and small acidic oranges, but those who had planted cold-weather crops (usually vegetables from the highlands of mainland Ecuador) said 2020 was actually a bountiful year. My participants' stories about planting potatoes revealed that overall the *garúa* has tended to be warmer (or arrive later), that it can be harmful to harvests, and that only recently has

the climate turned colder again, allowing potatoes to grow. A San Cristóbal farmer explained the difficulties of planting with the delayed arrival of the *garúa*:

We plant tomatoes and peppers under a greenhouse and they're stable...But with other plants there are problems. Before we used to plant vegetables (cabbage, lettuce, potatoes, broccoli, onions, carrots, green beans, peas, kidney beans) in May. The cold climate would come in May and then the rain, because short-season crops need constant rain for three months in order to develop. Now what happens in May is that the cold starts, but it doesn't rain. So now we plant from August onwards...sometimes the climate looks good and it suddenly changes...We plant with a drip watering system now.

A different farmer who planted everything outdoors and didn't have a drip watering system made the situation sound more dire, stating that if the *garúa* didn't come in July, then there was no point in planting. Because *garúa* is like a fine mist and these weather subtleties may not be picked up by the meteorological stations, it is vital to record farmers' perceptions of how agriculture is changing in Galapagos. Hopefully agronomists can take this information into account to promote the equitable construction of greenhouses and determine which species should be planted due to greater climatic variability. Farmers often speak of 'experimenting' when they plant, but it shouldn't be entirely left up to them to risk their livelihoods without receiving practical government advice on the matter.

In the hot/wet season farmers also observed changes. One participant recalled that when he was a child there were many downpours and watermelons grew everywhere, even in the wild on Baltra Island, the extremely arid island to the north of Santa Cruz where the main airport is located. Those times are long gone, but in 2021 the rains caused the island to turn green, something which he hadn't seen in a long time. Some farmers who used to plant watermelons have now decided not to. One of them stated the following, regarding the problem of intense sunlight:

Now pineapples show up 'burnt' and so do watermelons because of the sun. That didn't used to happen 15 years ago. Now even the *guineos* (green bananas) are 'burnt'! The sun is so strong! So, you can't talk about harvesting a healthy pineapple anymore. Some put weeds on top so that it survives, kind of like a hat. – Farmer, Santa Cruz Island

*Garúa* and cold have also negatively affected the ranching sector. Ranchers complained that the elephant grass was impacted by the cold temperatures during the cold/dry season since it is a tropical grass from Africa that is used to the heat and not hot-cold fluctuations. This has caused some ranchers to plant different varieties of grass (*Tasmania* and *Bracharia*) in their paddocks and to use artificial insemination of Simmental cows from South Africa to have breeds of cattle that better withstand drought. Farmers are still traumatized by the large number of cattle that died in 2016 due to lack of water and grass, leading to some people giving the cows sugar cane *guarapo* (juice) and banana leaves, or creating *silos*<sup>108</sup> (grass storage) to avoid shortages in the future. Some farmers were lucky to get greenhouses and geomembranes prior to the drought in 2016, but even they admitted that they weren't prepared for another big drought like they had that year. The following rancher describes how the climate used to be and how shocked he was by this relatively recent drought:

My parents knew exactly what to plant and harvest at certain times...For instance, right now (June 2021), *guineo* (green banana) and plantain grow well with this rain because there's a little sun. But for the plant to be bigger and almost adult you need to wait until December, which is when the heat starts. With the heat the plants bear fruit. But now, with global warming everything has changed. Ever since the 1983 El Niño, the El Niño was more or less every 5 years, but the climate has changed so much that we don't know if it will be one year or two. We just had a year and half of drought (in 2016)...No farm

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<sup>108</sup> Alternative feeding strategies during drought included the Ministry of Agriculture using a grass-cutting machine on an area that used to be farmland, but is now part of the Galapagos National Park. Some farmers get permission to take their cows there, but in general that is not allowed. People also collect grass from the roadsides.

had grass. We never thought that would happen, but it did!...The climate has definitely changed a lot over approximately the last 20 years. – Rancher, Santa Cruz Island

Additionally, coffee farmers are distressed by climate variability. One Santa Cruz coffee farmer voiced concern about the uncertainty of growing coffee in Galapagos because unless one has a greenhouse, there is not much that can be done apart from planting the trees in the shade. Coffee farmers say they can normally harvest once or twice a year, but sudden heavy rains can cause the beans to burst or fall off, and recently the plants have been acting strangely due to climatic fluctuations:

Now you have drought in December and it rains in January and so the coffee blooms and suddenly it stops and once again there's drought in February and March and the coffee blooms again...Sometimes it takes two months and other times it could take six...Before the climate was stable...There have been harvests that have lasted six months, little by little, and that's complicated because labour is expensive. – Coffee farmer, Santa Cruz Island



Images 21 & 22. Farmers process coffee with semi-industrial methods and require labourers for harvesting.

Sometimes, climatic issues are interconnected with invasive species, which have increased dramatically in the last two decades, according to my participants. As an elderly woman selling vegetables at the San Cristóbal marketplace told me, after dealing with climatic problems “the little we have left is destroyed by *plagas*.” A San Cristóbal rancher said the following:

Before there was so much water. There were some orange trees. I am old now and these trees have dried out. They've gotten covered in (Spanish) moss, the *pulgón* (cottony cushion scale) and ants. It affects mandarins, lemons, oranges, and pigeon peas. Citrus trees used to be plentiful, but they aren't anymore.

Farmers claim there are *plagas* for every season, but it is in the hot/wet season that all the ‘worms’ (caterpillars) seem to proliferate. Between February and April 2021 one organic farmer spoke about how difficult it had been to deal with the armyworms, which emerge in such huge quantities only once every five years. In the hot/wet season a large number of ants also emerge “because they like what is sweet”, like coffee plants, and so in the cold season farmers take the opportunity to fumigate them.

Finally, during my time in Galapagos it was extremely difficult to get farmers to tell me their farming calendar, mainly because people say they plant produce all the time and just experiment as they go along. Using a ‘production calendar’ from the Ministry of Agriculture, I was able to go through the list of produce with Mariana to determine what had become harder and easier to plant over the last few years. She claimed that banana, orange, avocado, watermelon, melon, cucumber, pepper, potato, banana, corn, passion fruit, *naranjilla*, and basil have not been bountiful because they don't get enough heat. On the other hand, production of onions, white cabbage, eggplant, green beans, peas, corn, carrots, white carrots, mint, lemon balm, and peppermint has improved due to the recent increase in rain and cold over the last two years. She expressed the following opinions about necessary changes: (1) short-cycle produce should be grown partially in

greenhouses and partially out in the open to make crop production more resistant, with select farmers receiving support; (2) pests should be combatted with organic methods to avoid destroying the soil; and (3) there should be a central seed bank in Galapagos. Based on the detailed information she provided about the Ministry of Agriculture’s ‘production calendar’, I have created an annotated version in Table 6:

**Table 6: Annotated production calendar from the Ministry of Agriculture**

Month	Produce	Mariana’s comments
<b>Hot/Wet Season</b> <b>December-May (approx.)</b>	Pineapple, watermelon, melon, peanuts, ciruela ( <i>Spondias purpurea</i> ).	<ul style="list-style-type: none"> <li>• All are growing well recently due to so much water from 2020-2021.</li> </ul>
<b>Late Hot/Wet Season</b> <b>January-August (approx.)</b>	Avocado, guava, bitter orange, passion fruit, soursop, cream bean ( <i>guaba</i> ), mamey apple ( <i>Pouteria sapota</i> ), pera noruega ( <i>Syzygium malaccense</i> ), araza ( <i>Eugenia stipitata Mc Vaugh</i> ).	<ul style="list-style-type: none"> <li>• It is harder to grow avocados compared to 15 years ago.</li> <li>• Soursop and avocado are smaller due to the cold.</li> <li>• Passion fruit isn’t growing well due to the cold.</li> </ul>
<b>Cold/Dry Season</b> <b>June-November (approx.)</b>	Mandarin, sweet orange, cherry, cauliflower, lima bean, kidney bean, peas, broccoli, turnip, iceberg lettuce, corn, Meyer lemon, star fruit ( <i>Averrhoa carambola</i> ), fig-leaf gourd ( <i>Cucurbita ficifolia Bouché</i> ).	<ul style="list-style-type: none"> <li>• Cottony cushion scale affects citrus trees.</li> <li>• Broccoli is not growing well due to too much heavy rain.</li> </ul>
<b>Late Cold/Dry Season</b> <b>September-February (approx.)</b>	Corn, red onion, potato, carrot, white carrot, zucchini, purple cabbage, stuffing cucumber ( <i>Cyclanthera pedata</i> ), beet, fennel, hyacinth bean ( <i>Lablab purpureus</i> ).	<ul style="list-style-type: none"> <li>• Corn must be planted during <i>garúa</i> season, otherwise it gets infested with worms.</li> <li>• Conservation International introduced a hybrid seed for cabbage, so it grows more easily.</li> <li>• Stuffing cucumber rots with too much water.</li> </ul>
<b>All Year</b>	‘Maqueño’, ‘Orito’ and ‘Seda’ banana, pepper, parsley, cucumber, arugula, tomato, cherry tomato, papaya, squash, manioc, green bean, oregano, mint, lemon balm, chamomile, romaine lettuce, kale, lemon grass, peppermint, white onion, sugar cane, celery, basil, chili pepper, coffee, eggplant, sweet potato, chard, radish, spinach, dill,	<ul style="list-style-type: none"> <li>• Tamarillo hasn’t been growing well due to the fruit flies and strong sunshine drying out the fruit.</li> <li>• Bananas remain small if <i>garúa</i> season is prolonged and it is cold.</li> <li>• Chard, celery, and onions are delicate plants.</li> </ul>

	cilantro, cabbage, valerian, grapefruit, jicama, musk cucumber ( <i>Sicana odorifera</i> ), tamarillo ( <i>Solanum betaceum</i> ), naranjilla ( <i>Solanum quitoense</i> ).	<ul style="list-style-type: none"> <li>• Lettuce grows well with hydroponics but otherwise is difficult due to pests.</li> <li>• Tomatoes, peppers, and cucumbers must be grown in greenhouses due to climate and pests.</li> </ul>
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When asked which plants were most resistant to climatic changes, Mariana claimed that lemon balm, mint, celery, cabbage, and radishes are the most resilient. Nevertheless, since all of her other produce is planted outside, it is extremely vulnerable to the climate and has done poorly in 2021 and 2022. As Eriksen (2016) pointed out, part of the accelerated change occurring during the Anthropocene involves the *treadmill syndrome*, meaning that people have to work harder to achieve the same outcome. For farmers who are now dealing with an unstable climate, *plagas*, high labour costs, competition with imported goods, and other challenges, this concept is applicable. It is the *treadmill syndrome* that is alienating people from farming, because eventually they just can't keep up<sup>109</sup>.

As capitalism generates risks and they accumulate, earning a livelihood becomes more difficult for those who are most marginalized. People's anxieties increase, and farmers must focus on making money to survive. During some meetings of farmers at the Ministry of Agriculture, many of them said that they tell their children to study something else and stay away from farming because it is too much work and isn't profitable.

In conclusion, government officials and NGO staff should consult with farmers because they

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<sup>109</sup> When I told the son of a farmer on Floreana Island about the 'treadmill syndrome', he said it was true of the private sector, including farming and fishing. However, he astutely observed that people with public-sector jobs who have job security (due to Ecuadorian labour laws that make severance expensive) or the so-called 'nombramiento' are able to be lazy and get a monthly pay check. Using the metaphor of the treadmill, one could possibly argue that while both the public and private sectors are on a treadmill, people in the public sector are able to slow down because their jobs are secure, whereas in the private sector they must speed up to stay in the same place.



have valuable empirical knowledge, and policies to support them should be designed around their current problems, rather than based on forecasts 40 years into the future. Based on the aforementioned natural scientific articles that were published around 2010, it initially appeared that quantitative and qualitative data didn't agree, showing a divergence between climate modelling and farmers' perceptions. However, by the end of my fieldwork, after discovering a recent publication on new climate modelling (Paltán et al. 2021), it became clear that qualitative research could complement and give more specificity to the climate models. Rather than demonstrate that the previous academic studies were incorrect, this suggested that, had scientists spoken with farmers a decade earlier, they might have been informed that the archipelago was getting drier and wouldn't have had to wait for this to become statistically visible in 2021. While natural scientific knowledge is valuable, local knowledge should be taken into account.

I have outlined the ways in which science is not unbiased and scientists take a 'paternalistic protectionist' approach when viewing the world as a globe and not as a lifeworld. Farmers don't trust the information scientists provide because it seems disconnected from reality. Through the above discussion of bioindicator species and farmers' intimate knowledge of crops, I have shown that farmers can contribute tremendously to the understanding of general changes to Galapagos' climate. In addition to using satellite imagery and GIS to conduct surveys of plant distribution, it is vital to view Galapagos farms as a lifeworld. As a rancher stated, people living in towns with air conditioning units don't really know what's going on, but "we can appreciate what's happening because we're in the *campo*."

Furthermore, an examination of the ethnographic data indicates that climate change is conceptually linked to other environmental dangers and blame is directed to the outside world, reinforcing the farmers' desire to protect the Galapagos 'bubble' from being damaged. External

risks (*plagas*, Covid-19, and climate change) pose everyday threats to Galapagueños, making them yearn for an unattainable utopian past and desire ways to avoid spiralling into a destructive vicious cycle that I call the *coexistential rift* (See Chapter 7).

## 6. PLAGAS: RATS, FINCHES & POLITICIANS

### 6.1 We care for the environment

One afternoon, Daniel, a gregarious and joyful rancher from Santa Cruz Island, accompanied by his mongrel dog in the back seat, was driving a rickety truck down the pothole-filled road to Puerto Ayora, where he lives and also manages a hotel. He had a twinkle in his eye and started chuckling as he told me of a Norwegian ‘pioneer’ in Galapagos by the name of Jens Moe, who lived in Galapagos from 1926-1964, and who had written a letter to his mother, a copy of which is framed in his house. The letter, from December 1949, states: “*Dengang var det bare 2 plager her, spurven og rotta. Nu har vi 3 med autoritetene, og den siste er den værste.*” This roughly translates to: “Back then there were only 2 *plagas* (pests) here, the finch and the rat. Now we have 3 with the authorities, and the last one is the worst.” During the car ride, the rancher added that even though rats and finches could be dealt with using nets and poison, respectively, he wasn’t sure what could be done about the authorities! Other farmers supported this viewpoint by referring to authorities as two-legged rats.

If rats, Darwin finches, and authorities are all conceptualized as *plagas*, then the word is not perfectly synonymous with ‘invasive species’ or ‘pests’. Similarly, some plants that conservationists consider introduced species to be controlled, like *cedrela*, are a source of income for the farmers. During my year in Galapagos, whether I was asking farmers about the climate, Covid-19, or what worried them, participants redirected the conversation towards *plagas*, which I understand as something/someone threatening that diminishes agricultural productivity. In other words, the antonym of a *plaga* pertains to other popularly verbalized concepts, such as *tranquillity*, *paradise*, and *care*. A *plaga* is that which threatens the *good life*, an idealized view of a utopian past. Even though the anglicized word *pest* was occasionally used in the archipelago, *plaga* was much more frequent, and in this chapter I intentionally use the word *plaga* because it retains the

religious connotation, alluding to the biblical ten plagues of Egypt<sup>110</sup>. In fact, since *plagas* are a way of thinking about threats, multiple participants have also conceptualized Covid-19 as the latest *plaga* which entered the archipelago and is destabilizing people's lives, fulfilling biblical prophecies of the apocalypse. In addition to fitting within pre-existing religious metanarratives of decline, *plagas* also appear in metanarratives of blaming the problems of the archipelago on the flows of people/things that arrive from the exterior (an insider-outsider discourse, which is discussed in Chapter 8.3). When migrants or politicians are labelled as pests, humans are transformed into things that must be annihilated (Mavhunga 2011: 154). Thus, the concept of the *plaga* is essential for understanding how people engage with risk in the archipelago, and especially how people use *plagas* to conceptualize their environment: some creatures must be *cared for*, and others are *risks that must be confronted, or at least identified, in order to allocate blame*.

Throughout my fieldwork, farmers commonly criticized conservationists and claimed 'nosotros cuidamos del ambiente' (*we care for the environment*). In Galapagos, 'conservation' often has negative connotations because it is associated with the work the Galapagos National Park and NGOs do, which is either considered impractical, destructive, or just an excuse for making money. In Theodossopoulos' (2003) ethnography of turtle-human interactions on Zakyntos Island, the author proposes that one of the reasons for conflict between locals and conservationists was their differing views on what it was to *care* for the environment – for locals, their *care* was manifested through hard work and an ongoing struggle with nature. Similarly, Ospina (2001: 50) and Quiroga (2013: 31) note that Galapagos farmers work to transform wild 'hell' into a

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<sup>110</sup> There is a moralistic quality to the term *plaga*, potentially due to its religious connotations. For instance, a farmer from Santa Cruz stated, "I'm an evangelical Christian and we're not frightened by the pandemic because it's written and we know that all of that will happen...Remember the plagues of Egypt. The plagues affected the Egyptians but not the people of God. We are living those times."

humanized ‘paradise’ – in both contexts there is a link between labour and religious redemption, in addition to a discourse of ‘struggle’ and transformation. Furthermore, domestic animals in both Greece and Galapagos have a reciprocal utilitarian relationship with farmers, while other species may be viewed as *plagas*<sup>111</sup>. In this sense, Ospina (2006: 75) argues that farmers have a utilitarian view of farm animals and consider them ‘inferior’ to humans. On Isabela Island “some residents still consider animals such as tortoises as sources of food and the Galapagos hawk as a pest that kills their chickens<sup>112</sup> and needs to be eliminated” (Quiroga 2013: 31). Andrada et al. (2010) also state that most inhabitants in Galapagos have an “instrumentalist logic” (2010: 259) regarding whether a species is economically beneficial to them.

I argue that this simplistic utilitarian understanding of how different sectors of society interpret *care* differently, though partially true, is not actually the crux of the conflict. Ospina states that farmers ‘probably’ do care for the environment without “contemplative romanticisms” (2006: 77) because they need to kill animals to survive. Additionally, he refers to a farmer game called the ‘game of the blind chicken’, where a chicken is buried in the ground up to its neck while a blindfolded person swings a machete in an attempt to chop its head off in one blow. The author explains that this demonstrates how farmers draw a sharp distinction between humans and animals,

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<sup>111</sup> For instance, a farmer told me that he found the endemic *Miconia* plants harmful because they removed too much water from the soil. He preferred to have guava trees, an invasive species, on his property because they provide shade. Another smallholder on Santa Cruz said that in the past there were a lot of *naranjilla* fruit trees growing in the wild, but they were allegedly affected by a *plaga* and have since disappeared. Similarly, the *lantana camara* invasive species was a huge problem in Galapagos, but Lucas told me that during the 1982 El Niño the plant received too much water, causing it to develop fungus and rot. Now everybody is more concerned about the damaging impact of blackberry.

<sup>112</sup> On Santa Cruz and San Cristóbal islands hawks were practically eliminated by farmers protecting their chickens. This conflict is also seen with regard to the Galapagos barn owl and short-eared owl, even though there have been some awareness campaigns. I spoke to multiple farmers who admitted to killing them, even though some of the younger rural Galapagueños seemed aware that they shouldn’t. Some argue the solution is to keep chickens in coops.

compared to conservationists, who wish to protect certain species. However, this distinction based on the relationship with animals is not clear-cut. Related to this, a few years before my fieldwork, when I volunteered at the Charles Darwin Foundation, one of the scientists fantasized about killing cats because they were predators of Galapagos' endemic species. I would argue that both sectors of society have analogous understandings of what it is to *care* for species and both are sometimes prone to violence towards animals, whether it is for conservationist or nutritional reasons. One reason why the distinction between how sectors *care* for the environment should not be understood solely in terms of the slaughter of animals is that this could unintentionally<sup>113</sup> reify the idea that farmers don't *care* for the environment.

What actually does distinguish farmer viewpoints is that, possibly due to their religious background, there is the idea of humans being stewards of animals. Furthermore, the farmers I spoke with don't agree with conservationist eradication projects when the animal in question is both of economic value and also part of traditional hunting practices. They are also fed up with feeling that conservationist decisions are made without their consultation or involvement. Finally, a common metanarrative in the archipelago is that conservationists care more about endemic animals than they do about humans, which reflects farmers' annoyance at the lack of basic services and political abandonment. An often cited example involves a tortoise with a hurt leg being flown to the US for medical support, while a girl allegedly died due to lack of transportation outside the

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<sup>113</sup> Ospina states that farmers live between two worlds, that of "ecosystemic cruelty" and that of "immaculate beauty" (Ospina 2003: 118), and that they care for the animals they have to slaughter, so he recognizes the ambivalence of their positionality. However, he also says that the ways in which humans use nature define their relationship to the environment (Ibid: 116). Contrasting their utilitarian relationship to the romantic relationship of conservationists risks the possibility of creating the idea that farmers don't *care* about the animals they interact with or the environment in general.

archipelago just one week beforehand<sup>114</sup>. So, it is not so much that *care* is understood differently, as it is that the farmers feel excluded from political and economic decision-making.

As anthropologist Eugene Guribye explains, “[p]eople on Galapagos relate to animals in a number of ambiguous and often contradictory ways, and it is impossible to pin everything down to the effect of one main discourse, or to reduce everything to conservation vs. exploitation” (2000: 9). Farmers in Galapagos have an ambivalent relationship with the species that surround them, whether they are considered *endemic*, *native*, *introduced*, or *invasive*. Despite their being fully aware of the scientific terminology used prominently in Galapagos (due to its being widely disseminated among the inhabitants), farmers’ relationships with animals were mostly pragmatic and utilitarian. However, utilitarianism (Quiroga 2013, Ospina 2006) isn’t entirely based on economic considerations because while farmers do care for goats and cows for meat and milk, they also *care* selflessly for animals. While living on a San Cristóbal farm, there were four prominent instances where this became evident:

- (1) I visited a rancher who had a disabled calf that could barely walk. When I asked how long he thought they would be feeding it with a baby bottle, he said they would do their best to nurse it to health. Although recovery was unlikely, they would care for it “until God takes it away.”
- (2) When a farm labourer and I were returning from fixing a wire fence, he heard bleating in the hills and upon further inspection we retrieved a baby goat from the brush. We nursed it back to health by feeding it with a baby bottle filled with cow milk and I personally took

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<sup>114</sup> This story was first told by Grenier (2007 [2000]: 341) and repeated by Ospina (2006: 76). Constantino (2007: 228) has a very similar story, potentially a variation of the original, which claims that the same year the tortoise was given medical attention in Miami, three fishermen died of diving-related accidents after not being able to receive medical treatment. The veracity or specificity of the stories is not as important as how they are used discursively by people to claim that humans don’t get as much attention as animals.

care of it in a crate by my bed throughout the night until we returned it to the neighbour the next day.

- (3) One morning I was called over to help a distressed cow give birth. The veterinarian had been called, but didn't show up. In the meantime, a neighbour, a farm labourer, and I used a rope to pull the baby out. The calf was so big that it could barely walk, so we had to give it milk in a bottle and vitamins every day. The farmer was saddened by the fact that it didn't seem to be recovering, but to our surprise and relief, one day it was standing!
- (4) Even with regard to death, Felipe was considerate of cows' feelings. For example, when a cow gave birth, it couldn't stand anymore. After a day of analyzing the situation, he decided that he would put it out of its misery and gift the meat to the Salasaca community so the food wouldn't go to waste, especially considering the Covid-19 crisis. After the butchering was over, I helped shovel the muddy ground to eliminate all animal remains and blood, and the rancher poured toilet cleaner in the area because he said that if the other cows smelled death, they would be afraid and would not produce much milk.



Images 23 & 24. Left to right: This calf was unable to stand for days, but was eventually nurtured to health. We rescued this baby goat from the hills and returned it to a neighbour.

These experiences could all be considered the ranchers' way of protecting their investment, but clearly this wasn't the only motive. One could argue that everything farmers do involves *care*. They tend to the animals' needs, feed them, pet them, give them affectionate names, check on the cattle's general health, etc. This involves their domestic animals, but is not exclusive to them. One chicken farmer on Floreana Island had adopted some lost white-cheeked pintail ducks (*Anas*



*bahamensis galapagensis*). Even though his original intention was just to nurse them to health, he wound up keeping them since they had integrated well to living with the chickens and he wasn't sure if they would be able to live in the wild anymore.

Paolo Bocci (2017b) argues that conservationists *care* about the environment differently, which is exemplified by their eradication of goats in order to *care* for giant tortoises. Farmers and conservationists may understand each other's viewpoints on conservation of species, but for farmers the ends do not justify the means, particularly when people's livelihoods aren't taken into account. While the livelihood of scientists depended on killing goats, this could also be interpreted as an attack on the inhabitants' source of food. In response to feelings of abandonment, it is commonly repeated that conservationists don't *care* about humans, that conservationists are only interested in making money. From this viewpoint, the killing of goats is interpreted as a way of attracting global funds and attention towards conservation issues, rather than being a selfless act to protect the archipelago.

## **6.2 Goat cheese and rat poison**

It is somewhat controversial to talk about goats in Galapagos. Conservationists typically justify eradication efforts, including the famous 'Proyecto Isabela' (1997-2006), by asserting that the degraded ecosystems made the eradication of goats necessary in order to ensure the conservation of giant tortoises, whose population had already declined dramatically. Historically, it is estimated that approximately 200,000 giant tortoises were taken from Galapagos on ships as a source of fresh meat for sailors, leading to the extinction of some of the islands' species (Nicholls 2014: 111). For centuries they were also eaten by the islands' inhabitants, and more recently their habitats were encroached on by goats, pigs, and donkeys (all introduced species that arrived in the time of pirates

and whalers). Goats eventually threatened the extinction of 60% of Galapagos' 194 endemic plants (Lavoie et al. 2007). Therefore, at a cost of \$10.5 million, the Galapagos National Park brought in a hundred specially trained dogs from New Zealand, helicopters with specialized pilots, and hunters with semi-automatic weapons, in addition to some land-based local hunters, and used so-called 'Judas goats' to locate and slaughter the remnant herds. Around 90% of the goats on Isabela Island were killed (Bocci 2017b: 432), among the over 140,000 feral goats that were eliminated from 500,000 hectares of land on thirteen islands (including all four inhabited islands), making it the "world's largest island restoration effort to date" (Carrión et al. 2011: 1).

Many farmers expressed their indignation at the project, claiming that they hadn't been consulted<sup>115</sup> by the Galapagos National Park authorities; goats are a source of food, and goat hunting is a Galapagueño tradition. In one of Bocci's (2017b) interviews, the participant states that even though he understood that they were trying to conserve Galapagos, "it looked like someone bombed the islands!" (Bocci 2017b: 425), and during the years of eradication work on the inhabited Isabela Island it was "like a war" (Bocci 2017b: 431) since helicopters would swoop over, gunning down the goats.

Some park guards I interviewed contended that the Galapagos National Park authorities really didn't have to ask locals for permission, since they were conducting eradication operations on the 97% of park land under their jurisdiction, but local hunters argued that they depended on the hunting. Even some ex-park guards who were also traditional goat hunters affirmed that they didn't really want to kill the goats but had to because it was their job. Some of them openly opposed conducting these activities on the other inhabited islands:

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<sup>115</sup> Someone who worked on the project claimed that people actually had been 'informed' but "the park wasn't interested in people's opinions. They have the power".

They do the easiest and most expensive projects without thinking about the future. All they worry about is money...When we were on Santiago...they told us that the goats were competing for the tortoises' food and that they're starving to death and the donkeys are also competing for food and they stomp on the tortoise nests. I said that it isn't a question of competition because animals have different habitats<sup>116</sup> and animals help one another in healthy coexistence. 'No', they said, 'you have to eradicate the goats!' We warned them there was blackberry on Santiago and the goats ate the blackberry and kept the paths open so the tortoises could enter. No, they force us to do what they say. They brought their own methodology...There was so much money...People were getting drunk, there were barbecues, there was so much food. There was no conservation at all. Heliports were set up on other uninhabited islands and there was no conservation...For them there was no impediment...The pelicans were flying around in the mangroves and were scared, but nobody cared, because we have to eradicate...They wanted to do it on Cristóbal, Floreana and here on Santa Cruz! The project was ready and I was one of the people who told them in a meeting that if they take me on a fieldtrip I'm not going to kill a single goat, because I don't want to compete with people. 'Do you know what you're doing here? You're putting me up against the *pueblo!*' What are we going to do tomorrow when we have no food<sup>117</sup>? What will people do? Eat the tortoises! We don't have enough park guards to have one guarding every single tortoise. *Déjense de vainas* (stop messing about) and think about what you're going to do.

Galapagueños were frustrated by the fact that the project authorities left the goats to rot, rather than gifting the meat to the community or involving more locals in the hunt. Furthermore, it doesn't sound like the leadership listened to the advice of the park guards, who questioned whether the goats were actually competing for tortoise food, and warned about the impact of blackberry expansion after the goats were gone. Now Santiago, Floreana, and other islands that used to have

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<sup>116</sup> Other farmers disagree and say that goats do destroy tortoise and petrel nests.

<sup>117</sup> A young participant from Floreana Island told me that goat hunting was never a main food source or essential part of the economy and that people mainly are annoyed because a 'hobby' was taken away. However, a rural housewife on Santa Cruz explained that it is an important way to supplement one's salary. It is also common for people to gift goat meat to each other as a form of communal solidarity. Furthermore, a nostalgic Isabela farmer/fisherman explained that he used to make substantial money by capturing goats and shipping them to the mainland; an Isabela cattle rancher also spoke nostalgically of the times when he could export cattle, before meat became extremely cheap in mainland Ecuador and when a large container transportation ship was still in operation. Eradicating 'free' goats and wild cows is akin to eliminating people's relationship to the commons and increasing their dependence on private property.

goats are overrun with blackberry and even the current director of the Galapagos National Park Directorate agrees that the park should have considered ecosystems holistically, as it is attempting to do now, rather than narrowly defining the problem as “killing goats to save tortoises”<sup>118</sup> (Bocci 2017b). Some farmers argue that they should have been paid to continually *control* the population of goats, rather than eradicate them. Others use conservationist reasoning to question whether it was wise to remove goats from the ecosystem, because it might lead hawks to eat more iguanas now that the goats are gone.

Most interestingly, in the previous excerpt, the ex-park guard/hunter/farmer affirmed that *endemic* and *invasive* species “help one another in healthy coexistence”. Regardless of the actual veracity of this claim, it shows clear parallels to how farmers view *coexistence* between humans and other animals in the archipelago, while criticizing the stereotypically individualistic, atheist, and capitalist conservationists. Many of these criticisms may originate from residents’ religious backgrounds and a rejection of secular humanist scientific thought (Ospina 2006: 67). In deciding to kill an invasive species to save an endemic one, the Galapagos National Park authorities were not attentive to the fact that throughout Galapagos’ history goats have been “pirates’ food, eremites’ companions, settlers’ source of income, and a means of colonization” (Bocci 2017b: 428), rather than just an invasive species that needed to be eradicated. As stated previously, farmers conceptualize *care* and *conservation* differently, arguing that conservation should also be *caring* towards communities and not blatantly wasteful and violent. A San Cristóbal rancher voiced his frustration:

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<sup>118</sup> As Felipe explained to me, “People try to solve a problem without understanding it”, such as the introduction of the smooth-billed ani to supposedly deal with ticks on cows; this didn’t work and the ani ended up preying on many of the endemic birds, including Darwin finches.

What kind of conservation is there if a helicopter comes and shoots the goats down?...Now they even have a law for not being able to bring a dog...and what would people say if we ate the tortoises?...They should have killed the goats and given away the meat!

The possibility for humans and invasive species to *coexist* in ways that don't destroy the environment was demonstrated during one of my farm stays. Felipe, the San Cristóbal rancher, has started an innovative project to produce goat milk and cheese. The idea came to him when his seven-year-old son asked why they had to kill goats and couldn't keep one. Thirty San Cristóbal farmers joined the 'Asociación de Capricultores' (Association of Goat Rearers) and are making progress in producing Galapagos' first goat products. By having farmers and fishers trap the goats and turn them into an economic asset, they solve a centuries-old ecological problem without needing to eradicate them. After I published a short blog post in support of the project, the rancher jokingly told me that if the conservationist groups didn't like the article, "maybe they'll kill us like the goats". There is still the opinion that conservation groups are in positions of power in the archipelago and, according to Foucauldian biopolitics, can decide what shall live and what shall die. As Wanderer (2020) observed on Guadalupe Island, "in order to optimize and multiply the life of some animals, others were killed" (2020: 60). In parallel, Bocci's (2017b) questions the conservationist premise of *caring* for giant tortoises by killing goats.



Image 25. A captive goat on San Cristóbal Island, on a farm that is part of the innovative goat cheese project.

“We're lucky people don't eat rats here or otherwise they would say that they're taking away another food source!” exclaimed one of the sisters of someone who implemented Project Isabela. During my time on Floreana Island I witnessed pigsties, chicken coops, and stables being constructed on farmers’ properties, thanks to funds from Island Conservation (IC). This NGO is currently working on pioneering the first eradication of rats on an island with human inhabitants, in order to help protect the Floreana mockingbird (currently living on nearby islets, but which hopefully will be reintroduced) in addition to land snails, giant tortoises, and petrels. Campbell et al. (2011) highlight that rodents are responsible for species extinctions on many islands worldwide. Most participants agreed with the project because rats are a *plaga* that have an economic cost and are also a nuisance for growing crops. The idea of IC is to keep all domestic animals corralled during the time when they spread poison all over the island. They have conducted meetings with

the community and explained that the poison is hydrophobic, so it won't contaminate the water supply and isn't dangerous for humans. Some people believe the 'astute' and 'intelligent' rats will survive this eradication attempt, or otherwise will easily be able to return to the islands, so they dispute whether all that money is really well spent. However, the project generally gets little negative press because of the corrals and other infrastructure being built. In other words, this eradication project is not as conflictive as Project Isabela, because the NGO is meeting with the community, funding construction projects for farmers, and helping eliminate a pest. Nevertheless, some people are annoyed by seemingly insincere surveys and due to concerns over the impact on tourism and water contamination:

Currently the ABG gives us a little bait every fifteen days for the rats on our *fincas*. We control the rats this way. Why not continue managing it in this manner? Why damage the community?! Because they want to put it in urban areas. You understand? It's bad! What human will want to come to Floreana with that aroma?! [A project leader] says, 'Don't worry. If a rat dies here or there, we will come pick it up' and I say, 'Who do you think I am? I don't believe you! You might do it now, but who will do it tomorrow or the next day?' You expect people at the ABG to pick up my rats? It's never going to happen. And are you really going to go up to the highlands to the water source to take the dead rats out of the water? No, they will already have contaminated the water and that's what we will drink!...Don't give us an island stinking of putrid rats! Because nobody will want to come eat at the restaurants or stay at the hotels. – Farmer, Floreana Island



Image 26. Rat poison is already used by farmers and park guards, but not in the large quantities planned for Floreana Island.

As we can see from both the past projects to eradicate goats and the current project to kill the rats on Floreana Island, the conservationist sector of society is still extremely powerful in Galapagos. Farmers may be more agreeable to the rat project, but they are still sceptical of large environmental conservation projects. Unlike Ospina (2006) and Bocci (2017b), I don't think the essential conflict is based on how people conceptualize *care*, but rather on the unequal power relations and lack of inclusion of farming communities. As a naturalist told me, "for me, conflict doesn't happen due to lack of knowledge or due to a purposeful desire to harm. It's a conflict that happens due to lack of vision from authorities in terms of distributing the wealth and making those resources reach the Galapagueños." Hence, farmer voices should be taken into account and included in the formation of policy, the control of invasive species, and the development of conservation projects.



### 6.3 Bugs, birds, and plants

Near the end of 2021 I revisited Mariana, who has a well-managed small plot of land on Santa Cruz Island. She gave me a tour around the vegetables that are planted outside, but which she says are vulnerable to *plagas* and the irregular climate. Along the perimeters of the farm, she had planted lemongrass, valerian (*Valeriana chaerophylloides*), and common rue (*Ruta graveolens*) as natural repellents for different *plagas*. She showed me a black caterpillar that was eating her chard and explained how she prepares eco-friendly pesticides using a solution of chili peppers and sugar cane alcohol or plant basil to attract the ants to it and away from the other crops. However, she admitted that the ants are sometimes too much trouble and she is forced to use cypermethrin, although she stays away from other pesticides due to health concerns. While we stood in the shade house, I saw a yellow warbler flying around and darting through a hole in the netting. “Oh, don’t worry! That’s my little helper”, she said. “It eats the bugs, so it’s good, but the finches are little *bandidos* (bandits). They pluck the seedlings out, but luckily they don’t dare go inside the shade house. They don’t like confined spaces.” She would later refer to the Darwin finches as *plagas* because of the damage they cause to her crops. Most other farmers I spoke to described these birds using the same term, although they conceded that because they’re a ‘special’ species, little can be done and instead farmers must *learn to coexist* or otherwise decide not to plant certain species (like corn and watermelons) altogether.



Image 27. The shade house, constructed with recycled materials and financed by caring for a Covid-19 patient.

I witnessed whole batches of tomatoes that had been pecked on, leaves that were ripped apart, and seedlings uprooted due to the finches. It was rumoured that some farmers put out poisoned rice/corn to kill the finches because of the damage they cause to crops, especially those grown outdoors: “I know my neighbours are doing that, because the finches were showing up on my land and dying here.” As another farmer observed, “we have found some finches poisoned, but it doesn’t solve the problem because hundreds or thousands will keep coming.” It is certainly a frustrating part of life: “The problem is that we can’t even kill them. I leave them there until they’re tired and hopefully they will leave us something...Can you imagine? You sometimes feel like sitting and crying as you see what they do, but they’re birds that you can’t do anything to.” Because it is taboo to kill an endemic species, which could also lead to massive fines from the Galapagos National Park Directorate, no farmers admitted to doing this personally. Some said they would

string up cassette tapes around the crops because the sound of them blowing in the wind would scare the finches. Others agreed the best method was to chop up some manioc and put it in a corner to feed the finches and distract them, while they planted corn and other sensitive crops in the midst of some *monte* (weeds or low-cut grass) so that the finches only discover the crops when they're too tall to uproot. Another apparent, but largely unspoken, method is to have cats on the property. Finally, some who deemed the above methods unsatisfactory preferred using netting or greenhouses to protect their crops from the annoying endemic birds. Others just accept that a portion of their crops will be destroyed.



Images 28 & 29. Tomatoes grown outdoors fall victim to the Darwin finches. When fragile crops aren't in a greenhouse, they are grown under this black netting for bird protection.

During my year of research, I often heard farmers complain about 'worms' and 'flies', but they were rarely precise in their names or descriptions. In fact, the term 'worms' usually referred to caterpillars. In a conversation with Lenyn Bettancourt, an entomologist and principal curator at the Charles Darwin Foundation, he asserted that many of the worms are endemic and not introduced, so what the farmers refer to as a *plaga* might in fact be a species that is originally from Galapagos, but harmful to agriculture. Despite the lack of specific names for bugs, farmers have an acute

perception of the interrelationships between species and apply those understandings to their agricultural practices. For example, Felipe (the rancher from San Cristóbal) planted both *Scalesia gordilloi* and *Lecocarpus darwini*, two critically endangered endemic species, on his property because, in addition to helping reforest the ecosystem, he can give them to coffee farmers: the former provides shade, the latter attracts pollinators, such as endemic carpenter bees and Darwin finches.

In my attempt to get to the bottom of which *bichos* (bugs) the farmers were constantly referring<sup>119</sup> to, I visited the Charles Darwin Foundation's Terrestrial Invertebrates Collection. Lenyn Bettancourt showed me three orders in their collections: Lepidoptera (butterflies), Diptera (flies), and Coleoptera (beetles). Since the farmers mostly mentioned '*gusanos*' (literally worms, but used to refer to caterpillars), we primarily looked at the Lepidoptera. A plaque on the side of the collection stated that the species contained were: "69 accidental, 1 doubtfully native, 162 endemic, 93 indigenous, 3 doubtfully endemic", which would mean that nearly 80% of the caterpillar species are actually from Galapagos.

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<sup>119</sup> I also used an experimental method of showing farmers photographs of introduced plants and insects from a recently published catalogue (Bermúdez et al. 2020) and having them identify species, tell me if they are problematic, and how they deal with the problem. In the end, this didn't lead to much additional dialogue about these species, but it could be useful to other researchers wanting to know which invasive species farmers observed on their island. The results can be found in Appendix IV.



Images 30 & 31. Lenyn Bettancourt, showing me some of the hundreds of species that are categorized and preserved in the Charles Darwin Foundation's Terrestrial Invertebrates Collection.

Lenyn further explained that even though the percentage of insect species that affect agriculture is not completely known, in an ongoing study CDF scientists are currently finding that approximately half are introduced or native, while the other 50% are endemic. This would suggest that many of the *plagas* that farmers spray pesticides on are actually from the archipelago but get no special conservationist attention because they are a nuisance to farming (and because they aren't 'charismatic' species). This raises thought-provoking ethical questions regarding conservation practices, challenging the notion that all endemic species are inherently beneficial while all introduced ones are harmful (Thompson 2014, Pearce 2016, Warren 2021). While from a biocentric viewpoint, introduced species are often considered harmful to the ecosystem, this is not always the case and many species of fruits and vegetables are vital for human consumption.



Images 32-35. Clockwise from the top left: A *Noctuidae* (armyworm) pupae in the paddocks of a rancher; whitefly on the underside of a leaf in a greenhouse (Santa Cruz Island); a *Lepidoptera* caterpillar; the effects of *Tuta absoluta* (tomato leaf miner) on tomato leaves.

There is some degree of a mismatch between how scientists/institutions attempt to communicate practical information to farmers and what they would ideally desire. I heard from farmers that they really enjoyed the field schools (*escuelas de campo*), where Conservation International, the International Outreach Initiative, and the Ministry of Agriculture taught farmers about alternate methods of organic farming, even though they would have liked more follow-up.

They said that their attitude towards the environment had changed after they learned exactly how long different tree species took to grow.

However, when I shared the *Alternativas para el control de insectos en cultivos* (CDF 2005) educational outreach publication produced by the Charles Darwin Foundation (highlighting environmentally friendly invasive species control methods) with Felipe, the San Cristóbal rancher, he claimed that the document was about as useful as saying you should “remove snow from Florida in June”: it was lacking specificity both in time and space. For instance, he explained that wasp traps don’t work in the rainy season (from December to April), and that controlling snails and slugs with salt also doesn’t work in wet conditions. Instead, he prefers to use natural repellents like lemongrass, dill, *Lecocarpus darwini*, and *Scalesia gordilloi*, all of which he learned by trial and error. Others claim they conduct ‘experiments’ after watching YouTube videos, seeking information from more trusted networks of agronomists or family members on the mainland, or investing their own money to take courses on mainland Ecuador. A naturalist guide who started farming during the pandemic said that his experimentation led him to conclude that manioc, chili peppers, pineapple, and ginger are his favourite crops because they’re the most resistant to *plagas*.



Image 36. A hydroponic farmer told me he had invested over \$10,000 between courses and this infrastructure, without any institutional support. Most farmers are unable to finance this kind of project.

Multiple farmers and ranchers repeated that they saw themselves as the ‘real conservationists’ and were fed up with academics coming in and conducting useless studies that cannot later be applied to their daily problems, so they are sceptical of the ‘good intentions’ of researchers, NGOs, and park guards. Part of these critiques also derive from how farmers define work, since they highlighted that manual labour was ‘real work’ and complained about all the public servants who worked in their air-conditioned offices and just went to the fields to get signatures and photographs, or were simply *hueveando* (wasting time). One participant at a meeting with the Ministry of Agriculture asked if their technicians were growing crops by sitting at the computer, instead of helping in the field, even though the agronomists do actually visit farms every day. A Santa Cruz chicken farmer explained that by the time the government completed its studies on the supply and



demand of produce in the archipelago in order to ascertain whether an importation ban should be implemented, the available produce had run out, so the importation of more goods became a self-fulfilling prophecy. One NGO worker expressed this sentiment of research fatigue succinctly:

Everyone comes to repeat the same work over and over, so people get tired because they say, 'Why do you study so much? Where are the results? Where is the potable water and sewage and a good hospital and good education?...Why aren't these thousands of studies being used at the administrative level?' I've heard every year that there's a consultancy to create a baseline. I'm sure that if we go to the thesis database, you'll find the information there and you just need to update it. It will end up being a lot cheaper and the money could be spent on implementing things...All the basic services for having a good quality of life don't work. So when people hear 'research' they are just tired. So when there's a workshop to discuss the problems that exist, people are also tired. They say, 'why are we doing this again?' There are the little cards and we write about the problems and solutions, but then nothing happens! Everyone knows that it isn't going to happen...They say, 'you've studied enough. It's time to act'.

In summary, farmers state that particularly over the last 10-20 years<sup>120</sup> they have been inundated by *plagas*, mostly invasive species from abroad, leading to daily frustration in ranching

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<sup>120</sup> Invasive species have increased dramatically in Galapagos over the last 30-50 years, with 560 plant species being introduced for agricultural purposes, and as of 2006 there were also 463 introduced insects (Quiroga 2018: xviii). Farmers often spoke of the ease with which they used to be able to plant 'without chemicals' and how that has now changed. Although farmers are also guilty of bringing some of the *plagas*, blame is allocated externally, attributed to migrants or the tourism industry. Since 69% of products confiscated by the biosecurity agency come from tourists (Toral-Granda et al. 2017: 14), there is truth to the latter assertion. Some species have even been named after the people who brought them to the archipelago, like the 'carmelito' fly (*Simulium ochraceum*), brought in by Doña Carmela, which causes welts and makes agricultural work very difficult on parts of San Cristóbal Island. People have suspicions about who was responsible for introducing blackberry, guava, and Cuban cedar. I also spoke to multiple farmers who had a *laissez-faire* attitude towards seeds, saying that if the Galapagos Biosecurity Agency (ABG) prohibits imports, they will bring them in illegally anyway, especially their favorite Italian tomatoes, blood orange, and macadamia trees, often hidden in the folds of people's clothing at airports, or smuggled with the help of fishers who also bring in new breeds of dogs or illegal motorcycles. A veterinarian I interviewed believes that the large number of dogs, which has multiplied rapidly in recent years, has to do with a lack of control, but also came about because people received free veterinary treatment at the *Darwin Animal Doctors*, therefore feeling more comfortable importing pets to the archipelago.

and planting. Whether it is armyworms eating farmers' paddocks, papayas growing smaller and turning black because of the *helada*, finches uprooting seedlings, or aggressive black ants making their nests underneath crops, farmers and ranchers are bearing the brunt of addressing these problems. They have intimate knowledge of the interrelationships between different species and have varied and ambivalent reactions when dealing with species, whether or not they are *endemic* or *introduced*. The reason they are particularly upset about how *plagas* are being managed by institutions and researchers is that they feel abandoned in terms of both technical and economic support. Viteri & Vergara (2017) proposed a series of solutions, including taxation on imported goods, subsidies to farmers, and greater support for their fight against invasive species. They demonstrated that while the Galapagos Biosecurity Agency (ABG), the Ministry of Agriculture, and the Galapagos National Park Directorate (GNPD) spent \$439,000 on pest control in 2014, which is under 5% of their yearly budgets, 250 agricultural producers on Santa Cruz spent \$1,952,632, without taking into account the cost of family manual labour. These proposals have not been implemented<sup>121</sup>, so clearly something needs to change.

#### 6.4 Without chemicals the *plaga* will come

Banana trees are reproduced by planting the offshoots of the parent plant, known as 'suckers' (*chupones*). During my fieldwork on Floreana Island, I helped a farmer fill bags with dirt to plant these small stubby-looking banana plants. However, both the agronomist from the Ministry of

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<sup>121</sup> When I spoke to the newly appointed director of the Ministry of Agriculture in May 2021 and asked why these initiatives had not been implemented, I was told that the issue was complicated and if they were to increase prices for imported goods, the farmers would also increase their prices to match them. Moreover, the MAG claims that price regulation is not within their jurisdiction. A system of subsidies and taxation still seems to me like the best solution, and if farmers were to increase their prices to match the imported goods, at least they would be earning a greater profit margin! If importing goods is made more expensive, clearly merchants will be upset, but farmers would be better off.

Agriculture and the farmer indicated that, prior to planting them, the suckers first needed to be treated with a pesticide called cypermethrin. The farmer couldn't find his gas mask, so he wrapped a cloth rag around his face in an attempt to keep the fumes from affecting his health. The stubs were placed in the smelly, milky solution to kill the *picudo* (banana root borer, *Cosmopolites sordidus*). Other farmers prefer to immerse the plant in a local detergent brand named *Deja* because it is less toxic, but others use much stronger chemicals without paying much attention to the name of the chemical being used.



Image 37. Cypermethrin is one of the most commonly used pesticides in Galapagos, especially for dealing with ants.

Cypermethrin and glyphosate were among the most common pesticides I saw farmers using during my fieldwork. Although glyphosate is widely used worldwide, several countries have banned or restricted its use due to concerns over it being a probable carcinogen (World Health Organization 2017). Cypermethrin is considered unlikely to cause cancer in humans (Chourasiya et al. 2020), but it is highly toxic if improperly used. As explained earlier, farmers are exposed to a high level of different chemicals, often without using masks or other personal protective gear. Neither glyphosate, cypermethrin, nor the plethora or other products used, are of much concern to

most farmers even though they may be causing harm. As one farmer told me, “If it’s approved by the Ministry of Agriculture, then it must be OK.” Since extremely harmful pesticides are prohibited entry to Galapagos, farmers assume that the ones being sold must not be too toxic<sup>122</sup> for their health. Coffee farmers are more attuned to limiting the amount of pesticide used because their buyers study levels of toxicity in their products, but they are often left with concerns about how to control<sup>123</sup> *roya* (a fungus called 'coffee rust', *Hemileia vastatrix*) and *broca* (coffee berry borer, *Hypothenemus hampei*) without chemicals. A few organic (or mostly organic<sup>124</sup>) farmers did voice their worries about chemical contamination of the soil and the possibility of pesticides poisoning Darwin finches, but generally this was not a risk that people worried about. However, pesticides do build up resistance over time, so farmers must evaluate “different temporalities of risk and reward...[and undertake] complex calculations involving economic security, visions for the future and long-term health” (Waltz 2020: 28). For most, pesticides are the only viable solution to produce anything at all, considering the growing risk of *plagas* and their increasing resistance to chemicals.

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<sup>122</sup> When I asked the owner of a pesticide shop about the most popular chemicals sold, he confirmed that cypermethrin and glyphosate were the most used. He claimed that often farmers would show up holding bottles of prohibited pesticide brands that are actually very toxic and which they had friends purchase in Colombia. Not only does this show how easily contraband enters Galapagos but it also suggests that farmers either don’t care about toxicity or are forced to choose stronger chemicals because of increased resistance to the less toxic chemicals they are used to.

<sup>123</sup> Frustrations concerning how to control *plagas* are directed at the Galapagos National Park and the Charles Darwin Foundation, especially when farmers know of biological controls that work elsewhere and would like to apply them. For instance, a farmer I met with showed me a bag of the fungal pathogen *Beauveria bassiana* to deal with the coffee berry borer, even though to my knowledge it hasn’t been approved by any Galapagueño institution.

<sup>124</sup> One of the problems in organic agriculture is that, apart from scientists and a minority of the population, most consumers don’t seem very concerned about the issue of pesticides. Instead, people buy produce that has no blemishes and some believe that imported produce is ‘tastier’. Furthermore, even if one tries to be organic in most ways, it is difficult to deal with ants and rats without using ‘Cyperpac’ and ‘Rotoc’. One farmer said it was difficult to learn organic methods; to maintain a competitive advantage she preferred to keep her techniques a secret.

On the other hand, institutions did seem to worry more about this issue. While on Santa Cruz, I attended a talk called ‘Aliado del Ambiente’, organized by the United Nations Development Programme (UNDP) in coordination with the Ministry of Environment, Ministry of Agriculture, and the Biosecurity Agency for Galapagos. The event had a sophisticated audiovisual system, microphones, TV screens, and even a carnivalesque ball game with balls symbolizing toxins which are thrown through a hoop. My main observation at the event was that institutional attention was being directed at how to properly dispose of pesticide containers, but no training was provided on how to properly use the chemicals themselves (highlighting dosage or proper application). Some institutions reportedly advised farmers on pesticide use in the past, but claimed that farmers easily forget the information they receive and continue to use the pesticides without precautions. Given the institutions’ own recognition of the need for further training, it seemed that the emphasis of this event was misplaced on disposal. They said that farmers should wear full protective gear (gloves, goggles, masks, and hazmat suits) when utilizing pesticides, but I never witnessed anyone actually following this protocol on their farms, most likely because they already have enough financial difficulties and aren’t going to invest in this equipment. This is an example of how nonprofit institutions can accuse farmers of being ignorant and blame the improper use of pesticides on their lack of knowledge, when the problem is clearly financial – yet instead of buying farmers protective equipment, money was spent on sophisticated audiovisuals and games. After the event, I spoke to some farmers who told me they didn’t show up either because they weren’t invited or they thought it was a waste of time.



Image 38. A game at the 'Aliado del Ambiente' event.

Some of the farmers I talked to, but most likely the exception to the rule, spoke of preparing their own organic *remedios* (remedies) for fertilizing and managing pests. It sounded like a complicated process:

We're making compost, *biol*, and it does work, but it's complicated...I chop some banana leaves, some *porotillo* [*Erythrina fusca*], some grass for the cows, a little bit of everything. This is all done in layers, making a bed. Later I collect the livestock's manure and add another layer. Then I need to gather ash. You need to make seven layers until it's a meter tall. You use whey from when we make cheese, and we wet all of that. After all these products are layered a meter high, we cover it up with plastic and add a tube so that it can breathe...this is all to make the compost...We leave it 3 months for it to decompose. Because it's covered, it sweats and it breathes through the tube...Three months later we have to turn it around, mix it together and make one single pile, which we cover again. It turns into like a dust and then we use an average of a pound, depending on what we're cultivating. That's to feed our plants... We still buy agrochemicals. Vegetation grows very quickly here, so whether you want it or not, you still have to use agrochemicals...it's laborious. It takes time and money. Talking about it is easy, but try to make it! (laughs)...Here the *técnicos* [from the Ministry of Agriculture, Conservation International,

FUNDAR, and other institutions] showed us how to do this...With a chemical it's already ready for you and you just buy it...We have other things to do. – Farmer, Santa Cruz Island

The same farmer explained that he uses sugar cane alcohol, chili peppers, nettles, garlic, and ‘bitter plants’ to make organic pesticides, but they don’t always work. On Isabela and San Cristóbal, I saw people using ash to combat ant nests or, when planting vegetables, to kill slugs, worms, and fungi. If the Ministry of Agriculture would like more people to use organic methods, they need to make these ready-to-use organic pesticides more easily accessible, or subsidize them, because currently there isn’t much of an incentive to use them, especially when people have greater economic worries.

Other farmers simply remain unconvinced they could ever deal with ant infestations without cypermethrin and believe the push against pesticides is part of a radical conservationist ‘cult’:

Why don't they [Conservation International and the Ministry of Agriculture] produce organically and have me go see how they do it in order to believe? Everyone comes here to sell you something: to do it this way or that way. Pure theory! – Daniel, the Santa Cruz farmer

Unfortunately, one of the few organic farmers in Galapagos, who is highly critical of the use of pesticides, is considered elitist and arrogant by her peers, who say her methods are economically unviable on a large scale. Farmers who are critical of organic agriculture conclude that the few organic farmers in the archipelago must have a secondary form of sustenance for their farming to be economically viable. One large-scale greenhouse farmer told me he allowed the Ministry of Agriculture to use part of his greenhouse to test their organic methods. He said they failed miserably and he ended up needing to fumigate the area before the *plagas* spread into his vegetables.

## 6.5 The curse of endemic tortoises and invasive guavas

Over the centuries, giant tortoises have held diverse meanings for different individuals arriving to the archipelago. To pirates, whalers, and sailors in the 17<sup>th</sup> and 18<sup>th</sup> centuries, they were a source of fresh meat and lamp oil. Due to the shape of their shells, they were named *galápagos*, after the old Spanish word for saddle, and the name was also given to the archipelago. For early settlers, they were a food source<sup>125</sup> and sometimes pets. Scientists and collectors thought of them as a specimen to be acquired for zoos, and later they became a conservationist symbol, the logo of numerous conservationist organizations in the archipelago, and a way of rallying global support for their salvation. Some farmers label them as a *plaga* and fence off their crops to keep the tortoises from eating them. Finally, they are the main tourist attraction at breeding<sup>126</sup> centres and ranches across the archipelago. However, in addition to all of these diverse associations, I would

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<sup>125</sup> Multiple people confessed to eating tortoise prior to the creation of the Galapagos National Park (1968). Some were hesitant to admit it because nowadays it is taboo since it is a protected species. On Isabela Island tortoises are still commonly eaten. During Project Isabela fishers ate tortoises to spite the park guards, and there are still people who do it either out of curiosity or habits that are hard to break. As Ahassi (2007b) explains, for a housewife food sources primarily have nutritional value, whereas for a scientist there is a conservationist value. A naturalist guide claimed people had eaten some tortoises due to food insecurity caused by Covid-19, but other participants say this is probably a tall tale because the pandemic was actually a time of bountiful agriculture and cheaper prices, so nobody would have the incentive. Although for the most part, tortoises, iguanas, and finches are no longer eaten, there are still tales of Sally Lightfoot crabs being consumed illegally. However, a line is drawn when it comes to threatened species: “We wouldn't touch a blue-footed booby. There are some species that are just too fragile and threatened.” One of the reasons tortoises are not eaten on Santa Cruz Island is that they are of enormous touristic value. This is not really the case on Isabela Island because, although they do receive tourists and have a breeding centre, tourism is still relatively recent.

<sup>126</sup> Inspired by Latour's (1993) idea of hybrids of nature and culture, produced paradoxically through the distinction between the two, Guribye explains that since endangered giant tortoises are bred in incubators by scientists and then repatriated to different islands, they “are indeed hybrids, somewhere in the middle of nature and culture, just like Latour claims that the ozone debate, deforestation and global warming are, since they mix politics, science, technology and nature” (2000: 24).



argue that the giant tortoise also reveals something deeper about the general conservation ethos and ‘moral framework’ of the archipelago.

In historian Octavio Latorre’s book ‘The Curse of the Giant Tortoise’ (2003), he states:

It is said that if you look into the eyes of these creatures you will see a gaze that is both mysterious and piercing. Tortoises can remain staring for long periods of time as if wishing to examine life and its purpose. The eyes, which presumably have stood witness for at least a century, also carry years of experience which enables them to perceive the motives and ambitions of those visiting the islands: whether they come to destroy this peaceful refuge or simply to admire it. This slow, deep stare of the tortoise marks the approval of the visit or the announcement of the newcomer's death; it is a safe welcome or a curse which will be carried out without fail in the most varied of circumstances (Latorre 2003: 1).



Image 39. A giant tortoise from Santa Cruz Island.

The mythical tortoise has the power to decide the fate of people who arrive to Galapagos by identifying whether their motives are destructive or benign. Like the author, who picked up this story from rumours and conversations, I also heard it told multiple times in the archipelago. While it could be used to criticize fishers or farmers who were ‘exploiting’ nature’s resources, I also

heard farmers using it to condemn the greed and inequality of naturalist guides who were now getting their comeuppance with the Covid-19 economic crisis. In Galapagos, where many arguments over the legitimacy of residents have to do with the order of one's arrival<sup>127</sup> to the archipelago, tortoises, which can live hundreds of years and seem to have been here for time immemorial, are considered a wise species that is capable of judging humans' behaviour and leading to their demise.



Image 40. *Porotillo* fences often block tortoise migration, but tortoises are usually not considered a *plaga*<sup>128</sup>.

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<sup>127</sup> Unlike tortoises, sea lions may have been in the archipelago first, but can elicit ambivalent reactions. In Puerto Baquerizo Moreno (San Cristóbal Island), a participant said the following: “There was once a recording of someone from a dive agency throwing a bottle at a sea lion. People complain of the smell of the sea lions’ feces and urine...Some like them, others hate them. But it’s up to us humans to adapt to them because they were here first.” However, some ship owners still put nails and barbed wire on their ships so the sea lions won’t jump on them and make a mess. I heard stories of a boat and a disembarkation platform at the docks being sunk by the sheer weight of sea lions lying on them.

<sup>128</sup> Of course, there are some exceptions. Mariana told me the following: “The tortoises have eaten corn, pumpkin, eggplant, lettuce! Oh no! And when they walk they don’t lift their legs. They drag the weight of their body and squish the plants...Oh, why did you come? Look what have you done!...And who’s going to undo it? Nobody. It’s done! So what do I get out of mistreating a tortoise? It won’t fix anything. They have that face of innocence and that look! They’re so cute.” Another farmer in Santa Cruz also explained how damaging they can sometimes be: “I have a friend

Another popular myth circulating in the archipelago is ‘The Curse of the Guava’ (Freire 1993, Arboleda 2006), inspired by actual historical facts. The mythical story takes place in the time of Manuel J. Cobos, a despotic sugar cane hacienda owner who lived on San Cristóbal Island from the 1870s until his assassination in 1904. As part of his poor treatment of the workers on his hacienda, he used to violently whip them as punishment. In the telling of the ‘The Curse of the Guava’, the plantation owner is transporting a guava plant and warns people not to eat the ‘forbidden fruit’ or they will be punished with hundreds of lashes. A child disobeys and is beaten to death, causing the mother to curse the *patrón* with the following proclamation: “That cursed plant will cause your death and turn into a pest! Many people will come attracted by the smell of the guava and will take over your hacienda! Whoever eats its fruit will not be able to abandon the island, and if they do, will return in no time, no matter where they are in the world” (Arboleda 2006: 142).

This second myth is fascinating because of its historical and religious overlap. One cannot fail to notice the religious parallel with Eve eating the forbidden fruit and being banished from Eden. In the myth, God is the plantation owner but instead of being kicked out of paradise, people who enter the island are cursed to keep returning. This story is popular amongst Galapagueños when they tell travellers (such as myself) that we are condemned to keep returning because we must have eaten guavas. In other words, it is the opposite of the tortoise curse, assuming one considers it a blessing to return to Galapagos. Moreover, in blaming the destruction of the archipelago on an

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at the market who was about to harvest her watermelons and she said that in the night two tortoises got in and the next day she found that they had eaten everything. She just sat and cried. People live off of agriculture and when the tortoises come, you lose your crops...You have to respect the life of the animals, because the tourists are coming to see that, not us.” Allegedly, some people who are frustrated with tortoises flip them on their backs and leave them to struggle, while others allow migratory passages through their farms, and still others let the tortoises roam freely around their banana plantations to eat the small banana offshoots, helping the main tree to grow better.

innocent child's desire to eat guava, the story tells the tale of a paradise being destroyed by invasive plants and followed by invasive humans. Could this be a way of communally accepting the blame for Galapagueños unintentionally bringing in species that became *plagas* for farmers, and whose nice smell attracted waves of future migrants? The story finishes by stating that migrants today are "attracted by treasures, and others by the intoxicating smell of the guavas" (Arboleda 2006: 143). Though 'treasures' is a reference to people searching for pirate gold in Galapagos, the distinction between people's different motives for arriving in the archipelago is also clear: some come to make money, and others are attracted by tranquillity and paradise. But is Galapagos still a *tranquil paradise* with the current threats from invasive species? In the words of a farmer: "What I did like about being here is the tranquillity. The children weren't in danger...Life before was hard, but it was healthy. You could eat a guava from the tree. Now it has so many worms!"

These myths unveil important messages about the morality of invasiveness. While the story of guava has religious connotations, it ends up legitimizing a *conservationist paradigm* that assumes humans do not belong in Galapagos. The story acknowledges that the damage is done because people will continue arriving to the archipelago and it also blames the metaphorical powerful plantation owner, while explaining that the child acted innocently and due to hunger. In other words, inequality and poverty are not a sin, and those responsible are the ones who had economic means. On the other hand, the tortoise myth puts the animal at the top of the hierarchy of legitimacy: while everyone may be fighting over who the longest time residents are, it is the ancient endemic tortoise that decides whether or not they belong.

## 7. THE COEXISTENTIAL RIFT

### 7.1 Unravelling the causal relations of risk

Hay golpes en la vida, tan fuertes... Yo no sé!(...)  
Son pocos, pero son... Abren zanjias oscuras  
en el rostro más fiero y en el lomo más fuerte.(...)  
Y el hombre... Pobre...pobre! Vuelve los ojos, como  
cuando por sobre el hombro nos llama una palmada;  
vuelve los ojos locos, y todo lo vivido  
se empoza, como charco de culpa, en la mirada. (...)  
– Cesar Vallejo, Los Heraldos Negros (abbreviated)

There are blows in life, so powerful...I don't know! (...)  
They are few; but they are...They open dark rifts  
in the fiercest face and in the strongest back. (...)  
And the man...Poor...poor! He turns his eyes, as  
when a slap on the shoulder summons us;  
turns his crazed eyes, and everything lived  
wells up, like a pool of guilt, in his gaze. (...)  
– Cesar Vallejo, The Black Herald (abbreviated)

People's experience of globalization is simultaneously making people feel more interconnected with the world and more vulnerable to global forces increasingly perceived as beyond their control. Individualization is simultaneously increasing personal choice and autonomy while at same time contributing to new levels of insecurity and anxiety. (Macnaghten 2006: 137)

Galapagos farmers' perceptions of the risks to their livelihoods are organized through an insider-outsider dichotomy, whereby threats mostly arrive from outside the archipelago. Migrants, pests, Covid-19, and the climate are all interpreted as exogenous to the tranquil 'Galapagos bubble'. As I attempted to understand the causal relation between risk and people's growing sense of anxiety, there were a few fortuitous epiphanies that emerged from my fieldwork.

One day I approached a farmer's house on Santa Cruz Island as light *garúa* rain fell on the paddocks. His dogs were the first to spot me, barking furiously until the farmer came out. As we sat and had coffee on his porch, he reminisced nostalgically about the past:

Farmer: Here in Galapagos there's a harmony that doesn't exist elsewhere in the world, a harmony with people and animals. There was more harmony before, however...The iguana and the sea lion share the same territory. That doesn't happen in the African Savannah...Here you have the iguana next to a sea

lion and a Sally Lightfoot is eating bugs off of them. There's a symbiotic relationship between all the animals and nobody fights over food or territory.

Me: And what about humans?

Farmer: In that time period, they didn't fight either. Before I remember fishers going to the highlands with half a bag of *lisas* (mullet fish) to give away in Bellavista and they would get manioc in exchange. Or if my father needed something and we'd go by motorcycle to visit a family, they'd bring out a coffee, some cheese, and so forth. We would take something to their house, and they would give us something to take to ours. There was an exchange and also we would sit and talk, like you and I are talking now, for hours, drinking coffee...Nowadays there's no time to talk, no time to socialize. It has been lost...I have a friend who said he would come by for a coffee and it's been seven months and he hasn't come... We no longer have time for friends, to chat and relive old times.

Me: Why did this change?

Farmer: Because people have lost this space they used to have to coexist (*convivir*). That space is being spent on 'what would I like to have?' People who have to work are busy...There's no time...For instance, now after I finish with you, I have to go down to Puerto Ayora to the CFN (National Financial Corporation) to get some credit because my coffee harvest is coming up and I don't have money to pay someone to gather it. I've been doing it little by little, but there's a lot right now and I also need to clean the coffee plants so that the fungus won't spread, especially now with all this *garúa*. I need to take care of it...

Me: How come everyone is busier nowadays? I would have thought that in the past people would also have things to do.

Farmer: Yes, but maybe people wouldn't work around the clock to get what they wanted. Right now I'm motivated to work because I need to feed my family and pay my credit card bill. Before, there were no credit cards and children didn't know what a hamburger was. They would eat cooked manioc with cheese and a little lemongrass water. Now they want Coke, hamburgers, fries, mayonnaise, mustard, etc. These are things that are commercially sold on TV and the Internet, so youth want these things...My daughter has never eaten at McDonalds, but she starts salivating and when I say, 'here's the delicious food', she says 'no, the good food is over there'. Those things change people's mentality and mean you

need more money in your pocket, so you work more. Instead of putting in just two hours of work to get \$10 to eat rice with egg, you now need to work three times as hard to earn \$30 in order to buy a hamburger and Coke. Luckily here we don't drink Coke. My kids don't like it. Luckily we've managed to get them to have some of our culture, to have more contact with nature and to drink aromatic waters like mint or lemongrass. Not everyone has this mentality of living towards and with nature. Instead they choose the vulgar life of money and consumerism. I think some of this could be changed, in part, with better education in the schools.

As we can see from this interaction and my discussions in the previous ethnographic chapters, the globalization of desire has altered people's behaviour on the archipelago, both in terms of how much they need to produce and of what they consume, who they relate to, and how much money they require to maintain this new lifestyle. The utopian tranquil coexistence with nature has become unattainable, there is no time for socializing, and people must focus on making money to satisfy a new consumerist mentality. Another Santa Cruz farmer told me how "the media, unfortunately, is making us consumerist" and it is because of this that nowadays people want comforts and *facilismo* (easy living) and are more individualistic. In these cases, globalization has been a 'pull factor', but as we shall see in the following excerpt with a naturalist guide (who is also a sailor and part-time farmer), globalization also leads to an increase in fear and precarity:

It makes me scared to be globalized because our home (Galapagos) is too small and is very pretty and when something is globalized everyone wants to have it...1998<sup>129</sup> was the year that showed us 'who we are' because that year we realized that we need to compete, that we need to learn new skills, that we need to have the capacity to survive these new demands (*exigencias*) that are entering the islands to be

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<sup>129</sup> 1998 was the year that the LOREG Galapagos law went into effect, ensuring that people who were living in Galapagos became permanent residents, migration was restricted, salaries were doubled, and employers were forced to search for workers in the archipelago before hiring someone external. Although this law was meant to mitigate the negative effects of globalization, the population of the archipelago continued to skyrocket. Furthermore, it was during this time period that the archipelago received 24-hour electricity and globally it coincides with the emerging influence of the Internet. The 1997-1998 ENSO event and the economic crisis that led to the dollarization of Ecuador may have also led to an increase in migration.

able to overcome them...It's true that 30 years ago people didn't worry about robbery. I've even talked to people who say that death didn't even exist as part of our vocabulary. But it's also true that we can't stay the way we were before. That's part of the past and we can't keep lamenting that. It's part of our history, but this is inevitable and this can't be changed anymore. Our constant opening to new expectations is going to force us to adapt.

The young people who lived in this time period of being unconcerned became adults when all of this hit them and they had no options of where to go and were disoriented...Kids who grew up from 1998 until now are more competitive and much smarter (*pilas*), with more abilities. All the people who have difficulty getting a job...people who are between 30-50 years old...were raised during this time period of transition...I know someone who is a cook...and opened a new restaurant...he's been to Peru, Chile, Argentina, and he's back here and is so well-prepared at the age of 24 that he came to give classes to 50-year olds. How are you going to feel at 50 if you have a kid educating you? It makes you feel bad. Until he showed up, you were the expert, but suddenly he shows up with 2000 recipes in his head, and he is much more competitive and efficient. He not only knows how to cook, but also the culture, how people like to be served. It leaves someone here without options. It's like getting a sword and chopping their limbs off and leaving them with just their head so they can keep thinking. That's how we have had to live.

The embodied pain of globalization is evident in this excerpt, which shows that older residents feel it is impossible to compete with newcomers or younger generations. As discussed in previous chapters, globalization has also brought other threats, including *plagas*, Covid-19, competition from migrants, and climate change, leading many inhabitants to take on debt which, in the current economic downturn, is harder to repay. Thus, globalized risks have transformed Galapagueños' way of life, with some changes now irreversible and earning money having become their central value and pursuit.

Throughout my fieldwork it became clear that 'coexistence' (*convivencia*) was a central concept for Galapagueños and that they realize that this utopian state of being cannot be achieved due to contemporary risks. Galapagos is a unique place to ponder coexistence because, compared to other places on Earth, humans and animals do share their habitat more intimately. Sea lions



linger around the fish market or by the side of the road, iguanas wander around town, and finches are a common sight at restaurants. In the highlands, tortoises migrate freely, except when blocked by fences and other obstacles. The President of Ecuador, Guillermo Lasso, highlighted the ways in which Galapagos inspires us to think about living together:

From these islands that have taught us so much, we tell our fellow citizens that a new relationship with the Earth and a new way of understanding human progress is possible. But to change this relationship with the planet, we first need to change our relationships with each other...A protected ocean will protect us from climate change...We are all interconnected. – President Guillermo Lasso, Inauguration of the Reserva Marina Hermandad, 14/1/22



Image 41. A sea lion here is 'coexisting' quite well with the human population.

Farmers often speak of the harmony that exists in different animal relationships and how that can actually be beneficial for farming. Some mentioned the tortoises stomping on banana suckers as a positive form of weeding and how they live in harmony with cows in the paddocks. Others, like Mariana, spoke of the ways yellow warblers help to control pests in the greenhouse, but the finch requires different treatment because it's 'naughty'. As explained previously, farmers have close relationships with goats, cows, and other farm animals. One participant who uses organic farming methods on San Cristóbal Island told me that he sees insects as a 'community' and he attempts biocontrol on his farm by having introduced wasps eat caterpillars; he says that, despite other farmers hating them, "the (introduced) wasps will be here anyway, so we might as well use them. If you coexist with them in the greenhouse, what's interesting is that they're a huge predator for worms." Another farmer commented that after he stopped using pesticides, he noticed that the carpenter bees returned, so he now has natural pollinators. Despite these positive examples of farmers attempting to live in harmony with nature, my fieldwork revealed that human relations with other people and with the environment had been disrupted during the pandemic.

In an attempt to make sense of the contradiction between utopian coexistence, which is both a value of the past and a desired future, and the ways in which risks are linked to Galapagueños' growing anxiety and the centrality of making money, the concept of the *coexistential rift* began to emerge from my ethnography. This concept describes a causal framework of risk, one that highlights the ways in which capitalism, risk, and anxiety are connected. In sections 7.3 - 7.5 I will provide additional ethnographic evidence that demonstrates the causal linkages for the *coexistential rift* and in Chapter 8 I discuss how this occurs in a context of the slow violence caused by fortress conservation and the rejection of Galapagueño belonging, in addition to other political, economic, legal, and bureaucratic structures.

## 7.2 What is the coexistential rift?

As we have seen throughout this thesis, the risks of Covid-19, climate change, and *plagas* have had a significant impact on the everyday lives of farmers in Galapagos. Furthermore, the pandemic created a liminal period in which they felt they were reliving the past, and yearned for more intimate connections to their community and with nature. However, recreating this ‘blast from the past’ is an unattainable ideal due to their having to pay back debts. Although the farmers’ perceptions of climate change revealed that it is getting drier, scientists insist on their predictions that the archipelago will get wetter, showing the exclusion of locally embedded knowledge and the prioritization of long-term models over the more immediate problems faced by farmers. Moreover, in the discussion of *plagas*, we see that the concept of pests is used to allocate blame and categorize what doesn’t belong in the archipelago, in addition to being the antonym of an idealized calm, caring life in paradise. Altogether, what this demonstrates is that farmers’ lives are getting harder, and they are increasingly feeling alienated in their relationship to the land and other humans. In order to conceptualize this systemically, and because my participants discussed their worries in terms of the economic hardships caused by risks, I invoke an eco-Marxist perspective to create the concept of the *coexistential rift*.

The *coexistential rift* is a vicious cycle that arises from the unsustainable *metabolic rift* (Marx 1990 [1867]), which creates the initial rupture between humans and nature. In the era of neoliberalism and globalization, capitalism generates manufactured risks (Giddens 1999b) that are distributed unevenly across the globe, mirroring (sometimes inversely) the unequal distribution of capital. This, in turn, transforms the world into a *risk society* (Beck 1992 [1986]) where people are anxious and become increasingly market dependent and indebted. As a result, Galapagueño farmers are becoming alienated from both the soil and each other, and making money becomes their primary goal (See Diagram 3). This concept not only explains how risks are a product of the

capitalist system, but also how they are embodied as anxieties. As anxieties accumulate, they support my *infinite pool of worry* hypothesis, which is a critique of psychological theories (Weber 2006) concerning the impact of anxiety<sup>130</sup>.

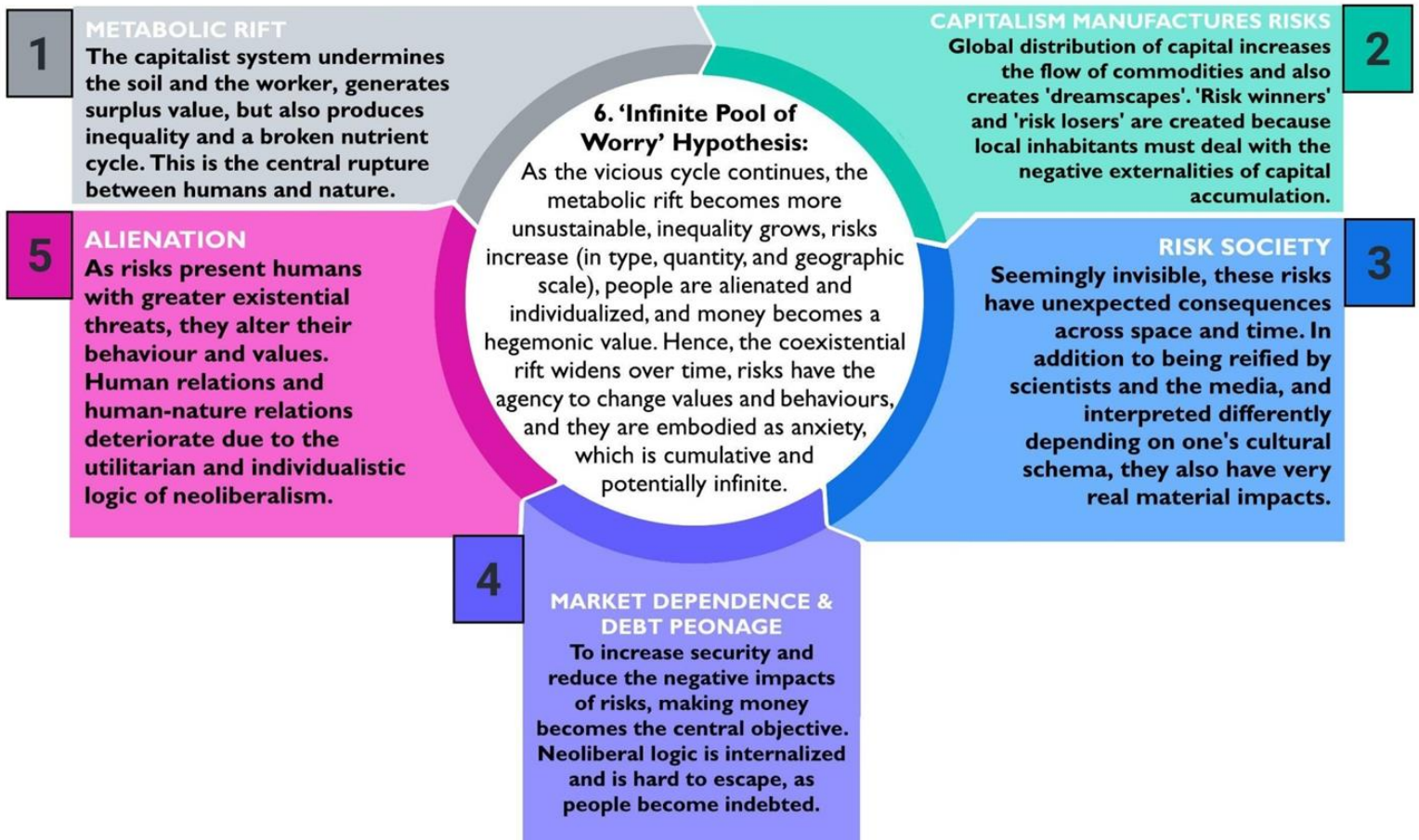
Although this cycle could probably be applied to understanding how neoliberalism and risk shape people's values worldwide, as an anthropologist, I am basing my ideas on contextualized<sup>131</sup> ethnographic research in the Galapagos Islands and therefore I will argue that this vicious cycle primarily describes the challenges encountered by the farmers in my study. In Diagram 3, I outline both the *coexistential rift* and the *infinite pool of worry* hypothesis, so that the concepts are more clearly understood. It is important to understand the nomenclature of the *coexistential rift*: the prefix 'co-' implies that we live with other beings in our surroundings, 'existential' is in reference to feelings of 'existential crisis' rather than mainstream philosophy on existentialism (Kierkegaard, Nietzsche, Heidegger, Sartre), and *rift* should be thought of as a verb (as in rifting), rather than a noun, because the concept describes a process of cyclically tearing apart, rather than a final state of being.

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<sup>130</sup> As 'anxiety' is 'embodied risk', I don't believe that emotions must necessarily be finite or even quantifiable. As in Cesar Vallejo's poem on the 'Black Heralds', there is no end to people's fears, anxieties, and suffering.

<sup>131</sup> In this section, although I mainly attempt to engage theoretically with new ways of conceptualizing risk, I would like to highlight that my concept of the *coexistential rift* is (a) based on ethnographic research, (b) applicable elsewhere, but not proven to be universal, (c) not based upon essentializing locals as people who lived in 'harmony' with nature in the past, which would be a reification of the 'ecologically noble savage' (Redford 1991), but instead based on the idea that the farmers' feelings of alienation are amplified by their nostalgic visions of a more communal past with more intimate relations to nature.

Diagram 3: The *coexistential rift*



The elements in Diagram 3 are explained in more detail as follows:

1. **Metabolic Rift (Foster 1997, 1999; Foster et al. 2010; Marx 1990 [1867]):** In *Capital* (1867), Marx explains that “all progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil...[and therefore] undermining the original sources of all wealth” (Marx 1976: 638). While Lukács and other prominent thinkers of Western Marxism didn't recognize the ecological elements of Marx's writings (Cassegård 2017: 7), Foster (1999) revived Marx's 'dialectics of nature'. Marx was inspired by the German chemist Justus von Liebig, who used the term 'metabolism' (*Stoffwechsel*) to describe biochemical exchanges in biological systems and Marx extended

it to also include humanity's relationship to the soil, which he believed caused a fundamental rift because nutrients are taken from farms and not returned.

Moore argued that the *metabolic rift* “stands out as one of critical political ecology’s most powerful ideas” (2011: 39) when applied to world-ecology<sup>132</sup>. Additionally, Moore (2000, 2011, 2015, 2016, 2017) argues that our current epoch should be called the *capitalocene* rather than the *anthropocene*<sup>133</sup>, since the former term places blame on capitalism while the latter is neo-Malthusian and recognizes humanity as a geological force. Foster (1999: 373) situated the *metabolic rift* as originating during the ‘second agricultural revolution’ from 1830-1880 due to a “crisis of declining soil fertility” (Schneider & McMichael 2010: 462) in Britain, Europe, and North America. On the other hand, Moore asserts that the concept applies to capitalism as a whole and not just the process of industrialization, claiming that there have been “a succession of metabolic rifts specific to each phase of world capitalist development” (Moore 2000: 128). Furthermore, as Clark & York (2005) suggest, Marx’s theory could be extended to understanding climate change as part of the ‘carbon metabolism’. As Max Koch (2012) explains, the earth’s fossil fuels can “only be burnt once” (Koch 2012: 28), and due to the second law of thermodynamics this energy transfer is both irreversible and increases entropy, whereas

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<sup>132</sup> Based on reinterpretations of Immanuel Wallerstein (1974) and Giovanni Arrighi (1994), ‘world-ecology’ is a global interdisciplinary conversation about capitalism as an “ecological regime” (Moore 2011: 2). Capitalism is a product of the “web of life” (Moore 2015) and is not just acting upon nature. To avoid reifying nature-culture dualism, Moore prefers hyphenated terms, such as “capitalism-in-nature” (2015: 13) because they demonstrate the “double internality” (Ibid) of capitalism working through nature and nature through capitalism. Foster, on the other hand, believes that Moore “may have misunderstood metabolic rift theory” because he “failed to grasp the importance of abstraction to social critique” (Heron 2021: 513). I agree with Foster that for the metabolic rift to make sense, one must think of humanity and nature as separate, but this does not mean they are not interrelated. Furthermore, while many cultures around the world do not conceptualize nature and humanity as separate (Descola & Pálsson 1996), in the context of the Galapagos Islands, my participants all spoke of nature and humanity in a dualistic manner.

<sup>133</sup> The meteorologist who coined the ‘anthropocene’ term, Paul Crutzen, suggested that it may have begun during the Industrial Revolution, which led to the “Great Acceleration”. I agree with Angus (2016: 230-232) that there is no point in getting overly caught up in the multiple alternative names for this term, but it is useful to highlight the importance of capitalism in shaping the world, rather than blaming an undifferentiated mass of *anthropos*. Due to its widespread use, and the importance of focusing blame on the capitalist system, perhaps there is a point to using the term ‘capitalocene’. Either way, neither term really explains *how* capitalism has created this current epoch.

capital easily changes form, is reversible and unlimited; this is the essential contradiction between the endless extraction of resources on a finite planet being used to accumulate infinite capital for the privileged.

Applying *metabolic rift* theory across both space and time is essential to understanding the central problem in capitalism today and the core reason why extracting from ‘free nature’ is unsustainable. However, I argue that it is a large-scale process and when doing ethnographic research in smaller societies like that of Galapagos, the idea of humans depleting the soil is only partially<sup>134</sup> true because most of Galapagos’ agricultural products stay in the archipelago (apart from coffee). Nonetheless, many of my participants commented on how bountiful the soil used to be decades ago (both on the mainland<sup>135</sup> and on the archipelago) when their avocados and watermelons were huge, but currently they depend on artificial fertilizers<sup>136</sup>. Some also use organic fertilization methods, including animal manure, and for them the main problem isn’t so much land degradation, as it is the

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<sup>134</sup> Schneider & McMichael argue that Marx’ theory was based on the soil science of the 1800s and is an oversimplified depiction of agriculture; the authors use the term ‘metabolic rift’ abstractly in order to move “beyond its initial ecological (mis-)conceptions” (2010: 474). Although their critique may be accurate from an agronomist’s point of view, I think it is precisely because the metabolic rift portrays humans and their relation to nature as a ‘broken’ metabolism, that we can frame the question of sustainability as one of closing the natural-human cycle through agroecological methods that replenish the soil.

<sup>135</sup> Indeed, the depletion of the soil, lack of well-paid job opportunities, and natural disasters (earthquakes, volcanic eruptions, and El Niño flooding) on the mainland are linked to migration to Galapagos. A member of the Salasaca community sums it up: "Our lands [on the mainland], due to use and deterioration, no longer produced the same amount. There's little work on the mainland and it's badly paid, so we need to go other places" (Vervloet 2012: 26). Another explains the loss of intimacy with the soil: "Nature is the source of our food. It gives us water and feeds us. Therefore, we are intimately connected to it...Nowadays not so much. People cultivate and everything, but more people are focusing on studying...they don't spend much time in the *campo* and no longer cultivate. It's worse here (in Galapagos)" (Vervloet 2012: 56).

<sup>136</sup> Foster et al. (2010) reminds us that in Karl Kautsky’s *The Agrarian Question* (1899) he warned about a ‘fertilizer treadmill’ whereby farmers needed to continually replenish soil nutrients. The increased prices of fertilizers reduce profitability, encouraging farmers to expand their operations onto uncultivated lands. As this isn’t possible in Galapagos, it could lead people to give up on farming altogether. Essentially, “[m]odern agriculture has become the art of turning oil into food” (Foster 2010: 81) through the use of chemical fertilizers and mechanized technologies like tractors.

increased pressure from pests and an uncertain climate. Since many smallholders both produce for themselves and sell the excess to the market, fertilizers and pesticides have become the *status quo*, and depleted soils are now the norm. Another aspect of the *metabolic rift* that must be considered in this context is that due to produce being cheaper on mainland Ecuador, it is actually the soil from the mainland that is being ‘robbed’ when produce is transported to Galapagos.

Therefore, when thinking systemically about the *metabolic rift* in Galapagos, it must be considered on a global scale as the origin of an overarching process that drives the rift between humans and nature, leading to unequal distribution of capital, migrant flows, and the creation of *risks*. On a smaller scale, it isn’t the main concern for Galapagos farmers: instead, I argue that their alienation stems from capitalism’s creation of risks. This is why the *metabolic rift* lacks explanatory power and the cyclical process of the *coexistential rift* is necessary to understand why people become alienated.

2. **Capitalism manufactures risks (Wetherly 1999):** Although it was argued that *manufactured* risks are created by the “very progression of human development” (Giddens 1999b: 4), as Wetherly suggests, the “deeper connection is to capitalism” (1999: 223). When a factory produces a commodity at the expense of ‘free nature’, which it pollutes, the contamination becomes a risk that local communities must deal with, while the companies responsible can extract profit and leave. In Appel’s ethnography of an oil rig off the coast of Equatorial Guinea, she introduces the term *modularity* to describe the ways in which companies seek frictionless profit and disentanglement, even though they are “deeply implicated” (Appel 2012: 706) and rely upon local manpower to run their businesses. Marx would have considered this as an example of how the essence of money is to erase the ways in which both labour and land are implicated in the creation of its abstract value and how the system itself leads to the creation of new frontiers of exploitation. In layman terms, one might call this ‘trickle down economics’ or the ethos of neoliberalism<sup>137</sup>, where profit margins are widened at the expense of the local populations

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<sup>137</sup> Karl Polanyi’s theory of the double movement suggests that the market’s expansion leads to a countermovement to protect society, but under neoliberalism this may not occur (Vail 2022).



where the wealth is made. In the case of Galapagos, large tourism companies that often rely on non-Galapagueño labour are frequently mentioned by locals as an example of how outsiders make money from the archipelago and just leave rubbish<sup>138</sup> behind for the people who actually live there (See Chapter 8.3). Even though some farmers profit from selling directly to ships and Galapagueños were happier when there was tourism before the pandemic because then at least there was some money circulating, there was still the perception that while farmers must labour to survive, big companies are making massive amounts of money from Galapagos, leaving the locals their rubbish and the responsibility to take care of the islands so they can continue accumulating wealth. This is part of neoliberalism's logic of "internalizing profits and externalizing risks" (Nixon 2011: 35), both spatially and temporally. Hence, *modularity* describes the reduction of friction while multiplying profits and redistributing capital globally.

In addition to *modularity*, another aspect of globalized neoliberalism is Appadurai's (1996) five 'scapes' (ethnoscapes, ideoscapes, technoscapes, mediascapes and financescapes), which have been circulating in the archipelago ever more prominently since the islands opened up to tourism in the 1970s. Beck explains that often "[s]ectors that had nothing or very little causally to do with the production of the threat...are also among the most affected...[and the world is split] into risk winners and risk losers" (1999: 64), but that because the risks are often spread ubiquitously, they can affect anyone (water and air pollution, for instance), creating an "uninsured society" (Ibid: 53). Furthermore, globalization has led to the expansion of 'dreamscapes' (Appadurai 2015), also resulting in the intensification of the circulation of commodities in the archipelago. For most people worldwide, as Achille Mbembe highlighted, globalization has simply been 'licking at the shop-window' (*lécher la vitrine*, quoted in Meyer and Geschiere 1999: 5). Dreams and desires increase but livelihoods do not, leaving people frustrated with the newfound inadequacy of their lives in relation to globalized utopias. Galapagos farmers may be providing some food for the tourism industry, but the majority of smallholders do not profit

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<sup>138</sup> As will be discussed in Chapter 8.3, I visited the landfill and recycling plant on Santa Cruz Island and can attest to having seen large rubbish bags with stickers that identified their origin from a cruise ship. Although companies promote themselves as 'environmentally friendly' and donate to NGOs, they are still literally dumping their rubbish on the archipelago.

from these activities<sup>139</sup> and instead must bear the brunt of invasive species that arrive on imported goods for the tourism industry. Furthermore, young people are leaving rural areas in search of more profitable work in tourism.

3. **Risk Society (Beck 1992 [1986]):** According to this ‘world-systems’ approach, modernity has *manufactured risks* (Giddens 1999b) that “complement and accentuate one another...[and] where hard-to-manage dangers prevail instead of quantifiable risks” (Beck 1999: 36). Moreover, Beck (1992 [1986]: 22-24) argues that contemporary risks are unique because:
  - a. ‘Invisible’ risks are usually explained in scientific terms by the media and people in power, who are in control of the narrative and can convey this knowledge as they please, by magnifying or altering communication.
  - b. Risks can exacerbate inequalities, but even the wealthy are not immune to them.
  - c. As risks are commercialized and diffused, they still operate within the logic of capitalism and create new economic and political opportunities.
  - d. “*Consciousness determines being*” (1992 [1986]: 23), meaning that knowledge in a risk society creates new political opportunities.
  - e. The management of risks reorganizes political power and influences both economics and the bureaucratic system.

Despite criticisms about the universality of the concept of the *risk society*, mentioned in Chapter 3.5, from my ethnographic evidence it was apparent that Galapagos farmers are increasingly worried about the abstract risks they hear about through the media, and that contemporary risks like Covid-19 and climate change are fundamentally different from other types of risk due to their ‘invisibility’ and widespread consequences around the globe.

4. **Market dependence and debt peonage (Chibber 2022, Harvey 2020):** Prior to the pandemic, smallholder farmers in the archipelago were already affected by numerous challenges to their everyday lives, so they resorted to high-interest loans. Despite

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<sup>139</sup> I am aware of one tourism company that has a ‘farm to table’ initiative that purchases produce from forty smallholder farmers, but this still only makes up 30% of the food consumed on their ships. Other companies should have similar initiatives and could be legally required to import a much higher percentage from the archipelago.

practicing some degree of subsistence farming, they became increasingly market dependent (Chibber 2022). As Harvey (2020) points out, global financial mechanisms have made sure that “[w]e are all locked into a system of debt peonage” (2020: 44). Furthermore, as neoliberal<sup>140</sup> capitalism is practically ubiquitous, even in remote places like Galapagos there is a cult of money. Even though farmers on Galapagos are perhaps less market dependent than other sectors of society, new *manufactured risks* like Covid-19 have led them to focus increasingly on making money to survive. Arguably, this situation leads farmers to become members of the *precariat*. As Standing (2011) explains, the *precariat* is a new social class where people must think short term because of the four A’s (anger, anomie, anxiety, and alienation) and live in “chronic insecurity” (2011: 20). In other words, as neoliberalism focuses on “transferring risks and insecurity onto workers” (2011: 1), it alters human values and behaviours – colleagues become competitors and gardens (*chacras*) are reconceptualised as businesses.

Even though the *precariat* concept is similar to my *coexistential rift*, it differs due to (a) its seeing the *precariat* as a product of precarious labour practices, rather than *manufactured risks*, (b) the focus on social classes, rather than a holistic process linking capitalism-risk-alienation, (c) the *precariatized mind* (Standing 2011: 18-19) describes information overload and the inability of people to focus as a result of making short-term decisions, whereas the *coexistential rift* highlights the growing alienation between humans and as experienced by humans in their relationship to nature, as a result of their focusing on making money. Likewise, the *coexistential rift* shares similarities with both: (a) Tönnies' (2002 [1887]) idea of the shift from *Gemeinschaft* (community) to *Gesellschaft* (society) as a natural cause of urbanization and modernization, where people lose a sense of mutual obligations and shared identity due to growing individualization and the creation of rational contractual agreements, and; (b) Durkheim's (2014 [1893]) concept of anomie

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<sup>140</sup> One could argue that *neoliberalism* is Social Darwinist because survival through intense competition has become naturalized, which is the *modus operandi* of the tourism industry and the conservationists. On the other hand, fishers and farmers (typically with a strong religious background) tend to focus more on communal support, sharing resources evenly, and criticizing the indifference of the opulent. These were all topics from the sermons given during the Good Friday ‘Via Crucis’ on Floreana Island, where community members carry the cross to commemorate Jesus’ crucifixion. Liberation Theology is still alive and well in Latin America.

(normlessness) that arises from the social division of labour and the breakdown of traditional values. However, Durkheim and Tönnies didn't live in the context of a neoliberal globalized world, didn't use an ethnographic approach, and neither of them argued that social changes were due to people's feelings of insecurity when confronted by risks.

It is important to note that Galapagos farmers, like people everywhere, have been made to focus on money mainly out of the need for basic sustenance, although their ultimate goal is still to accumulate as much capital as possible to ensure a sense of security. In a sense, communism and capitalism are actually similar, except that in the latter the elite prefer to share wealth amongst a much smaller group. Marx<sup>141</sup> may have been the first to explain the hegemony of money:

Money degrades all the gods of man—and turns them into commodities. Money is the universal self-established value of all things. It has, therefore, robbed the whole world—both the world of men and nature—of its specific value. Money is the estranged essence of man's work and man's existence, and this alien essence dominates him, and he worships it (Marx 1844).

A Galapagos farmer once told me “el dinero te daña” (money damages you), showing that the idea of money being linked to sin or changing human values is currently circulating in the archipelago (as well as worldwide). Of course, there is also a recognition that it is necessary and it is easier to be a conservationist when you have money. Simmel (2004 [1978]) argued that money is an “example of a means becoming an end” (Ibid: 232) due to its abstractness and detachment from material possessions. Additionally, psychologists have found that there are three psychological consequences of money: “(1) money promotes a focus on the self; (2) money impairs communal relationships; and (3) money alters personal values” (Zaleskiewicz et al. 2017: 109). They have also demonstrated that money can be a “substitute for social acceptance” (Zhou et al. 2009: 700) and can even reduce the physical pain felt when sticking fingers in hot water, whereas not having money leads to increased distress and physical pain. Others have shown that while money can lessen suffering, it doesn't bring happiness (Vohs & Baumeister 2011). As economic

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<sup>141</sup> Unfortunately, this brilliant quote comes from a controversially anti-Semitic publication by Marx.

relations become embodied, the need for money creates great anxiety that leads to market dependence and debt peonage.

5. **Alienation (Marx 1990 [1867]):** Marx's concept of alienation evolved throughout his writings. Musto (2010: 82) summarizes<sup>142</sup> the four ways in which alienation is defined: "(1) from the product of his labour, which becomes 'an alien object that has power over him'; (2) in his working activity, which he perceives as 'directed against himself,' as if it 'does not belong to him'; (3) from 'man's species-being,' which is transformed into 'a being alien to him'; and (4) from other human beings." While all are relevant for capitalist critique, in this thesis I focus on the latter two forms: alienation between humans and nature, and of humans from each other. Since alienation is closely linked to anxiety (the embodiment of risk), it is important to note that risks have amplified existing structural inequalities, thus acting as a form of 'slow violence' (Nixon 2011). Another way of understanding this form of alienation is to consider Graeber's concept of 'baseline communism' (2011: 98) as the foundation of human sociability and interpret the *coexistential rift* as an attack on this, replacing it with selfishness and individualism. In other words, both alienation and anxiety are the visible symptoms of the damage done when people are confronted by risks.
  
6. **Infinite Pool of Worry Hypothesis:** Psychologists Linville & Fischer (1991) suggested that people have finite emotional resources for coping with worry because they prefer experiencing negative events separated in time, an idea which Weber (2006) turned into the 'finite pool of worry' hypothesis. Nevertheless, a recent publication (which Weber also co-authored) explains that there is "no conclusive evidence" (Sisco et al. 2020: 2) for this hypothesis and that instead people have finite attention spans, meaning that there's "a limit to how many threats we can dwell on or address at a time. However, this does not mean that unattended worries have reduced intensity if they are brought to our attention again" (Ibid: 17). Alternatively, I propose that anxieties are cumulative and can potentially be compounding and infinite. Considering growing numbers of mental health problems

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<sup>142</sup> For a detailed account of alienation, see Ollman (1971: 136–52).

worldwide, they may be indicative of a spillover effect, where people's anxiety disorders have been created by the widening *coexistential rift* in society; in other words, a societal crisis is pathologized<sup>143</sup>.

As mentioned previously, Eriksen's (2016) *treadmill syndrome* helps explain how people have to struggle harder to stay in the same place, or even just to survive. In the case of Galapagos farmers, this has led to increased frustration and, in some cases, a desire to sell land and leave farming altogether. Furthermore, Eriksen (2016) also reminds us that Gregory Bateson's (1972) *schismogenesis*, or what he calls 'runaway processes', are "mutually reinforcing growth processes which eventually lead to collapse unless, as Bateson points out, a 'third instance' enters into the process and changes the relationship" (Eriksen 2016: 21). Hence, it is important to note that unless something changes in the vicious cycle of the *coexistential rift*, it may lead to a gradual collapse in the archipelago's agricultural sector, a trend already predicted by Sampedro et al. (2020), who estimated that 75% of the food supply was transported from the mainland in 2017, and by 2037 that number may increase to 95%.

In Diagram 3 I have focused on the economic aspects of the *coexistential rift*. However, it is also important to highlight that the political context of people's lives in the archipelago, which is one of abandonment and lack of care, helps amplify alienation. *Quemeimportismo* (not-caring-ism) is an important term that participants use to explain political abandonment, as well as general apathy from the rest of society. *Facilismo* (easy living) is another term commonly used to describe people who seek a comfortable life without having to work hard to make money. It is clear to

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<sup>143</sup> As Wilkinson (2001b) complains, much of the psychological study of anxiety focuses on it as a mental illness, rather than understanding it as a societal problem, even though there are some exceptions (Fromm 2001 [1955]). Simmel also argues that the "reduction of the concrete values of life to the mediating value of money" has created "cynicism and a blasé attitude" (2004 [1978]: 256).

farmers that the political establishment doesn't care about them and that the *status quo* benefitting tourism and certain interest groups will be maintained by those in power. In meetings, farmers must demonstrate either technical or scientific knowledge in order to be taken seriously. Furthermore, many researchers at conservation organizations are foreign or from mainland Ecuador, and they sometimes come with arrogant<sup>144</sup> attitudes, wielding their education as cultural capital (Bourdieu 1986) and treating locals like 'country bumpkins'. A municipality staff member from Santa Cruz explained that even thesis writers conclude that the solution is education and communication, which is a "disastrous capitalist vision that blames the victim, blames the poor for external evils." One Santa Cruz rancher expressed his opinion that the conservationists perceive themselves as superior to the rest of Puerto Ayora:

Temporary residents who come to work at CDF see us as ignorant...They're arrogant and they look at you like you're kind of stupid. It has happened to me. They come and they think they're above us. I've seen these attitudes...They think they're culturally superior...and a lot of Galapagueños feel that...They're people who work at CDF, at NGOs, and they have their circle.

This separation between locals and outsiders is even evident geographically: the main town of Puerto Ayora has a powerful neighbourhood that can only be reached by boat, prominent residents live on coastline properties, and both the Galapagos National Park Directorate and the Charles Darwin Foundation are housed down a long path that is physically distant from the main part of town, meaning that this area is viewed as an enclave of foreigners and outsider conservationist interests. As Daniel explained, since some of them "come from Quito, which is a big city, they come to a little town like Galapagos and they think everyone here is ignorant." These individuals,

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<sup>144</sup> An administrative staff member at the Charles Darwin Foundation itself said: "I don't think anyone respects [scientists] in the community" because they "really don't take people into account" and "they're arrogant".

who typically work in conservation, tourism, or politics, are often the same individuals who vilify the existence of human beings in Galapagos as ‘introduced/invasive’ (especially when discriminating against recent migrants), making it difficult for people to acquire a sense of belonging to the archipelago. It is this context of lack of care and belonging which frames the process of the *coexistential rift*.

The reader may question whether the economic argument I made previously for the *coexistential rift* might be contested on the grounds that risk is not always a material entity<sup>145</sup> produced by the metabolic rift, since many everyday risks (like my constant threat of being bitten by the dogs on the farms I visited) are not a by-product of neoliberal capitalism, and indeed risks have existed throughout human history, prior to neoliberalism. I argue, like Beck (1992 [1986]), that contemporary risks are more abstract and ‘invisible’, reaching everyone on the globe in new and unexpected ways. Alienation, the accumulation of capital by the few, and the growing desperation of the most marginalized to acquire money, are definitely nothing new. However, in the context of globalization, climate change, and Covid-19, I contend that what we are witnessing is a more aggressive cycle of alienation due to the acceleration of capital accumulation and its impacts on both humans and nature. In other words, it is possible that the *coexistential rift* has always existed, but that nowadays the cycle is accelerating/overheating (Eriksen 2016) and amplifying anxieties.

Another avenue of critique for my concept would be to claim that the source of alienation comes from neoliberalism itself, which could be interpreted, in a Foucauldian sense, as an “art of

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<sup>145</sup> Reith asserts that risk is “not real, but rather that it is a measure of calculation” (2004: 385). Using Bhaskar et al.’s (2010) idea of dialectical critical realism, I argue that while risk is not an empirically observable ‘thing’, it is a ‘generative mechanism’ in the sense that mediated depictions of threats and the physical embodiments themselves (like the Covid-19 virus) are not simply a ‘measure of calculation’, but things that have very real impacts on the world.



governing” human beings for capital accumulation. As Lorenzini explains, Foucault’s definition of neoliberalism involves “a set of technologies structuring the ‘milieu’ of individuals in order to obtain specific effect from their behaviour...[,] as a governmental rationality transforming individual freedom in the very instrument through which individuals are directed...[and] as a set of political strategies that constitute a specific, and eminently governable, form of subjectivity” (Lorenzini 2020: 50). However, even though I agree with Foucault that neoliberalism is a form of governing, to understand how people exert power over others who are feeling threatened and how global flows of finance achieve that, we must turn to an eco-Marxist interpretation of *risk*.

As we shall see in the next section, my ethnographic evidence indicates that *risk* does have *agency* on humans, and that it led Galapagos farmers to anxiously discuss their economic woes with me. The *coexistential rift* should be self-evident to the layman, who can easily infer that capitalizing off of ‘free nature’ in an increasingly globalized world economy leads to inequality, spreads new risks (such as Covid-19 and climate change) throughout the globe, harms those who are most marginalized, makes them more market dependent, and alienates them from each other and from nature as they focus on making money to survive and pay off debts.

Nevertheless, I have not encountered this argument articulated in this way before, potentially because there are “scholars who assert that Marx is really passé, especially after the dismantling of the Soviet Union” (Patterson 2009: ix), and so it is unusual to combine Marxist concepts with risk theories. For instance, Giddens claimed that “Marxism, as we all know now, has lost most of its potency as a theoretical perspective on history and change” (Giddens 1996: 366). However, although historical materialism and utopian socialism no longer seem correct, that is no reason to disengage with all of Marx’s ideas. It is noteworthy that Beck (1999) overtly premised himself as anti-Marxist even though “Beck’s work is indebted to Marx’s” (Curran 2016: 21). Beck’s theory

of the *risk society* refused to link itself to Marxist ideas, possibly because admitting the importance of *class* “would undermine the possibility of a general solution to the problems of society through a single solution” (Ibid). Beck bluntly wrote that:

With the end of the predominance of Marxian theory, the century-long petrification among Europe’s intellectuals has been lifted. The father figure is dead. In fact, only now can the critique of society get its breath back and see more clearly. (Beck 1999: 79)

Contrary to both Giddens and Beck’s distaste for Marx’s ‘petrified’ ideas, I propose dialectically integrating both Marx’s and Beck’s ideas to create a new holistic concept. Both the *risk society* and the *metabolic rift* are the ‘missing links’ in the current analysis of what causes alienation and how altered human values and behaviours paradoxically strengthen the neoliberal capitalist system.

Marx argued that labour “is the universal condition for the metabolic interaction [*Stoffwechsel*] between man and nature, the everlasting nature-imposed condition of human existence” (Marx 1990 [1867]: 290). Along these lines, Harvey argues that “[a]lienation exists almost everywhere” (Harvey 2020: 36) because of: (a) the loss of jobs due to deindustrialization of the West and the threat of technological innovation, (b) the “industrialization and capitalization of agriculture” (Ibid: 38), and (c) transportation and communication systems altering modes of production and consumption. While *alienation* may stem from these changes in the “configurations of production and exchange” (Ibid: 39), Harvey doesn’t mention ‘universal alienation’ as being part of a complex causal framework. Do humans solely interact with nature through labour processes, production, and consumption? Isn’t our environment also a place we inhabit and which has *agency* to transform our subjectivities? Our growing alienation arises because: (a) when capital is accumulated, it also manufactures by-product risks that include ‘hyperobjects’ (Morton 2013), (b) those risks are

embodied as worries and anxieties which fundamentally change people's mindsets, and (c) growing anxiety and alienation paradoxically force people to focus even more on making money, and less on having a strong community or an intimate connection to nature. Since the *coexistential rift* produces the *risk society* we are living in, we should choose to implement policies that reverse the cycle of growing alienation and market dependence.

### 7.3 Capitalism manufactures risks

Pondering the cycle representing the *coexistential rift* (Diagram 3), it becomes clear that the 'metabolic rift', 'capitalism manufactures risks', and the 'risk society' are arguments that are harder to prove based on ethnographic data, even though people's criticism of the wealthy tourism sector, politicians, and conservationists is an indirect attack on neoliberal capitalism. Farmers will most likely criticize the lack of credit and unfairness of the system, while not overtly speaking about 'capitalism'. On the other hand, the relationship between *risk*, *market dependence*, *debt peonage*, and *alienation* is much more apparent from ethnographic data (See 7.4 & 7.5). One participant who did speak specifically about capitalism's role in the destruction of the environment in Galapagos was a staff member from the municipality of Santa Cruz:

Bourgeois capitalism...is creating profound wounds in the Earth. So you create an NGO and give money to 'educate' the local savages (*bestias*). Who is giving the money? The ones who caused the damage...Bourgeois capitalism is trying to cover its wounds. But that isn't possible. I can't shoot you and then give you \$10 so you can set up a clinic! Just don't shoot. That's the problem with conservationism. It sets up the clinic and 'educates' you environmentally.

Thus, there is a recognition that there is an irreparable 'metabolic rift' caused by capitalism, that conservationist attempts to protect the planet are like putting a band aid on a gaping wound, and that to a great extent the money invested in conservationism comes from the capitalist system

itself. Furthermore, the locals are blamed for the damage done to the archipelago. In response to this ‘victim blaming’, innovative ranchers like Felipe set up new business models:

In 2001 when the Jessica (oil spill) happened...at Playa Mann we saw pelicans and sea lions covered in oil. Many died. I think this really drew the world's attention towards Galapagos and its fragile ecosystems...I didn't like some articles I read in the national and international press...They blamed humans in Galapagos. They said the threat to the fragile ecosystems were the local people. I got very mad...A cargo ship is coming to give fuel to a tourist vessel and then they blame the locals? I didn't like it at all. So then I got the idea of taking care of the environment but involving people (by hosting volunteer programs on a ranch).

Graeber (2011: 158) explains that in a ‘human economy’ money is a social currency between people who have moral obligations, whereas in a ‘market economy’ society is built upon a web of detached and impersonal relationships where debts are reduced to mere accounting entries. The problem nowadays is that under neoliberal capitalism it is hard for people to consider a feasible way back to a ‘human economy’. An artist and naturalist guide who lives in the highlands of Santa Cruz explained to me that he doesn’t believe in capitalism or communism, but that we need to design a ‘sustainable system’ which can only be achieved through more political and economic autonomy for Galapagos and by reforming its LOREG law. However, a former mayor of San Cristóbal Island explained the difficulties of realistically changing the archipelago:

Barter is motivated by an event like the pandemic...but you can't turn this into a reasonable form of life when the entire rest of the planet lives a different way... We're in a capitalist system...The current model leads to the accumulation of capital in very few hands....But if you change the management – like, for example, the processes of a 'circular economy' or a 'bioeconomy' in terms of environmental services – then there are no benefits for the big (tourism) companies.

Therefore, there is an awareness that, as Appel (2012) explained in regard to oil rigs, ‘modular’ capitalism in Galapagos has set up a system where cruise ships reap the benefits and people on the islands get to see very little of that money. This was originally observed almost forty years ago, when Sylva (1984b) stated that inhabitants were opposed to park restrictions and were less interested in wildlife because “the majority of inhabitants do not feel like owners or beneficiaries of insular natural resources” (1984b: 70). A tour guide explained to me that, in addition to ships hiring personnel from outside the archipelago, “people who pay for cruises deposit the money in Miami to avoid paying taxes. The money stays out of Ecuador. The only money that enters is what is spent on the employees and produce and operational costs”. Admittedly, during the pandemic people would prefer for at least some money to enter the archipelago, but many Galapagueños believe that the pre-pandemic tourism economy was flawed for the reasons stated above. Thus, a large proportion of the population is pushing for land-based tourism, which they argue would benefit the hotels, restaurants, and businesses more than cruise ship tourism.

In summary, Galapagueños are aware that the current capitalist system is flawed. However, while the pandemic provided a unique opportunity to rethink life in the archipelago, it is unclear how any envisioned changes would occur. One of the benefits to thinking about ‘coexistence’ and its opposite, the *coexistential rift*, is that it shifts the conversation about changing the economic system from a discussion about ‘capitalism’ and ‘communism’ to a question of humanity’s place in the world. In other words, we must question ‘What is sustainable?’ and ‘How can we repair the metabolic rift?’ Finally, this dichotomy begs the question of how to ensure that humans and nature can coexist in Galapagos in the future. A naturalist guide explained his views about coexistence:

Politically, Galapagos has been badly managed and due to that there has been incredible damage done to both the community and nature. Sustainable development and the coexistence of humans with nature

are complicated by political actions and economic actions that cause disaster in Galapagos...I think there's still the time and resources to achieve the desired 'coexistence'. It could be done, because we're just 30,000 people, Galapagos hasn't been developed much, the population is still very small despite our rapid growth. It is still manageable, but a lot would need to be done to train future leaders and disseminate values in a more honest society, as well as strengthen education. We're just coming out of that generation of adults that did everything wrong, so I have hope that the children and youth that are coming of age will be able to do things differently than the people who have been in charge over the last 20-30 years and making awful decisions in relation to human-nature relations.

Multiple farmers observed that Galapagos is unique because there is such an emphasis on humans living side by side with animals, which is something not seen on the mainland, where people throw rubbish on the ground and think about extracting resources from the environment. A rancher who owns a farm that tourists visit to see the giant tortoises roaming around explained that “we must coexist as man and nature...We need a balance – some harmony between all the sectors and conservation”. Implied is the idea that ‘coexistence’ can only be achieved if there is more ‘economic sustainability’ by allowing other economic sectors to prosper in addition to the tourism and conservation sectors<sup>146</sup>, a topic which will be explored in Chapter 8.

By way of conclusion, I would like to provide an anecdote from Floreana Island which exemplifies how coexistence or sustainable development can be achieved. Lucas, the farmer I stayed with, owns a hotel and some cabins in town but also has a farm in the highlands where he produces his own milk, yoghurt, coffee, wine, pork, vegetables, etc. After I had helped milk the

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<sup>146</sup> Among the best examples of the conservation sector working towards ‘sustainable development’ in agriculture are the ‘conservation agreements’ between Conservation International and approximately forty farmers, where they have agreed to clear areas of invasive plants and plant endemic species in exchange for training and donations. Although some hope to then turn towards agrotourism, it remains to be seen whether this initiative will work. On the other hand, these agreements could be interpreted as a form of ‘environmentality’ (Agrawal 2005), without addressing the root problems in agriculture.

cows, weed around the *naranjilla* plants, or hoe a field, he would invite me to have lunch with his family by a pond. The place is idyllic because as you eat you get to see frigate birds swoop down to scoop up fresh water in their bills. He explained that he had just finished building this covered area with hammocks so that tourists could enjoy this experience. It turned out that the pond used to be smaller, but he had blocked it off at one end to increase its size in case the corn planted adjacent to it needed water during a drought. By enlarging the pond, he inadvertently attracted the birds, which included frigates and the *common gallinule*. However, he observed that his pigs were trampling and eating the *gallinule* eggs, so he fenced off the pond to prevent them from entering. This example, similar to Felipe's aforementioned goat cheese project on San Cristóbal Island, demonstrates that through thoughtful interventions in the environment it is possible for both humans and nature to benefit. Although there are inevitably tradeoffs and the long-term benefits of these sustainability initiatives should be further assessed to see if they are truly 'environmentally friendly', it seems like a win-win scenario to have a pond where birds can live and drink water and which serves as a reservoir for agricultural use in case of drought, with a great opportunity for agrotourism.



Images 42-44. Frigate birds don't have waterproof feathers, so they must scoop the water off the surface of the pond when they're thirsty.

#### 7.4 Risks cause alienation

Revisiting some of the points from previous chapters, we see that Galapagos farmers were heavily impacted by the Covid-19 pandemic because they couldn't sell their produce and prices dropped to the point it was no longer profitable enough to justify hiring a taxi pickup truck to take vegetables to the marketplace. During meetings with the Ministry of Agriculture during the 2021 elections, farmers voiced their frustration at the lack of government support, and later in 2022 some confirmed that indeed nothing had changed. Smallholders also feel threatened by larger farmers who treat their farms in a more industrial, business-oriented manner. Moreover, when discussing different farming associations with my participants, some of them claimed that other farmers are self-centred and joined the association just to gain access to money or a greenhouse, but otherwise aren't collaborative. Similarly, regarding climate change, farmers state that the future has become uncertain and that they should all receive greenhouses and geomembranes, instead of only some getting them as a result of nepotism and political connections.

The threat of prolonged drought continues to loom, even though the year I was there ended up being rainier than usual, and the lack of ability to predict the weather meant that some farmers lost their crops due to too much humidity or even flooding. Because nature is inconsistent and cannot be trusted, the majority dream of having infrastructure, advanced technologies, or semi-industrialization<sup>147</sup> that will allow them to continue farming irrespective of the climate, so that their farms can operate as financially sound businesses. Finally, regarding pests, the majority of farmers are sceptical of using agroecological methods exclusively and complain about the high cost of pesticides and fertilizers in the archipelago, which they consider unavoidable expenses if

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<sup>147</sup> Semi-industrialized value-added agricultural products are contentious because they are associated with contamination, but producing tomato paste or more milk products in Galapagos could lessen reliance on imports.



they want to produce anything at all. The older Galapagueños reminisced nostalgically about a past where nobody had much money, people bartered, crops grew bountifully and easily, and everyone knew one another and got along:

Before people were *chévere* (cool). There was no social discrimination. If people were having a barbecue, they would call you over. If you were walking by, someone might give you a lobster or a fish...I have friends from that time who have money now, but they don't discriminate against me because I don't have much. – Farmer, Santa Cruz Island

Nowadays they are reminded that this past cannot be brought back due to debts and because “everything runs on gasoline and without cash you can't do anything...Right now, women are saying ‘if you have money, speak. If not, go away’. Now there's no love<sup>148</sup>. There's only money.” In this broad summary, we see once again that *risk* leads to *alienation* between individuals and from the soil, and even though people would like to relive the utopian ideals of the past, they are now hindered by the ever-present need to make money. In the following examples we shall see this cycle of *risk-alienation-money* repeat itself over and over:

1. **Migration & mingas**: As mentioned in previous chapters, recent migrants are often xenophobically labelled as an invasive species or a *plaga* by older migrants who have lived in the archipelago for a long time. Since the Galapagos Islands had no native human population and few families predate the 1950s, residents assert their legitimacy by the order of their arrival or by their attitude towards the environment. Older participants claim that they are the ‘true conservationists’ and that recent migrants “are not interested in our future. They're interested in their own future. In other words, some come here to work, survive,

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<sup>148</sup> Another rancher from Santa Cruz Island was equally frustrated by the change of heart in the archipelago: “The heart of human beings is damaged. [Politicians’] hearts go to stealing the money from the people...They just want to get rich, like Correa did...Here there is no incentive to stay. We're thinking of leaving Galapagos for our children, so they can leave this poor mentality and for their hearts to not be damaged by the rotten hearts here. They should leave and find a different mentality. Of course the whole world has a problem with people's hearts, but hopefully we can go to a country with a better mentality and our children can become businessmen, not yet another guide or fisherman.”

and then go back home; others, with the idea of making money here to take away and live out there.” This farmer from Santa Cruz Island elaborates further on why migrants are a problem:

Before there weren't many people. There were few of us and we lived together (*convivíamos*) in harmony. We trusted one another, there were strong friendships and we would undertake work together. There weren't strangers here. Our work would be conducted through *mingas*, so we would spend all day in one place or all day in another place, smiling, sharing, and people were very collaborative...The system has changed a lot. Now work is individual. People don't want to collaborate anymore. The population has increased and people have different ideas from different places in Ecuador.

On Floreana Island, multiple participants explained that, as on Santa Cruz Island, there has been a significant decrease in communal *minga* work. Before people would help with community projects such as cleaning the road and installing the first electric poles, and during festivities they would bring food of their own accord, but now people are ‘comfortable’ and will avoid community work, although they sometimes contribute a little money. One farmer theorized that before there were “*mingas* because there was no money” and that “young people haven’t suffered [like we did].” Another participant explained that growing individualism and alienation from the community were due to a recent shift in island politics, leading the population of Floreana Island to split into two main factions. Other residents say that the rift in the community started earlier, when Ecuador experienced an oil boom in the 1960s-1970s, because that is when the parish government entered the island; as they explained, people became less inclined to clean the streets or do communal labour when they knew public servants were going to get paid to do that work.

On San Cristóbal Island, even though the *minga* to build a dam (which I participated in) could be seen as an exception because the community came together for the common good, some *minga* workers complained that others did the bare minimum and they needed to enforce people’s participation by ticking names off an attendance clip board. Some also blame intergenerational value change for *mingas* being more infrequent, saying that the

young people<sup>149</sup> of today are lazy (See Chapter 8.3). Whatever the cause, many farmers assert that there isn't much of a sense of community anymore and too many migrants are arriving to the archipelago, with most people just focusing on making money and surviving. To summarize this evidence, we see that in Galapagos the economic conditions and politics have shifted over time and recent migrants are viewed as an invasive threat. Life is getting harder, so people are feeling alienated from others and becoming increasingly market dependent and indebted.

2. **Conservationist conflicts:** As seen in Chapter 6.2, the conflict between farmers and the conservationist sector over successive attempts to eradicate goats from different islands is central to the farmers' view that the 'so-called conservationists' don't really care about the environment, but actually are just living parasitically off of the donations received for the protection of Galapagos. In Daniel's own words, "people come to give advice in order to continually return to give advice, to secure their jobs and serve hidden political interests".

One farmer spoke of conservationists supposedly inventing the conflict over food between goats and tortoises. He argued that there is no need to kill the goats because he

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<sup>149</sup> The metanarrative of 'lazy youth' was summed up in the phrase 'lazy recent migrant' by many of the middle-aged Galapagos residents that I spoke to. Most of them had three or four jobs as a survival strategy, and could potentially be categorized as members of the *precariat* (Standing 2011). Farmers wish for their children to work in the public sector due to greater job security, but they also contradictorily chastise bureaucrats for being 'lazy' because they do office work and aren't working under the sun. I recall one farmer in particular who expressed harsh criticisms of the public sector, but his daughter works as a civil servant. Unfortunately, young people and recent migrants are often scapegoats for the problems in Galapagos, even though they may be victims of a competitive economic system, where even if they go to study outside the archipelago, when they return they can't find a job. One participant told me, "what's the point of my son studying marine biology if when he returns there are no jobs" and another explained that because the children of Galapagueños return with little experience, the institutions end up hiring more experienced migrants. Another farmer exasperatedly said that for his farming generation there was little else they could work in and that nowadays "even to sweep the floor you need a degree!" A young taxi driver I spoke to said that in Galapagos there weren't opportunities for youth, that you can only get a job if you have connections, and it didn't matter if they had gone to university or stayed back like him because either way there was no work. The average age of my farmer participants was over 50, so their depictions of young people as lazy, addicted to drugs, and seeking easy jobs in the public sector seem like biased intergenerational ageist statements. The grain of truth in their complaints is that many young Galapagueños don't want to work in agriculture, which leads farmers to hire migrants. Further research should be conducted on the topic of young people in Galapagos.

believes these animals can *coexist*. While I don't doubt that the scientists were probably right about goats depleting the food for the tortoises, what is of interest is the opposition between farmers espousing coexistence between all species, and 'conservationists' prioritizing protecting the tortoises because they are endemic. Since the goat is not viewed as a *plaga* by farmers, it is obvious that they would be alienated by a group of outsiders coming in and shooting them from helicopters. Here we see that the farmers seem to promote more of a subsistence lifestyle, including being able to hunt goats, which they consider part of Galapagueño tradition, while they see the conservationists making money off of the eradication of their food source. In other words, conservationists have created the *risk* of increased food insecurity as a result of not having goats to hunt, which is deeply alienating, especially at a time when cheap food is already scarce due to Covid-19.

Similarly, fishers have conflicts with the conservationist sector over the zoning of the Galapagos Marine Reserve. There is an 'us versus them' mentality that is sometimes even promoted by the conservation organizations themselves. I heard the anecdote of a meeting between WWF, the MAG, and the fishing sector in which the WWF staff were trying to determine which side the MAG was on. When my participant, a MAG staff member, responded "I'm on the side of Galapagos", they replied that the Ministry had to take sides with either the fishers or the conservationists. Nevertheless, during other meetings with the fishing sector, staff members from the MAG would send text messages to the fishers telling them what legal arguments and articles they should cite. Since the number of employment options is small in the archipelago and this MAG staff member didn't want to sabotage his ability to get work at the Galapagos National Park, he preferred to support the fishers in an indirect manner. One farmer from San Cristóbal summarized some of the problems faced by fishers:

Here the sectors that have more money enter into conflict. Where there's cake, that's where people fight. That's where the economic power is. The agricultural sector is abandoned and nobody pays attention or helps it. People have to figure things out on their own, so we are basically isolated. That's why conservationists and fishers fight. It's a delicate issue because the fishers have always just asked to be able to work, which is a constitutional right. It's a fight to be able to work! But the conservationists say, 'No. Don't fish here or there', even though there

are only artisanal fishers here. In a whole year they won't catch the fish that a Chinese boat gets in a day.

3. **Covid-19 & poverty:** The clearest example of how risks are alienating comes from my participants' experiences with Covid-19. A female farmer from Santa Cruz Island explained that her husband had lost his job and since they still had debts to pay, they were unable to pay for basic services, such as water and electricity. Because their children's classes went online, they had to install Internet at home, which costs \$85 a month. With a trembling voice she explained that "every day is worse because there's nowhere to get money from. Nothing is sold". Even if she manages to earn \$26 from sales in the market, the taxi that takes the produce down to market charges her \$13, so she hardly makes any money. Luckily, her family was receiving food baskets (*kits alimenticios*) from a nonprofit called Frente Insular and they also eat some of the food they produce. When asked if the government or the community was helping her, she said that before people were supportive, but now they "don't share and everyone works for themselves".

Another smallholder from Santa Cruz elaborated on the economic and psychological impacts of the pandemic, demonstrating once again how risks lead to alienation:

It has been tough. I owe the banks because I bought my lands bit by bit and I still owe them for that. There's no work. I have animals, but we can't sell them...I went to the bank and they said I could refinance my debt, but it's so much interest! It's almost double...Nobody can deal with so much debt and no work and the fear of going out and getting sick. It has affected people economically and mentally too!...Some people are just thinking and thinking of where to find the money and they're going crazy.

4. **Unstoppable plagas:** Blackberry and guava are the two most damaging invasive<sup>150</sup> plants in Galapagos. On Floreana some farmers who are also park guards told me they are frustrated because they had been keeping blackberry in check, but then funding ran out for the project, and now it is impossible to deal with. As one of them explained, the Galapagos

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<sup>150</sup> One participant said that in the 1970s farmers were most concerned about the *Lantana camara* shrub, but during the 1982 El Niño these shrubs were covered in a fungus and during the subsequent drought they were eaten by cows. *Sauco* (*Cestrum auriculatum*) is another plant that farmers complain about because it kills their cows, but it has to be controlled manually with weed whackers.

National Park's control efforts are futile because "in one place they're killing it and elsewhere it's growing. It's impossible now...they're just throwing money away for the sake of throwing money away." This farmer believes a more viable solution for his farmland would be to allow people to work parts of his land for free in order to keep the blackberry under control. On Isabela Island some demoralized park rangers also told me their jobs felt pointless. Supposedly a bio-control method will soon be implemented, but until then these invasive plants continue to spread. When I went out to help round up cows on Floreana Island, I finally understood how terrible guava infestations can be: entire thickets of branches make it difficult to walk. Floreana Island inhabitants theorized that the infestations were caused by park guards from other islands who ate blackberries and defecated the seeds, directing the blame for environmental degradation directly at the conservationists. One park guard from Santa Cruz Island confessed that he thinks his own colleagues introduced both blackberry and guava to Santiago Island, possibly intentionally, "either to ensure a job in the future or out of anger, because they see goats as a benefit for humans; there were many who didn't want to eradicate them."

What is apparent from these narratives is that conservationists are perceived to be making money off of 'invasive species control', while common sense alternatives to problems, like hiring farmers to remove invasives, aren't implemented. Ranchers and farmers argued that they are the true conservationists because on a daily basis they work on removing invasive species from their paddocks. Once again, we can see that farmers are alienated by the conservationist community; the invasive species that have entered the archipelago are extremely costly for farmers to control and they've mostly been given the burden of dealing with them, which further leads to alienation and the increased need to make money. Finally, it must be recognized that because the tourism industry led to rapid growth in the population, resulting in a substantial increase in food imports and the associated introduction or spread of invasive species, the tourism sector has shifted risk onto the agricultural sector and is thus indirectly responsible for the growing challenges that farmers are facing.

## 7.5 Alienation changes values and behaviours

I can only expect destruction for my family because I am provoking it with my own hands. This is what happens when the peasant doesn't receive help from the government and the banks—he looks for the obvious way out, which is to farm the mountain slopes and cut down the mountain vegetation. Otherwise how are we going to survive? We're not in a financial position to say, 'Here I am!—I would like a loan to plant so many hectares!' I put in my request but the banks don't want to give me credit because I cannot guarantee the loan. I know what I am doing—as a person I know. I am destroying the land! – Honduran peasant, 1990 (Stonich & DeWalt 2006: 284)

Galapagos farmers share some of the same difficulties that smallholders experience worldwide. As shown by the above quote, Honduran farmers also struggled with not being given access to loans and needing to exploit natural resources to make a living, despite being interested in conservation, in the sense of 'environmentalism of the poor' (Martinez-Alier 2002). However, what makes Galapagos different is that due to the geographical boundaries of the islands and the fact that the Galapagos National Park Directorate already went through a zoning process in 1974 that cemented the distribution of land in the archipelago, farmers have nowhere to expand into. Furthermore, the purchase and sale of land is highly restricted to an internal market, meaning that even though there are a few individuals who have acquired a large quantity of land (one owns over seven plots of land on Santa Cruz Island), the issue of *accumulation by dispossession*<sup>151</sup> (Harvey 2003) is not yet a problem in Galapagos. However, farmers are still living within the confines of the Galapagos National Park and must abide by restrictions not to kill endemic species, chop down *matazarno* trees (*Piscidia carthaeensis*), or access parts of the island without a permit.

*Coexistence* between humans and animals seems apparent in Galapagos because marine iguanas, finches, and sea lions are regular visitors to urban spaces. However, this superficial

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<sup>151</sup> This could change after 2023, because a new investment regulation has been drafted which could allow investors that aren't permanent residents to buy land without having a local partner or with minimal local support.

semblance of coexistence, based on Galapagos animals being 'ecologically naïve'<sup>152</sup> and generally unfazed by human activities, masks the actual social situation of the archipelago, where globalized neoliberal capitalism and the *metabolic rift* have created a series of risks that alienate people from themselves and their environment. Ultimately, the *coexistential rift* is based on the idea that when humans confront overwhelming risks to their livelihood, they become market dependent and indebted, which leads to a growing sense of alienation and a focus on making money rather than on subsistence or conservation. But do people also care about conservation and everyday agricultural subsistence?



Image 45. Sea lions and iguanas are often seen lying on pavements in the main towns.

To improve our understanding of Galapagueños' relationship to the environment, we must analyze three overlapping 'mentalities' that farmers have: 1) a money-making mentality; 2) a

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<sup>152</sup>Due to the isolation of some islands, animals that arrive can eventually become naïve, making them unafraid of predators. This behaviour has been cited by some of my participants as the most amazing quality of Galapagos and why it should be conserved: "I think this is the only part of the world where we can still coexist with nature...in other places you see them in cages or far away."



subsistence mentality; and 3) a conservation mentality. When asking people about whether the population had an 'environmental consciousness', the answer was inconclusive: some do and others don't. Birds are still squashed when taxis rush to the airport to pick up tourists; some farmers poison finches because they are a pest to crops; and tortoises are still occasionally killed and eaten (mostly on Isabela Island). Although everyone in Galapagos knows that they 'should' be a conservationist, and many people are, the logic of capitalism is what ultimately determines people's behaviour: the speed at which taxi drivers need to go to the docks to pick up passengers depends on how much money they want to make, irrespective of the number of endemic birds that are run over. Whether or not a Darwin finch eats poisoned corn will depend on whether a farmer is being watched, the extent to which the finches are a nuisance to crops, and the degree to which the farmer innately respects nature for its inherent value. Nonviolent solutions to human-animal conflict, like making fences with space for tortoises to pass through while migrating, or distracting birds with manioc while planting, should be implemented, but depend on the degree to which people value coexistence with nature and aren't solely interested in money. As farmers point out, conservation behaviour is a luxury when people have more pressing monetary worries.

1) A money-making mentality?

One of the central questions about people's ways of thinking and their relation to the *coexistential rift* is when exactly the rift began. To some extent, one could argue that the *coexistential rift* occurs globally and therefore is something that happened well before people even migrated to Galapagos. Many Ecuadorians migrated to the archipelago to escape civilization or seek new livelihoods after crises like ENSO events, earthquakes, volcanic eruptions, financial crisis and dollarization, wars with Peru, etc. In fact, most people probably came to Galapagos because of poverty, crisis, and desperation, trying to start their lives somewhere else, whereas a minority came as 'adventurers' seeking natural paradise.

Older migrants like to highlight that in their time the islands didn't have all the amenities they do now and that coming to Galapagos was not associated with making money. When migrants arrived prior to the 1970s, there was no electricity, fresh water, roads, and they had to go up and down from the highlands on donkeys. Many people failed to adapt to the harshness of the islands and left. It was only from the 1980s and 1990s onwards that the vision of the archipelago started changing and people arrived with a 'money-making mentality'. Clearly, every human being worldwide who is part of a capitalist system has some degree of a 'money-making mentality', but older migrants assert that there is a huge difference between when they arrived and the influx of younger and more recent migrants with the boom of tourism. Nowadays, as Felipe observes, "unfortunately, Galapagos is about making money".

The culture of neoliberalism involves a "casino relationship to the world" (Hilgers 2010: 353), and Galapagos is no exception. Although earlier migrants also migrated to Galapagos in search of money-making opportunities, they weren't the predominant draw to a faraway archipelago that had been associated with prisoner colonies and delinquents. However, some recent migrants assert that they didn't come here "with the intention of getting rich" and instead hoped to have a new beginning or a tranquil life. Newer migrants will sometimes complain<sup>153</sup> that the older families hold the best land or political power, whereas older migrants accuse the newer migrants of not having suffered like they did in the establishment of towns:

My parents came because they liked it, not because they wanted to make money. They contributed to the development of this community. Now people come and everything is ready for them and they make money quickly and then they want to be the leaders who create laws that work against us. That's why people complain. It's like them coming to your house to tell you what to do. – Long-time resident, Santa Cruz Island

As seen from this statement, even though some politicians come from old Galapagueño families, people complain that it is the newer ones who are getting into power and then restricting their freedoms. A farmer from Santa Cruz told me that the "majority of mayors and people who have existed in political power in Galapagos have been people who arrived in the

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<sup>153</sup> Arguments about who conserves or destroys the archipelago more or less are also a way of allocating blame and (de)legitimizing people's belonging.

last 15-20<sup>154</sup> years. The old guard in Galapagos had a different vision”. People claim that politicians have “corrupted hearts” and that:

If they did their job the way it should be and weren't stealing money, we would be fine...The pandemic would just be a virus, but we would have money. We'd have better schools. Here the hospital is a piece of shit. If you break your head, they need to take you out or you'll die. In a place that generates so much money it is disgraceful for there to be such a miserable health system. – Farmer, Santa Cruz Island

The utopian vision from the ‘old guard’ has been described by some as an “ecosystemic community” (defined as having a spiritual and simple relationship with nature) or a “caring economy” (*economía solidaria*) premised upon utopian visions of the past. A long-time farmer and guide told me that he hadn’t come to make money “because almost everything was free. You wanted lobster, you went to fish. You wanted chicken, you bartered”. Additionally, a politician and farmer on San Cristóbal Island explained that in the old days they didn’t specifically ‘barter’ and that people would gift each other food. The economy was “voluntary and caring...Nobody would die of hunger. Even though we were in absolute poverty without money, we ate!” Felipe, who lived in those times, says that people have to accept that they are now living in a market economy and there’s no going back.

In addition to being criticized politically, newer migrants, especially those who get construction work, are accused of making money and taking it out of the archipelago. So, the issue of dissatisfaction with the unequal distribution of money in the archipelago is also a question of ensuring that permanent residents make the money and not the temporary or illegal residents – Galapagueños want money coming in, but not leaving. As one NGO worker on

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<sup>154</sup> The question of when someone becomes ‘Galapagueño’ is complex. One participant told me her mother was 96 years old and had come as a teenager, but still felt like a migrant. On the other hand, a migrant who had arrived 25 years ago felt Galapagueña and asked how long she had to wait until she could call herself ‘Galapagueña’. There apparently was a movement about a decade ago calling for “Galapagos for the Galapagueños”, but even though some people still think that way the movement isn’t ‘politically correct’. One of the oldest participants I interviewed belonged to a group called ‘Galapagos Pioneers’. He claims some old people try to join the group even though they don’t have a shared history of facing hardships alongside the first inhabitants. Other terms used in the archipelago are *colono* (colonizer) and *resident*, where the former actually has positive connotations.

Isabela explained to me, people are “always fearful of the newcomers...there’s a lot of distrust. It’s a culture that is based on distrust...it’s about protecting resources and benefits for the group that was already here”. This distrust may be based on people’s trauma from the rapid changes that occurred in the archipelago due to globalization, tourism companies making most of the money, and fears of becoming part of the *precariat*. This also explains widespread xenophobia and distrust of recent migrants. However, some fears also reflect a loss of identity and a change of heart: “the feeling of being Galapagueño is being lost...The problem here is that people want to come and make money off of Galapagos”. Another farmer complained about her own children:

We suffered back then and we know what agriculture is like. I have a 22-year-old son and he doesn't know what agriculture and ranching are. He just knows about typing, studying and the computer. When I take him to the land, I have to tell him what to do and he doesn't know. The youth today don't know anything about the earth. – Farmer, Santa Cruz Island

As we have seen, recent migrants and young people are blamed for Galapagueños’ loss of identity and the change towards a ‘money-making mentality’. There’s a third narrative regarding both newer and older migrants, which is that they were both always interested in money and are just trying to prevent others from accessing resources:

People who came to colonize the islands weren't educated people...My father came here with a secondary education...Since they came without education, even though they lived here for a long time their way of living never changed...So the mason who came has children who are masons and they still think the same way they did thirty years ago...The islands mean nothing to them. What does Galapagos represent? It just represents a way of making money. These people love the fact they came somewhere where you could earn twice or three times as much as on the mainland. They didn't have competition or as much regulation as outside. Life here is calmer, you eat well, there's a great landscape and beaches...there's a problem in society because people don't have awareness of nutrition, education, or coexistence. – Farmer, Santa Cruz Island

In summary, to some degree all people have a ‘money-making mentality’, but Galapagueños who arrived more recently are accused of only caring about making money and taking it out of the archipelago, whereas older migrants supposedly care more deeply about the

archipelago because it's their home. New migrants and young people are distrusted and delegitimized. This scapegoating and strengthening of the money-making mentality could be symptomatic of the *coexistential rift* creating *market dependence* and *debt peonage* and forcing local residents to be more wary of protecting resources for the few and preventing access to outsiders.

## 2) A subsistence mentality?

On Floreana Island people also have a sense of the archipelago changing rapidly, but they are proud that their population is still under 200 individuals. Due to the scarcity of fresh water, the fact that most of the land is already owned, and the harshness of Floreana being more isolated than the rest of the archipelago, the community hasn't grown like those on the other islands have. Inhabitants are proud of their island because "there's no poverty here...If someone doesn't have something, another has it (and will share)". They explain that they don't make a big deal about the small scarcities of life: "if there's no onion, you just don't eat onion...Here people accept and find a way to change the menu or find an alternative". One of my participants said he had recently had a conversation in which he and a friend pondered whether Floreana would be able to survive a world war:

How long could Floreana survive? Well, we would run out of diesel and electricity. But that's not a big deal. You just go to bed at 7pm. Food - you have pigs, chickens, and animals in the highlands. You have manioc, banana, sugarcane - you could get oil from the pig lard. So, how long would we have? We could survive for a long time.

This 'subsistence mentality' is strongest on Floreana Island, where the majority of people only buy basic goods like rice and sugar from outside, while they try to produce most of their other food. They explained that the economy used to be built on sharing goods, letting friends cultivate freely on their land, or inviting strangers into their home, but these practices are now much less common. Although they said that nowadays people won't help out for free, one older farmer continued allowing people to work on his land because it is mutually beneficial and helps him control *plagas*. His son, however, thinks his father should have more of a money-making mentality because the world has changed. The central difference between Floreana and the rest of the archipelago is that this island's bountiful resources are distributed amongst a

small population. On Santa Cruz, which is the central tourism hub of the archipelago, many farmers are subsistence-based but also sell at the market or to tourism ships and there appears to be greater pressure to make money. Galapagueños from the more inhabited islands often tell me that Floreana is what their island used to be in the past. However, with the onslaught of the *coexistential rift*, people nowadays “see Galapagos as a source of money. It’s like a gold mine<sup>155</sup> (for the tourism industry)”.

### 3) A conservation mentality?

Galapagueños often criticize one another for not caring about the environment, and this goes beyond the conflict between the community and the conservationists. One argument is that migrants who enter the archipelago don’t respect nature because they come from ‘dirty’ cities like Guayaquil where it’s normal to kill animals. People claim to have seen illegal farm labourers throwing rocks at finches, killing them with slingshots, and so forth. On the other hand, older migrants are sometimes accused of arrogantly throwing rubbish on the beach and saying they’re entitled to do so because they’re Galapagueño. Also, because they lived in the archipelago at a time when it was normal to eat tortoises and Sally Lightfoot crabs, they are sometimes blamed for the continued destruction of the islands. Furthermore, there is the conservationist discourse that all humans in Galapagos are harmful to the environment.

Ever since the Galapagos National Park was established in 1964, a new environmental paradigm<sup>156</sup> started. The communication and education campaigns conducted by the Charles Darwin Foundation, other NGOs, and schools have succeeded<sup>157</sup> in making people adopt a

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<sup>155</sup> A common statement in Galapagos is that the tourism industry relies on the “tortoise that lays golden eggs” (Ramírez 2004: 53-63). Indeed, without the successful giant tortoise captive breeding and repatriation program from the 1960s, today the tourism industry would be struggling. Galapagos needs to conserve its species, or at least project the idea of pristine nature, in order to keep attracting tourists to the archipelago.

<sup>156</sup> The framework of thought built on science and conservation pervades all aspects of the archipelago, whether it is labeling someone as an introduced species, criticizing people for not conserving, or the fact that the Seventh Day Adventist museum on the main street in town has a whole section dedicated to ‘theistic evolution’, a sort of limited speciation. For instance, they argue that Darwin Finches did evolve from an original finch, but God must have created them because they look nothing like flamingoes.

<sup>157</sup> A fisherman explained that “young people who are born here have a different mentality because school takes you to do a beach cleanup and all that...The rest of us act because of the law.”

conservationist attitude. As one farmer observed, “little by little people found out how important the tortoises are. They’d say, ‘Oh, the *gringos* come for the tortoises and birds””, meaning that the incentive to conserve nature may in part be based on the desire to make money off it. Obviously, people did ‘care’ for the environment prior to the arrival of these environmental conservation organizations<sup>158</sup>, but they didn’t have restrictions and might touch animals, go fishing on the dock, sit on tortoises, etc. The rules weren’t so strict, but now there are hefty fines if any environmental rules are broken. Although some people take care of Galapagos out of love, people originally acted out of fear of fines:

At first people kept from doing things because of fear, not love for nature. People wouldn't obey because they would say, how come these Serranos (Andean highlanders) come here to tell me what to do, when I was born here!...My mother never respected any rules and if people told her she couldn't, she insulted the park guards. There are still some people like that, but they're really old, like over 80, who never understood and resisted their entire lives....[As young people growing up] conservationism didn't even exist in my head. I was the descendant of a family that was practically indigenous, like the people in the Oriente (Amazon). If you tell someone in the Oriente 'don't eat the monkey', they will look at you and say 'what's wrong with you? Are you crazy?'....So I had to learn and be convinced that it was correct (to be conservationist). My mother never understood, or maybe she didn't want to understand! (laughs). From my generation forward, I think we're all clear.  
– Tourism operator, Santa Cruz Island

Other participants disagree about newer generations being clear about the law, emphasizing that people still try to get away with breaking the park rules. Additionally, Galapagos has a large turnover of people who only live in the archipelago for between 1-5 years, until their residence papers expire. Some workers at NGOs question whether the real problem is that temporary residents gain an environmental education but leave when their residence permits run out. With this turnover, newcomers to Galapagos continually need to be taught. Generally, outsiders are blamed for having a mentality of exploitation. One of my participants concluded that rather than point fingers at each other, all sectors of society should “cultivate their hearts

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<sup>158</sup> Again, there is a difference between ‘care’ and ‘conservation’. Multiple grassroots conservation organizations have emerged in the archipelago due to people’s desire to conduct beach cleanups and protect the environment, without the controversy surrounding the big conservation organizations.

and not just focus on money”, and another explained that they try to “coexist with the tortoises...[because] we’ve taken their land, their spaces.”

Subsistence, conservation, and making money are hypothetical ‘ideal types’ and farmers have all three mentalities. However, during the ongoing pandemic, money was predominantly on everyone's mind and diverted attention from subsistence and conservation mentalities. Ideally, all three activities could be carried out concurrently if people were open-minded and would focus on *coexistence* and not just making money. One example that illustrates how conservationists and farmers don’t always think alike relates to cows. I talked to a long-time foreign conservationist who was one of the first naturalist guides in the archipelago and she said, “Galapagos is a world treasure and we can't let someone who is raising cattle run it down. It's more important than that. So we either buy the guy out or find another thing for him to do.” During my fieldwork, I spoke to another guide who is also a farmer and he made the following contrasting comments:

I often point to the cows when the tourists visit the highlands and say that the Galapagos cows are helping conserve Galapagos. They laugh but I tell them that if cows are well managed, they help us conserve the islands because we import less [and bring in fewer introduced species]. – Naturalist guide and former farmer-fisher, Santa Cruz Island

Well-managed agriculture has a tremendous potential to support conservation work if farmers’ needs and views are taken into account. Farmers themselves are perceptive of the environment, as shown by one participant who told me she was worried when she saw a Galapagos rail (*Laterallus spilonotus*) having its chicks attacked by ants in its nest near her alfalfa. Another farmer admitted that some workers he hired had chopped down the *Miconia robinsoniana* (an endemic species) on his land, but now he would like to restore the area because it would provide shade for his cattle. Farmers see themselves as people who care for the environment and eliminate invasive species,



but they would like to be rewarded for their efforts: “We could help the park if they told us, ‘Hey, go into the park and help us eradicate invasive species on two or three hectares so that we can plant native plants and we’ll pay you \$500’. I think a lot of people would be interested”. Admittedly, there are some participants who are cynical of the concept of *coexistence*, as it seems like a “really romantic idea, like what you’d find in a novel...and in Galapagos it is inevitable that the population will increase, which means they will need services”. A rancher echoed this sense that nothing will change for the better now:

I feel I have been thrown into abandonment like everyone else. People from outside have come to make money. The big businessmen here are the ones who make a lot of money. Here in Galapagos there's no way to stop it. What can they do? Just with the people born here the population growth will be immense. Sadly this will have to turn into a city like the US – Rancher-taxi driver-electrician, Santa Cruz Island

Nevertheless, the whole point of sustainable development should in theory be to grow in ways that support both the community and the ecosystem. A former director of the Galapagos National Park (in the 1990s) told me that conservationists had an active role in trying to prevent the development of the archipelago’s human population:

I read a sociology book that said that wellbeing causes migration and I disagree. Wellbeing causes employment. Period. That's what the Charles Darwin Station didn't understand and that's why they thought that basic services like water and sewage shouldn't be developed...One time some Japanese people came on the Santa Cruz cruise ship and they met with us to talk business...We met at the Finch Bay Hotel and they proposed a great idea, which was to have some Japanese ships bring tourists here but they wouldn't get off on land, and in exchange they would give us infrastructure like pavement, sewage and water. The director of the station stood up angrily and said, ‘how is it possible that they would propose something so indecent?!’

Fortunately, the Charles Darwin Foundation has some new staff members who have a background in the social sciences and they have begun conducting social studies of fisheries, so

there is hopefully now more of a philosophy of supporting both the community and the environment at the same time. In the meantime, older generations speak nostalgically about a communal past with a more intimate connection with nature, but which seems unattainable. The *coexistential rift* (negative cycles of ‘risk-market dependence-debt peonage-alienation-anxiety’) makes it harder for the population to think about, much less revitalize, traditional forms of *coexistence*.

In the following chapter I will delve into the political and economic context in which Galapagueños live, highlighting some of the key problems, and then link it back to the *coexistential rift*. Afterwards, we shall discuss ways in which the process of the *coexistential rift* can hopefully be slowed down or reversed by implementing common sense advice that previous academics have already suggested (See Chapter 9). However, the question of how to convince a stagnant political class to implement change without a revolution is a troubling matter. Unfortunately, “the capitalist classes are everywhere doing extremely well...The capitalist class will do nothing about such a situation. They have no incentive to change” (Harvey 2020: 44).

## 8. THE SLOW VIOLENCE OF NEGLIGENT HEGEMONY

### 8.1 Galapagueño identity and belonging

Technical fixes to socio-ecological problems typically have unintended consequences and fail to address the root of the problems: the political-economic order. Rather than acknowledging metabolic rifts, natural limits, and/or ecological contradictions, capital seeks to play a shell game with the environmental problems it generates, moving them around rather than addressing the root causes. (Foster et al. 2010: 74)

In this section I provide ethnographic evidence for the context in which the *coexistential rift* can thrive. Hunt et al. (2022) argue that the archipelago is experiencing an “underlying *cultural identity crisis*” (Ibid: 6) based on struggles for sovereignty in Galapagos and the fact that Galapagueños “do not yet have a cohesive culture” (Ibid: 12); because the archipelago lacked an indigenous population, there are diverse cultural influences that translate into power imbalances, and the legal framework leads to an entrenched insider-outsider dichotomy. Although the latter assertions were evident in my fieldwork, this portrayal of a Galapagueño identity crisis veers too closely to simplistic assertions that there is “no culture” in Galapagos and fails to recognize that cultures worldwide are dynamic, fragmented, and super-diverse (Vertovec 2007). Rather than highlight peoples’ lack of holistic cultural identities, we should focus our attention on the sources of tension.

The central problem in the archipelago is that Galapagueños are facing a constant onslaught of slow violence (Nixon 2011) caused by conservationist rhetoric, pejorative metanarratives (of laziness, rubbish, and the value of human life), laws that are subverted by the powerful and well-connected, a frustrating bureaucratic system, political abandonment, and the feeling of imprisonment and restricted freedoms. I agree to a greater extent with Bocci (2022), who recently claimed that Galapagos farmers have a deep sense of belonging. However, it is important to note

that to establish a feeling of rootedness that isn't solely based on making money, residents will need to strive towards achieving their desired coexistence. Building upon my prior conceptualization of Ecuador as a “negligent hegemonic state” (Stimson 2016) – with the government seeking to expand its control over resources while neglecting the needs of local populations – I argue that there is a tension in Galapagos between people trying to *care* for their environment and feeling that multiple structural forces (indebtedness, indifferent politicians, bureaucracy) extract money from them without providing a substantial benefit to the community.

Firstly, I argue that scientific classification of species has been transferred into the social realm and used to validate the idea that humans do not belong in Galapagos and have no distinctive social identity. Secondly, I outline the possibility that *coexistence* is a central component of idealized Galapagueño identity and that indebtedness and difficulty obtaining credit with reasonable interest rates make it challenging for Galapagos farmers to focus on anything apart from making money. Thirdly, I discuss the Ecuadorian cultural phenomenon of *viveza criolla*<sup>159</sup>, which simultaneously glorifies trickery and deception and leads to a corrupt political system that leaves the agricultural sector abandoned. The blatant disregard for laws in Galapagos is also due to close family social networks where it is in nobody's best interest to enforce abstract juridical rules. Fourthly, I examine the ways in which bureaucracy itself is damaging to the environment and a major source of frustration for farmers who need credit. Finally, I explain some of the central economic problems facing farmers and state that if ‘sustainable development’ is to be achieved, policymakers should rethink the ‘fortress conservation’ model and reverse the ‘cultural inertia’ of inaction towards the agricultural zone.

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<sup>159</sup> This concept is used in many Latin American countries to describe cunning (often illegal) actions that usually lead to the monetary gain of marginalized peoples.

Throughout my year of fieldwork, I continually pondered what crosscutting factors and issues existed in my participants' interactions with humans, animals, the environment, and the climate. Eventually, it became apparent that the main issue in Galapagos remains one of a closed system having become open (Grenier 2007 [2000]), leaving the residents to negotiate the flows of goods and people arriving to the islands. In other words, the cross-cutting issue in all my participants' narratives is how they engage with the archipelago's connection to the outside world, highlighting a sharp dichotomy between an idyllic version of Galapagos and the threats that come from outside, whether they are human migrants, invasive species, climate change, or Covid-19. This stark insider-outsider dichotomy was previously identified by a group of Spanish anthropologists:

All living things in Galapagos are subject to a purity test...All are classified according to their 'origin'. Introduced? Endemic? Native? These variables create a hierarchy of living organisms that stigmatizes introduced species, especially *plagas*...The debate about what is autochthonous or allochthonous, so ubiquitous in Galapagos, interests us because it is one of the central axes of conservationism and therefore helps explain how human beings are living on these islands...On the one hand, it is evident that humans are an 'introduced organism', and thus, their presence has more than doubtful legitimacy...Since we are past thinking about eradicating [humans] from the archipelago, the only option left is to regulate and control them. From the perspective of the introduced vs. autochthonous, humans are always a potential *plaga*. Therefore, different categories have been developed to describe their presence...humans – always introduced – seek to identify themselves as autochthonous by classifying themselves as 'permanent residents', while distancing themselves from the 'temporary residents' – invasive species – and giving a wide berth to 'illegal residents', who are potential *plagas*. Half seriously and half jokingly, some temporary residents commented that this system creates a kind of Galapagueño apartheid...based on these ways of thinking, it is very difficult for humans to find their place on the islands; they will always be precarious, like uneasy and uncomfortable visitors who cannot find their place because they harm everything they touch...The goat, pig, smooth-billed ani, and guava tree are hardly of any comfort to us; instead, they show us the harm we have caused: they are signs of our original sin towards nature. (Andrada et al. 2010: 69-70)

Following from Andrada et al.'s argument, it is clear that the scientific categories of 'endemic' and 'introduced' make it hard for humans in Galapagos to ever feel a sense of belonging. In fact, these terms are often used in verbal altercations, where one individual claims to be endemic or *carapachudo* (shellback) whereas the offending party is deemed *introducido*<sup>160</sup>. Contrary to the United States, where mainstream discourse can purposely forget about genocide and colonialism but still insist on the right to live there, in Galapagos people are constantly being reminded that the ideal state of the archipelago would be 'pristine', as it was before Fray Tomás de Berlanga 'discovered' the archipelago in 1535. Although this radical form of natural scientific thought is no longer as prevalent in the archipelago as it once was, Salcedo (2008: 23) and Ospina (2006: 54-58) have highlighted that the conservation plan 'A Biodiversity Vision for the Galapagos Islands' (Bensted-Smith 2002) states that the way to save Galapagos' wildlife would be to reduce the human population by relocating inhabitants from the less populated islands to the two most populous ones. The first chapter is titled 'Back to Eden – one last chance' (Bensted-Smith 2002: 1). Privately, I have had a number of scientists tell me that the only way to solve conservation problems would be for everyone to be expelled from the archipelago, and this narrative is a well-known source of contention amongst non-scientists.

The idea of taking such actions to restore "pristine nature" is neocolonial and establishes a marked hierarchy between scientific and political elites, and the rest of the population. Still, while

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<sup>160</sup> Subramaniam stated that there are "striking similarities in the qualities ascribed to foreign plants and animals and people. The xenophobic rhetoric is unmistakable...we are living in a cultural moment where the anxieties of globalization are feeding nationalisms through xenophobia...I am not without sympathy or concern about the destruction of habitats. However, in their zeal to draw attention to the loss of habitats, some journalists and scientists feed on the xenophobia rampant in a changing world" (2001: 34-35). Many Galapagos researchers (Andrada et al. 2010, Bocci 2017a, Brewington 2011, Constantino 2007) have also noticed a parallel between xenophobic migrant discourses and negative attitudes towards invasive species.

conservationists legitimize their activities by evoking the islands' relatively recent human settlement and striving to take Galapagos back to 1535 or to preserve what is left because of the importance of the archipelago to the history of science (Darwin's legacy), farmers and fishers like to point out that in the historical order of colonization (Diagram 4), they were there first. A long-time Galapagos naturalist guide explained:

We were fishers before working in tourism...The Charles Darwin Foundation and the park came much later than our human settlement. We were here first. There are people who were born here 70 or 90 years ago, before the creation of those institutions. So, they need to adapt to us and show some respect...People often say that Galapagueños destroy [the environment] (laughs)...People from the park and people who come here say that. They should be happy that they have the opportunity to come here, that a town exists, that there's electricity, water, and food, because there were families here who worked hard to make this possible.

**Diagram 4:** The historical order of human arrival



Another argument my participants made to de-legitimize the role of conservationists in the archipelago was that conservation NGOs actually have no interest in solving conservation problems; to the contrary, they have a vested interest in making humans appear damaging for the archipelago, since that way they can keep attracting funds to Galapagos conservation causes. A survey conducted on various islands in 2009 found that half the population think they obtain no benefit from scientific studies (Quiroga & Ospina 2009: 116) and at least one third of Galapagueños believe that scientists do not take them into account, have too much power, and aren't credible. However, the survey also found that 84.2% of the population thought that more

scientific research was needed and that it should be focused on migration, public health, and the impacts of tourism.

In the late 1990s and early 2000s there were violent confrontations between fishers and conservationists, and they created wounds and stereotypes that still haven't healed. While conservationists<sup>161</sup> criticize fishers for their extractivist livelihoods and their "selfish material interests" (Ospina 2006: 12), fishers have accused scientists of killing sea lions in order to attract conservationist funding (Ibid: 11), claiming that they are more interested in money than conservation. Salcedo (2008: 33) has argued that economic inequality is at the root of conflict between Galapagueño social sectors. Despite a 78% increase in the archipelago's total revenue between 1995 and 2005, average per capita income only increased 1.8% (Taylor et al. 2007: 128).

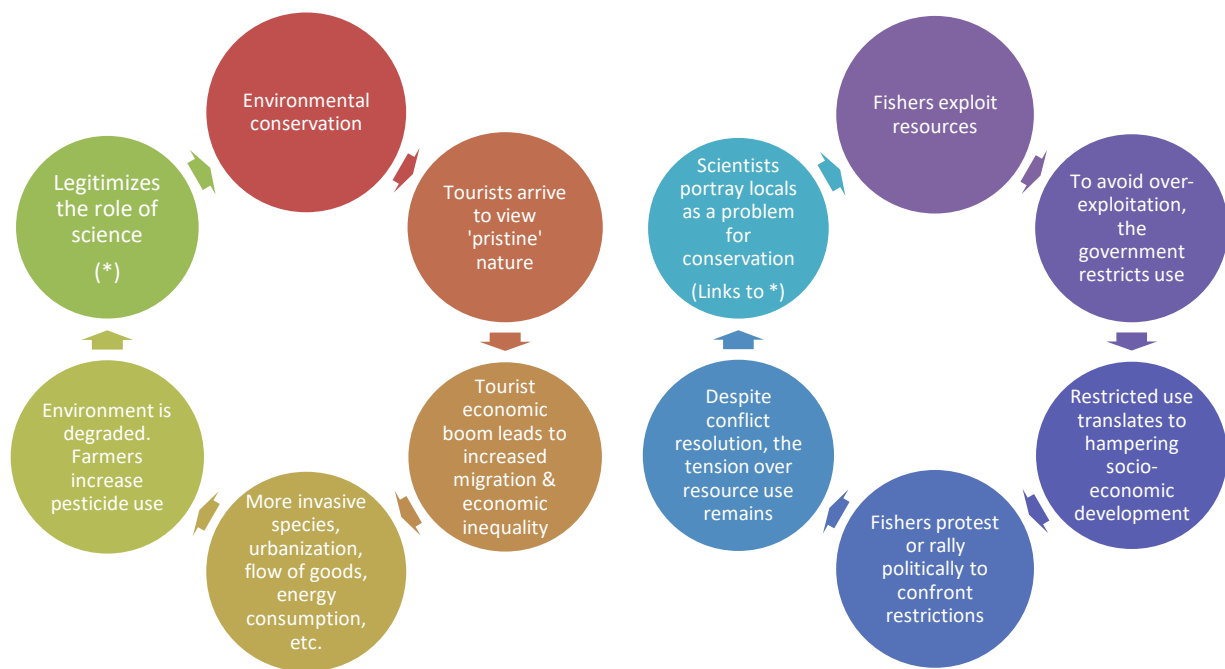
Since some farmers became fishers in the 1990s when the sea cucumber boom occurred, but then fishers became farmers after fishing was no longer as profitable, it is worth considering the conflict that fishers have with the conservationist sector and how they allocate blame. As seen in the following diagram, Galapagos sectors of society engage in different 'blame games' that are mutually constitutive: while fishers blame conservationists/tourism for destroying the environment and using that destruction to make money, the scientists/conservationists also blame the fishers for destroying the environment, leading to restrictions on their livelihoods. When protests occur, the more powerful tourism/conservation sector can use the fishers' resistance as proof of their supposed destructiveness.

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<sup>161</sup> Even Eliécer Cruz (2010: 238), a former director of the Galapagos National Park Directorate (GNPD), stereotypes older migrant families as being protectors of nature, while claiming that the younger ones destroy it.



**Diagram 5: Blame games<sup>162</sup> of environmental destruction**



**Cycle 1:** Fishers blame conservation for attracting tourism, destroying the environment, and legitimizing the role of science.

**Cycle 2:** Conservationist/tourism sectors blame fishers for being extractivist, leading to restrictions. When fishers resist them, they can easily be portrayed as non-environmentally friendly humans.

Admittedly, fishers have a much greater conflict with the conservationist/tourism sector than farmers do, probably because in agriculture people have control over their private property whereas the ocean is viewed as commons (Hardin 1968) that must be managed. I often heard both

<sup>162</sup> These two cycles, though essentializing and reductionist, summarize some of the ‘blame games’ that occur in the archipelago. Notice the asterisk, indicating that farmer/fisher exploitation of resources also legitimizes scientific conservation work, even if that ultimately leads to further degradation being caused by incoming tourists. Therefore, one can understand the cycles either as two separate discourses or as one united feedback loop. It is also of interest that all social groups use a discourse of ‘environmental destruction’ to delegitimize others’ positions. This diagram is based upon my lived experiences in Galapagos and an elaboration of ideas presented by Ospina (2006: 11-12) and Stacey & Fuks (2007: 120).

fishers and farmers claim that scientists and conservationists have a parasitic relationship to the archipelago; at the same time, farmers are often criticized by scientists for polluting the soil due to lack of correct pesticide knowledge. There is a clear link between Galapagos conservation and tourism, since the conservation of the islands is critical to attract tourists. This has led to the expansion of the economy, the importation of goods, the introduction of new species, and the increased use of pesticides farmers need to cope with *plagas* on farms.

In *Identidades en Galápagos*, Ospina (2001: 21) explains that every identity is constructed in relation to the ‘other’, an idea originally coined by Frederick Barth (1975) in his work on ethnicity. In Galapagos, the ‘other’ is referred to as *afuereño* (outsider), demonstrating that the inhabitants establish their identity spatially, creating an insider-outsider dichotomy. Ospina (2003b) also states that a Galapagueño community exists because, in spite of having migrants from all over Ecuador, they find ‘refuge’ under Ecuadorian national identity (2003b). He disagrees with academics that assert Galapagos has no identity, claiming that “it is difficult to find social groups completely devoid of identity. Identity is a continuous process of the construction of a definition of oneself and others” (2003b: 154) and is linked to a sense of place. Since everyone in Galapagos is a migrant, or descended from migrants, and very few people can claim to have lived in the islands prior to 1950, when the total population was of approximately 1,300 individuals, each successive wave of migrants tries to legitimize their belonging in the archipelago and to delegitimize the rights of future migrant flows. In 1998, the LOREG (Galapagos Law) established strict restrictions, essentially codifying a series of rights and privileges for one group of ‘permanent residents’, while simultaneously excluding people who arrived after that year.

So, what does it mean to be a Galapagueño? When I arrived on Floreana Island, one participant seemed amused that an anthropologist would be interested in Galapagos, because “there is no

culture here.” Similar statements are often repeated in the archipelago, irrespective of social sector. Cultures worldwide are actually dynamic, constantly evolving, shaped by various historical factors involving shared values and a sense of belonging. In the archipelago, attempts to create Galapagueño music with Andean instruments like the *quena* or *charango* are viewed by some as contrived or forced attempts to come up with a culture. Similarly, seafood *ceviche* made with chiton molluscs (canchalagua, *Radsia goodallii*) is a recent ‘Galapagueño’ invention. Furthermore, because the archipelago is composed of migrants from all over Ecuador and they bring their cultural traditions with them, as one participant observed: “this has been evolving over time, but I would say that there still isn’t a unique (shared cultural) identity...However, people who live in Galapagos for a long time have developed a feeling of belonging”. Some older residents commented that the culture of the past involved walking barefoot, being tranquil, sharing, living in nature, and having a ‘human economy’, but that this has been lost and newer generations are not able to create a holistic cultural identity because there are too many influences from the Internet and from around the world.

Some argue that a Galapagueño is someone who was born there, whereas others state that if they have lived there for a really long time (certainly prior to 1998), they might be able to identify as a local. In the words of one farmer, “when you spend a long time in one place, you feel love for where you live. Love for the earth”. Another farmer argued that suffering was central to the identity of the true Galapagueño – someone who used brackish water, didn’t have electricity 24 hours a day, and had a hard life. Finally, there are those who say Galapagueño identity only exists on paper; in other words, it is just about having permanent residency papers, providing people with specific privileges. This is particularly troubling to older Galapagueño residents because they say some migrants have obtained their papers illegally or don’t truly ‘love’ the archipelago and instead

see it as a way of making money. Furthermore, there is anger and frustration towards an economic system that prioritizes cruise ships, which typically employ outsiders and don't stimulate the local economy as much as land-based tourism. As Ospina (2001) summarizes, identity has been constructed in relation to the exterior and the perceived political and economic structure that privileges<sup>163</sup> the rights of Galapagueños in the labour market and reifies their difference from the outside world:

The feeling of [Galapagueño] community is characterized by political opposition to economic interests 'from outside' and therefore the affirmation of an irreducible difference with the mainland. It is justified based on a vision of self-sacrifice, of history and its own tradition. That is where the belief in the existence of acquired rights is rooted. The political form of affirmation of this right is the creation of a migratory control system. But it is also characterized by the vision of new space which they inhabited and which led them to feel different after some time. (2001: 84)

Galapagueño anthropologist Cristina Ahassi (2007a) explains that their identity is highly fragmented and therefore society is built upon “hyphenated identities” (*identidades compuestas*) which are dependent upon: (a) the origin of the migrant, who could be from anywhere in mainland Ecuador, or internationally; (b) their feeling of allegiance to one of the four inhabited islands; (c) intimate family relationships involving the exchange of goods between fishers and farmers; (d) which legal category they hold, whether it be ‘permanent’, ‘temporary’, or ‘illegal’; (e) their job sector (mainly tourism, conservation, fishing, farming, and public institutions). Ahassi also points

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<sup>163</sup> Although organizations must legally recruit local labour first, before advertising jobs to outsiders, as many participants explained, locals often don't have the same amount of experience, education, and language ability as an outsider, making it difficult to compete. Furthermore, in some sectors there is a negative stereotype of ‘lazy’ Galapagueños, who are perceived as having had an easy life and not being used to working hard compared to desperate migrants who will be much more hardworking and accept pay that is often under the legal minimum wage. Thus, even though the laws would in theory be set out to protect local interests, in reality many people have told me they see no future career in the archipelago and are saddened to have to look for opportunities elsewhere.

out that Galapagueño identity is “emptied out each time scientists...demand that populations should be more concerned about protecting this territory” (Ahassi 2007a: 173-174). This point is of vital importance because it contrasts with Ospina’s assertion that the “conservation of nature, but above all the formation of an environmental ethic, has enormous opportunities at this cultural crossroads” (2001: 85). Indeed, other authors (González 2007: 285) claim that natural capital is the basis of human wellbeing and so development must take into account protecting the ecosystems that people rely on. For many institutions in the archipelago, conservation should be at the heart of Galapagueño identity. Ultimately, an important question emerges about the impact of the creation of the Galapagos National Park in 1964 and the subsequent environmental education programs implemented by them and the Charles Darwin Foundation. Did these campaigns create environmental subjects, as Agrawal (2005) might suggest, or did they create an ‘empty’ sense of cultural identity among the human inhabitants?

The participants I spoke to seemed convinced that environmental education programs had mostly been successful in the archipelago. People rarely eat tortoises and are aware of the importance of conserving flora and fauna, both for tourism to thrive and because it is a privilege to inhabit this UNESCO world heritage site. However, as highlighted in Chapter 7 on the *coexistential rift*, Galapagos’ economic system has similarities to Appel’s (2012) description of an oil rig in Equatorial Guinea: *modular* capitalism allows companies to make tremendous profits, while practically disengaging from the local population. As mentioned previously, stark inequality (Salcedo 2008: 264) leads to resentment and conflict between social sectors. In turn, the practically hegemonic scientific understanding of the world as composed of ‘introduced’ or ‘endemic’ species leaves Galapagos inhabitants struggling to find a sense of belonging – precisely because there are people who tell them that they shouldn’t belong. In a pithy statement, a long-time resident told me

“the national park treats us like we're all enemies.” Although alienation due to the ‘fortress conservation’ model (Brockington 2002) is prevalent amongst ‘permanent residents’, the feeling is even more pronounced in illegal<sup>164</sup> or temporary residents, who know that their time in the archipelago is limited or have to live hidden from the law. One illegal farm worker on Santa Cruz Island complained:

I have thought about leaving sometimes due to migration problems. Since I can't do *trámites* (paperwork), I have to have things in other people's names. It starts to bother you...You can't get a loan, you can't do anything....I've lived here for 15 years so they should accept me now. I survived the entire pandemic...I really like Galapagos, and I always have some work to do... Galapagueños try to humiliate you<sup>165</sup>...We have the right to live. If I were doing some illicit activities, they would have the right to report me and say I'm stealing or smoking marihuana and can't live here, but in my case I focus on working and my plants. That's what I love. Having my plants is a joy. I grew up that way.

As I reflected on the idea that predominant scientific thought in the archipelago (the *conservationist paradigm*) has made it difficult for Galapagos inhabitants to form an identity and a sense of belonging, I raised the topic with an anthropologist who lives in Galapagos. He said that this theory of science being alienating was possible, but the intense individualism and competition in Galapagos is due to having to survive in the capitalist system, and furthermore that blame

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<sup>164</sup> During my fieldwork, I talked to two illegal migrants who spoke of having to run away from the police and keep a low profile to prevent themselves from being deported. Indeed, I was told stories of illegal migrants whose children grew up in Galapagos and are afraid to leave the archipelago because they may not be allowed to return. Others do come and go seasonally, pretending to be tourists, but finding work on the farms of the archipelago.

<sup>165</sup> The formation of identity is not just spatial, but also temporal, as recent migrants are often blamed by older migrants for supposedly being more destructive to the environment. Older migrants also like to highlight that newer migrants didn't have to suffer like they did. Back then there were few ships, no electricity, dirt roads, no airport, etc. The newcomers, they claim, are only motivated by making quick cash and sending remittances home or they plan to leave. However, as seen in my ethnographic account, many temporary and illegal residents love Galapagos and would love to stay for non-monetary reasons. One final interpretation of migrant relations is summed up by the following participant: “it's not that we hate new migrants. We get mad at the authorities because of their failure to control them.”

towards powerful sectors of society has become entrenched as part of a metanarrative to explain why people can't progress or have the livelihood they desire. To some extent, this inability to 'get ahead' is premised on the idea of an unfair political and economic system, but it is also the result of globalization and people's fear and distrust of outsiders. An NGO worker on Isabela Island elaborated:

Here people are afraid because they think any information they give will be used against them, so nobody wants to talk. The idea is that maybe if a study comes out they will implement more restrictions<sup>166</sup>, so we should not say anything. And so fear has been generated by hatred of conservation, hatred of the *afuereño* (outsider), hatred of associations (NGOs) and everything.

It is within this context of distrust, fear, and the inability to form a sense of identity and belonging (premiered on the scientific hegemony imported by outsiders) that my concept of the *coexistential rift* seems relevant. Economic woes such as debt and lack of credit increase people's anxiety, leading them to become market dependent and focus less on communal interests or the soil. In other words, people are much more willing to believe that all they need to do is work and make money in circumstances where they are constantly being told by more powerful social sectors that there is no community, no culture, and no identity – essentially everyone is alone in an archipelago filled with 'others'. As one farmer protested, "Galapagos has become a no man's land. There's drug addiction, brothels with minors, robbery", and another added that "the worst enemy of the Galapagueño is another Galapagueño." The *coexistential rift* is one form of economic

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<sup>166</sup> A farmer on San Cristóbal told me that the other reason people don't want to talk is that they "feel used...the years go by and nothing changes". In other words, abandonment by scientists, politicians, researchers, and people in power compounds over the years and amplifies distrust of outsiders.

slow violence within a greater context of structural violence and its impact is particularly destructive when one's sense of culture and belonging is denied.

## 8.2 Galapagos is a beautiful prison

“Conservation has taken people's land, imposed changes to culture and custom, and marginalizes them politically.” (Brockington et al. 2008: 125)

Thinking about conservation is utopia. There's only one way to think about conservation. You can kill an albacore tuna and put it in a can. Then you 'conserve' it, but it has a shelf life. In other words, you haven't conserved anything. You've just extended the time period in which you can eat the fish. So, these are natural resources and we protect them, but we're just postponing their eventual use. – Municipality staff member, Santa Cruz Island

Prior to my fieldwork, in 2014 and 2016, I both volunteered and worked at the Charles Darwin Foundation. Even though not all scientists held a 'radical' view of humans being banished from the Galapagos, the topic was sometimes brought up jokingly and their 'biocentric view' supported the argument that humans cannot coexist with nature in Galapagos, especially when 'extractive' professions (like fishing) still exist. The problem with this view is twofold: (a) it reifies a neocolonial model of 'fortress conservation', which denies human existence by prioritizing nature; (b) it portrays humans as a permanent introduced species, incapable of asserting their legitimacy and the cultural identity of being 'Galapagueño'.

Felipe, the rancher from San Cristóbal Island, told me multiple times that he believed scientists and conservationists exaggerated the problems caused by invasive species in order to attract funds, and other farmers concurred that despite all the research and conservation NGOs in the



archipelago, they weren't actually conserving the environment. Another farmer agreed with this view:

Me: Is Galapagos being conserved?

Farmer: It's mostly just talk.

Me: What do conservationists do?

Farmer: Well, they exaggerate.

Since I used to work for the Charles Darwin Foundation, I can attest to the fact that scientists are passionate about conducting research and also conserving Galapagos. However, in projects like the study of the *Philornis downsi* fly, which parasitizes and kills many of Galapagos' small endemic landbirds, the amount of research that needs to be conducted prior to taking action can take years before the appropriate biocontrol species is identified and they are sure it won't damage the ecosystem when it's introduced into the archipelago. Although Felipe recognizes this is important work, he has two central criticisms: a) scientific knowledge isn't shared with the community, as it is often just published in English academic journals; b) scientific knowledge should be applied to making human lives better, but rarely does science on the archipelago have a noticeable impact on the well-being of the community. He argued that too much attention is given to conserving the environment, and not enough is focused on people. As another farmer observed, "the [NGOs and government agencies] come and do surveys and they ask about problems, but maybe everything stays written and nothing changes". A participant who used to work in risk management stated this even more bluntly:

Sixty years ago when the scientists came, there were only aboriginal people here. They came with their 'wisdom' to 'illuminate' these poor and sad aboriginals...we the aboriginals are in exactly the same place where we were sixty years ago. Nothing has improved. Three or four people have gotten educated thanks to the CDF scholarships and all that. 0.01% of the population benefitted. There is no progress.  
– Long-time resident, San Cristóbal Island

Contrary to other farmers who make the same criticism, Felipe has decided to lead by example<sup>167</sup> in showing that a farm can have benefits both for people and conservation. He told me that an arrogant botanist from CDF had attempted to persuade him to use plastic water containers (Groasis Waterboxx<sup>168</sup>) to plant endemic species as part of a project called ‘Galapagos Verde 2050’. The scientist’s elitist attitude alienated him and it wasn’t until he was visited by an independent botanist researcher from Copenhagen, who was also cynical about CDF’s restoration work, that Felipe learned how to effectively breed both *Lecocarpus darwini* and *Scalesia gordilloi*, a project that he now manages independently on his farm. This initiative is part of his successful agrotouristic business, which attracts international high school and college students to volunteer on his land. During my farm stay I witnessed a group helping to reforest these endemic plants, chop down invasive plants with machetes, milk cows, and even help distribute water to the community by connecting plastic tubes to the dam I helped build during a communal *minga*. He is also the creator of the aforementioned goat cheese project, which turns an invasive species into an economic asset. Felipe explained that his philosophy is to “work on the environment, but always with the community.” He employs people in the area to help cook for the volunteers or as farm labourers, so he is also providing local employment. Essentially, Felipe believes that “anything that is done in the populated areas will have an impact on the protected areas”.

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<sup>167</sup> In doing so, he is criticized by farmers who say he makes money from ‘tourism’, rather than making his farm productive.

<sup>168</sup> Incidentally, another farmer told me that he only sets up the technology when the scientists come to visit, but otherwise doesn’t believe that the technology works and even uses it to feed his pigs! He also told me that even though the ‘Galapagos croton’ (*Croton scouleri*) was being planted on his land he doesn’t see the point of restoring ecosystems with that plant, due to the fact that it already grows in abundance.



Images 46 & 47. *Lecocarpus darwini* and *Scalesia gordilloi*, planted on Felipe's hacienda.

Unfortunately, this kind of community integration is lacking in the work done by the conservation NGOs on the archipelago. While there have been occasional social initiatives, such as the CDF's Shark Ambassadors program, which provided environmental education, in most NGO projects the social component is more of an afterthought. Furthermore, farmers are aware that conservation and politics are intertwined:

Here in Galapagos conservation has gotten politicized and that's not good. Conservation should be transparent and equitable and independent. It shouldn't have a political agenda, but that's how it has been. Many of the leaders in conservation have been following what politicians tell them to do at a national level. Just have a look in Santa Cruz at who the directors of WWF and the Galapagos National Park have been and you'll realize they are rotating...In my opinion it doesn't matter where they are from. What I care about is for there to be people who have the idea of developing Galapagos. They have to have good intentions. Many times the very people from here don't know how to conserve.

A great deal of the conflict with conservationists precisely has to do with the historical legacy of conservation in Galapagos. As a prominent long-time conservationist on the island noted:

In 1959, the National Park was created...At that time Galapagos was a backwater of Ecuador, but had been pretty roughly treated by a carefree bunch of people who hunted tortoises and ate them...Because the military were very powerful, [conservationists] could just put out an order [to take pet tortoises from people's homes for scientific reasons]. You didn't have to speak to all the people and be nice to everyone. It was just like 'this is what we're doing' and that's it...The transition from an autocratic to a

democratic system has not really developed in a way that is more encompassing of bringing people into the debate, and creating a more friendly dialogue. So that creates mistrust and a feeling of not being listened to and a feeling of 'whatever we do is wrong'...However, you have to have some rules in the park. You can't just tell people 'you're welcome to do what you like'...The problem is the growing population brings more demands...if you damage the national park, how viable is it to keep the economy running in Galapagos? So there does need to be a better way to integrate people into a) understanding the national park and b) the essential nature of this relationship: that the park can survive without the people, but the people can't survive without the park.

What's interesting about his last sentence is that it is basically paraphrasing a slogan from Conservation International: "Nature doesn't need people. People need nature". This same conservationist told me that many Galapagueños see scientists and conservationists as people who "have big fat wallets and fiddle about in nonprofit organizations". He argues that their work is essential to ensure a "stable planetary system" and that, contrary to the inhabitants' belief that scientists love nature more than humans, the scientists' premise is actually that humans cannot function without stable ecosystems. While this viewpoint makes sense for the long-term viability of a human population, in the short term the conflict caused by economic inequality and restricted access to resources cannot be avoided unless conservationists find ways to simultaneously benefit both humans and nature. Simplistic mantras like Conservation International's slogan sound tone deaf to people who have different access to nature's resources. For instance, conservationists like to state that over the lifespan of a shark's life it can be worth millions of dollars in tourism revenue, much more than its economic value in the shark finning industry. However, the actual question is where the money is going, because for a fisher the shark is definitely worth more if it's dead (Ospina 2006: 52-53). Meanwhile, the restrictions imposed on fishers are interpreted as a way of preventing them from progressing, and the fishers claim that the conservationists involved are not held accountable for their work:

Look, we [fishers] take care of Galapagos....Galapagos is falling apart...Those who really love Galapagos give money towards it, but...money is badly administered...The conservationists live calmly and sleep calmly because no one forces them to prove what they're doing. Believe me, if they were forced to prove their work, the conservationists would disappear. – Fisher, Santa Cruz Island

Although I am sure donors do request monitoring and evaluation of programs, this fisher's criticism reflects clear concerns about long-term ecological decline. In other words, if conservation work were successful, then wouldn't people be seeing Galapagos becoming more pristine, rather than increasingly covered in blackberry? Other farmers direct their wrath at tourism companies, which are allied with the conservation sector, saying that cruise ship naturalists speak about conservation and climate change, and their leaders praise conservation efforts or even donate to NGOs, but that ultimately this talk is hollow considering the amount of fuel spent on ships, the rubbish produced, and the anchors destroying the sea floor. Similar to the fishers' criticisms, farmers have asserted that it's easy for people to have a 'conservationist mentality' if they are economically well-off or if they make money from conservation work. This inequality and the large amounts of money that go into conservation work lead farmers to say that conservationists "are in the office and many people do it because they want their salary, rather than out of love for the environment". Furthermore, the farmers highlight that in agriculture the focus needs to be on making one's business economically viable, regardless of what this means in terms of pesticides or deforestation:

I am part of [the] Conservation International [conservation agreements], but it's hard to fight against the *plagas*...let's say I use *biol*, the slugs are still destroying the cabbage and the organic farmers tell me to add ash and milk. I try, but it's hard. Sometimes you need to use chemicals. – Farmer, Santa Cruz Island

It is said that humans progress within nature, but we're also destroyers, because in order to have

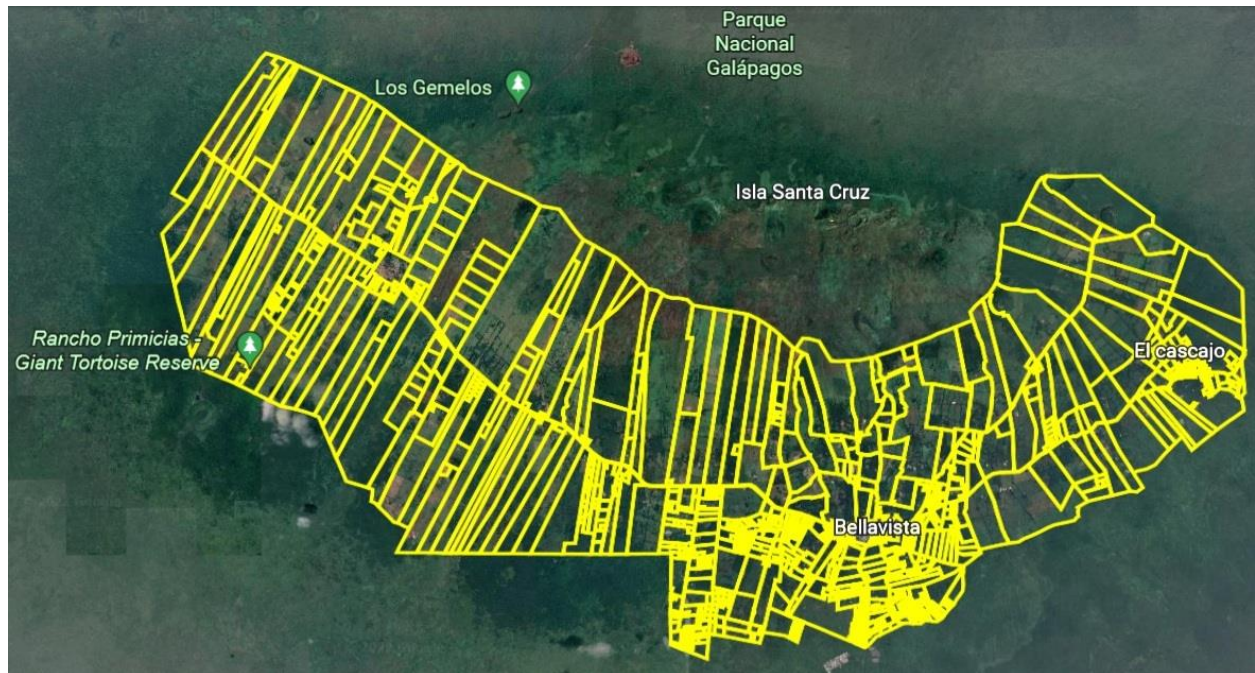
agriculture I need to chop down trees. What am I doing? I am destroying...Once we've exploited a forest, which I had to do it in order to plant, it hurts my soul and then there is nowhere else to plant or sell wood. So what am I doing? I am damaging the environment. I should maintain it. But to maintain a forest, who gives us our sustenance to survive? – Farmer, Santa Cruz Island

This is similar to an example given to me by a Cofán leader from the Ecuadorian Amazon during my Master's research:

[Imagine] there's a turkey standing in front of me. I know it's the only turkey of that species left in the world and my family is hungry and if I have the money to go buy a chicken, I'll let that turkey go. If I don't have the money to buy a chicken, I'll whack its head off and take it home with me to feed my family (Randy Borman, personal communication, August 19, 2015).

Since being able to exist within nature is essential for our conservation of it, it is clear that issues of wealth inequality in Galapagos need to be dealt with. For now, a 'fortress conservation' model (Brockington 2002) has been imposed upon the archipelago. Moreover, when the Galapagos National Park was established, it limited the amount of land that could be dedicated to farming and surrounded it with protected areas (See Map 2).

## Map 2: Geographically imprisoned



This map of the highlands of Santa Cruz Island shows how the entire agricultural area is surrounded by the Galapagos National Park, making people feel geographically imprisoned. The other three inhabited islands are very similar. Map data is from the Ministry of Agriculture, superimposed on Google Earth.

Effectively, this means that Galapagos residents often feel confined or imprisoned, especially because they cannot go freely into the protected areas without a permit – although some break the rules when hunting goats. Furthermore, even though some people go kayaking, paddle boarding, and surfing, these activities technically require permits. This privileges tourism companies that rent out this equipment, while reducing everyone else’s freedom. In the words of a rancher:

Right now it's prohibited to go to all kinds of places. When I was a kid we were very close to nature because we went more places, exploring the shorelines. Now it's prohibited to go kayaking. There was a director of the park who prohibited it. Before children would fish at the dock at night. Now it's not allowed. I'm sure 80% of the population here doesn't know how to fish...this is the only damn island [in the world] where you can't have a sailboat to go to the inhabited islands. In other words, you're a prisoner! You have no freedom. – Rancher, Santa Cruz Island

During the pandemic, one participant spoke about feeling imprisoned two times over: firstly by being on an island, and secondly in his confined apartment due to lockdown. Another farmer described in more detail the feeling of geographical imprisonment:

The pandemic has generated a whole series of issues, including the economic crisis... When you talk to people about leaving, you ask, ‘when do you get out?’, as if you were a prisoner... From my point of view, the problem with putting a fence around [Galapagos] is that it's like living inside a beautiful jail (laughs)... You're limiting people so much that even though you want them to love a place and protect it, you are forcing them to live in a way that's very much like a metropolis because people have to build upwards instead of expanding outwards. People want electricity, air conditioning, Internet, and all the things you find in a city. And you radicalize people even more because you don't allow them to spend time in nature.... Sometimes saying ‘no’ is much easier than working on creating something together. – Farmer and eco-cabin owner, Santa Cruz Island

Psychologically, this imprisonment can be tough. A common expression in the archipelago is ‘te coge la isla’ (the island takes hold of you). As a Floreana resident explained, “there comes a point when I have to leave Floreana because I say, ‘I’m going cuckoo’... and I grab my stuff and leave. Luckily I have a lot of family on Santa Cruz, so I can get refreshed outside and get different energy to then return”. Others take trips to the mainland briefly for medical checkups and to buy cheaper goods. However, the majority of farmers don’t have the privilege to leave. Moreover, a large proportion of farmers and other locals have never been able to see the beautiful touristy places Galapagos has to offer because the cruises are expensive and the tourism spots on the uninhabited islands are hard to reach. As a young Santa Cruz farmer said, “Many people in Galapagos don't know where they are standing... They don't know how special Galapagos is. And I don’t blame them, because access is restricted and it’s expensive”. A few companies have offered travel initiatives for school children and other select individuals, but still for the majority the beautiful ‘pristine’ Galapagos that appears in photographs and videos is primarily accessed on the



Internet and on TV even though they actually live in Galapagos. Another farmer from San Cristóbal expressed a similar feeling of imprisonment, but emphasizing the importance of caring for what one knows:

We're limited and can't go to the beach or exit the bay because there are restrictions everywhere. If you want to go surf at point X, you can't. The park doesn't authorize it. So, we live in a prison and we live in a place which we can't even enjoy...Give alternatives where humans can get to know the surroundings so that we can take care of it....you can't take care of what you don't know. And you also don't take care of what you don't love. So we need to change that.



Images 48 & 49. The mural on the left has the slogan 'Conserve what's ours', which is a popular sentiment in the archipelago. NGOs have succeeded in fostering environmental awareness in the archipelago, but not necessarily in making the discourse viable. On the right is a very iconic landscape viewed from the top of Bartolomé Island, which I photographed while working as a videographer on a cruise ship. The message Galapagueños receive is that the archipelago's beauty is only accessible to the wealthy.

Brockington's (2002) fortress conservation model highlights some of the central problems that occur in Galapagos. Although his descriptions of colonial evictions of indigenous peoples from natural parks around the world are different from the Galapagos context because the archipelago is a place where there really were no 'indigenous' people prior to 1535, the history of worldwide conservation work does actually come full circle. As mentioned previously, the first president of

the Charles Darwin Foundation, Victor Van Straelen, had previously founded the Albert National Park in the Belgian Congo, which involved evicting its inhabitants.

I am not espousing a system where there are no restrictions, because it is true that the islands are ecologically unique and it makes sense to protect their endemic biodiversity. However, policies should shift towards allowing the local population to experience more of Galapagos' unique natural heritage, either aboard subsidized cruise ships or by making it easier for people to enjoy and explore their environment by camping, kayaking, or paddle boarding. Furthermore, farmers and fishers should be supported, rather than viewed as the enemy. Not only were people living in the islands before the *conservationist paradigm* was imposed, but given their past experiences and vision of a calmer way of life, they could help to build a more sustainable model of coexistence between humans and nature. To conclude, I would like to highlight the opinion an ex-director of the Galapagos National Park Directorate expressed regarding sustainable development:

Galapagos is one of the most researched places worldwide, but it's also a place where a lot of theories of sustainability are being put to the test, because it's a relatively small place. You have an enviable biodiversity, a population that lives within and depends on environmental services from protected areas, but you also have capitalism that is responsible for all progress. The multinational companies are already here and that is something we should have avoided at all cost...Right now we are just surviving. We can't talk about a sustainable Galapagos because demographic growth has exploded and so has connectivity. There has been an explosion of the entry of invasive species, and the decline of species like the finches. We're trying to control here and there, but clearly Galapagos does not have a sustainable trajectory.

### 8.3 Metanarratives, blame, and insider-outsider dynamics

One way of understanding how the sense of Galapagueño identity overlaps with discourses of who is an insider and who is an outsider is by deciphering certain metanarratives commonly encountered in the archipelago. The main ones I will focus on are: (1) Galapagueños are lazy; (2) Tourism companies, migrants, and Chinese ships bring rubbish into the community; (3) Certain animals have more value than humans in Galapagos. While the first metanarrative may be a way of ‘blaming the victim’, a reflection of people’s changed expectations in employment, or a negative depiction of an idealized Galapagueño life of tranquillity, the latter two metanarratives are ways in which Galapagueños defend themselves from the feeling of marginalization under the conservationist-touristic paradigm, where they consider their basic rights aren’t taken into consideration. Below, the three metanarratives will be analyzed in more depth, explaining some of the key interrelationships in the archipelago and the allocation of blame:

#### 1. Galapagueños are lazy:

Firstly, as previously discussed, there is a positive narrative of a historical utopian Galapagueño lifestyle that is calm and tranquil:

The Galapagueño (of the past) hardly exists anymore. There are very few families. Many have left or died...The real Galapagueño is the one whose ancestors walked through the mud, put up with the rain, ate from the *fincas*...Look at my neighbour. He arrived before me and isn’t interested in working very hard. Just enough for day to day...They just want to live calmly, lie in a hammock, work a bit until they’re tired...that’s the real Galapagueño. – Farmer, Santa Cruz Island

However, a second discourse involved the claim made by Daniel that even in the past there was a culture of lazy people criticizing those who are hard-working<sup>169</sup>:

[In the old days, there was a farmer who would come] down (from the highlands) on his donkey with the chickens and we would laugh at him...the lazy ones laughing at the hard working<sup>170</sup>. That's what we've gotten used to...[Some people] are lazy and then claim that they don't have work and that these damn temporary residents and *introducidos* are taking our jobs away. But they've lived here for generations in times when anyone could come here and they didn't do anything! So now they live complaining. They had an easy life, so they live complaining. I don't identify with those Galapagueños.

There is also a third discourse about Galapagueños currently wanting “to work little and earn a lot”. This criticism is mainly targeted at young people who the older farmers see as wanting the easy work of tourism instead of hard and unprofitable work in agriculture. Young people are also accused of wanting more prestigious work, and some tourism operators stated that ultimately it is hard to find good workers in Galapagos, arguing that a migrant from Guayaquil will be more responsible because he wants to make more money and send it back home to his family. One hotel owner and rancher said that he thinks all island people around the world are lazy because they “think more philosophically and life is easier”.

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<sup>169</sup> A naturalist guide and farmer recounted the story of the ‘Ecuadorian crab’ vs. the ‘Colombian crab’. Apparently both types of crabs have been caught and are going to be boiled alive, with some crabs managing to crawl out of the pot. In the case of the Colombian crab, the ones in the water cheer on the ones that make it out and are happy for them, whereas in the Ecuadorian case the crabs try to prevent other crabs from escaping and if one gets out, they criticize it. While I don’t think this is necessarily the case in my country, I do find it interesting that when I conducted fieldwork with the Cofán of the Ecuadorian Amazon, Randy Borman explained that “[a]nytime anybody tries to get ahead of the rest of the group, there’s a huge social structure aimed at pulling them back...it’s not conscious...it’s just the normal reaction of the culture is to begin gossiping about that person, and decrying and inventing all sorts of rumours about how they got their wealth” (Randy Borman, personal communication, August 19, 2015). Growing up in Ecuador, I sensed a strong push towards more equality in our society, but it can be depicted negatively by those who feel that they aren’t allowed to ‘climb the economic ladder’.

<sup>170</sup> Another long-time resident told me how his father had helped install the first electric poles and the community bad talked him for being greedy, but he actually made no money from this act of ‘civic duty’.

Within the discourses of laziness, there are multiple possible interpretations: (a) the reality is that agricultural work truly is difficult (and poorly remunerated); (b) due to the LOREG of 1998, employers must first seek workers in Galapagos, which has made some people complacent about finding easy work; (c) young people have other aspirations because they don't see a future in farming; (d) many Galapagueños hope to obtain white-collar work; (e) young people are often labelled as being lazy drug addicts by the older generation; (f) the utopian ideal of being Galapagueño is to live a tranquil life, which others may view pejoratively as 'lazy'; (g) there is a tendency for people to bad talk people who work harder.

In any case, what is evident is that labelling Galapagueños as lazy may actually be symptomatic of the *coexistential rift*. Because tourism is more profitable and farming is difficult, farmers are forced to evaluate the threats to their livelihoods and consider which activities are most economically viable. As people leave farming or decide not to enter into agricultural activities, they are labelled as lazy, even though larger economic forces are at play. Finally, the metanarrative of laziness can also be used by farmers as a way of allocating blame towards recent migrants and the tourism sector.

What is most salient about the criticism of Galapagueños being lazy is that it has neocolonial undertones, as a contemporary expression of the 'myth of the lazy native' (Alatas 1977). Galapagueños are described as being lazy in order to justify inequality, marginalization, exclusion, and abandonment: they are deemed 'risk losers', individuals who in a Social Darwinist sense must have lost out in the 'survival of the fittest'.

## 2. Tourism companies, migrants, and Chinese ships bring rubbish to Galapagos:

Ever since the foundation of the Galapagos National Park in 1964, the conservationist paradigm has successfully launched campaigns in the archipelago to ensure that people recycle and don't litter. Rubbish is therefore used by different social sectors to accuse each other of not caring for the archipelago. For instance, Daniel complained about the tourism sector:

People always say 'for whom am I conserving?'. It's other people who take the money out and become millionaires based on what I conserve. It's a very important question. Because people say,

‘If I don't benefit<sup>171</sup> directly from conservation, then why do I do it?’ They sell you the idea that the main predators on the islands are the Galapagueños. The fisherman says, ‘who are you conserving for? So that the Chinese can come and take the fish out of the reserve? I won't conserve for that’. And these thoughts are reasonable! Who am I conserving for if [a tourism ship] takes all the passengers and here they just leave us garbage?

Ultimately, rubbish has become entangled in discourses of belonging, conservation, and inequality. In ‘An Ontology of Trash’ (Kennedy 2007), the author explains that the word ‘trash’ is pejorative, denotes a lack of care, and can also have violent connotations. Thus, when farmers use it to criticize tourism companies and speak of them extracting money and leaving rubbish behind, they are highlighting *modularity* (Appel 2012) and the symbolic violence of inequality. Because wealth is not fairly distributed, people start to question who they're conserving the islands for. A conservation ethic will only last as long as the archipelago is economically viable and it is possible for everyone to get a piece of the cake.

My participants also used rubbish accusations as a way of blaming Galapagos' problems on recent migrants and the Chinese fishing fleet:

It's good that we're a thousand kilometres from the mainland. That is in our favour. But we're still affected by plastic contamination that comes from Asia and China. There's also the issue of fishing exploitation from China and elsewhere [just outside the Galapagos Marine Reserve]. They leave garbage and consume marine resources. – Young resident, Floreana Island

We have a lot of people who come to Galapagos to work. They just come to make money and then leave...and they come from areas where nature is not the priority...It's normal for them to throw rubbish on the streets...They come from that environment...I know we give them an [environmental] 'induction' [when they arrive], but obviously it's not good enough.

– Young farmer, Santa Cruz Island

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<sup>171</sup> A different farmer told me that "maybe those who don't have that feeling of love for the environment have a wound in their heart, caused by the [fact that they live in Galapagos, but ships prefer to hire outsiders and] won't hire them to work."



Image 50. This mural from Santa Cruz Island reads “more life, less rubbish”.

In other words, ‘rubbish’ is used to undermine certain social groups by portraying them as destroyers of the archipelago. Interestingly, an illegal migrant on Santa Cruz Island defended himself against the permanent residents’ accusations of contamination by blaming them for the same thing. He claims that:

It's a lie that outsiders damage things. People who come from outside come to work. Occasionally a few come who are lazy, but the majority are hard working...In terms of conservation, it's not just migrants who throw rubbish. I've seen Galapagueños who drive around in trucks and throw their rubbish on the road.

Because there is an overarching conservationist paradigm where it is morally good to recycle and not create rubbish, people have appropriated this language to fight back against tourism companies that ‘pretend’ to be conservationist:

The people from here conserve what they can, but the large tourism monopolies here aren't interested in conservation. They say they are, but in practice they aren't. Because if they really did care, all the rubbish from the ships would be taken out. They get so much money from here, but they don't give anything in return. – Farmer, San Cristóbal Island

Finally, rubbish is a very real and visible threat in Galapagos, especially when landfills are receiving so much trash from tourism ships. As a farmer pointed out, “There are restrictions for residents...but no restrictions for the 'magnates' and big businessmen...Garbage (from the ships) goes into the sea. And who needs to clean up? Galapagueños!” Even though trash may symbolize the impact of the tourism industry, the negative impacts of the industry go further:

Read any report from the [Galapagos National] Park or the [Charles Darwin Research] Station...the majority end up saying that the problems of Galapagos are migration, introduced species, and rubbish. And what about tourism? What does tourism leave socially? It leaves you three things: drug addiction, alcoholism, and clandestine prostitution...People may protest and say that tourism leaves many positive things, but tourism has also brought that...and I'm also talking about Acapulco and Rio de Janeiro. It happens everywhere. – Municipality staff member, Santa Cruz Island



Images 51 & 52. The recycling plant on Santa Cruz Island also has stacks of unrecyclable materials (left) and, curiously, the yellow sticker on the right identifies one of Galapagos' cruise ships. Literally, ships are dumping rubbish on the islands.

### 3. Animals have more value than people in Galapagos:

I met with a long-time conservationist who highlighted the importance of systems thinking and bringing in community viewpoints. In defence of the government, she criticized the members of the citizens' government platform, the *Junta Ciudadana*, for continuing to say “nobody is listening to us” and “they make us live like animals, but they have so many millions to protect the area” even after the President of the Republic had received them in Quito. I argue that the reason they continued to make these complaints is because they still didn't feel listened to or that their worries were taken seriously. One clear example Felipe gave, took place during the 2016 drought, when he warned the Consejo de Gobierno about the drought's impacts on



cattle but no action was taken until cattle had been dying for months, after which a ‘state of emergency’ was finally declared. It is possibly human nature to complain about the government, but when politicians talk with citizens yet nothing seems to change, then it’s a matter of discourse not matching reality. As two participants remarked:

Why don’t conservationists care about how the inhabitants of Galapagos are living? Why don’t they care about the tons of rubbish that are left by the tourism sector? Why don’t they worry about the fact that we haven’t had potable water for over 60 years? – Fisher, Santa Cruz Island

The Consejo de Gobierno gives millions of dollars to the National Park for invasive species, but there aren’t enough medicines at the hospital. – Farmer, Santa Cruz Island

More than one official responded to the residents’ long-term frustrations with the government by stating that these matters do not fall within their jurisdiction (*competencia*), ultimately leaving Galapagueños to continue bad talking the authorities (*autoridades*) while observing that large sums of money are arriving to the archipelago for conservationist projects. Furthermore, people clearly witness animals continuing to get more attention than human beings:

Just twenty days ago on San Cristóbal there was a car that ran over a sea lion because the driver didn’t see it. It became a huge scandal, like you have no idea. A while back they killed a guy here and until now they haven’t done anything about it. They want to arrest the man who ran over the sea lion, but for our friend they do nothing. That’s how Galapagos is being managed. They give more preference to animals than to us. – Farmer, Isabela Island

In addition to the above example of someone getting away with murder while others were fined and vilified for accidentally killing a sea lion, in Chapter 6.1 I mentioned the story of a girl who died due to lack of transportation outside the archipelago, while a tortoise was transported to Miami for medical attention. Undoubtedly, the reason people may feel that more money is going into conservation work is because conservation is a prominent economic sector with close links to the tourism sector (they are some of the biggest donors). As Daniel explained, “I think we should conserve, but I think conservation is like a religion. Some really truly believe in it with conviction and others are into the money”. Another long-time resident

said, in a similar vein: “I think there has been a huge international responsibility, unwittingly, for creating a lot of rules that are not really there to save Galapagos, but to show that we are doing everything we can”. Although different institutions and NGOs can get away with saying that healthcare and education aren’t their jurisdiction (*competencia*), in the eyes of farmers and fishers, the ‘authorities’ have failed them. Why? Because of rampant inequality, leading to many of my participants feeling like the “doors are closing” on them. On Isabela Island I also spoke to fishers who admitted to having conducted shark finning in the past and who now felt that they had few economic activities to turn to. In desperation, people must sell their lands, become *todólogos* (jacks-of-all-trades) as a “survival strategy”<sup>172</sup>, and potentially even use some *viveza criolla* (creole cunning) to get by. Until the income disparity and the problem of not wanting to employ Galapagueños because they are supposedly “lazy” are addressed, we will most certainly continue to hear complaints that in Galapagos people only care about animals and not people.

These three metanarratives of *laziness*, *rubbish*, and the *inferior value of humans in a conservationist paradigm* are all ways of allocating blame and (de)legitimizing people’s belonging and claims for equity in the archipelago. In the aforementioned conversation with a conservationist, I firmly disagreed with two of her assertions: she told me that more money was spent on social issues than on conservation and that Galapagueños have no culture. As mentioned previously, Galapagos is a melting pot of cultures, but it is the current *conservationist paradigm*,

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<sup>172</sup> One rancher from Santa Cruz assured me that if farmers had more education and employment opportunities, they would all exit the sector and do something else, which is why their children also do not want to work in that area. However, some people I interviewed enjoy working in agriculture and when asked if they wanted to do anything different, they would say, “I like what I do. I don’t see myself doing something else, sitting in an office. Because I was raised in the *campo*...Also, the challenge is to show that you can make a living off a *finca*....you can technify the land and use less of it. It’s hard, but the challenge is what keeps me going, what keeps me focused and motivated”. A Floreana resident told me that he would prefer to work only in agriculture, but that unfortunately “it’s not economically viable” to work solely as a farmer.

increasing market dependence and indebtedness that attack residents' sense of belonging in the archipelago. Furthermore, the conservationist's claim that more money is spent on human issues than on conservation work, while potentially quantifiably accurate, doesn't address the root problem of the communications rift between the scientists and the rest of the community, or the fact that there is great inequality and corruption in the archipelago (See Chapter 8.4). While conservationists may not see this as their issue, because taking care of people is allegedly the responsibility of the government, it is unlikely their conservation work will have a long-lasting effect on the socio-ecological system unless they also focus on social problems.

Returning to the metanarrative about animals being valued more than humans, Galapagos farmers clearly object to being labelled as a permanently introduced species that is denied belonging in an archipelago that focuses on being a 'scientific laboratory' and a place to be made more 'pristine'. The idea that rubbish is all that is left behind by tourism is clearly evidence of people's sense of disconnection from the wealth generated in Galapagos. As Salcedo (2008: 33) has shown, outsiders can generate wealth while locals are marginalized. Of course, during the pandemic even less money entered the islands, so the local population wants tourism to return, but that doesn't mean the previous model was ever viewed as fair or equitable.

Galapagueños tend to blame outsiders for their troubles, and they would actually be correct when it comes to tourism companies and politicians. Recent migrants have become scapegoats in a Neo-Malthusian argument (Eibl-Eibesfeldt 1960, De Groot 1983, Bensted-Smith 2002) about there not being enough room for everyone in Galapagos. As Tom Douglas argues, laying blame on scapegoats is a way in which a community sacrifices people for the "purification of others" (1995: 6). All of these metanarratives can be summed up under a general sentiment of social and environmental decline. Everyone is trying to find legitimacy and to label others as outsiders who

must be blamed for the decline. But what is the cause of this sentiment? Debt, neoliberal capitalism, globalization, individualism, and the *coexistential rift*. Despite yearning for a deep *coexistence*, this utopia is located in people's nostalgic past, as they continue to confront the rapid flows of invasive species, migrants, Covid-19, climate change, and other threats that enter the archipelago from the exterior.

#### 8.4 'The laws were made to be broken'

It's been corrupt since the very beginning. – Long-time resident, Santa Cruz Island

According to the World Bank Gini Index<sup>173</sup>, Latin America is the most unequal continent in the world and Ecuador is currently in 20<sup>th</sup> place. Under these circumstances, it is unsurprising when people cheat, steal, or commit illegal acts in order to gain advantage. In Scott's *Weapons of the Weak* (1985), the author outlines everyday forms of peasant resistance, such as “foot dragging, dissimulation, false compliance, pilfering, feigned ignorance, slander, arson, sabotage and so forth” (1985: 29). In the Galapagos Islands, a place where environmental restrictions are interpreted as forms of hampering social development, it is therefore common to see people breaking the law, whether it be by eating the protected Sally Lightfoot crabs (*Grapsus grapsus*), chopping down protected *matazarno* trees (*Piscidia carthaeensis*), going fishing without a permit, owning a hunting gun without a permit, or camping illegally. Participants often highlighted that some of these activities, like fishing or occasionally eating a crab, are not going to destroy the archipelago, but it is good that the Galapagos National Park regulates them because otherwise illegal activities would be even more prevalent.

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<sup>173</sup> The Gini index is a measure of wealth distribution in a population, with higher numbers denoting greater inequality.



Image 53. Sally Lightfoot crabs are some of the few native species I heard locals still eat.

When speaking to a farmer about migration, he highlighted that even though the latest census states there are around 30,000 people living in Galapagos, the real number is probably much higher, and that “Ecuadorians will come even if they have to swim! We’re inventive! It’s our *viveza criolla*. There would be more migrants if they hadn’t implemented the [LOREG] law.” The term *viveza criolla* (creole cunning) is used prominently all over the country to justify acts of resistance, which could consist of harmless illegal actions, like raising the price of a product for tourists, but can also include more serious offences, such as bribery, tax evasion, or corruption. As explained by Sanchez-Jara & Rosado-Cusme (2019), the various forms of trickery inherent in *viveza criolla* are portrayed positively due to the idea that marginalized people can thus resist the injustices of higher classes and the state. Furthermore, as highlighted by Herbas-Torrico & Gonzalez-Rocha (2020), this cultural phenomenon has a long historical trajectory, dating back to colonial resistance against the Spaniards. In fact, *viveza criolla* has become an “anomalous exercise of freedom...as a mechanism of adaptation and survival” (Ibid: 137).

In the context of growing economic disparities, *viveza criolla* can be seen as a way of overcoming and resisting the forces of marginalization and exclusion associated with increasing inequality and market dependence. However, on a macro level, the more radical form of *viveza criolla* increases the amount of corruption and political trickery occurring in the archipelago, which paradoxically perpetuates conditions of inequality. Like other members of the population, politicians are prone to believe that it is better to “rip off than be ripped off” (Sanchez-Jara & Rosado-Cusme 2019: 7); this amplifies the separation between ‘risk winners’ and ‘risk losers’, ultimately bolstering the *coexistential rift*.

One clear example of this emerged when I visited a ranch on Santa Cruz Island. The rancher and I were sitting under the eaves of a building as the *garúa* shrouded his land with a misty veil. When speaking about political abandonment of farming, he exclaimed in frustration, “There’s so much corruption here in Galapagos!” Shaking his head, he continued:

My [extended family member], who was the president of the Junta Parroquial, told his son, ‘The salary is something symbolic. One works for the *obras*<sup>174</sup> (construction contracts)’ ...What principles are you teaching someone? You’re saying that you’ll get out of debts because you’ll have an *obra* and then figure out how you are going to take a cut...He’s saying out in the open that he’s going to steal! I don’t even think he knows he’s saying something wrong!

Before I thought the NGOs were here to conserve Galapagos, but now I realize it’s just a business! They make hundreds of thousands of dollars...and the civil servants are there because they get paid...pure show, but no benefits...there’s a lot of corruption at the Galapagos National Park! Whenever

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<sup>174</sup> Another example mentioned to me concerned the lack of viable sewage treatment in the archipelago. People have been discussing this issue since the 1980s or earlier, but haven’t seen progress. This was explained as follows by a farmer: “The sewage in Puerto Ayora is in a dismal state...it’s the municipality. They say the ‘obra’ will cost one million...The consultant takes \$300,000 and the other \$700,000 are taken by someone else...So then later they hire another consultancy because something was missing...corruption is like that...Unfortunately, Ecuador is like that”. Similar arguments are made about the construction of roads and potable water infrastructure.

they hire helicopters or if you have to bring gasoline for the ships, they are already filled with fuel that's been paid for. There's so much corruption and there's no way of cleaning that up.

A taxi driver who used to work for the Galapagos Biosecurity Agency (ABG) told me plainly that he had witnessed corruption involving the cars the staff drove, where they would pretend the car broke down and then everyone would get a cut of the mechanic's costs. Multiple participants have asserted that it is the people in power who break the laws and it's "like an eagle taking care of the eggs". One rancher even suggested I reach out to Interpol to unravel the animal trafficking network in Galapagos, which he says is deeply intertwined with the leaders in the conservationist sector. Such rumours have not been verified, but demonstrate the lack of trust towards authorities, which farmers use to justify engaging in minor illegal actions, following the logic of something being acceptable because everyone else is doing it too. On the other hand, some of the scientists I talked to spoke of the millions of dollars that have been spent on potable water and sewage over the years, with little success, as evidence that even though people complain that too much is spent on conservation and not enough on people, this is a false narrative – it's just that money spent on social causes is spent on consultants, ineffective projects, or corruption.



Image 54. 'What Galapagos politicians: promise / do', 1/11/2020, @expatgalapagos [Facebook page].

It is no surprise that the genre of magical realism thrives in Latin America. Everyday stories seem fantastical and absurd, but are actually based on people's daily challenges. During my time in Galapagos, a policeman attempted to smuggle out 185 baby tortoises in a suitcase (Deutsche Welle 2021) and a mysterious passenger airplane was detained on Isabela Island, only to disappear afterwards despite being guarded by the police (Redacción Plan V 2021). Rumours about the plane abound, including stories of *narcos* smuggling drugs or of decapitated corpses washing up on Fernandina Island. True or false, these rumours are related to the confirmed existence of animal and drug trafficking groups in Galapagos, and residents feel the archipelago is a lawless place where the people in power can't be trusted. If a policeman is smuggling, then what authority figure can be trusted? Animal traffickers are said to be able to sell each tortoise for \$5,000 (BBC 2021), so more smuggling attempts occurred well into 2022 (El Comercio B 2022). Demoralized park guards admitted to me that nowadays there is little incentive to report illegal activities because in the end they also get drawn into the lawsuits (and must pay their own legal fees) since there is suspicion they could also be involved in the case – troublingly, this would mean that the people in charge of controlling illegal activities may not fulfil their duties<sup>175</sup>. Furthermore, although the rumours about drug trafficking are grounded in actual fact, they are sometimes censored due to fear. As a participant from Isabela Island explained:

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<sup>175</sup> Obviously, there are many park guards who do their work, but the participant quoted below seemed especially disillusioned by the way they get 'punished' for catching the smugglers, so there's little incentive to do so. He also highlighted that the budget for the park has been slashed, meaning that less field monitoring can feasibly be conducted. I have been told that some naturalist guides stop reporting to the park because they don't see any actions being taken. Of course, the news of additional smugglers getting caught suggests that at least some of the criminals are being arrested.



In every meeting [with the ranching sector] I bring up the drug issue...[John Smith] was threatened by the drug traffickers. They told him to be quiet or otherwise he would suffer the consequences...So people have to cross their arms and let the party continue.

Another participant from Floreana also speculated about the airplane incident:

How much *narco* money must have disappeared?...Overnight the plane [that had been captured by the police] vanished. If there's a navy and police force on Isabela, they should have prevented the plane from leaving.



Image 55. The 185 baby tortoises were found in this suitcase, and it is likely that there are other cases of animal trafficking that go unnoticed. Photo by Aeropuerto Ecológico de Galápagos (BBC 2021).

Finally, in 2022 it was revealed that over \$3.7 million were stolen by employees at the hospital on San Cristóbal Island during the pandemic (El Comercio A 2022). Hence, even though it is a worldwide trope to complain about the incompetence and corruption of ‘authorities’, it must be noted that in Galapagos these complaints seem well-founded. Admittedly, Santa Cruz, Floreana, and San Cristóbal are less controversial than Isabela Island, but people still feel abandoned by the political class. Daniel told me he had friends who said he would be a great politician, but he doesn’t want to because he isn’t corrupt. He explained that:

“Everyone [else] wants to become a politician because that's the easiest way to become a millionaire...Here in Ecuador there's no political ideology or anything like that. Here the only

interest is money!...People point the finger at the politicians who are corrupt, but if they were in their spot they would have no problem with it.”

When questioning whether the political abandonment of farming was intentional or due to incompetence, he replied:

They're very good at technical consultations, but terrible at solving problems. They sell you smoke...They will develop a bla bla bla improvement project...but it doesn't lead to sheep or sowing...If they spend state resources and NGO funds and they know nothing is going to change, then they're doing it to maintain their job or obtain contracts...that isn't very ethical.

A staff member from the Ministry of Agriculture (MAG) highlighted that a lot of the bureaucracy is externally imposed on Galapagos and that filling out forms incorrectly could lead to fines for the individuals involved. Therefore, the MAG agronomists would focus on getting signatures from the farms they visited, taking pictures of the work they were doing, and writing up reports. Interestingly, the Comptroller General for the Ecuadorian government, Pablo Celi, was accused of corruption during my fieldwork; since the comptroller is responsible for ensuring that civil servants account for all their expenses, he allegedly bribed those who had any irregularities, making their fines disappear if he got paid (González 2022).

As I observed in my master's thesis about the Cofán people of the Ecuadorian Amazon (Stimson 2016), the Ecuadorian government is a “negligent hegemonic state”, which means that while they attempt to extend their control over their territory by expanding the government's regulatory role (leading to a new migratory wave of civil servants to Galapagos during the Correa presidency), they are simultaneously uncaring or negligent of their citizens. This paradoxical negligent hegemony is probably a symptom of neoliberal capitalism, since what is important about Galapagos from the government's point of view is their capacity to generate revenues, and therefore the wellbeing of marginalized Galapagos farmers is seemingly of no concern.

It is within this environment of political abandonment that the *coexistential rift* thrives. In the context of the pandemic, when income was scarce, one Galapagueño farmer/naturalist guide I spoke to showed interest in stock market investing because he knew a sailor who had made money that way. Other individuals at the Ministry of Agriculture wanted to partner with me in a potential future Galapagos business venture. It seems that some Galapagueños make partnerships with outsiders to then climb the socioeconomic ladder, especially in a restrictive environment where there are limited economic opportunities outside tourism. Three participants asked me if I wanted to buy land with them, implying that I would be investing more than the legally allowed 49% as a foreign investor. In theory, permanent residents must contribute at least 51% of the capital, but my participants explained that often the foreign partner paid more under the table<sup>176</sup>.

Illegal acts, such as going fishing without a permit, seem legitimate during a pandemic because it is unethical to prevent people from feeding themselves. Another source of contention was the ownership of dogs and motorbikes, which would appear on the streets without anyone knowing their origin. It is obvious that pure dog breeds<sup>177</sup> don't appear out of thin air, but residents didn't complain because it is often people in power who are breaking the rules and importing items illegally with the help of fishing boats. My participants explain why all of this is possible:

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<sup>176</sup> On San Cristóbal Island there were accounts of a 'Chinese man' (although some said Peruvian) who had purchased land in the highlands and had many large greenhouses that farmers worried would flood the market with cheap produce and make it difficult for smallholders to compete. If a new Galapagos law is written, it needs to include a clear land investment regulation that could be enforced to prevent these illegal actions.

<sup>177</sup> Many people desire pets and cars – a normal part of life outside the archipelago – and this increases residents' frustration with Galapagos restrictions. Supposedly farmers can have cars for their work, but one of my participants said it took him “seven years of constant fighting” to get one. The bureaucratic difficulty in obtaining vehicles is a problem for many because the transportation of goods from the highlands by taxi can be very costly. However, I have also heard of some farmers who subdivide their farms and illegally obtain multiple cars, which they then can use as taxis.

Here if you have a godfather, you get baptized...It scares people to apply the law when they're dealing with their cousin, brother, *compadre* (friend), father-in-law, etc. So, the law is just applied to the biggest *pendejo* (idiot). That's the reality. But if you've got a godfather, nothing will happen.<sup>178</sup> – CDF staff member, Santa Cruz Island

More succinctly, Mariana said that “laws were made to be broken.” Other participants stated that “when there are many restrictions people end up doing things illegally” and “Galapagos is run by mafias”. The recognition of the need to bolster law enforcement is shared by other academics (Varea 1997: 154). Older residents remember that when they were younger and possibly even up to the 1990s, before the rapid growth of tourism, politics in Galapagos was not as controversial as it is now. Nowadays, “Galapagos is someone else’s *hacienda*” because it is being ‘managed’ politically and economically by outsider tourism companies, Ecuador’s political elite, and international conservation organizations. One example of this is the widely-cited rumour that the Minister of Environment was involved in forcing a director of the Galapagos National Park to resign after he stood up to a large tourism company that wanted to break the laws related to *cupos* (permits) for the number of passengers allowed on ships. This highlights that even if tourism

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<sup>178</sup> I knew of multiple farmers who have gotten away with not following strict rules regarding pigsties and chicken coops because of their family connections, whereas others are burdened by bureaucracy and sometimes give up on projects because there are too many requirements and it is too costly to comply with them. One older resident on Floreana Island protested that she used to keep her chickens by the hotel she runs, but the government threatened to shut down her business and she begrudgingly moved the animals to the highlands. For other farmers, breaking the law or contesting it is a question of ensuring the viability of agriculture, whether by bringing in chemicals for hydroponic production or by importing the fungal pathogen *Beauveria bassiana* to combat the *broca* on coffee plants. Some residents feel that the rules are too strict and it is unfair when they are caught fishing lobster during restricted dates or accidentally running over an iguana, each of which can lead to thousands of dollars in fines and loss of one’s residency. As one farmer cynically remarked, “there’s no penalty for the drug dealer, but if you commit a crime against the environment then you’re screwed!” Fishers particularly like to remark that Chinese fishing ships are pillaging the oceans right outside the Galapagos Marine Reserve, while the Galapagos authorities are restricting the local population’s fishing activities.

companies aren't entirely in control of local politics, they can exert power nationally to sway what happens in the archipelago. In the words of one participant, there are "political mandates from outside [the archipelago] and you have to comply".

A Galapagueño friend who used to volunteer with me at the Charles Darwin Foundation recently told me that politically she felt Galapagos never changed – like in the game of 'musical chairs', those in power would simply change leadership roles. Or, as a farmer said, "You know why it hasn't changed? Because it's the same people who occupy the political posts. Today there's Juanito and tomorrow it's Pablo, Pablo leaves and Juanito returns, and so on." For instance, the head of the Galapagos National Park become head of the Charles Darwin Foundation and later worked for the National Electoral Council. So, for those outside of the power elite, the general sentiment was that opportunities on the islands are rigged against them, that it's almost impossible to get a good job without *palancas* (connections), and that politically and economically the system isn't set up to ameliorate the daily lives of the islands' residents.

Although there are people who claim that the Galapagos law (LOREG) should be reformed again, others say that the law was a failure to begin with because its central purpose was to restrict migration and that didn't happen. Furthermore, it is unclear how family connections and nepotism in the archipelago can be dealt with. Despite calls for stricter enforcement, the policemen themselves are involved in some illegal actions, and the government often puts hundreds of "people behind desks and one person in the field, but they say they don't have enough personnel or funds<sup>179</sup>". I have been told that the number of civil servants in the islands skyrocketed during the Correa presidencies (2007-2017) and they brought all their friends from the mainland.

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<sup>179</sup> From my visits into the highlands with veterinarians it seemed that there were funding problems because often the MAG staff needed to buy their own medicines and even gasoline for the vehicles. Of course, this could also be caused by mismanagement of the budget or problems related to the central government.

Furthermore, funds that used to be for Galapagos are now sent to national parks outside the archipelago. Some argue that Galapagos should have greater political and economic autonomy. It is difficult to envision how that would happen, but I agree it would help confront the power imbalance with powerful outsiders who are more aligned with the interests of the tourism industry, the public sector, and the conservationists.

### 8.5 Paperwork is a business

For Weber, the likely future was one of ‘uncontrolled bureaucratic domination’ - we are all destined to live in a ‘steel-hard cage’ of rationality, expressing the combined influence of bureaucratic organization and machine technology. We are all due to be tiny cogs in a vast and well-oiled system of rational human power...[Max Weber’s vision] does not correspond to the world in which, at the end of the twentieth century, we in fact find ourselves. We do not live in a world which feels increasingly under human control but, rather to the contrary, one which seems to run out of control - in the words of Edmund Leach (1968), a ‘runaway world’... The uncertainties which we face do not result, as the thinkers of the Enlightenment tended to believe, from our ignorance. They come in some substantial part from our own interventions into history and into the surrounding physical world. (Giddens 1996: 366)

The dichotomy between Weber’s ‘uncontrolled bureaucratic domination’ and Giddens’ chaotic world that has “run out of control” seems unfounded because my ethnographic experience in Galapagos demonstrates that over the last two decades there has been an increase in bureaucratization in addition to greater chaos. During Rafael Correa’s government (2007-2017) there was a large expansion of state agencies, which led to more civil servants entering the archipelago. In spite what is perceived as an increasingly chaotic world due to *manufactured risks* (Giddens 1999b), there is no less paperwork. In fact, David Graeber calls this the “age of ‘total bureaucratization’” (2015: 18) due to the “gradual fusion of public and private power” (Ibid: 17) and what he calls the ‘iron law of liberalism’:

The Iron Law of Liberalism states that any market reform, any government initiative intended to reduce red tape and promote market forces, will have the ultimate effect of increasing the total number of regulations, the total amount of paperwork, and the total number of bureaucrats the government employs. (Graeber 2015: 9)

Bureaucracy in Galapagos is of particular interest because it permeates all levels of society and establishes some of the basic antagonisms between the ‘authorities’ and everybody else. Furthermore, it lays out the set of rules and restrictions that people live under, which they protest and circumvent, and also creates a social sector of civil servants in the archipelago that essentially live off of creating paperwork. *Oficios* (formal letters) are needed whenever organizations such as the Charles Darwin Foundation want something approved by the Galapagos National Park, *cupos* (permits) are required by tourism companies which cannot operate a ship without one, and *parmas* (fishing permits) are limited to a small number of fishing families who are allowed to operate. Furthermore, farmers told me about the complicated bureaucracy involved in getting a permit to be able to sell produce at the marketplace, to legally have a chicken coop or a pigsty, or to import seeds legally. In the end, my participants said they prefer to bring in their seeds illegally and not have a chicken coop at all because it requires too much paperwork. One frustrated farmer from Isabela Island, who used to be a fisherman but left the sector because it was no longer profitable<sup>180</sup>, explained to me how his options were running out:

Here they tell us to leave some documents and after 15 days you have to return because something was missing, but finally they'll say, 'you won't be approved because you don't live on the *finca*' or for whatever reason. So I have thought of migrating, but nobody wants to buy my land. Many doors in

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<sup>180</sup> My conversation with this farmer highlighted the desperation people feel on Isabela, especially if they don't make money from tourism. Fishers made a lot of money during the sea cucumber boom a few decades ago, but since then they have not had many alternatives. This man bought a plot of land in the highlands and feels pushed into the ‘corner’ because his options are running out.

Galapagos are closing... We've been pushed into a corner... There are certain people in tourism who are doing well, but the rest is collapsed... If I want to have white chickens here, there are so many requirements for the ABG... Imagine if there were alternatives! Now there are too many guides and that's saturated. There are no jobs<sup>181</sup>. Any business you establish gets ten next door!

Furthermore, these problems transcend the agricultural sector. Young people from Floreana Island told me that due to bureaucracy, restrictions, and a lack of employment opportunities they didn't think they would be able to live in Galapagos even though they love their home. Also, during an enlightening conversation with a long-time resident and hotel owner in Galapagos, I was told the following:

If the farmers are complaining, you have no idea how bad [the bureaucracy] is in tourism. Here the National Park is universally despised by all operators... as an institution it's this rigid pile of paperwork... To get my boat operation I'm treated like an ex-con on probation... It takes so much paperwork to have a boat. It's not like you just register it and you're done. Every time you want to move your boat and go fishing, there's a stack of documents just to leave the dock. You can't do it. It's a full-time job. If you want to take a walk along the coast – 'No, that's illegal'... Galapagos was made a province in 1974<sup>182</sup> and up to that point we were around 2,600 people living here altogether in the entire archipelago... They made Galapagos a province and the population instantly grew by 1,500 people because there weren't enough people who knew how to read and write and fill those jobs... Between corruption and ignorance, all of the public projects are badly designed... [Under Correa's government] we went from about 11 ministries to around 36 or 38 ministries... [In addition to the large influx of people, there were] brand new buildings for all the new ministries... All of our legal structures that control what we do and how we live are from the Sierra (Ecuadorian Andes), and the town is full of people who have zero awareness. They are city people in Galapagos.... The most likely future is more

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<sup>181</sup> Another participant followed up on this: "If there's abandonment on the other islands, here in Isabela it's worse... Here you can protest, but nobody will listen to you."

<sup>182</sup> A long-time resident of Santa Cruz Island recounted that she was a girl when this happened and her father said, "Oh no, now it's all going to shit' because before we weren't anything and we lived happily. There were no laws, everyone respected one another, there were no thieves, nothing at all. We were very few. So provincialization was the first mistake."



of the same, due to the cultural rigidity of bureaucracy...The bureaucrats are a big voting block<sup>183</sup> and they have worked a great deal on laws and regulations.

In summary, he argues that bureaucracy makes everyday life challenging, that throughout history the growth of civil servants in the archipelago has led to more paperwork, that these individuals don't want the current legal and political structure to change, and that they are "a big voting bloc". Additionally, some of the frustration with bureaucracy comes with the recognition that, as with the Galapagos laws, without family connections or network ties with the elite, it will be more difficult and costly to get things done. An ex-director of the Galapagos National Park Directorate explained that originally he devised the *cupo* system as a way of limiting the number of people in tourism and retaining Galapagueño ownership over the sector. However, even though the *cupos* are supposedly non-transferable, people have sold them for tens of thousands of dollars to large international cruise companies who use Galapagueños as 'figureheads' for their ownership.

As Graeber argues, "what came to be called 'globalization' was really a creation of new political alignments, policy decisions, and new bureaucracies – which were only later followed by physical technologies like containerized shipping, or the Internet – so the pervasive bureaucratization of everyday life made possible by the computers is not, itself, the result of technological development. Rather it's the other way around" (2015: 34). Rather than thinking of it as one way or the other, it is possible that bureaucracy and technological innovation are mutually reinforcing. As mentioned previously, a Floreana resident suggested that *mingas* (communal

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<sup>183</sup> Another voting bloc conservationists like to blame problems on is the fishers, because a lot of them entered the archipelago during the 1990s sea cucumber boom. They have been described as greedy rabble-rousers who came attracted by the promise of economic rewards and then decided to stay and live in the archipelago. Whether or not this is true, the demographics of the islands have become a lot more complex.

labour) ceased after the oil boom in the 1960s-70s because that brought the public sector into the archipelago and led people to expect the government to pay for activities they used to do for free. Another good example of the impact of technology in the archipelago was highlighted by a naturalist guide I used to work with on cruise ships:

I lived my entire childhood and youth without electricity. Electricity would go out on Isabela at 9pm and on Santa Cruz at 11pm. There was a huge change in people's lives that people don't take into account. I call it the era without light and the era of electricity 24 hours a day. Many people would come to Galapagos and I would hear them say, 'I'm not staying here in Galapagos, because the electricity goes off'...After 1997-98, first Santa Cruz got electricity all day, then San Cristóbal, and finally Isabela by around 2000 or 2001. So, when electricity came, progress arrived. People said, 'Now I have electricity 24 hours a day, so now I can buy myself a TV, a large refrigerator'. Before people would dry fish and meat in the sun because they knew that at night it could get damaged...I think that changed everything, because it brought comfort...The ships improved and then economic pressure started.

Mariana also shared her thoughts on how electricity changed Galapagos:

[After we got electricity] we started having discotheques, bars, and so the nightlife started. So, husbands started showing up drunk and women would get beaten and women would take advantage of the fact that the husband was at the discotheque to see if Don Cornelio was waiting for her.

Thus, electricity radically changed Galapagos and contributed to the growth of tourism and migration. At the same time, the last 20 years have coincided with a boom in bureaucracy and civil servants. As explained previously, these historical trajectories are probably mutually reinforcing elements of globalization. Finally, throughout this period there has been a sense of stagnation and decline in the agricultural sector, which the farmers claim was abandoned economically and politically. What I have shown is how bureaucracy and technology contribute to the growth of some sectors, with negative repercussions for inhabitants who already feel precarious. As stated in

Chapter 7.1, globalization has turned many people into the *precariat*, individuals who must work multiple jobs in order to survive, but it has also bolstered a growing social sector of civil servants, created greater amounts of profitable paperwork, and led people to feel overburdened by bureaucracy. As we shall see later, this problem extends to the difficulty farmers have in gaining access to credit, meaning that it also entrenches marginalized communities' inability to 'progress'. In short, the rules and restrictions, in addition to the hurdles of bureaucracy, have a way of increasing inequality and amplifying risk amongst marginalized peoples, which makes up the context for the *coexistential rift*. Although some of the directors of government agencies who I interviewed claimed that they were simplifying<sup>184</sup> bureaucracy, this assertion contradicts my participants' perception of the situation in Galapagos. As one long-time scientist observed, some degree of bureaucracy is necessary, but it should be innovative and not just about filling in boxes, accumulating stacks of paper, and making people's lives harder.

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<sup>184</sup> One notorious attempt to simplify bureaucracy in Galapagos involved the mayor of Santa Cruz Island changing the way rubbish and electricity were being billed so that big businesses that weren't producing much trash during the pandemic could pay less. Essentially, the idea was to charge more for special municipal rubbish bags in order for that cost to be incurred by those producing the most waste. This led to tremendous controversy. I attended a town hall meeting at which Galapagueños were shouting at authority figures and one explained that his mother could hardly sleep at night when she got fined \$150 for leaving a regular rubbish bag outside her house instead of a municipal bag. When I spoke to the mayor in person, he said there was no going back to the old ways and that people would have to adapt, like they did when recycling was first implemented. Sadly, rubbish started appearing in gutters, was being burnt or thrown away in the highlands; on this matter the mayor said that the municipality will have to "increase personnel to control people so they dispose of their rubbish properly". One of my participants commented that these policies make "people angry at conservation".

## 8.6 Debt: ‘man is born free but everywhere is in chains’

For thousands of years, the struggle between rich and poor has largely taken the form of conflicts between creditors and debtors...By the same token, for the last five thousand years, with remarkable regularity, popular insurrections have begun the same way: with the ritual destruction of the debt records...As the great classicist Moses Finley often liked to say, in the ancient world, all revolutionary movements had a single program: ‘Cancel the debts and redistribute the land.’ (Graeber 2011: 8)

Here, everyone wants to have a piece of the pie, but some people eat the whole pie and others just get the crumbs – Farmer, Santa Cruz Island

Jean Jacques Rousseau famously stated, “Man was born free but everywhere he is in chains” (Rousseau 1762). Rousseau’s argument was that legitimacy of political authority emerges from a social contract of mutual preservation between citizens of a modern state. Arguably, due to the abandonment felt by Galapagueño farmers and other sectors of society, that social contract has been broken – people don’t feel represented by their politicians, nor do they believe that politics will improve in the future.

In the 1990s and early 2000s the majority of conflicts were between fishers and the conservationist sector (the Charles Darwin Foundation and the Galapagos National Park Directorate), leading to strikes, threats to kill giant tortoises, and vandalism at the Charles Darwin Research Station. According to Daniel, the rancher from Santa Cruz, from the 1960s to the 1990s there were some complaints against ranchers when the price of meat increased, but otherwise farmers have not been part of mainstream conflict on the archipelago. In the 1990s, with the large migration of fishers to the archipelago to catch sea cucumbers and sell them to the Chinese there was a huge influx of money in that sector. I was told of fishers who would rent entire brothels, burn money, and pay large sums for just a kiss. As soon as the sea cucumber populations dwindled and prohibitions were enforced, money in the Galapagos was mostly made through the growing

tourism sector, leading to migration from rural to urban areas. Since farming was no longer very profitable, the sector was politically and economically abandoned. Currently, although resentment between fishers and conservationists still exists, the majority of social conflict seems to have shifted towards confrontation with politicians:

If you see an equitable community with everyone united, it's difficult to govern. When you have a population of different social classes, there is discontent and people are disunited, so it's easier for the politicians to govern – Dive guide, San Cristóbal Island

The politicians are really trying to divide people by talking about 'the rich' and 'the poor'...They try to divide the fishermen, conservationists and so forth. They don't always succeed, though, because we're inside every group. Within any family there will be a fisher, an uncle at the Research Station, so in the end we're a family and it's hard to divide us<sup>185</sup> – Farmer, Santa Cruz Island

Although communal unity is professed here, most of my participants said people are very individualistic these days, don't want to help out in *mingas* (communal work), and they nostalgically think back to a time when the Galapagos had a smaller united population that didn't even have social classes. As one farmer stated, “before dollarization<sup>186</sup> (in 2000) everyone without exception had money, maybe not the same amount, but we had money...Back then there wasn't poverty”. In 2021 I personally witnessed a ‘political caravan’ on San Cristóbal Island, where a politician was yelling through a loudspeaker that the people were tired of being treated worse than animals and of seeing so much money going to conservationist causes. There is public frustration

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<sup>185</sup> Family networks and nepotism can also reinforce insider-outsider dynamics, preventing certain people from entering and allowing others easier access. There is controversy about permanent residents who allegedly obtained their residence by paying someone off or through arranged marriages.

<sup>186</sup> In 2000, following hyperinflation, Ecuador changed its currency from the Sucre to the American dollar. Although this stabilized the economy, it also threw people into poverty and gave those who had been earning in dollars (like naturalist guides in Galapagos) an advantage over those who didn't.

that very little money is perceived to be spent on improving education, healthcare, or basic services like potable water, sewage, and electricity. As a participant said, “my entire life the politicians have been offering water and electricity<sup>187</sup> and when they get to power they forget about them both. Four years go by and they promise us the same thing”. Often contractors are hired for public work projects but they do the job badly and then have to repeat the work. During my fieldwork I witnessed one of the main roads being worked on and when it got flooded during a storm someone filmed a video and uploaded it onto Facebook to complain about politicians wasting funds and probably taking a cut out of the deal to build the new road.

## Municipio de Santa Cruz inaugura piscinas de pesca deportiva 🙌



Image 56. This satirical meme was uploaded to Facebook during the flood: ‘Municipality of Santa Cruz inaugurates sport fishing pools’, 3/4/2021, @expatgalapagos [Facebook page].

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<sup>187</sup> A rancher on San Cristóbal Island recounted the story of how the region in the highlands where he lives did not have electricity until 2017, when they finally convinced the government to invest only in equipment, while allowing the community to carry out *minga* work to get the job done.

The issue of water contamination is particularly indicative of people's frustration towards politicians:

They're making a sewage system now, because everyone has a septic tank and it filters into the *grieta* (crevasse) and the *grieta* next to it is where you get the water for your house. So what are you doing? Bathing yourself in shit. – Resident, Santa Cruz Island

At this time we have three flows of shit into the ocean...you can see the pipe and shit comes out at 6am and 6pm...No processing. The same happens at the Golden Bay beach. There's another pipe there. The third one is a little further away from Punta Carola, at the point. – Resident, San Cristóbal Island

So, it is within this context of frustration towards politicians, and of increasing inequality, that the question of *human freedom* and *chains that subjugate us* is particularly prescient. Indebtedness is one of the main causes of anxiety in Galapagos, especially during the pandemic. Arguably, the *coexistential rift* can be framed as a system of reallocating risk, anxiety, alienation, and indebtedness onto the most marginalized people, ultimately generating greater inequality and reducing personal freedoms.

Furthermore, if the *coexistential rift* is what denies a more tranquil and communal Galapagueño utopian reality, could *coexistence* be a central concept for understanding their sense of 'identity'? Since most of my participants brought up the issue of coexistence/conviviality (*convivir*) without my prompting, it appears that this might be the case. They mentioned that their ideal for the future of the archipelago is to coexist with nature, rather than destroy it. Finally, when asked what the core of Galapagueño identity is, or at least should be, participants stated: love, harmony, tranquillity, belonging, "life in community", "to support one another and to live in a world of peace and tranquillity", and "the capacity to enjoy your surroundings and for that to allow you to develop yourself locally", in addition to caring for the archipelago.

Quiroga argues that the “idealized version of Galapagueño culture” involves a less stressful and sustainable way of life that rejects “consumerism and modernity” but is contrasted by “the increasing number of cars, scooters, air conditioners, household appliances, computers, and other amenities that are finding their way to the islands” (2013: 43). Ospina suggests that farmers and fishers wish to protect the tranquil way of life associated with the paradise they have created and which is being threatened by the rapid changes brought by globalization (Ospina 2006: 79-85; Castillo’s autobiography in Ospina 2005: 57-61). In other words, as many of my participants argued, Galapagueño identity should be built on loving and caring for the archipelago, and on living a tranquil life in ‘paradise’, but this is threatened by a ‘money-making mentality’, increased connectivity to mainland Ecuador, and greater openness to the arrival of people, goods, media, finance, etc. Each of the threats to their livelihoods and well-being, which are identified as Covid-19, *plagas*, and climate change, can be conceptualized in terms of their economic harm to farmers who are already struggling with high levels of indebtedness.

Based on Gregory Bateson’s work (1972), Eriksen claims that a *double bind* is “when you say [or do] two incompatible things at once” (Eriksen 2016: 24). Can sustainability be achieved in a world economy that strives towards infinite growth? Or are we facing the double bind of capitalism where, despite good intentions, there is no escaping how unsustainable the system is? In essence, Galapagos is at the forefront of the apparent clash between a sustainable system where people can coexist with nature, and the *status quo* of predatory accumulation of capital. Farmers may dream of coexisting with nature and in a small community, but under their current conditions of indebtedness and lack of credit the more realistic dream is one of making their businesses profitable and preventing bankruptcy.



Throughout my fieldwork, one of the central complaints I heard from farmers was about the problem of debt compounded by a lack of available credit. Out of all my participants, I only encountered one individual who got a relatively low (under \$5,000) loan from a bank, but everyone else said that during the pandemic this was impossible. People told tales of submitting folders of paperwork and spending months or even years trying to get credit from the state bank, BanEcuador. In frustration, people either give up on their plans, sell land and cows to raise funds, or try to secure credit from private banks. Farmers voiced numerous grievances, such as high interest rates, credit penalties for minor payment defaults, limited access to credit due to tax delinquencies, difficulties in finding loan guarantors, and excessive indebtedness. They also claimed that loan opportunities were only available to those with influential connections. Despite the incumbent president of Ecuador in 2021 deciding to eliminate debts under \$1,000, many farmers argued that their debts exceeded this threshold and, therefore, this measure would not benefit them. For a detailed description of the credit problems, in the words of the farmers themselves, see Appendix III.

So, the question remains: can *coexistence* be achieved if Galapagueños are indebted and must focus on making money? Of course, capitalism isn't entirely incompatible with coexistence, but being preoccupied with debt made many of my participants think of their farms as business enterprises instead of plots of situated soil to be cared for, and of their social interactions in terms of economic calculations rather than solely friendship. Undoubtedly, debt has been a problem in farmers' lives for a very long time. In fact, as one participant explained to me, debt is the very reason why migrants come to Galapagos:

I've heard from people who come to do construction work here and when I ask them why they've come they say, 'to make money because I have a loan and I have to pay it back on the mainland with the money I make here.' So money is sent out. – Farmer, Santa Cruz Island

In a capitalist system that brings risks into the archipelago, increases anxiety, and creates market dependence, coexistence seems like an unattainable utopian dream. Mariana, who told me that finches, anis, herons, and gallinules help eliminate pests and that Galapagueños “coexist with all of them”, is also facing indebtedness. If the situation doesn’t improve, many farmers will be forced into bankruptcy and will sell their land, change professions, or leave the islands. An Isabela farmer I interviewed told me that he was forced to sell his land out of desperation:

I have three children and we had loans because everything was going great with tourism. We had a little business in town where we would sell produce and make sandwiches and milkshakes. So, all the things from the *finca* were sold in town. We got in debt to expand our business, and the *finca* as well because it's hard to work alone on the *finca*. Nobody saw this [pandemic] coming. The banks here still expect to get paid [so I had to sell the farm].



Images 57 & 58. These two images were posted by users of the popular Galapagos Facebook page called ‘Realidades Galapagueñas’. On the left, it says ‘Find out what your property is worth and sell!’ and on the right the Lord’s Prayer accompanies a picture of Jesus hovering over piles of money. Other posts included offers to lend people money, with questionable intent.

Daniel, Felipe, and Lucas, three of my main participants, were among some of the most successful ranchers when the pandemic-induced economic crisis started. Through the goat cheese project and the touristic pond, they demonstrated that coexistence and sustainable development are attainable. However, even if their economic situations are not as dire as that of the farmer who

sold his land, with an increase in future insecurity they too will not be able to focus on coexistence. Many farmers worry about paying back large loans they took out prior to Covid-19 to expand their businesses, and without some kind of policy change or governmental support, it is unclear whether they will be able to. Ultimately, selling land will lead to an increase in imported goods and invasive species because the market must compensate for lower amounts of local produce. Furthermore, if the lands are abandoned due to farmers not cultivating, then the invasive species will spread more rapidly.

The belief that wealth on a global scale can contribute to greater security, well-being, tranquillity, and even self-actualization (Maslow 1954), thrives in Galapagos, where transference from Darwinian thought can label those who come out on top in the ‘survival of the fittest’ as ‘risk winners’, providing a justification for greater individualism. In Galapagos, the expansion of the *precariat* is justified based on Social Darwinist discourses. In order to demonstrate that there are other ways to achieve security while retaining communal ties or a connection to the land, policies should be implemented to help support Galapagueños’ desire for an identity based on *coexistence*. Farmers are capable of transforming Galapagos into a more sustainable archipelago, but there must be a tremendous effort in the future to learn from their local knowledge and experience, provide them with credit, and work towards reversing the *coexistential rift*.

## 8.7 Political abandonment and cultural inertia

There's an old joke. So, God is creating the Earth and in six days he has done the whole thing and calls the angels over. Oh, that's really beautiful. What's there? He says, 'Well, here's Canada. I'm going to give them wheat and corn and really tough winters.' 'Yeah, that's cool.' 'Here's South Africa. I'm going to give them diamonds and gold and tremendous social problems.' 'Oh, well that's OK.' And so he lists countries and each one gets something good and bad. He gets to Ecuador and says, 'I'm going to give them the Amazon jungle, and hydropower, and agriculture, and gold and uranium and fishing, and even

the Galapagos Islands'. And the angels say, 'well, that's kind of unfair! All the countries get something and a problem with it. You've just given Ecuador everything they could possibly dream of'. And God says, 'Wait until you see the government they're going to have!'

– Long-time resident, Santa Cruz Island

Galapagueños argue that they are being ‘managed’ by external economic and political forces. One participant commented that outside Galapagos it is viewed as a “jewel, but here the authorities don’t care” and another told me that in Galapagos “[t]he problems begin because of distrust”. When I visited Isabela Island I spoke to a farmer who had sold his land due to the financial crisis caused by the pandemic. Like so many other farmers and ranchers in the archipelago, he spoke of political abandonment and having to fend for himself:

There has never been any support to farmers in Galapagos. The abandonment goes all the way from the central government to here. There is a lot of money, but it all goes to tourism rather than agriculture....We all thought that after a year this [pandemic] would be over and now we've run out of savings and this continues, so we don't know what to do. Here on Isabela people had *fincas* and two or three activities, but none of them are really giving any income and instead are generating expenses. A *fincas* needs maintenance and it's not even possible to sell a cow weekly to pay workers' wages [because consumers aren't buying]. People are really tired of this and we have nobody to ask for help. If we meet at the MAG, it will all remain there. Now I'm just planting to survive, because we still don't know what the future will hold.

Although most farmers repeated similar statements to this, it is important to highlight that the Ministry of Agriculture has been involved in multiple projects to fund infrastructure in the archipelago, providing greenhouses, geomembranes, weed whackers, water pumps, etc. A couple farmers admitted that they had received some forms of support, but complained either about the bureaucracy or the fact that political alignment gave unfair advantages. Furthermore, they said that they wanted more specialized and regular technical support, but workers at the Ministry of Agriculture claim that there aren't enough funds to expand this work. The new political

administration in 2022 started providing credit to farmers but, as Mariana observed, now they are being so ‘generous’ when there’s no way she could access credit after two years of pandemic-related debt.

One incident stands out as exemplary of MAG-farmer relations. Staff from the Ministry of Agriculture took me to visit a farm on Isabela Island and upon our arrival the farmer said he didn’t wish to speak to me or anyone because nothing would ever change. I said I was sorry this was the ongoing story of research and politics in Galapagos. Briefly, he stated that NGOs and the government had done ‘nothing’, that the little they did do was implement *soluciones parche* (stop-gap solutions), and that conservation and development should go hand in hand, but with humans taking priority over nature. These comments seemed consistent with the often-expressed view that the president of the Consejo de Gobierno only cares about conservation. As we drove off, the MAG staff member angrily told me that this farmer was lying because he had received over \$10,000 in infrastructure and that the truth of the matter is that he is lazy, which is why he didn’t ‘progress’ like other farmers. On other islands I heard similar arguments, with MAG staff saying that the problem is that farmers expect a paternalistic relationship with institutions and want to receive everything for free. A director of the Galapagos National Park gave the example of chicken owners wanting the park to help finance a study of environmental impact; he finds it hard to believe that they don’t have the money to fund these essential requirements for their businesses, meaning they are used to getting things for free. A disgruntled farmer agreed with them: “unfortunately in this country people hope the government will fix everything”. Although there may be some truth to these assertions, I generally saw Galapagos authority figures either defending their inaction due to the matter not being their jurisdiction or to not having funds, admitting that they too are frustrated by systemic problems, or by ‘blaming the victim’.

During my fieldwork the Ministry of Agriculture formed partnerships with NGOs on the archipelago and ensured funding for greenhouses. The people who obtained them had belonged to associations<sup>188</sup>, as this is a requirement to qualify for government benefits, but later I was informed that the associations had been dissolved and the collective infrastructure abandoned. Collection centres (*centros de acopio*) for storing communal produce were also abandoned due to their belonging to the associations. In another case, the failure to complete the installation of geomembranes on Isabela Island was due to non-performance by the contractor, who was later sued. Farmers argue that the director of the Ministry of Agriculture should have a technical background rather than a political one, but unfortunately this is usually not the case. As one staff member of the MAG told me, the prior directors of the MAG had not accomplished ‘anything’, but the last two directors<sup>189</sup> who served from 2013-2021 were good at attracting funds from the government and private institutions, including for a project called ‘Proyecto de Inovación Tecnológica y Desarrollo Sostenible’ (Technological Innovation and Sustainable Development Project), and they were able to increase the amount of technical specialists working for the institution.

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<sup>188</sup> A farmer told me that she had been told to pay the head of a chicken association \$100/month in order to be a member, so she decided not to. A different association, which she wound up joining, cost a flat fee of \$300, but gave her a spot at the Galapagos school to sell her produce. Although nobody else verified these costs, it appears that membership in associations is costly.

<sup>189</sup> The MAG director who was present for most of my fieldwork was criticized for being overly concerned with promoting the ministry on social media and taking photos to make their work look good, for getting a cut from the *obras* he implemented, and for being overly political and ineffective in his leadership. I tried to speak with him on multiple occasions to get his side of the story, but he declined.

Regardless, farmers continue to say that all the authorities<sup>190</sup> are just interested in making money, conducting useless viability studies, and not actually implementing useful projects. As one rancher remarked, “people become mayors to steal the money from the people...It's true that I can't throw all mayors into the same bag...When I came 23 years ago there were maybe five years of good mayors, but then it was all bad.” Right before I left the archipelago, a new MAG director had been appointed, so the ministry organized a series of meetings with farmers to assess their problems and establish a series of priorities. Using a participatory engagement approach, large posters were created with lists of farming challenges. Farmers were asked to stand and place stickers of different colours to vote on what the most urgent priorities were in order for the ministry to take action. One year later, I asked one of my participants if these problems had been resolved and she said that, as expected, the government had not done what they promised. As I wrote this thesis in 2022, there was yet another director who supposedly had good intentions, including providing credit for farmers, but it remains to be seen what their verdict of him will be.

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<sup>190</sup> Obviously, blanket statements like these can be heard worldwide and don't mean this is an actual fact. A bigger issue is the problem of jurisdiction (*competencias*). When I spoke to the mayor of Santa Cruz, he explained that his work focused on the urban areas and that the Ministry of Agriculture (MAG) was in charge of farms. However, the MAG says that regulating prices is not within their jurisdiction. When people criticize the Galapagos Biosecurity Agency (ABG) for not controlling the new breeds of dogs, they say it's the responsibility of the municipality, which doesn't act because they want votes. Finally, the Galapagos National Park mainly focuses on park lands, so it has little to do with agriculture. The mayor of Santa Cruz assured me that the government agencies are currently working together better due to the pandemic, but a key problem remains that decisive actions are avoided by finger pointing. According to staff from the MAG, the municipality will often blame issues on the Ministry of Agriculture or Tourism because their directors aren't elected by popular vote. For instance, the municipality prevents people from selling land that is smaller than 1000m<sup>2</sup> but when people complain they take it out on the MAG. Ultimately, the prohibition against selling land in smaller lots is probably for conservationist reasons involving tortoise migration, leading farmers to then get upset at the Galapagos National Park.



Image 59. Meeting with the Ministry of Agriculture in Bellavista, Santa Cruz Island, on July 7, 2021.

All of this begs the question: Why do people claim that so little has changed in Galapagos farming? One might describe this issue as ‘political stagnation’ or ‘administrative atrophy’ in Galapagos. The answer is probably threefold. Firstly, as the farmers point out, Galapagos' priority has been tourism, and multinational companies will often bring produce from the outside. Clearly, politicians have not prioritized the agricultural sector because it is seen as unprofitable and the lack of support leads to little having changed. Secondly, there is “cultural inertia” (Randy Borman, personal communication, August 19, 2015), or what are called *cultural models*, which means that people's ways of thinking and acting perpetuate a certain trajectory: deprioritizing farming and increasing reliance on imports. Thirdly, a staff member of the Consejo de Gobierno (CGREG), Galapagos’ main governing body, explained that because the institution emerged during the Correa presidency as a way of integrating what used to be called the ‘Instituto Nacional Galapagos’ (INGALA) and the governor’s office, the Ministry of Finance of Ecuador wasn’t sure how to categorize this new government agency. Consequently, for over a decade Galapagos wasn’t able to receive funds called the ‘Fondos de Modelo de Equidad Territorial’, “which correspond to the money that the province needs to receive to carry out all the work in the rural areas” and could



amount to about “15-20 million dollars a year.” Apparently, during my fieldwork year the Minister of Galapagos (at the Consejo de Gobierno) managed to “agree on a mechanism to disburse those funds”, so there might be hope in the future. Additionally, according to a staff member of the MAG, funds for the control of invasive species (FEIG) had previously been allocated to the Galapagos National Park and the Galapagos Biosecurity Agency, and only recently has the Ministry of Agriculture begun to receive them. However, when I asked farmers and ranchers why nothing has changed in farming, they replied that “it's not that everything is the same. It's getting worse!” and that the cause was simple: “Corruption, corruption, corruption. And besides that, there's corruption”.

Over time, I began to realize that even though life has changed dramatically over the years in the archipelago, many structural issues have remained the same for decades, such as the lack of potable water and demands for better healthcare and education. The theses written by Chavez (1993) and Bonilla (1998), as explained in Chapter 3.3, still accurately depict the current agricultural problems in the archipelago. In spite of some recent initiatives to give farmers greenhouses and water infrastructure, their lack of access to credit and the inability to effectively regulate prices have led farmers into a precarious situation. The consequences of doing nothing to ameliorate farmers' livelihoods would be dire:

I talked to the authorities about this. I said, 'this might be the last year that I work in agriculture because can you imagine how I've broken my back working and everything stays the same. It's hard and nothing is changing. What can I do? Leave the fields abandoned? Or should I sell them and go look for work at the institutions? Do you want that?' – Farmer, San Cristóbal Island

In other words, in a world of constant change, social and political structures have changed very little and instead of having fewer problems to deal with. Galapagos farmers are confronted with an ever-increasing number of threats to their livelihoods. Once again, this could be described by

Eriksen's *treadmill syndrome* (2016). As my participants highlighted, the politicians, public servants, tour guides, NGO workers, and researchers can all continue to dawdle on making real change because they will still make an income whether or not the problem is resolved. Daniel, the Santa Cruz farmer, said he was frustrated by going to meetings and wasting time, and he eventually realized that the public servants don't have skin in the game, whereas he has to take a day off of work. He wonders why technical staff at the MAG try to sell him ideas that may not be viable. Why don't they implement them if they are so profitable? Furthermore, he advises other farmers to investigate on their own, because he doesn't trust the Ministry of Agriculture, and he says, "if they give you the wrong advice, nothing will happen to them". He concluded: "we expect someone to solve our problems and those that make a living from the state live off of that *hope*...If the agricultural producers didn't expect much from them (civil servants), things would change." So, politicians are peddlers of hope, a hope that is left unfulfilled until the next election cycle, and the people become increasingly disillusioned, individualized, leading the *coexistential rift* to widen. Certainly, without honest politicians<sup>191</sup> who actually listen to the people and engage them in solving problems collaboratively, "Galapagos is like a ship without a captain. If a storm comes, it topples over".

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<sup>191</sup> I heard of a bottom-up political movement called the 'Junta Ciudadana', which gave me hope that people might be able to create their own system of governance since they don't feel represented by the current structure. The president of the Consejo de Gobierno isn't an elected official, leading to many complaints.

## 9. POLICY RECOMMENDATIONS

In Galapagos theses it is customary to add a ‘recommendations’ section so that institutions can develop relevant policies and actions. As mentioned in Chapter 3.3, plenty has been written about the archipelago’s agricultural problems and various solutions have been proposed. Having listened to the challenges faced by farmers, I will primarily focus on economic solutions, but the *coexistential rift* framework provides a more holistic picture of how specific interventions may either amplify or reverse the vicious cycle. By thinking systemically in terms of causal factors, policy work should be able to make more lasting long-term changes. The following priority interventions are just a few of the many ways that the agricultural sector could be supported, preventing a rapid decline in farming, decreasing the need for imported goods, and lessening the anxiety created by the *coexistential rift*:

1. Involve farmers in policymaking: I concur with Laso (2020) that farmers must be included at the negotiating table. At the meetings I attended between the Ministry of Agriculture and farmers, I was impressed that the MAG had an open forum for producers to identify the priorities that should be undertaken. However, my participants later informed me that the Ministry officials didn’t follow through with their promises. In order to promote more participation and transparency, the agricultural sector could potentially choose a farming spokesperson to represent and defend their interests from within the Ministry of Agriculture and improve communication on how budgets are used and why certain policies are or aren’t possible. It could also be beneficial to have an agronomist specialized in climate-resilient crops visit farms regularly to provide tailored guidance or conduct regular phone surveys to obtain rapid assessments of crop productivity from farmers. As one of my participants explained: “Here the problem is that all the sectors are fighting each other...There need to be mechanisms to promote dialogue and understanding for all. Conservationists need to understand that there are people here who need to live, but the people need to understand that even though we

live here, we must take care [of the environment]...Then we can talk about 'sustainability'!"

2. Tax imports and provide subsidies for local produce: As Viteri & Vergara (2017) highlighted, the economic burden of dealing with invasive species falls on farmers. Economic mechanisms such as subsidies could be implemented without having a negative impact on consumers if they were financed by increased taxation of tourism-generated revenues. This way of regulating prices would lead consumers to buy local produce because it is cheaper. In addition to using the Galapagos Invasive Species Control Fund (FEIG) to address the problem of invasive species on parklands, farmers could be paid to participate in activities to control these species on their own land.
3. Provide access to low-interest loans: As Chiriboga et al. (2007) argued, the lack of capital is one of the biggest challenges for Galapagos farming. In January 2022 the Ministry of Agriculture partnered with BanEcuador to offer the low-interest loans that farmers had been requesting. However, upon reaching out to my participants, I was told that they became so indebted during the pandemic that they wouldn't be able to obtain new loans. Clearly there needs to be a way of reducing or erasing farmers' debts and allowing them to obtain access to credit so they can make their farms economically viable. The depopulation of farms is directly linked to the lack of economic opportunities in the agricultural sector – if this sector were strengthened, it would also help bring young people back into farming.
4. Reduce labour costs: Chiriboga et al. (2007) also observed that expensive farm labour was a major hindrance to the agricultural sector. Farmers depend on a principally illegal labour force to harvest and plant their crops. Rather than allow farmers to continue hiring people illegally, a new migratory category for temporary farm labourers could be created. More affordable farming insurance options should also be implemented. In order to prevent salaries from being undercut by farmers who can't afford to pay labourers, the Ministry of Agriculture could potentially subsidize part of these costs. If this is unviable, the subsidized provision of new farming infrastructure should be considered to lessen the economic burden on farmers. Another idea proposed by some

of the farmers is to incentivize the idea of ‘cambio de mano’ (voluntary labour exchange), whereby farmers help harvest produce on another farmer’s land in return for later receiving help to harvest their own farm produce.

5. Address systemic inequality: Inequality in the archipelago should be addressed (Salcedo 2008: 83) through policies that strengthen the agricultural sector and ensure that farmers obtain more of the wealth that enters the archipelago from tourism by creating a more profitable relationship for farmers selling to the tourism industry (hotels, restaurants, and cruise ships). The role merchants and intermediaries play in tourism should be assessed in order to prevent them from exploiting farmers. Furthermore, providing farmers with equal access to infrastructure (greenhouses and water pumps), subsidizing the costs of fertilizers and pesticides, creating seed banks, improving access to organic methods, or providing a cheap method of transportation of goods between farms and towns could alleviate basic farming expenses.

## 10. CONCLUSION: A FUTURE OF CARE AND BELONGING

Neoliberal capitalism has left in its wake a multitude of destroyed subjects, many of whom are deeply convinced that their immediate future will be one of continuous exposure to violence and existential threat. (Mbembe 2019: 115)

Insecurity is here to stay, whatever happens. More than anything else, 'good luck' means keeping 'bad luck' at a distance. (Bauman 2007: 104)

The pandemic was a liminal moment that revealed people's nostalgia for a utopian past that cannot be fully recreated due to high levels of indebtedness and Galapagos' global integration. The recommendations outlined previously could be helpful in solving some of the problems in agriculture, but a more lasting solution will come from the cultivation of a deep sense of belonging and care, which of course can only be accomplished by supporting farmers economically. Although the capitalist system has caused Galapagos farmers to bear the brunt of risks in the archipelago, and their livelihoods are increasingly threatened as more produce is imported, if there were political will to support sustainable agriculture, they need not be doomed. Additionally, scientists and conservationists who are already supporting the agricultural sector should listen attentively to farmers' observations about the changing climate and environment, involve them in policymaking, and take local knowledge seriously.

Many farmers have viewed the pandemic within a metanarrative of socio-environmental decline and link it to religious conceptualizations of the apocalypse. Irrespective of my participants' understanding of the standard global narrative of climate change, 85% believe the climate is changing in Galapagos. These individuals have deep knowledge about how different crops grow, which ones are resilient, and share the general perception that the climate has gotten drier over the last two decades despite earlier natural scientific predictions of a wetter archipelago.

Policymakers should pay attention to farmers' claims of a drier archipelago to ensure that water infrastructure is provided to the agricultural sector.

My participants often expressed the feeling that they were living in a faraway 'bubble' that was somewhat removed from world events, even though the archipelago is currently so globalized that they are also concerned about the arrival of external threats: introduced species, an unpredictable climate, and Covid-19. This paradoxical conceptualization of the archipelago is indicative of their desire to return to a utopian past, which is currently unattainable due to high degrees of indebtedness and market dependence.

Due to the economic collapse that ensued from the pandemic and the disruption of the tourism industry, even non-farmers started cultivating their plots of land in the highlands – a move that farmers said had shone light on how difficult it is to farm in Galapagos, but also negatively affected the market because fewer people bought produce. Barter emerged on newly created Facebook pages and WhatsApp groups as a way of surviving during the aftermath of Covid-19, but often farmers complained that exchanges were calculated and precise rather than approximate trades based on need and generosity. Because people are highly indebted, they were more worried about the economic fallout of the pandemic than the possible health impacts of getting infected.

Even though different economic sectors are typically critical of each other, most of the blame for problems in Galapagos was placed on politicians and conservationists, who Galapagueños argue are good at talk but thin on action. Farmers also complain that there are too many restrictions and bureaucratic hurdles and they feel like Galapagos is a 'beautiful prison', a place that is pretty for tourists but hard to live in due to the lack of economic opportunities and stringent rules about not hunting or camping on the national parkland that surrounds the agricultural areas. Additionally, Galapagueños use scientific, environmental, and historical narratives to try to legitimize their

existence in the archipelago, while denying others access to resources. Migrants are perceived as the greatest threat to 'paradise' and 'tranquillity'.

Contrary to conservation organizations' attempts to create a culture of conservation in Galapagos, what residents need is for the scientists and conservationists to stop promoting the idea humans do not belong in the archipelago. In other words, identity should not be based on science or capitalism, but on being part of a community and feeling connected to the environment, without transferring the biological concepts of 'endemic' or 'introduced' onto human populations. Solutions such as the goat cheese project on San Cristóbal, which views goats as an economic asset to the community, or the artificial pond on Floreana that benefits frigate birds and also helps farmers during droughts, are examples of agricultural projects that could be replicated to benefit both people and the environment. A stronger sense of belonging and care for Galapagos, which defies extreme scientific narratives that 'humans shouldn't be here', could help the archipelago's residents achieve 'sustainable development.'



Image 60. Frigate birds benefit from the artificial pond on Floreana Island.



While Bocci (2022) has claimed that farmers have a strong sense of *arraigo* (cultural belonging) and Hunt et al. (2022) argue the opposite – that there is a cultural identity crisis – I take a more nuanced position: Galapagos farmers had a strong sense of belonging to a small community and to the land, but they are currently facing an onslaught of compounding threats that are alienating them. My concept of the *coexistential rift* is based on an eco-Marxist understanding of how neoliberal capitalism exploits ‘free nature’ through the *metabolic rift* and creates ‘risk winners’ and ‘risk losers’ (Beck 1999) through unequal distribution of capital, harming the most marginalized and alienating them from each other and from nature, making farmers more market dependent, primarily focused on making money to survive and pay off debts. Globalized *manufactured risks* (Giddens 1999b), such as climate change and Covid-19, are by-products of neoliberal capitalism and people are affected not only by their perception of risks, but by the materiality of risks themselves. Thus, the farmers’ communal identity is under attack and a close relationship to the soil and with others will not be possible unless economic challenges are addressed and a human economy is prioritized over the depersonalized neoliberal system. As one participant succinctly explained, “here in the pandemic if you don’t have money, you die!” The ‘slow violence’ (Nixon 2011) of political abandonment, bureaucracy, nepotism, corruption, and lack of credit is extremely destructive for people’s sense of belonging and care. Enhancing agricultural prosperity, reducing inequality, and overcoming the false notion that humans do not belong in nature are essential for Galapagos farmers’ communal wellbeing. Flows will continue to arrive to the archipelago with unpredictable and dangerous consequences, but risks can be evaluated, mitigated, and reduced to reverse the vicious cycle of the *coexistential rift*. In Galapagos and worldwide we should be asking ourselves whether we are truly coexisting and if not, what we can do to change.

## 11. APPENDICES

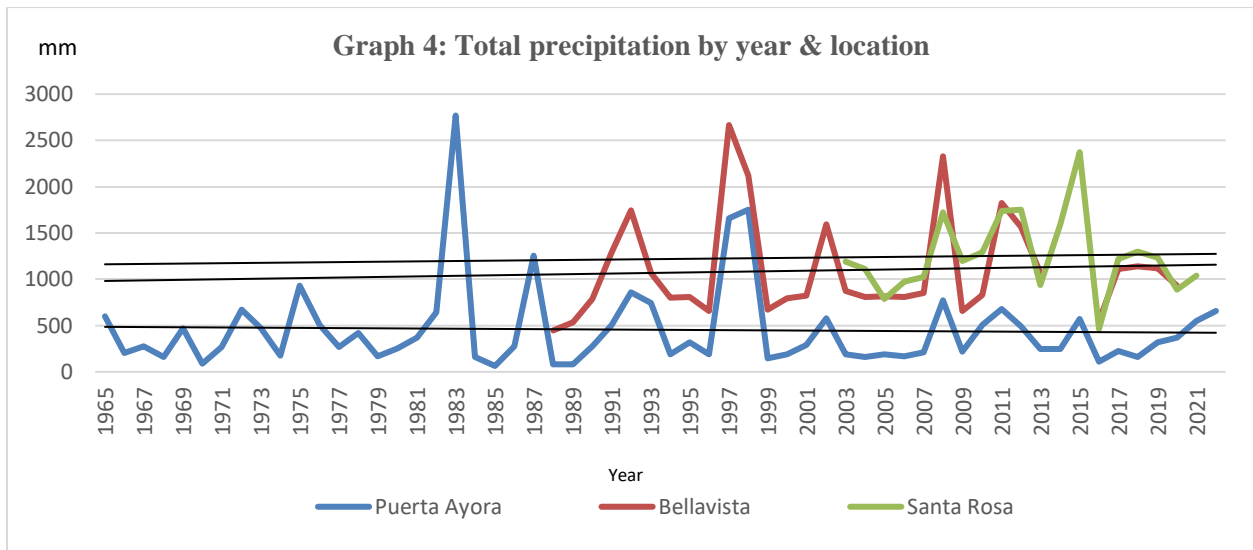
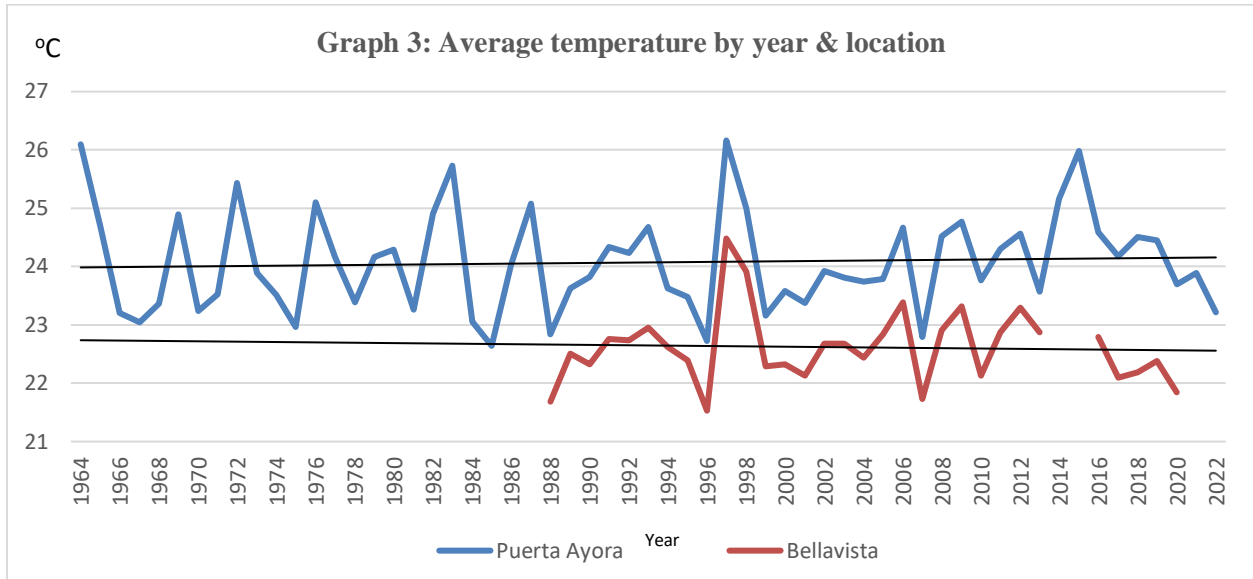
### APPENDIX I: Semi-structured interview questions

The following represent some of the main questions I asked participants to elicit open-ended responses about changes to Galapagos, the environment, the climate, their current challenges, Galapagueño sense of identity, etc. The questions evolved throughout my research and were semi-structured in nature. Most interviews were conducted in Spanish, apart from a few with bilingual long-time residents and scientists. Oral consent was obtained in all cases because signing documents in Galapagos could be interpreted as threatening. I always gave an overview of my research project and my affiliation with Oxford, explained the anonymous nature of the interview, and told participants that they could withdraw consent at any time. I would then ask if I could record the conversation, indicating that I would be the only one listening to the interview.

1. So, firstly I'd like to know a little about your personal story.
  - a. Where are you from? Did you come to Galapagos or are you from here?
  - b. Why did you come to Galapagos?
2. What has changed since you arrived?
  - a. How has Galapagos changed socially?
  - b. How has the environment changed?
3. How has Covid-19 affected you?
  - a. What was the social, political, and economic impact of the pandemic?
4. What are your worries or challenges?
  - a. What challenges do you face in farming?
  - b. If they mention *plagas*: What *plagas* affect you and how?
5. Are any environmental changes due to the climate?
  - a. Do you think the climate has changed? How?
  - b. Why do you think the climate is changing?
  - c. Have you heard of climate change?
  - d. What causes climate change and is it affecting Galapagos?
  - e. How have climatic changes affected your life?
  - f. Do you or others talk about climate change? Where do you get information from?
  - g. Have you experienced an El Niño or La Niña event? Does it worry you?

6. What differences do you see in how different social groups relate to the environment?
  - a. Is Galapagos being conserved? How should it be? What is the difference between discourse and practice?
  - b. Do you know of people who don't want to conserve Galapagos?
  - c. What should be the ideal relationship between humans and the environment?
  - d. Have you observed human-wildlife conflict?
  - e. What can be done in Galapagos to adapt to climate change and other changes (like Covid-19)?
  - f. Why should we conserve Galapagos?
7. What does it mean to be Galapagueño?
8. What do you think about migrants and migration rules?
9. Can I get some demographic data from you? (Collect: age, education, profession, years in Galapagos, island of residence, migratory status, main sources of media, and religion)

## APPENDIX II: Galapagos climate data



Commentary: Farmers observed the highlands (Bellavista and Santa Rosa) to be drier and hotter and this was also corroborated by Paltán et al. (2021). Even if these findings had not matched, there is value to both local situated knowledge and natural scientific knowledge. However, it is evident that conducting an anthropological study with an interdisciplinary collaboration from a climatologist could have been beneficial. Notably, the linear trend lines, which are probably not the ideal way to analyze complex climate data, indicate that the lowlands are getting hotter and

drier, whereas the highlands are cooler and rainier. It is difficult for me, as a non-expert, to use this climate data in a meaningful way.

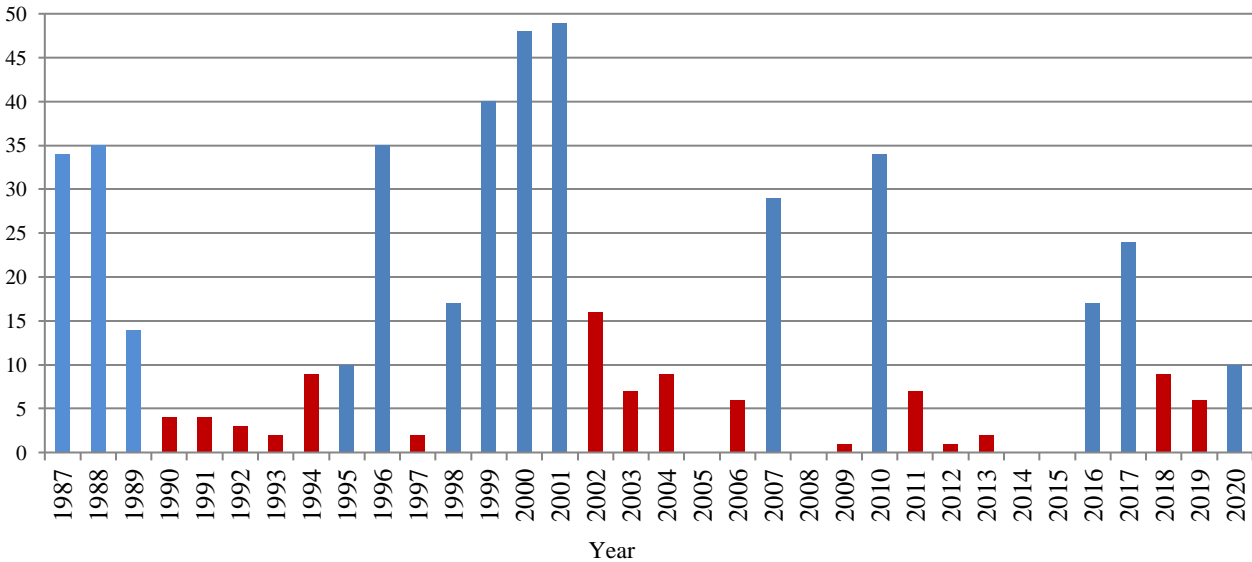
**Table 7: The first rainy day over 30 mm for Bellavista and the month in which it occurred**

Exact Date (Day/Month/Year)	Year	Oct	Nov	Dec	Jan	Feb	Mar	EARLY OR LATE (FEBRUARY AS A BASE)
10/2/89	1989					X		ON TIME
25/2/90	1990					X		ON TIME
2/2/91	1991					X		ON TIME
3/1/92	1992				X			EARLY
1/3/93	1993						X	LATE
30/1/94	1994				X			EARLY
22/12/95	1995			X				VERY EARLY
28/2/96	1996					X		ON TIME
5/2/97	1997					X		ON TIME
27/10/98	1998	X						VERY EARLY
20/2/99	1999					X		ON TIME
5/2/00	2000					X		ON TIME
3/2/01	2001					X		ON TIME
6/2/02	2002					X		ON TIME
2/1/03	2003				X			EARLY
27/11/04	2004		X					VERY EARLY
11/3/05	2005						X	LATE
27/2/06	2006					X		ON TIME
16/1/07	2007				X			EARLY
3/3/08	2008						X	LATE
25/1/09	<b>2009</b>				X			EARLY
18/1/10	2010				X			EARLY

22/2/11	2011					X		ON TIME
9/2/12	2012					X		ON TIME
9/2/13	2013					X		ON TIME
DATA MISSING	2014							
25/11/15	2015		X					VERY EARLY
31/12/15	<b>2016</b>			X				VERY EARLY
8/3/17	2017						X	LATE
24/10/18	2018	X						VERY EARLY
26/12/18	2019			X				VERY EARLY
8/1/20	<b>2020</b>				X			EARLY
25/1/21	2021				X			EARLY

Commentary: Most often the heavy rains start in February or before then, but occasionally they have started in March. I highlighted in bold the years that never had more than 30 mm of rain in a month, and in those cases I used the next largest rain value. Furthermore, the values in October, November, and December refer to the prior year, but appear as the first ‘rain values’ for the upcoming year. Since 2003 there have only been four years when the rains arrived ‘on time’ in February, which is corroborated by farmers who claim that everything changed between 15-20 years ago. However, a caveat to this experimental method is that it relies on farmers’ perception of rain being based on the first rainy day, whether or not this actually signals the start of the *aguaceros*.

**Graph 5: Percentage of days per year under 17 °C  
(Bellavista, Santa Cruz Island)**



Commentary: In Graph 5, the years highlighted in blue were ‘La Niña’ years, which is why a larger percentage of days were colder in the highland areas of Santa Cruz Island. In general, farmers claim that Galapagos has gotten warmer, but that some days can get really cold, so the temperature differences are more drastic. Even though 2020-2022 were part of a ‘triple dip’ La Niña, farmers complained that they had not felt such cold temperatures in a long time. However, this graph would seem to show that there were many other years that were colder or just as cold. Although this doesn’t discredit local perceptions, which are attuned to daily fluctuations, it is important to also take quantitative data into account, often raising more questions than providing answers.

### APPENDIX III: Problems with credit in Galapagos

According to farmers, credit agencies, and officials at the Ministry of Agriculture, the main struggles people face when trying to get a loan are tenfold. Here I outline the main problems, each followed by empirical evidence and participant statements from my fieldwork:

1. The level of interest is too high for farmers to pay back.
  - a) “For someone who earns a dollar for a pound of tomatoes it’s impossible to pay 21% interest!”
  - b) “I only once bothered to go to the BanEcuador and they gave me so many difficulties that I prefer to go to private banks. They have no problem in giving you a loan, but the interest is higher.”
2. When farmers sometimes failed to pay cellphone bills or other minor amounts, especially during the pandemic, they had points deducted by the credit bureau.
  - a) “Sometimes you’re late paying Claro telephone for two days and they will reduce your points by 10-15 points. If you’re late paying your card because you forgot or are busy you lose another 20 points. The credit bureau doesn’t know how good a businessman you are.”
3. Farmers often don’t pay taxes when they sell their produce, so banks are reluctant to lend to them.
  - a) The BanEcuador credit requirements include: a photo, copy of the applicant’s ID card, bank statement, property tax statement, land title, commercial invoice (*factura*), and a simplified tax statement called RISE. Some farmers don’t have land titles or don’t pay taxes, which makes getting a loan impossible.
  - b) However, it is also true that a lot of people avoid paying taxes in Galapagos. An accountant who also enjoys small-scale farming/gardening explained: “here people do their bookkeeping very irregularly, not how it should be. As soon as you start to do things for them legally, they say, ‘thanks, I have a previous accountant who made me pay less’, so there’s a lot of tax evasion here in Galapagos.”
4. There is so much bureaucracy required and typically there are many *trabas* (hurdles) to overcome, meaning the loan application process can take months or even years.
  - a) At a meeting with the Ministry of Agriculture, Daniel told everyone how he had spent three years gathering a folder of paperwork to get credit and he spent a lot of money obtaining certain documents. Later on, when I met with the director of the Galapagos National Park, he explained that all sectors of society face this struggle. He said that he has a small plot for subsistence



- gardening but was having trouble getting a loan: “even for me it's complicated, so I can imagine it's really hard for the farmers.”
5. Some farmers assert that people who have friends in the bank get supported.
    - a) “It seems like to give you credit they check to see if you have friends.”
  6. Guarantors are needed for loans, but are especially hard to find during a pandemic.
    - a) “I wanted to build a milking stable...but they said they couldn't give me a loan because of my age...because I don't have a guarantor.”
    - b) “Now with the pandemic, who can help you by [being a guarantor]? Nobody!”
  7. Farmers may be paying back previous loans and are therefore either unwilling or unable to get further into debt.
    - a) “It turns out that now (in September 2022) they (the banks and the MAG) are generous, but we've all been in debt for two years due to the pandemic and now we can't do anything.”
    - b) “There's a foundation...and there's a tourism company that has given an X amount of money to that foundation to help us get out of this crisis. So I go and tell them, can you help me with \$5,000? For me that's a lot of money because I have a vacuum seal meat packing operation...They say, yes, fill out an application online. They later looked at it and said I should go to the fishermen's cooperative...The cooperative said it won't be possible because you have uncollectible debts (*deudas castigadas*, meaning ‘punished’ debts). I know I have pending debts, but how are they ‘punished’? They just said it wasn't possible....How are you going to think that during this pandemic I'm going to be OK with the banks? I depend on tourism, not on businesses! I'm in debt!...I said, 'don't worry, because I'm sure I can do this and get ahead'...During the whole pandemic nobody has done anything.”
  8. Even though debts were refinanced during the pandemic, farmers would have wanted a one or two-year moratorium on their payments to get back on their feet, but this didn't occur. The incumbent president in 2021, Guillermo Lasso, eliminated the debts of Ecuadorian citizens that were under \$1,000. Although this was a positive move, most of my participants had much higher debts and therefore would have liked more support.
    - a) “Imagine if President Lasso said, ‘All your loans are put on hold for one to two years for you to recover and start to pay. Of course you still have to pay, but just put it on pause! But they don't. They should have done that at the start of the pandemic.’”
    - b) “The majority of businesses are going bankrupt because they keep asking them to pay and most people are unemployed...the problem with credits existed before, but now it's worse.”

9. Some ranchers want significantly larger amounts, sometimes over \$100,000, to import machinery and industrialize their milking businesses, but they are still affected by all the aforementioned problems.
  - a) “Recently I asked for a \$200,000 loan and they told us that we can't get one because during Covid my wife was two months late in paying her Claro cellphone bill and they had reported it to the credit bureau... We can mortgage land, a hotel, and so forth. But \$42 on our telephone bill makes us not creditworthy!”
10. The government is accused of intentionally deceiving people to create the appearance that it is helping people during the pandemic.
  - a) “The government lies to us now in Covid. BanEcuador, the CFN, Banco del Pacífico all showed up to say they had loans. It was all a smokescreen. They filmed us.....it's kind of like they're laughing at you, because how can you say the government is helping the people if everyone goes to a meeting but then they don't get credit? It all appears on social media and sounds great, but actually it isn't. On Facebook they said they were giving credit to the people. But how can that be?”

#### APPENDIX IV: Introduced species identified by farmers

As explained in Chapter 6, my participants were often vague when referring to flies, worms, and other insects on their farms. In an attempt to better understand what they were referring to and whether they witnessed the species experts/scientists claim exist in Galapagos, I showed three farmers from different islands the photographs of invasive species compiled in the *Catálogo de organismos asociados a especies agrícolas en la Provincia de Galápagos* (Bermúdez et al. 2020). I have highlighted in green whenever a farmer's claim contradicts what the scientists have written (i.e. if a species is present when the catalogue says it isn't, or vice versa). However, it appears that the fact that the catalogue doesn't include information about the presence of a species on a given island isn't indicative of its absence, since it is obvious to anyone that blackberry is everywhere and yet the catalogue doesn't mention its distribution on Santa Cruz Island. Furthermore, the catalogue doesn't mention the distribution of introduced species on Floreana or Isabela Islands.

Even though this table only has one data point per island, and it is possible the farmers who gave feedback may have misidentified species from the photos, this exercise could be helpful to future researchers in understanding the distribution of these introduced species, whether they are problematic for farmers, and what pesticides are used on them. For instance, on San Cristóbal the farmer claims to have seen *Heliotropium indicum*, *Conyza Canadensis*, and *Sonchus oleraceus*, even though this distribution doesn't appear in the catalogue. Furthermore, we learn that farmers use 'Gramoxone' on *Spermacoce latifolia* and 'Ridomil' on *Alternaria solani*. Hopefully, agronomists may be able to use this data and consider using participatory methods to determine what species farmers are witnessing, what they are concerned about, and how they are combatting them.

What was striking, in addition to the ample knowledge the farmers had about each species and their ability to identify them, was the fact that the book didn't mention guava, blackberry, rats, slugs, or *plagas* that are detrimental to farmers' lives. Furthermore, it is arguably useless for farmers to know the names of these insects if they aren't being properly trained on how to best deal with these immense threats to their farms. It would be a good idea to produce a similar catalogue that farmers can use to determine the best methods to deal with pests.

**Table 8: Introduced species observed by Galapagos farmers**

SPECIES NAME (Bermúdez et al. 2020)	SANTA CRUZ Participant Response	SAN CRISTÓBAL Participant Response	FLOREANA Participant Response
<i>Blechum pyramidatum</i> (Lam.) Urb.	YES: But easy to eliminate manually	NO	NO
<i>Heliotropium indicum</i> (L.)	YES: Easy to eliminate manually	YES: Not a problem	YES
<i>Plantago major</i> (L.)	NO: Would like it but doesn't have it; a good plant	YES: Good plant – medicinal use for kidneys or for softening the udders of cows	YES
<i>Priva lappulacea</i> (L.) Pers.	YES: A little, but almost none	YES: Problematic, in greenhouses; <i>Gramoxone</i> pesticide is used; it is hard to eliminate without chemicals	YES
<i>Stachytarpheta cayennensis</i> (Rich.) Vahl	YES: Medicinal remedy, good for bathing to deal with skin allergies; her mother would even use it as mouthwash	YES: Not a problem	NO
<i>Hyptis pectinata</i> (L.) Poit.	NO	YES: Not a problem; manual removal or using <i>Gramoxone</i>	YES: It is a <i>plaga</i> at the edge of the road and also in the paddocks
<i>Achyranthes aspera</i> (L.)	NO	YES: Not a problem for agriculture; found in	YES

		hotter areas (lower altitudes)	
<i>Alternanthera sp.</i> (Lam.) Standl	YES: Negative, but easy to eliminate	YES: Not a problem	NO
<i>Amaranthus dubius</i> (Mart.) Thellung	YES: Negative	YES: Not a problem	YES
<i>Chenopodium ambrosioides</i> (L.)	NO: Would like to have some	YES: Medicinal use for treating internal parasites	NO
<i>Drymaria cordata</i> (L.) Willd. ex Schult.	YES: Very bad (seems worse than rest)	YES: Not a problem	YES
<i>Portulaca oleracea</i> (L.)	YES: Useful - can be used in salads, good for compost; not a problem	YES: Big problem; manual removal; doesn't affect this area much; chemicals don't work	YES
<i>Talinum paniculatum</i> (Jacq.) Rzedowski y Rzedowski	NO	YES: Problematic; manual removal; no chemical works	NO
<i>Centella asiatica</i> (L.)	NO	YES: Big problem; some use <i>Aminopac</i> , or manual removal	NO
<i>Hydrocotyle bonariensis</i> (Lam.)	NO	YES: Not a problem	YES
<i>Coriandrum sativum</i> (L.)	YES	YES: This is commercial cilantro	YES
<i>Xanthosoma sp.</i> (L.) Schott	YES: Planted for its edible bulbs; known as 'papa china' and also used for feeding pigs	YES: <i>Otoy</i> is the same as <i>malanga</i> ; food for tortoises or pigs; bulbs eaten by humans	YES
<i>Bidens pilosa</i> (L.)	NO	YES: But in the hot zone, not a problem for agriculture	YES
<i>Conyza Canadensis</i> (L.) Cronquist	YES: Easy to clear	YES: Problematic, manual removal; others use <i>Diflopac</i>	YES
<i>Eclipta alba</i> (L.) L.	NO	YES: Not problematic, it is found in more humid areas	YES

<i>Sonchus oleraceus</i> (L.)	YES: Known as <i>diente de león</i> and used for salads - good plant	YES: Not problematic; <i>Gramoxone</i> or manual removal	YES
<i>Vernonia cinerea</i> (L.) Less.	YES: But not much, sporadic; used for compost	YES: Not a problem	YES
<i>Lepidium virginicum</i> (L.)	NO	YES: Not a problem; found in the hot zone	YES
<i>Commelina erecta</i> (L.)	NO	YES: Not a problem - medicinal, for when children have tongue or throat fungus/thrush	MAYBE
<i>Commelina diffusa</i> (Burm.)	YES: Peskier; manual removal	YES: Manual removal; problematic	YES
<i>Tradescantia fulminensis</i> (Vell.)	YES: Peskier; manual removal	YES: Not a problem	NO
<i>Asclepias curassavica</i> (L.)	YES: A brownish black worm lives there, but not in her field because she controls it	YES: But very little; a worm lives on it and is camouflaged by flowers	Yes; horses eat it and die or abort and stay thin; cows have died too.
<i>Spermacoce latifolia</i> (Aubl.) K. Schum.	YES: A little	YES: Problematic; manual removal or <i>Gramoxone</i>	YES
<i>Ipomoea fastigiata</i> (L.)	NO	NO	YES
<i>Browallia Americana</i> (L.)	YES: A little	YES: Not a problem	MAYBE
<i>Datura stramonium</i> (L.)	NO	YES: Not a problem	NO
<i>Physallis angulata</i> (L.)	NO	YES: Not a problem; <i>Gramoxone</i>	YES
<i>Solanum americanum</i> (Mill.)	YES: Known as <i>martiño</i> ; used as a medicinal remedy, edible, can be used for bathing	YES: Terrible! Very aggressive – has lots of seeds; <i>Gramoxone</i>	YES
<i>Momordica charantia</i> (L.)	YES: But not the Santa Rosa Region – it is found in Bellavista, which is lower down and warmer	YES: Not a problem	YES

<i>Cyperus rotundus</i> (L.)	YES: But not in the Santa Rosa region – it is found in Bellavista, which is lower down and warmer	YES: Not a problem	YES
<i>Cyperus strigosus</i> (L.)	YES: Bad, ‘bothersome’	YES: Not a problem	YES
<i>Rhynchospora nervosa</i> ( <i>Dichromena cillata</i> ) (Vahl)	YES: Bad, ‘bothersome’	YES: Not a problem	YES
<i>Killinga brevifolia</i> (Rottb.)	YES: Bad, ‘bothersome’	Yes: Very problematic, abundant; <i>Diflopac</i> is used, but he uses manual removal	YES
<i>Chloris polydactyla</i> (L.) Sw.	YES: Bad, ‘bothersome’	YES: Terrible, <i>Diflopac</i> is used	YES
<i>Cynodon dactylon</i> (L.) Pers.	YES: Bad, ‘bothersome’	YES: Not a problem	YES
<i>Digitaria sanguinalis</i> (L.) Scop.	YES: Bad, ‘bothersome’	YES: Not a problem	YES
<i>Echinochloa colona</i> (L.) Link	YES: Bad, ‘bothersome’	YES: Problematic; <i>Diflopac</i> or manual removal	YES
<i>Eleusine indica</i> (L.) Gaertn.	YES: Bad, ‘bothersome’	YES: Very problematic; <i>Diflopac</i> or manual removal	YES
<i>Oplismenus burmannii</i> (Retz.) P. Beauv.	YES: Bad, ‘bothersome’	YES: Problematic; <i>Diflopac</i> or manual removal	NO
<i>Panicum maximum</i> (Jacq.)	YES: Bad, ‘bothersome’	YES: It is a grass consumed by cows; not a problem	YES
<i>Paspalum conjugatum</i> (P.J. Bergius)	YES: Bad, ‘bothersome’	YES: Terrible; <i>Diflopac</i> is used	YES
<i>Paspalum paniculatum</i> (L.)	YES: Bad, ‘bothersome’	YES	NO
<i>Pteridium aquilinum</i> (L.) Kuhn	YES: But not here in this field	YES: Problematic; manual removal, and some use <i>Anikil</i>	YES

<i>Caperonia palustris</i> (L.) A. St.-Hil.	YES: Known as <i>escoba de brujo</i> – worse than the rest	YES: Not a problem	YES
<i>Chamaesyce hirta</i> (L.) Millsp.	YES: Bad	YES: Problematic; manual removal	NO
<i>Chamaesyce hypericifolia</i> (L.)	YES: But more in port	YES: Terrible, arrived recently, reproduces rapidly; <i>Gramoxone</i> or manual removal	NO
<i>Euphorbia heterophylla</i> (L.)	YES: But lower down	YES	NO
<i>Phyllanthus niruri</i> (L.)	YES: A little	YES: Not a problem	YES
<i>Phyllanthus tenellus</i> (L.)	YES	YES: Not a problem	NO
<i>Rhynchosia discolor</i> (Rhndi)	NO	NO	NO
<i>Desmodium uncinatum</i> (Jacq.) DC.	YES: But more in warmer areas	YES: Not a problem	YES
<i>Senna hirsute</i> (L.) H.S. Irwing & Barneby	YES: But more in warmer areas	YES: Not a problem	YES
<i>Senna obtusifolia</i> (L.) H.S. Irwing & Barneby	YES: But more in warmer areas	YES: Not a problem	YES
<i>Mimosa pudica</i> (L.)	YES: But more in warmer areas	YES: Not a problem	NO
<i>Sida acuta</i> (Burman f.)	YES: But more in warmer areas	YES: Problematic, but not much of it.	YES
<i>Ludwigia linnifolia</i> (L.)	YES: But more in warmer areas	YES: Not a problem	YES
<i>Oxalis corniculata</i> (L.)	YES	YES: Problematic, spreads rapidly; <i>Gramoxone</i> or manual removal	YES
<i>Argemone Mexicana</i> (L.)	YES: But in the humid zone	YES: Not a problem	YES
<i>Piper peltatum</i> (L.)	YES: But some confusion on whether	YES: Not a problem	NO



	in El Chato or warm areas		
<i>Rubus niveus</i> (Thunb)	YES: It's the worst	YES: this is the worst. Others use <i>Aminopac</i> , but he attempts manual removal	YES: blackberry everywhere; glyphosate used
<i>Laportea aestuans</i> (L.) Gaud.	YES: But nettle is medicinal, good for the nervous system, gastritis, flu, and hair loss	YES: But medicinal, for circulation	YES
<i>Cissus sicyoides</i> (L.)	NO	NO	NO
<i>Alternaria brassicae</i> (Berk.)	YES: Particularly bad now, in the seasonal change	YES: Many chemicals used ( <i>Captan</i> , <i>Hidropluvion</i> , <i>Star50</i> , <i>Bravo</i> )	YES
<i>Alternaria solani</i> (Cooke) Wint	YES	YES: Same as above, or use <i>Ridomil</i>	YES
<i>Alternaria sp.</i> (Ellis & Martin)	YES	YES: Same as above, or use <i>Ridomil</i>	YES
<i>Exserohilum turcicum</i> (Pass.) K.J. Leonard & Suggs	YES: Happened a lot this year – “it was like a pandemic for the corn” – affected the whole island, even El Cascajo; only people with chemicals succeeded	YES: Same as above, or use <i>Ridomil</i>	NO
<i>Alternaria sp.</i> (Ellis & Martin)	YES	YES	YES
<i>Phoma sp.</i>	YES	YES: It is like <i>Broca</i>	YES
<i>Corynespora cassicola</i> (Berk. & Curtis) Weir	YES	YES	YES
<i>Capnodium sp.</i>	YES: In citrus	YES	YES: But not common
<i>Cercospora capsici</i> (Heald & F.A. Wolf)	YES	YES: <i>Ortocide</i>	YES
<i>Cercosporazea maydis</i> (Tehon)	YES	YES: <i>Ridomil</i>	YES

<i>Cercospora Fresen. sp.</i>	YES	YES	NO
<i>Cercosporidium sp.</i>	YES: Related to <i>heladas</i>	YES	YES
<i>Pseudocercospora fijiensis</i> (Morelet) Deighton	YES	YES: But he doesn't fumigate	YES
<i>Colletotrichum coffeanum</i> Noack	YES: But she doesn't have it – other farmers do	YES	YES: It is a little more problematic
<i>Colletotrichum Corda sp.</i>	YES	YES: But doesn't fumigate	NO
<i>Cordana musae</i> (Zimm.) Höhn	YES	YES: But doesn't fumigate	MAYBE
<i>Erysiphe Hedw. ex DC. sp.</i>	YES	YES: <i>Ridomil</i> or <i>Bravo</i> pesticides are used	NO
<i>Erysiphe Hedw. ex DC. sp.</i>	YES	YES	NO
<i>Leveillula taurica</i> (Lev.) G. Arnaud	NO	YES: <i>Ridomil</i> is used	NO
<i>Hemileia vastarix</i> (Berk. & Broome)	YES	YES: But he doesn't have coffee	YES
<i>Puccinia Pers sp.</i>	YES	YES: Doesn't fumigate	NO
<i>Puccinia Micheli</i> ex Haller sp. Pers sp.	YES	YES: Doesn't fumigate	NO
<i>Papaya ring spot virus</i> (PRSV-P)	YES	YES: Doesn't fumigate	YES
<i>Bemisia tabaco</i> (Gennadius)	YES	YES: <i>Triclan</i> or <i>Rescate</i> pesticides are used	NO
<i>Aleurothrixus floccosus</i> (Maskell)	YES: Use valerian and other repellents	YES: <i>Triclan</i> or <i>Rescate</i> pesticides are used	NO
<i>Toxoptera aurantii</i> (Boyer de Fonscolombe)	YES	YES: <i>Karate</i> is used; a problem now, but wasn't here 10 years ago	YES: But little
<i>Aphis gossypii</i> (Glover)	NO	YES: <i>Karate</i>	NO
<i>Rhopalosiphum maidis</i> (Fitch)	YES	YES: <i>Karate</i> or <i>Bala</i>	YES: But little
<i>Dalbulus maidis</i> (DeLong)	YES	YES: <i>Karate</i> or <i>Bala</i>	NO

<i>Peregrinus maidis</i> (Ashmead)	YES	YES: <i>Ciperpac</i> or <i>Karate</i>	NO
<i>Nezara viridula</i> (Linnaeus)	YES	YES: <i>Karate</i> or <i>Bala</i> . The chickens eat it	YES
<i>Unaspis citri</i> (Comstock)	NO	YES: Not a problem	NO
<i>Planococcus</i> spp. (Ferris)	YES	YES: A little	YES: A little
<i>Spodoptera frugiperda</i> (J. E. Smith)	YES: The <i>cogollo</i> is bad	YES: Big problem; <i>Bala</i> and <i>Karate</i> used	YES: 'Black worm'
<i>Spodoptera sunia</i>	YES: Also bad	YES: <i>Bala</i> , resistant to <i>Karate</i>	YES: Cypermethrin
<i>Spodoptera</i> spp.	YES: Also bad	YES: <i>Karate</i> or using chickens to eat it	MAYBE
<i>Mocis latipes</i> (Guenée)	NO	YES: <i>Karate</i>	NO
<i>Trichoplusia ni</i> (Hubner)	YES	YES: <i>Bala</i> , resistant to <i>Karate</i>	YES: Aggressive
<i>Diatraea saccharalis</i> (Fabricius)	YES: A little	YES: But doesn't use chemicals	NO
<i>Diaphania nitidalis</i> (Stoll)	NO	YES: Uses <i>Karate</i> when the worm is still small	NO
<i>Neoleucinodes</i> sp. (Capps)	MAYBE	YES: <i>Karate</i> , <i>Bala</i>	NO
<i>Stegasta bosquella</i> (Chambers)	NO	YES: <i>Karate</i> , <i>Bala</i>	NO
<i>Tuta absoluta</i> (E. Mayerick)	NO	YES	YES: Problematic
<i>Phyllocnistis citrella</i> (Stainton)	NO	NO	NO
<i>Stenoma</i> sp. (Zeller)	YES	YES: Recently appeared; affects avocado production.	NO
<i>Plutella xylostella</i> (Linnaeus)	YES	YES: <i>Orthene</i>	NO
<i>Epinotia</i> sp. (Walsingham)	YES	YES: <i>Karate</i>	NO

<i>Hypothenemus hampei</i> (Ferrari)	NO	YES: <i>Karate</i>	NO
<i>Agriotes</i> sp. (Eschscholtz)	NO	YES: <i>Karate</i> and <i>Bala</i>	NO
<i>Trips</i> spp. (Haliday)	MAYBE	YES: Trips are a big problem. Many types of chemicals are used, including <i>Ortene</i> and <i>Triclan</i>	MAYBE
<i>Frankliniella</i> spp. (Pergande)	YES	YES: Same as above	MAYBE
<i>Selenothrips rubrocinctus</i> (Giard)	NO	YES: Same as above	NO
<i>Anastrepha</i> spp. (Schiner)	YES	YES: Doesn't use anything, ABG supposedly deals with it along the roadside in the highlands.	YES: Fruit fly, a bit, but hasn't seen many
Dpitera: <i>Agromyzidae</i>	NO	YES: <i>Karate</i>	NO
<i>Polyphagotarsonemus latus</i> (Banks)	NO	YES	NO
<i>Tetranychus</i> spp. (Dufour)	NO	YES: Uses an insecticide, doesn't remember name	NO
<i>Oligonychus</i> spp. (Berlese)	NO	YES: Doesn't fumigate	NO
<i>Mononychellus</i> spp. (Mc. Gregor).	NO	YES: Doesn't fumigate	NO
<i>Cycloneda sanguine</i> (Linnaeus)	YES	YES: This farmer likes and takes care of these ladybugs	YES
<i>Hippodamia convergens</i> (Guérin-Méneville)	NO	YES: This farmer likes and takes care of these ladybugs	NO
<i>Cheilomenses</i> spp. (Chevrolat)	NO	YES: This farmer likes and takes care of these ladybugs	NO
<i>Stethorus</i> sp. (Weise)	NO	YES: This farmer likes and takes care of these ladybugs	NO

<i>Oligota</i> sp.	NO	YES: This farmer likes and takes care of these ladybugs	NO
<i>Conura</i> sp. (Spinola)	NO	NO	NO
<i>Aphidus</i> sp.	NO	NO	NO
<i>Ageniaspis citricola</i> (Logvinovskaya)	NO	NO	NO
<i>Polistes</i> spp. (Linnaeus)	YES	YES: Not a problem	YES
<i>Condylostylus</i> sp. (Bigot)	NO	YES: Not a problem	NO
Diptera: <i>Syrphidae</i> (Latreille)	YES	YES: Not a problem	NO
Diptera: <i>Cecidomyiidae</i> (Gagné, R.J.)	NO	YES: Not a problem	NO
<i>Orius</i> spp. (Wolff)	NO	NO	NO
<i>Zelus</i> spp. (Fabricius)	NO	YES: Not a problem	NO
Hemiptera: <i>Reduviidae</i>	NO	YES: <i>Bala</i> pesticide is used	NO
<i>Chrysoperla</i> sp. (Stephens)	NO	NO	NO
<i>Euseius</i> spp. (De Leon)	MAYBE	NO	MAYBE
Additional comments made by farmers about introduced species	She says guava and blackberry are the worst invasive plants. This year's tomatoes didn't grow well because of the fruit fly. Corn also did poorly. She was surprised the catalogue didn't include slugs and centipedes. She is against the use of chemicals, but has to use cypermethrin for the ants.	The farmer was surprised the catalogue didn't include slugs, ants, and centipedes. He uses cypermethrin against the ants and a slug killer ( <i>mata babosa</i> ) for the slugs.	The farmer says guava trees and rats should be in the catalogue. He says that tobacco and aji peppers are used to protect tomato plants.

## 12. REFERENCES CITED

Agrawal, A. (2005). Environmentalism: Community, intimate government, and the making of environmental subjects in Kumaon, India. *Current Anthropology*, 46(2), 161-190.

Ahassi, C. (2007a). Lo Galapagueño, los Galapagueños. Proceso de construcción de identidades en las islas Galápagos. *Revista de Antropología Experimental*, 7(14), 169-176.

———. (2007b). Procesos de adaptación cultural y símbolos implicados. In P. Ospina, & C. Falconí (Eds.), *Galápagos: Migraciones, economía, cultura, conflictos y acuerdos* (pp. 201-204). Quito: Corporación Editora Nacional/UASB-E/Programa de Naciones Unidas para el Desarrollo.

Alaszewski, A. (2015). Anthropology and risk: Insights into uncertainty, danger and blame from other cultures—A review essay. *Health, Risk & Society*, 17(3-4), 205-225.

Alatas, S. H. (1977). *The myth of the lazy native: A study of the image of the Malays, Filipinos and Javanese from the 16th to the 20th century and its function in the ideology of colonial capitalism*. London: Frank Cass and Company Limited.

Alberdi, L. (2021). *Propuesta de financiamiento para el fondo verde del clima (GCF)*. FAO, WWF, CAF. [Unpublished funding proposal].

Allan, B. B. (2018). *Scientific cosmology and international orders* (Vol. 147). Cambridge: Cambridge University Press.

Alomía Herrera, I., Paque, R., Maertens, M., & Vanacker, V. (2022). History of land cover change on Santa Cruz Island, Galapagos. *Land*, *11*, 1017.

American Anthropological Association (2015). AAA Statement on Humanity and Climate Change. Available at: <https://www.americananthro.org/anthropology-and-climate-change> (Accessed: 5 May 2020).

Anchundia, D., K. P. Huyvaert, & D. J. Anderson. (2014). Chronic lack of breeding by Galápagos Blue-footed Boobies and associated population decline. *Avian Conservation and Ecology* *9*(1), 6.

Andrada, J., Cantero, P., & Ballesteros, E. R. (2010). *Habitar Galápagos: Encrucijada de naturaleza y cultura*. Quito: Universidad de Cuenca.

———. (2015). *Floreana: Islamundo en Galápagos*. Consejo de Gobierno del Régimen Especial de Galápagos.

Andrade, M. (1995). Las comunidades pesqueras en la región insular. In *Perspectivas científicas y de manejo para las islas Galápagos: Simposio*. Quito: ORSTOM / Fundación Charles Darwin.

Angus, I. (2016). *Facing the Anthropocene: Fossil capitalism and the crisis of the earth system*. New York: NYU Press.

Appadurai, A. (1996). *Modernity at large: Cultural dimensions of globalization* (Vol. 1). Minneapolis: U of Minnesota Press.

———. (2015). Mediants, materiality, normativity. *Public Culture*, 27(2), 221-237.

Appel, H. (2012). Offshore work: Oil, modularity, and the how of capitalism in Equatorial Guinea. *American Ethnologist*, 39(4), 692-709.

Arbin, L. (2019). The Galapagos Islands-a conflict of interests: A case study of how conservation, tourism and local interests meet, and how that affect the islands and the residents. Second cycle, A2E. Uppsala: SLU – Swedish University of Agricultural Sciences, Dept. of Urban and Rural Development.

Arboleda, Á. (2006). *Cuentos y tradiciones orales del Ecuador*. Quito: Eskeletra Editorial.

Arrighi, G. (1994). *The long twentieth century: Money, power, and the origins of our times*. Brooklyn, NY: Verso.

Baer, H. A. & Singer, M. (2014). *The anthropology of climate change: An integrated critical perspective*. New York: Routledge.

Barrow, M. (2009). *Nature's ghosts: Confronting extinction from the age of Jefferson to the age of ecology*. Chicago: University of Chicago Press.



Bassett, C. A. (2009). *Galápagos at the crossroads: Pirates, biologists, tourists, and creationists battle for Darwin's cradle of evolution*. Washington DC: National Geographic Books.

Batalla, C., Michelena, L., & Batalla, J. (2019). *Índice de vulnerabilidad al cambio climático en la Isla de Santa Cruz de Galápagos (Provincia de Galápagos) en Ecuador*. CAF-Banco de Desarrollo de América Latina.

Bateson, G. (1972). *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. Chicago: University of Chicago Press.

Bauman, Z. (2007). *Liquid times: Living in an age of uncertainty*. Cambridge: Polity Press.

BBC (2021, March 29). Galápagos tortoises: 185 babies seized from smugglers. Available at: <https://www.bbc.com/news/world-latin-america-56564326> (Accessed April 4, 2021).

Beck, U. (1992 [1986]). *Risk society: Towards a new modernity*. London: Sage Publications.

———. (1987). The anthropological shock: Chernobyl and the contours of the risk society. *Berkeley Journal of Sociology*, 32, 153-165.

———. (1994). The reinvention of politics: Towards a theory of reflexive modernization. In U. Beck, A. Giddens, & S. Lash (Eds.), *Reflexive modernization: Politics, tradition and aesthetics in the modern social order*. Cambridge: Polity Press.

———. (1996). World risk society as cosmopolitan society? Ecological questions in a framework of manufactured uncertainties. *Theory, Culture & Society*, 13(4), 1-32.

———. (1999). *World risk society*. Cambridge: Polity Press.

———. (2000). Risk society revisited: Theory, politics and research programmes. In B. Adam, U. Beck, & J. Van Loon (Eds.), *The risk society and beyond: Critical issues for social theory* (pp. 211-229). London: Sage.

———. (2008). World at risk: The new task of critical theory. *Development and Society*, 37(1), 1-21.

———. (2009). *World at risk*. Cambridge: Polity Press.

———. (2013). Living in and coping with a world risk society. In D. Innerarity, & J. Solana, (Eds.), *Humanity at risk: The need for global governance* (pp. 11-16). London: Bloomsbury.

———. (2018). *What is globalization?* Cambridge: Polity Press.

Beebe, W. (2012 [1924]). *Galapagos: World's end*. Putnam, New York: Courier Corporation.

Bellamy, R., & Hulme, M. (2011). Beyond the tipping point: Understanding perceptions of abrupt climate change and their implications. *Weather, Climate, and Society*, 3(1), 48-60.

Bensted-Smith, R. (Ed.). (2002). *A biodiversity vision for the Galapagos Islands*. Washington, DC: World Wildlife Fund; Quito: Charles Darwin Foundation.

Bermúdez, E.C., Colina, L.P., Santillán, D.N., Coello, D.V., Guamán, L.M., Carrasco, L.P., Escobar, J.D., Garcés-Carrera, S. (2020). *Catálogo de organismos asociados a especies agrícolas en la provincia de Galápagos-Ecuador*, Publicación Miscelánea No. 446. Quito: INIAP.

Bhaskar, R., Frank, C., Hoyer, K. G., Naess, P., & Parker, J. (2010). *Interdisciplarity and climate change: Transforming knowledge and practice for our global future*. London: Routledge.

Bocci, P. (2017a). *Invasive life: Illegal immigrants and invasive species on the Galapagos Islands, Ecuador* [PhD thesis, University of North Carolina at Chapel Hill].

———. (2017b). Tangles of care: Killing goats to save tortoises on the Galápagos Islands. *Cultural Anthropology*, 32(3), 424-449.

———. (2019). Planting the seeds of the future: Eschatological environmentalism in the time of the Anthropocene. *Religions*, 10(2), 1-14.

———. (2022). 'Rooting,' for change: The role of culture beyond resilience and adaptation. *Conservation & Society*, 20(2), 103-112.

Boholm, Å. (1996). Risk perception and social anthropology: Critique of cultural theory. *Ethnos*, 61(1-2), 64-84.

———. (2015). *Anthropology and risk*. New York: Routledge.

Bonilla, D. (1998). *Propuesta de diseño y proyecciones de uso de la zona agrícola de Galápagos*. [Unpublished master's thesis]. Spain: Universidad Internacional de Andalucía.

Borja, R. & Pérez, J. (2000). *Parque Nacional Galápagos: Dinámicas migratorias y sus efectos en el uso de los recursos naturales*. Quito: Fundación Natura, World Wildlife Fund and The Nature Conservancy.

Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology education* (pp. 241-58). Westport, CT: Greenwood.

———. (1998). *Acts of resistance: Against the tyranny of the market* (R. Nice, Trans.). New York: The New Press.

Bozzano, D.P. (1989). Galápagos: Historia de los asentamientos humanos. In *Trama. Revista de Arquitectura* 49, 44-46. Quito: Editorial Fraga.

Brewington, L. (2011). Agriculture and conservation in the Galápagos Islands. *Grassroots Development* 32(1), 54-59.

———. (2018). Stakeholder perceptions of invasive species and participatory remote sensing in the Galapagos Islands. In C. Mena, & M. de Lourdes Torres (Eds.), *Understanding invasive species in the Galapagos Islands: From the molecular to the landscape* (pp. 175-192). Springer.

Brockington, D. (2002). *Fortress conservation: The preservation of the Mkomazi Game Reserve, Tanzania*. Bloomington, IN: Indiana University Press.

———. (2014). Celebrity spectacle, post-democratic politics, and Nature™ Inc. In B. Büscher, W. Dressler, & R. Fletcher (Eds.), *Nature™ Inc: environmental conservation in the neoliberal age* (pp. 108-126). Tucson: The University of Arizona Press.

Brockington, D., Duffy, R. & Igoe, J. (2008). *Nature unbound: Conservation, capitalism and the future of protected areas*. London: Earthscan.

Brown, P. R., & Zinn, J. O. (Eds.). (2022). *Covid-19 and the sociology of risk and uncertainty: Studies of social phenomena and social theory across 6 continents*. Springer Nature.

Bryant, R. L. (1992). Political ecology: An emerging research agenda in Third-World studies. *Political Geography*, 11(1), 12-36.

Burke, A. (2012). *An ethnographically-based critique of sustainable tourism and eco-tourism practices in Galápagos, Ecuador* [Master's thesis, University of Cape Town].

———. (2016). *The performativity of sustainability: Assessing the continuity of artisanal fishing livelihoods in Galápagos' precarious waters* [Doctoral thesis, University of Cape Town].

———. (2021). The crossroads of ecotourism dependency, food security and a global pandemic in Galápagos, Ecuador. *Sustainability*, 13(23), 13094.

Büscher, B. & Fletcher, R. (2019). Towards convivial conservation. *Conservation & Society* 17(3), 283–296.

CAF, FAO & WWF (2022). Climate change: The new evolutionary challenge for the Galapagos (environmental and social management framework vs 1V3). Available at: <https://www.caf.com/media/3042413/social-and-environmental-assessment-galapagos-05-11-21.pdf> (Accessed 17 January 2023).

Cairns, R. (2011). *A critical analysis of the discourses of conservation and science on the Galápagos Islands* [DPhil thesis, University of Leeds].

Cairns, R., Sallu, S.M., & Goodman, S. (2014). Questioning calls to consensus in conservation: A Q study of conservation discourses on Galápagos. *Environmental Conservation*, 41(1), 13-26.

Calkins, S. (2016). *Who knows tomorrow?: Uncertainty in north-eastern Sudan*. Oxford: Berghahn Books.

Campbell, K. J., Carrión, V., & Sevilla, C. (2011). Increasing the scale of successful invasive rodent eradications in the Galapagos Islands. *Galapagos Report, 2012*, 194-198.

Caplan, P. (Ed.). (2000). *Risk revisited*. London: Pluto Press.

Carrión, V., Donlan, C. J., Campbell, K. J., Lavoie, C., & Cruz, F. (2011). Archipelago-wide island restoration in the Galápagos Islands: Reducing costs of invasive mammal eradication programs and reinvasion risk. *PloS one, 6*(5), e18835.

Cassegård, C. (2017). Eco-Marxism and the critical theory of nature: Two perspectives on ecology and dialectics. *Distinktion: Journal of Social Theory, 18*(3), 314-332.

Castel, R. (1991). From dangerousness to risk. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 281-298). London: Harvester-Wheatsheaf.

Caulkins, D. D. (1999). Is Mary Douglas's grid/group analysis useful for cross-cultural research? *Cross-Cultural Research, 33*(1), 108-128.

Charles Darwin Foundation [CDF] (2005). Alternativas para el control de insectos en cultivos. [Educational document].

Chassagne, N., & Everingham, P. (2021). Buen Vivir: A guide for socialising the tourism commons in a post-COVID-19 era. In *Socialising Tourism* (pp. 214-228). Routledge.

Chavez, J. (1993). *Diagnóstico de la agricultura y la ganadería en la provincia de Galápagos*. [Unpublished agronomist thesis]. Quito: Universidad Central del Ecuador (Facultad de Ciencias Agrícolas).

Chibber, V. (2022). *Confronting capitalism: How the world works and how to change it*. Brooklyn, NY: Verso Books.

Chiriboga R, Maignan S., & Hidalgo, F. (2007). Crisis del sector agropecuario y control de especies invasoras en Galápagos. In P. Ospina, & C. Falconí (Eds.), *Galápagos: Migraciones, economía, cultura, conflictos y acuerdos* (Vol. 57, pp. 145-150). Quito: Corporación Editora Nacional/Universidad Andina Simón Bolívar/UNDP.

Chourasiya, S., & Mahobiya, P. (2020). *Toxicology and mode of action of cypermethrin. An overview of toxicants*. New Delhi: Vishwagayan Prakashan.

Clark, B., & York, R. (2005). Carbon metabolism: Global capitalism, climate change, and the biospheric rift. *Theory and Society*, 34(4), 391-428.

Connell, J. (2003). "Losing ground? Tuvalu, the greenhouse effect and the garbage can". *Asia Pacific Viewpoint*, 44(2), 89-107.

Connor, L. H. (2016). *Climate change and anthropos: Planet, people and places*. Routledge.



Constantino, J. (2007). Construyendo y borrando las historias de Isabela. In P. Ospina, & C. Falconí (Eds.), *Galápagos: migraciones, economía, cultura, conflictos y acuerdos* (pp. 217-229). Quito: Universidad Andina Simón Bolívar/UNDP/Corporación Editora Nacional.

Conway, D., & Heynen, N. (2006). The ascendancy of neoliberalism and emergence of contemporary globalization. *Globalization's contradictions: Geographies of discipline, destruction, and transformation* (pp. 17-34). London: Routledge.

Cooper, E., & Pratten, D. (2015). Ethnographies of uncertainty in Africa: An introduction. In *Ethnographies of uncertainty in Africa* (pp. 1-16). London: Palgrave Macmillan.

Couenberg, P. & Poma, J. (2017). Importancia de los conocimientos y prácticas locales en la actividad agropecuaria insular. In *Informe Galapagos 2015-2016* (pp. 77–81). Puerto Ayora, Galápagos, Ecuador: GNPD, GCREG, CDF, GC.

Crate, S. A. & Nuttall, M. (Eds.). (2009). *Anthropology and climate change: From encounters to actions*. Walnut Creek, CA: Left Coast Press.

Cruz, E. (2010). Galápagos: ¿Conservación a ultranza o desarrollo sustentable? In J. Andrada, P. Cantero, & E. Ruiz-Ballesteros (Eds.), *Habitar Galápagos: Encrucijada de naturaleza y cultura*. Quito: Universidad de Cuenca.

Curran, D. (2016). Risk society and Marxism: Beyond simple antagonism. *Journal of Classical Sociology*, 16(3), 280-296.

Darwin, C. (1859). *On the origin of species*. London: John Murray.

Davies, C. A. (1999). *Reflexive ethnography: A guide to researching selves and others*. London: Routledge.

Dean, M. (1998). Risk, calculable and incalculable. *Soziale Welt*, 25-42.

Debord, G. (1995 [1967]). *The society of the spectacle*. New York: Zone Books.

de Groot, R. S. (1983). Tourism and conservation in the Galapagos Islands. *Biological Conservation*, 26(4), 291-300.

Dein, S. (2016). The anthropology of uncertainty: magic, witchcraft and risk and forensic implications. *J. Forensic Anthropology*, 1(107): 1-7.

Denevan, W. (1992). 'The pristine myth: the landscape of the Americas in 1492'. *Annals of the Association of American Geographers*, 82(3), 269–285.

Descola, P. & Pálsson, G. (Eds.). (1996). *Nature and society: Anthropological perspectives*. London: Routledge.

Destro, A. (2010). Cosmology and mythology. In J. Brix (Ed.), *21<sup>st</sup> century anthropology: A reference handbook* (pp. 227-237). London: SAGE Publications.

Deutsche Welle (2021, March 30). Descubren maleta con 185 crías de tortugas gigantes en el aeropuerto de Galápagos. Available at: <https://p.dw.com/p/3rOuI> (Accessed 3 October 2022).

de Wit, S. (2016). *Love in times of climate change: How an idea of adaptation to climate change travels to northern Tanzania* [Doctoral thesis. Universität zu Köln].

———. (2020). What does climate change mean to us, the Maasai? How climate-change discourse is translated in Maasailand, Northern Tanzania. In M. Brüggemann, & S. Rödder (Eds.), *Global warming in local discourses: How communities around the world make sense of climate change*. Cambridge: Open Book Publishers.

Dickens, P. (1992). Who would know? *Science, environmental risk and the construction of theory* (Working Paper 86). Centre for Urban and Regional Research, University of Sussex.

Douglas, M. (1970). *Natural symbols: Explorations in cosmology*. London/New York: Routledge.

———. (2003 [1966]). *Purity and danger: An analysis of concepts of pollution and taboo*. London: Routledge.

———. (1970). *Natural Symbols: Explorations in cosmology*. London: Barrie & Rockliff.

———. (2003 [1992]). *Risk and blame: Essays in cultural theory*. Taylor & Francis e-Library.

Douglas, M., & Wildavsky, A. (1983). *Risk and culture: An essay on the selection of technological and environmental dangers*. Berkeley: University of California Press.

Douglas, T. (1995). *Scapegoats: Transferring blame*. London: Routledge.

Durkheim, E. (2014 [1893]). *The Division of Labor in Society*. New York, NY: Free Press.

Eibl-Eibesfeldt, I. (1960). *Galapagos*. London: Macgibbon & Kee.

El Comercio A (2022, April 19). MSP presentó denuncias por presuntos casos de peculado en Galápagos. Available at: <https://www.elcomercio.com/tendencias/sociedad/denuncias-peculado-hospital-galapagos-ecuador.html> (Accessed May 19 2022).

El Comercio B (2022, September 30). Cárcel para tres personas por transportar tortugas e iguanas de Galápagos. Available at: <https://www.elcomercio.com/tendencias/ambiente/carcel-transporte-tortugas-iguanas-galapagos.html> (Accessed 7 November 2022).

Epler, B. (2007). *Tourism, the economy, population growth, and conservation in Galapagos*. Puerto Ayora: Charles Darwin Foundation.

Eriksen, T. H. (2001). *Small places, large issues: An introduction to social and cultural anthropology*. London: Pluto Press.

———. (2007). *Globalization: The key concepts*. London: Bloomsbury Publishing.

———. (2016). *Overheating: An anthropology of accelerated change*. London: Pluto Press.

Espin, P.A., Mena, C.F., Pizzitutti F. (2019). A model-based approach to study the tourism sustainability in an island environment: The case of Galapagos Islands. In T. Kvan, & J. Karakiewicz (Eds.), *Urban Galapagos: Transition to sustainability in complex adaptive systems* (pp. 97-113). New York: Springer.

Evans-Pritchard, E. E., & Gillies, E. (1937). *Witchcraft, oracles and magic among the Azande* (Vol. 12). Oxford: Clarendon Press.

Ewald, F. (1991). Insurance and risk. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 197-210). London: Harvester-Wheatsheaf.

Falk, R. A. (1999). *Predatory globalization: A critique*. Cambridge: Polity Press.

Forsyth, T. (2003). *Critical political ecology: The politics of environmental science*. London: Routledge.

Foster, J. B. (1997). The age of planetary crisis: The unsustainable development of capitalism (in special issue on 'The Future of Capitalism'). *Review of Radical Political Economics*, 29(4), 113-42.

———. (1999). Marx's theory of the metabolic rift: Classical foundations for environmental sociology. *American Journal of Sociology*, 105(2), 366-405.

Foster, J. B., Clark B., & York, R. (2010). *The ecological rift: Capitalism's war with the Earth*. New York: Monthly Review Press.

Foucault, M. (2008). *The birth of biopolitics: Lectures at the Collège de France, 1978-1979*. (G. Burchell, Trans., M. Senellart, Ed.). London: Palgrave Macmillan.

Freire, E.G. (1993). *Leyendas de Chatam: San Cristóbal, Galápagos*. Editorial Casa de la Cultura Ecuatoriana.

Fromm, E. (2001 [1955]). *The Sane Society*. Routledge.

Gaba, E. (2011, September 2). Topographic and bathymetric map of the Galápagos Islands, Ecuador. Wikipedia. Available at:

[https://commons.wikimedia.org/wiki/File:Galapagos\\_Islands\\_topographic\\_map-en.svg](https://commons.wikimedia.org/wiki/File:Galapagos_Islands_topographic_map-en.svg)

(Accessed 12 September 2021).

Galapagos National Park [GNP] (2005). *Plan de manejo: Un pacto por la conservación y desarrollo sustentable del archipiélago*. Galapagos, Ecuador: Parque Nacional Galápagos.

Geertz, C. (1973). *The interpretation of cultures* (Vol. 5019). New York: Basic Books.

Giddens, A. (1981). *A contemporary critique of historical materialism* (Vol. 1). Berkeley: University of California Press.

———. (1990). *The consequences of modernity*. Cambridge: Polity Press.

———. (1991). *Modernity and self-identity: Self and society in the Late Modern Age*. Cambridge: Polity Press.

———. (1996). Affluence, poverty and the idea of a post-scarcity society. *Development and Change*, 27(2), 365-377.

———. (1999a). *Runaway world: How globalisation is shaping our lives*. New York: Routledge.

———. (1999b). Risk and responsibility. *The Modern Law Review*, 62(1), 1-10.

González, J. (2007). Cooperando en un mundo cambiante: Una mirada sobre el papel de las organizaciones cooperantes en el presente y futuro de Galápagos. In P. Ospina, & C. Falconí,

(Eds.), *Galápagos: Migraciones, economía, cultura, conflictos y acuerdos* (Vol. 57, pp. 277-287). Quito: Corporación Editora Nacional/Universidad Andina Simón Bolívar/UNDP.

González, M. A. (2021, May 3). Contraloría: una orden verbal de Pablo Celi era suficiente para desvanecer las glosas. *Primicias*. Available at:

<https://www.primicias.ec/noticias/politica/desvanecimiento-glosas-contraloria-corrupcion/>

(Accessed July 10 2021).

Graeber, D. (2011). *Debt: The first five thousand years*. New York: Melville House.

———. (2015). *The utopia of rules: On technology, stupidity, and the secret joys of bureaucracy*. Melville House.

Grenier, C. (2007 [2000]). *Conservación contra natura. Las Islas Galápagos* (Vol. 233). Quito: Editorial Abya Yala.

———. (2010). The continentalization of the insular ecosystems and lifestyles. In *Galapagos Report 2009 - 2010* (pp. 127–129).

———. (2012). Nature and the world: A geohistory of Galápagos. In M. Wolff, & M. Gardener (Eds.), *The role of science for conservation*. New York: Routledge.

Grenier, C., & de Miras, C. (1994). Les Galápagos: du mythe d'un espace vierge au partage disputé de la rente. *Cahiers des Sciences Humaines*, 30(4), 645-666.



Guggenheim, D. (Director). (2006). *An inconvenient truth* [Film]. Lawrence Bender Productions & Participant Productions.

Guodaar, L., Bardsley, D. K., & Suh, J. (2021). Integrating local perceptions with scientific evidence to understand climate change variability in northern Ghana: A mixed-methods approach. *Applied Geography, 130*, 102440.

Guribye, E. (2000). *The last paradise: Man-animal relationships on Galápagos* [Master's thesis, University of Bergen].

Guzman, Juan Carlos, & Poma, Jose Enrique. (2015). Bioagricultura: Una oportunidad para el buen vivir insular. In *Informe Galapagos 2013-2014* (pp. 25–29). Puerto Ayora, Galápagos, Ecuador: GNPD, GCREG, CDF, GC..

Hameso, S. (2018). Farmers and policy-makers' perceptions of climate change in Ethiopia. *Climate and Development, 10*(4), 347-359.

Haram, L., & Yamba, C. B. (2009). *Dealing with uncertainty in contemporary African lives*. Nordiska Afrikainstitutet.

Hardin, G. (1968). The tragedy of the commons. *Science, 162*(3859), 1243-1248.

Harris, M. P. (1970). The biology of an endangered species, the Dark-rumped Petrel (*Pterodroma phaeopygia*), in the Galapagos Islands. *The Condor*, 72(1), 76-84.

Harvey, D. (2003). *The 'new' imperialism: Accumulation by dispossession*. Oxford: Oxford University Press.

———. (2005). *A brief history of neoliberalism*. New York: Oxford University Press.

———. (2020). Universal alienation. In A. Cole & E. Ferrarese (Eds.), *How capitalism forms our lives* (pp. 33-62). New York: Routledge.

Hennessy, E. (2010). *Crisis in nature's Eden: Conserving nature and culture in the Galápagos Islands* [Master's thesis, University of North Carolina at Chapel Hill].

———. (2014). *On the backs of tortoises: Conserving evolution in the Galápagos islands* [PhD thesis, University of North Carolina at Chapel Hill].

———. (2017). Mythologizing Darwin's islands. In D. Quiroga, & A. Sevilla (Eds.), *Darwin, Darwinism and conservation in the Galapagos Islands* (pp. 65-90). Bern: Springer.

———. (2018a). The Galápagos Islands: A natural laboratory? *Arcadia*, Environment & Society Portal, Rachel Carson Center for Environment and Society. Available at:

<http://www.environmentandsociety.org/arcadia/galapagos-islands-natural-laboratory> (Accessed: 5 May 2020).

———. (2018b). The politics of a natural laboratory: Claiming territory and governing life in the Galápagos Islands. *Social Studies of Science*, 48(4), 483-506.

———. (2019). *On the backs of tortoises: Darwin, the Galápagos, and the fate of an evolutionary Eden*. New Haven, CT/London, UK: Yale University Press.

Hennessy, E., & McCleary, A. L. (2011). Nature's Eden? The production and effects of 'pristine' nature in the Galápagos Islands. *Island Studies Journal*, 6(2), 131-156.

Herbas-Torrico, B.C. & González-Rocha, E. A. (2020). Análisis de las causas del cumplimiento y evasión tributaria: Evidencia de Bolivia. *Perspectivas* [online], 46,119-184.

Heron, K. (2021). Dialectical materialisms, metabolic rifts and the climate crisis: A Lacanian/Hegelian perspective. *Science & Society*, 85(4), 501-526.

Hilgers, M. (2010). The three anthropological approaches to neoliberalism. *International Social Science Journal*, 61(202), 351-364.

Holbraad, M. & Pedersen, M. A., (2013). Introduction: Times of security. In *Times of security* (pp. 11-37). Routledge.

Hulme, M. (2009). *Why we disagree about climate change: Understanding controversy, inaction and opportunity*. New York: Cambridge University Press.

———. (2011). Reducing the future to climate: A story of climate determinism and reductionism. In J.R. Fleming, & V. Jankovic (Eds.), *Osiris*, 26(1), 245-266.

Hunt, C., Barragán-Paladines M. J., Izurieta J.C. & Ordóñez A. (2022). Tourism, compounding crises, and struggles for sovereignty. *Journal of Sustainable Tourism*, 1-18.

Hunt, C. A., Jones, M. E., Bustamante, E., Zambrano, C., Carrión-Klier, C., & Jäger, H. (2023). Setting up roots: Opportunities for biocultural restoration in recently inhabited settings. *Sustainability*, 15(3), 2775.

Idrovo, H. (2005). *Galápagos: Footsteps in paradise*. Quito: Libri Mundi.

Igoe, J. & Brockington, D. (2007). Neoliberal conservation: A brief introduction. *Conservation and Society*, 5(4), 432-449.

INEC. (2015). *Análisis de resultados definitivos censo de población y vivienda: Galápagos 2015*. Instituto Nacional de Estadística y Censos (INEC).

———. (n.d.). *Proyección de la población ecuatoriana, por años calendario, según regiones provincias y sexo, período 2010 – 2020*. Instituto Nacional de Estadística y Censos (INEC). Available at: <https://www.ecuadorencifras.gob.ec/proyecciones-poblacionales/> (Accessed: 10 May 2020).

Ingold, T. (1993). Globes and spheres. In K. Milton (Ed.), *Environmentalism: The view from anthropology* (31-42). London: Routledge.

———. (2000). *The perception of the environment: Essays on livelihood, dwelling and skill*. Hove, UK: Psychology Press.

———. (2013). Designing environments for life. In Hastrup, K. (Ed.), *Anthropology and nature* (pp. 243-256). London: Routledge.

IPCC. (2007). *IPCC fourth assessment report: Climate change 2007 (AR4)*. Geneva: IPCC.

Irwin, A., Simmons, P. & Walker, G. (1999). Faulty environments and risk reasoning: The local understanding of industrial hazards. *Environment and Planning A*, 31(7): 1311-26.

Jäger, H., Crespo, C., Abad, F., Llerena, A., & Couenberg, P. (2018). Aprendiendo de los productores: Especies invasoras en la zona agropecuaria de Santa Cruz. *Informe Galapagos 2017*, 63-66.

Jasanoff, S. (2010). A new climate for society. *Theory, Culture & Society*, 27(2-3), 233-253.

Joffé, H. (1999). *Risk and 'the other'*. Cambridge: Cambridge University Press.

Kautsky, K. (1988 [1899]). *The Agrarian Question*. London: Zwan Publications.

Kelly, A. B. (2011). Conservation practice as primitive accumulation. *Journal of Peasant Studies*, 38(4), 683-701.

Kempton, W., Boster, J. S. & Hartley, J. A. (1995). *Environmental values in American culture*. Cambridge, MA: MIT Press.

Kennedy, G. (2012). *An ontology of trash: The disposable and its problematic nature*. Albany: State University of New York Press.

Kerr, D. (1999). Beheading the king and enthroning the market: A critique of Foucauldian governmentality. *Science & Society*, 63(2), 173-202.

Kerr, S., Cardenas, S. & Hendy, J. (2004). *Migration and the environment in the Galapagos: An analysis of economic and policy incentives driving migration, potential impacts from migration control, and potential policies to reduce migration pressure* (Motu Working Paper Series No. 03-17).

Kichamu, E. A., Ziro, J. S., Palaniappan, G., & Ross, H. (2018). Climate change perceptions and adaptations of smallholder farmers in Eastern Kenya. *Environment, Development and Sustainability*, 20, 2663-2680.

King, S. (2022, September 13). Rare 'triple dip' La Niña declared. *BBC News*. Available at: <https://www.bbc.com/weather/features/62890361> (Accessed 13 September 2022).

Koch, M. (2012). *Capitalism and climate change: Theoretical discussion, historical development and policy responses*. Basingstoke: Palgrave Macmillan.

Krimsky, S., & Golding, D. (Eds.). (1992). *Social theories of risk*. Westport, CT: Praeger Publishers.

Laegaard, S. & Pozo, P. (2004). Invasive grasses in the Galapagos Islands. In *Lyonia* 6(2), 172-175.

Larrea, I. & Di Carlo, G. (2011a). *Adapting to climate change in the Galapagos Islands*. Quito: WWF and Conservation International.

———. (2011b). *Climate change vulnerability assessment of the Galápagos Islands*. Quito: WWF and Conservation International.

Lash, S. M., Wynne, B., & Szerszynski, B. (1998). *Risk, environment and modernity: Towards a new ecology*. London: Sage.

Laso, F. (2020). Galapagos is a garden. In S.J. Walsh, D. Riveros-Iregui, J.Arce-Nazario, & P. H. Page (Eds.), *Land cover and land use change on islands* (pp. 137–166). New York, NY: Springer Publishing.

———. (2021). *Agriculture, Wildlife, and Conservation in the Galapagos Islands* [Doctoral dissertation, The University of North Carolina at Chapel Hill].

Laso, F. J., Benítez, F. L., Rivas-Torres, G., Sampedro, C., & Arce-Nazario, J. (2019). Land cover classification of complex agroecosystems in the non-protected highlands of the Galapagos Islands. *Remote Sensing*, *12*(1), 65.

Latorre, Octavio (1999). *El hombre en las Islas Encantadas: La historia humana de Galápagos*. Quito: FUNDACYT.

———. (2003 [1990]). *The curse of the giant tortoise: Tragedies, mysteries, and crimes in the Galapagos Islands* (4<sup>th</sup> ed). Quito: National Cultural Fund.

Latour, B. (1993). *We have never been modern*. Cambridge, MA: Harvard University Press.

———. (2017). *Facing Gaia: Eight lectures on the new climatic regime*. Cambridge: Polity Press.

———. (2021a). *After lockdown: A metamorphosis*. Cambridge: Polity Press.

———. (2021b, November 9). *Kyoto Prize Commemorative Lecture: Bruno Latour “How to React to a Change in Cosmology”* [Video]. Available at:

<https://www.youtube.com/watch?v=VOIqItHwUA4> (Accessed 4 April 2023).



Latour, B. & Woolgar, S. (1986). *Laboratory life: The construction of scientific facts*. Princeton, NJ: Princeton University Press.

Lavoie, C., Cruz, F., Carrion, G. V., Campbell, K., Donlan, C. J., Harcourt, S., & Moya, M. (2007). *The thematic atlas of Project Isabela*. Puerto Ayora, Ecuador: Charles Darwin Foundation and the Galapagos National Park Service.

Lazrus, H. (2015). Risk perception and climate adaptation in Tuvalu: A combined cultural theory and traditional knowledge approach. *Human Organization*, 74(1), 52-61.

Leach, E. (1968). *A runaway world?* (The BBC Reith Lectures 1967). Oxford: Oxford University Press.

León M. G. (2014). *Censo de unidades de producción agropecuaria de Galápagos 2014*. CGREG, MAGAP, INEC.

Lincango, M.P., Mieles, A.E., Guaman, L. (2005). *Invertebrados terrestres introducidos asociados a las zonas agrícolas de las islas San Cristóbal, Floreana e Isabela*. Puerto Ayora: Charles Darwin Foundation.

Linville, P. W., & Fischer, G. W. (1991). Preferences for separating or combining events. *Journal of Personality and Social Psychology*, 60(1), 5.

- Loeb, N. G., Johnson, G. C., Thorsen, T. J., Lyman, J. M., Rose, F. G., & Kato, S. (2021). Satellite and ocean data reveal marked increase in Earth's heating rate. *Geophysical Research Letters*, 48(13).
- Lorenzini D. (2020). Governmentality, subjectivity, and the neoliberal form of life. In A. Cole, & E. Ferrarese (Eds.), *How capitalism forms our lives* (pp. 50 – 62). New York: Routledge.
- Lu, F., Valdivia, G. & Wolford, W. (2013). Social dimensions of 'nature at risk' in the Galapagos Islands, Ecuador. *Conservation and Society*, 11(1), 83-95.
- Luhmann N. (1993). *Risk: A sociological theory*. Berlin and New York: de Gruyter.
- Lundh, J.P. (2006). The farm area and cultivated plants on Santa Cruz 1932-1965. *Galapagos Research*, 64,12-25.
- Lupton D. (2013 [1999]). *Risk*. New York: Routledge.
- Macdonald, T. (1997). Los conflictos en las Islas Galápagos: Análisis y recomendaciones para su manejo [Financiado por: Agencia de los Estados Unidos para el Desarrollo Internacional (AID) Programa Alimentario PL 480]. Quito: Fundación Charles Darwin.
- Macnaghten, P. (2006). Environment and Risk. In G. Mythen, & S. Walklate (Eds.), *Beyond the risk society: Critical reflections on risk and human security*. New York: Open University Press.

Maignan, S. (2007). En el archipiélago de Colón: Sostener el sector agorpecuario para garantizar la conservación de un patrimonio natural único. In M. Vaillant, D. Cepeda, P. Gondard, A. Zapatta, & A.Meunier (Eds.), *Mosáico agrario: Diversidades y antagonismos socio-económicos en el campo ecuatoriano*. Quito: SIPAE, IRD, IFEA.

Malinowski, B. (1922). Ethnology and the study of society. *Economica*, 6, 208-219.

Martinez-Alier, J. (2002). *The environmentalism of the poor: Study of ecological conflicts and valuation*. Cheltenham: Edward Elgar.

Marx, K., & Engels, F. (1976). *Marx & Engels collected works Vol. 6: Marx and Engels: 1845-1848*. London: Lawrence & Wishart.

Marx, K. (1844). On the Jewish question. Available at:

<https://www.marxists.org/archive/marx/works/1844/jewish-question/> (Accessed 7 January 2023).

———. (1990 [1867]). *Capital: A critique of political economy* (Vol. 1). London: Penguin Classics.

Maslow, A. H. (1954). *Motivation and personality*. New York: Harper and Row.

Mathis, A. & Rose, J. (2016). Balancing tourism, conservation, and development: A political ecology of ecotourism on the Galapagos Islands. *Journal of Ecotourism*, 15(1), 64-77.

Mavhunga, C. C. (2011). Vermin beings: On pestiferous animals and human game. *Social Text*, 29(1), 151-176.

Mayorga, E. (2019). *Galápagos: Imaginarios y evolución textual en las islas encantadas* (Vol. 77). West Lafayette, IN: Purdue University Press.

Mbembe, A. (2019). *Necropolitics*. Durham and London: Duke University Press.

Meltzoff, S. K. (2012). *Listening to sea lions: Currents of change from Galapagos to Patagonia*. Lanham, MD: AltaMira Press.

Mena, C. F., Paltán, H. A., Benitez, F. L., Sampedro, C., & Valverde, M. (2020). Threats of climate change in small oceanic islands: The case of climate and agriculture in the Galapagos Islands, Ecuador. In S.J. Walsh, D. Riveros-Iregui, J. Arce-Nazario, & P.H. Page (Eds.), *Land cover and land use change on islands: Social and ecological interactions in the Galapagos Islands*. Springer, Cham.

Merino, R. (2016). An alternative to ‘alternative development’?: Buen vivir and human development in Andean countries. *Oxford Development Studies*, 44(3), 271-286.

Methaphat, C. (2009). *Silent risk: Chemical pesticide use among fruit farmers in an eastern Thai community*. University of Washington.

Meyer, B., & Geschiere, P. (1999). Globalization and identity: Dialectics of flow and closure. Introduction. In B. Meyer, & P. Geschiere (Eds.), *Globalization and identity: Dialectics of flow and closure* (pp.1-15). Oxford: Blackwell.

Ministerio de Agricultura, Ganadería, Acuacultura y Pesca, [MAGAP], Subsecretaria Regional del Litoral Sur y Galápagos, Dirección Provincial Agropecuaria de Galápagos (2009). *Plan Estratégico 2009-2020*.

Ministerio del Ambiente (2019, June 6). Programa “Galápagos compatible con el clima”, una propuesta para hacer frente al cambio climático. Available at: <https://www.ambiente.gob.ec/programa-galapagos-compatible-con-el-clima-una-propuesta-para-hacer-frente-al-cambio-climatico/> (Accessed April 3 2023).

Moore, H., & Sanders, T. (2001). *Magical interpretations, material realities: Modernity, witchcraft and the occult in postcolonial Africa*. London: Routledge.

Moore, J. (2000). Environmental crises and the metabolic rift in world-historical perspective. *Organization & Environment*, 13(2), 123-157.

———. (2011). Transcending the metabolic rift: A theory of crises in the capitalist world-ecology. *Journal of Peasant Studies*, 38(1), 1- 46.

———. (2015). *Capitalism in the web of life*. London: Verso.

———. (2016). *Anthropocene or Capitalocene? Nature, history, and the crisis of capitalism*. Oakland: PM Press.

———. (2017). The Capitalocene, part I: On the nature and origins of our ecological crisis. *The Journal of Peasant Studies*, 44(3), 594-630.

Moreno, C. (2001). Conocimientos y prácticas del uso de plaguicidas y su incidencia en la salud de los agricultores del cantón Santa Cruz-Galápagos. [Thesis, Universidad Nacional de Loja].

Morton, T. (2013). *Hyperobjects: Philosophy and ecology after the end of the world*. Minneapolis: University of Minnesota Press.

Müller-Mahn, D., & Everts, J. (2013). Risksapes: The spatial dimension of risk. In D. Müller-Mahn (Ed.), *The spatial dimension of risk: How geography shapes the emergence of risksapes* (pp. 22-36). London & New York: Routledge.

Musto, M. (2010). Marx is back: The Marx-Engels-Gesamtausgabe (MEGA) project. *Rethinking Marxism*, 22(2), 290-291.

Mythen, G. (2004). *Ulrich Beck: A critical introduction to the risk society*. London: Pluto Press.

Nicholls, H. (2014). *The Galápagos: A natural history*. New York: Basic Books.

Nietzsche, F. (1957 [1874]). *On the use and abuse of history for life* (A. Collins, Trans.). Indianapolis: Bobbs-Merrill.

Nixon, R. (2011). *Slow violence and the environmentalism of the poor*. Cambridge, MA: Harvard University Press.

O'Connor, M & d'Ozouville, N. (2015). Uso de pesticidas en la agricultura en Santa Cruz.. In *Informe Galápagos 2013-2014* (pp. 30-34). Puerto Ayora, Galápagos, Ecuador: DPNG, CGREG, FCD y GC.

Ollman, B. (1971). *Alienation*. New York: Cambridge University Press.

Olofsson, A., & Zinn, J. (2019). *Researching risk and uncertainty*. London: Palgrave Macmillan.

O'Malley, P. (2008). Governmentality and risk. In J. Zinn (Ed.), *Social theories of risk and uncertainty: An introduction* (pp. 52-75). Oxford: Blackwell.

O'Reilly, J. (2017). *The technocratic Antarctic: An ethnography of scientific expertise and environmental governance*. Ithaca, NY: Cornell University Press.

Orlove, B. S., Chiang, J. C., & Cane, M. A. (2002). Ethnoclimatology in the Andes: a cross-disciplinary study uncovers a scientific basis for the scheme Andean potato farmers traditionally use to predict the coming rains. *American Scientist*, 90(5), 428-435.

Ospina, P. (2001). *Identidades en Galápagos. El sentimiento de una diferencia*. Quito: Trama.

———. (2003a). Ética ambiental y actores sociales en Galápagos. Apuntes sobre las relaciones entre naturaleza y sociedad. *Ecología Política*, 25, 111–19.

———. (2003b). Región y nación en la formación de identidades Galapagueñas. *Revista Ecuatoriana de Historia*, 19, 151-169.

———. (comp.) (2005). *Desde las islas encantadas: Historias de vida de colonos en Galápagos*. Quito: UNDP, Corporación Editora Nacional.

———. (2006). *Galápagos, naturaleza y sociedad: Actores sociales y conflictos ambientales en las islas Galápagos* (Vol. 55). Quito: Universidad Andina Simón Bolívar and Corporación Editora Nacional.

Ospina, P., & Falconí, C. (Eds.). (2007). *Galápagos: Migraciones, economía, cultura, conflictos y acuerdos* (Vol. 57). Quito: Corporación Editora Nacional.

Pálsson, G. (1996). Human-environmental relations: orientalism, paternalism and communalism. In P. Descola, & G. Pálsson (Eds.), *Nature and society: Anthropological perspectives* (pp. 73-91). London: Routledge.



Paltán, H. A., Benitez, F. L., Rosero, P., Escobar-Camacho, D., Cuesta, F., & Mena, C. F. (2021). Climate and sea surface trends in the Galapagos Islands. *Scientific Reports*, *11*(1), 1-13.

Patterson, T. C. (2009). *Karl Marx, anthropologist*. Oxford: Berg.

Pearce, F. (2016). *The new wild: Why invasive species will be nature's salvation*. Boston: Beacon Press.

Pizzitutti, F., Walsh, S.J., Rindfuss, R.R., Reck, G., Quiroga, D., Tippett, R., & Mena, C.F. (2016). Scenario planning for tourist management: A participatory and system dynamics model applied to the Galapagos Islands of Ecuador. *Journal of Sustainable Tourism*, *25*(8), 1117–1137.

Quiroga, D. (2009). Crafting nature: the Galapagos and the making and unmaking of a “natural laboratory”. *Journal of Political Ecology*, *16*(1), 123-140.

———. (2013). Changing views of the Galapagos. In S.J. Walsh, & C.F. Mena (Eds.), *Science and conservation in the Galapagos Islands: Frameworks & perspectives* (pp. 23-48). New York, NY: Springer.

———. (2018). Introduced species and the threats to the Galapagos. In *Understanding Invasive Species on the Galapagos* 1<sup>st</sup> ed., pp. 2-13). Berlin: Springer.

Quiroga, D., Mena, C., Karrer, L., Suzuki, H., Guevara, A. & Murillo, J. C. (2011). Dealing with climate change in the Galapagos: Adaptability of the tourism and fishing sectors. In I. Larrea, & G. Di Carlo (Eds.), *Climate change vulnerability assessment of the Galápagos islands*. Quito: WWF and Conservation International.

Quiroga, D. & Ospina, P. (2009). Percepciones sociales sobre la ciencia y los científicos en Galápagos. In Tapia et al. (Eds.), *Ciencia para la sostenibilidad en Galápagos: El papel de la investigación científica y tecnológica en el pasado, presente y futuro del archipiélago* (pp. 109-126). Quito: Parque Nacional Galápagos, Universidad Andina Simón Bolívar, Universidad Autónoma de Madrid y Universidad San Francisco de Quito.

Ramírez, J. (2004). *La pesca artesanal en la Reserva Marina de Galápagos: Dinámica laboral y conflictos socio-ambientales* [Bachelor's thesis, Pontificia Universidad Católica del Ecuador].

Rayner, S. (1992). Cultural theory and risk analysis. In S. Krimsky & D. Golding (Eds.), *Social theories of risk* (pp. 83-115). Westport, CT: Praeger Publishers.

Redacción Plan V (2021, March 29). La increíble historia de la avioneta fantasma de Galápagos.

Available at: <https://www.planv.com.ec/historias/sociedad/la-increible-historia-la-avioneta-fantasma-galapagos> (Accessed January 2 2022).

Redford, K. H. (1991). The ecologically noble savage. *Cultural Survival Quarterly*, 15(1), 46-48.

Reith, G. (2004). Uncertain times: The notion of 'risk' and the development of modernity. *Time & Society*, 13, 383-402.

Riascos-Flores, L., Bruneel, S., Van derHeyden, C., Deknock, A., Van Echelpoel, W., Forio, M. A. E., et al. (2020). Polluted paradise: Occurrence of pesticide residues within the urban coastal zones of Santa Cruz and Isabela (Galapagos, Ecuador). *Science of the Total Environment*, 763, 142956.

Rodríguez, J. (1989a). Galápagos: Breve diagnóstico regional. In *Trama, Revista de Arquitectura* 49, 8-9. Quito: Editorial Fraga.

Rodríguez, J. (1989b). Una agricultura exigua en un espacio rural singular. In *Trama, Revista de Arquitectura* 49, 13-15. Quito: Editorial Fraga.

Roncoli, C., Crane, T. & Orlove, B. (2009). Fielding climate change in cultural anthropology. In S.A. Crate, & M. Nuttall (Eds.), *Anthropology and climate change: From encounters to actions*. Walnut Creek, CA: Left Coast Press.

Rudiak-Gould, P. (2011). Climate change and anthropology: The importance of reception studies. *Anthropology Today*, 27(2), 9-12.

———. (2012). Promiscuous corroboration and climate change translation: A case study from the Marshall Islands. *Global Environmental Change*, 22(1), 46-54.

———. (2013). “We have seen it with our own eyes”: Why we disagree about climate change visibility. *Weather, Climate, and Society*, 5(2), 120-132.

———. (2014). Climate change and accusation: Global warming and local blame in a small island state. *Current Anthropology*, 55(4), 365-86.

Sachs, J. & Ladd, S. N. (2010). Climate and oceanography of the Galapagos in the 21st century: Expected changes and research needs. *Galapagos Research*, 67, 50-54.

Sachs, J., Sachse, D., Smittenberg, R.H., Zhang, Z., Battisti, D.S. & Golubic, S. (2009). Southward movement of the Pacific intertropical convergence zone AD 1400–1850. *Nature Geoscience* 2, 519–525.

Salcedo Andrade, R. A. (2008). *Galápagos: Conflictos en el paraíso*. Quito: Universidad Andina Simón Bolívar, Sede Ecuador; Corporación Editora Nacional; Ediciones Abya Yala.

Salinas-de-León, P., Andrade, S., Arnés-Urgellés, C., Bermudez, J., Bucaram, S., Buglass, S., Cerutti, F., Cheung, W., De La Hoz, C., Hickey, V., Jiménez-Uzcátegui, G., Keith, I., Marín Jarrín J.R., Martí Puig, P., Medina, M., Moya, A., Pauly, D., Orellana, D., Ostergaard-Klem, R., Stock, C., Witman, J., & Worm, B. (2020). Evolution of the Galapagos in the Anthropocene. *Nature Climate Change*, 10, 380-382.

Samandaroff, Y., & Chalons, M. (1937). *El Porvenir Agropecuario del archipiélago de Colón (Galápagos)*. Quito: Imprenta Caja del Seguro

Samimian-Darash, L., & Rabinow, P. (Eds.). (2015). *Modes of uncertainty: Anthropological cases*. University of Chicago Press.

Sampedro, C., Pizzitutti, F., Quiroga, D., Walsh, S. J., & Mena, C. F. (2020). Food supply system dynamics in the Galapagos Islands: Agriculture, livestock and imports. *Renewable Agriculture and Food Systems*, 35(3), 234-248.

Sanchez-Jara, G., & Rosado-Cusme, J. (2019). *La viveza criolla* [Doctoral thesis, PhD Thesis, Universidad de Guayaquil].

Available at: <http://repositorio.ug.edu.ec/handle/redug/39645>. (Accessed 4 December 2022).

Santander, T., González Novoa, J. A., Tapia, W., Araujo, E. & Montes del Olmo, C. (2009). Tendencias de la investigación científica en Galápagos y sus implicaciones para el manejo del archipiélago. In Tapia et al. (Eds.), *Ciencia para la sostenibilidad en Galápagos: El papel de la investigación científica y tecnológica en el pasado, presente y futuro del archipiélago* (pp. 62-108). Quito: Parque Nacional Galápagos, Universidad Andina Simón Bolívar, Universidad Autónoma de Madrid y Universidad San Francisco de Quito.

Schelhas, J., & Pfeffer, M.J.. (2009). *Saving forests, protecting people?: Environmental conservation in Central America*. Plymouth: Altamira Press.

Schneider, M., & McMichael, P. (2010). Deepening, and repairing, the metabolic rift. *The Journal of Peasant Studies*, 37(3), 461-484.

Scott, J. C. (1985). *Weapons of the weak: Everyday forms of peasant resistance*. New Haven: Yale University Press.

Simmel, G. (2004 [1978]). *The philosophy of money*. Routledge.

Sisco, M. R., Constantino, S. M., Gao, Y., Tavoni, M., Cooperman, A. D., Bosetti, V., & Weber, E. U. (2020). A finite pool of worry or a finite pool of attention? Evidence and qualifications. [Preprint].

Smith, W. (2020). *Mountains of blame: Climate and culpability in the Philippine uplands*. University of Washington Press.

Snell, H.M., Snell, H.L., Davis-Merlen, G., Simkin, T., & Silberglied, R.E. (1996). *Galapagos bibliography 1535–1995*. Quito: Fundación Charles Darwin.

Sollod, A. (1990). Rainfall variability and Twareg perceptions of climate impacts in Niger. *Human Ecology* 18: 267–81.

Soubry, B., Sherren, K., & Thornton, T. F. (2020). Are we taking farmers seriously? A review of the literature on farmer perceptions and climate change, 2007–2018. *Journal of Rural Studies*, 74, 210-222.

Stacey, L. & Fuks, V. (2007). Struggling for the golden egg: Conservation politics in the Galapagos [Master's thesis, Roskilde University, Denmark; available from Roskilde University Digital Archive].

Standing, G. (2011). *The precariat: The new dangerous class*. London: Bloomsbury Academic.

Stensrud, A.B. & Eriksen, T.H. (Eds.). (2016). *Climate, capitalism and communities: An anthropology of environmental overheating*. London: Pluto Press.

Stimson, J.R. (2016). *Cofán pragmatism in times of uncertainty: Negotiating the negligent hegemonic state & imaginary oil* [Master's thesis, KU Leuven].

Stonich, S.C. & DeWalt, B.R. (2006). The political ecology of deforestation in Honduras. In N. Haenn, & R.R. Wilk (Eds.), *The environment in anthropology: A reader in ecology, culture, and sustainable living* (pp. 284-301). New York: NYU Press.

Subramaniam, B. (2001). The aliens have landed! Reflections on the rhetoric of biological invasions. *Meridians: Feminism, race, transnationalism*, 2(1), 26-40.

Sullo way, F. (1984). Darwin and the Galápagos. *Biological Journal of the Linnaean Society*, 21, 29–59.

Sylva, P. (1984a). Impactos eco-sociales de la actividad humana en las Islas Galápagos. *Antropología: Cuadernos de investigación*, 3. Quito: Pontificia Universidad Católica del Ecuador/Abya-Yala.

———. (1984b). ¿Es posible vivir junto a un Parque Nacional?: Diagnóstico de problemas y propuestas eco-sociales para las Islas Galápagos. Puerto Ayora: Charles Darwin Foundation.

Tansey, J. (2004). Risk as politics, culture as power. *Journal of Risk Research*, 7(1), 17-32.

Tapia, W., Rodríguez, J., Reck, G., Quiroga, D., Montes del Olmo, C. & González Novoa, J. A. (2009). Ciencia para Galápagos: una propuesta de estrategia y agenda de investigaciones prioritarias para la sustentabilidad del archipiélago. Quito: Parque Nacional Galápagos, Universidad Andina Simón Bolívar, Universidad Autónoma de Madrid y Universidad San Francisco de Quito.

Taylor, J., Stewart, M. & Hardner, J. (2007). Estimación de la importancia del turismo y la pesca en la economía de Galápagos. In P. Ospina, & C. Falconí (Eds.), *Galápagos: Migraciones, economía, cultura, conflictos y acuerdos* (Vol. 57, pp. 115-130). Quito: Corporación Editora Nacional/Universidad Andina Simón Bolívar/UNDP.

Theodossopoulos, D. (2003). *Troubles with turtles: Cultural understandings of the environment on a Greek island* (Vol. 16). New York: Berghahn Books.



Thompson, A. L., Ochoa-Herrera, V., & Terán, E. (Eds.). (2022). *Water, food and human health in the Galapagos, Ecuador: "A little world within itself"*. Springer.

Thompson, K. (2014). *Where do camels belong?: The story and science of invasive species*. Vancouver: Greystone Books.

Thompson, M., Ellis R., & Wildavsky, A. (1990). *Cultural theory*. Boulder and San Francisco: Westview Press.

Thompson, M., & Rayner, S. (1998). Risk and governance part I: The discourses of climate change. *Government and Opposition*, 33(2), 139-166.

Toledo, Alexandra. (2014). *Rentabilidad de la producción agrícola en Santa Cruz, Galápagos* [Technical Report]. Conservation International.

Tönnies, F. (2002). *Community and society: Gemeinschaft und Gesellschaft*. (C. Loomis, Ed. & Trans.). New York: Dover Publications.

Toral-Granda, M.V., Causton, C.E., Jäger, H., Trueman, M., Izurieta, J.C., Araujo, E., et al. (2017). Alien species pathways to the Galapagos Islands, Ecuador. *PLoS ONE* 12(9): e0184379

Trelles, B.M., & Trelles M.L. (1988). *Evaluación del impacto e implementación de sistemas agroforestales en la isla Santa Cruz* [Thesis, Universidad Nacional de Loja].

Trueman, M., & D'Ozouville, N. (2010). Characterizing the Galapagos terrestrial climate in the face of global climate change. *Galapagos Research*, 67, 26-37.

———. (2011). Terrestrial ecosystems in Galapagos: Potential responses to climate change. In I. Larrea, & G. Di Carlo (Eds.), *Climate change vulnerability assessment of the Galapagos Islands* (pp. 29-46). WWF and Conservation International, USA.

Tulloch, J., & Lupton, D. (2003). *Risk and everyday life*. Sage.

Turner, V. (1969). *The ritual process: Structure and anti-Structure*. Chicago: Aldine Publishing.

UNDP (2022). *New threats to human security in the Anthropocene: Demanding greater solidarity (2022 Special Report)*. New York: United Nations Development Programme.

Vail, J. (2022). *Karl Polanyi and the paradoxes of the double movement*. New York: Routledge.

Valdivia, G., Wolford, W., Lu, F. (2014). Border crossings: New geographies of protection and production in the Galápagos Islands, *Annals of the Association of American Geographers*, 104 (3), 686-701.

Vallejo, C. (1918). *Los Heraldos Negros*. Lima.

Van Gennep, A. (1960 [1909]). *The rites of passage*. London: Routledge & Kegan Paul.

Van Voorst, R. (2015). Applying the risk society thesis within the context of flood risk and poverty in Jakarta, Indonesia. *Health, Risk & Society*, 17(3-4), 246-262.

Varea, A. (1997). Galápagos: El desencanto del paraíso. In A. Varea, C Barrera, A.M. Endara, B. Real, & V. Reyes (Eds.), *Desarrollo Eco-ilógico: Conflictos socio-ambientales desde la selva hasta el mar* (pp. 109-158). Quito: CEDEP / Abya-Yala.

Vayda, A. P., & Walters, B. B. (1999). Against political ecology. *Human ecology*, 27(1), 167-179.

Vertovec, S. (2007). Super-diversity and its implications. *Ethnic and Racial Studies*, 30(6), 1024-1054.

Vervloet, L. (2012). *Salasacas en Galápagos: Aspectos culturales, sociales, ambientales*. Puerto Ayora: Charles Darwin Foundation.

Viteri, C. (2014). Propuestas de política pública para la restauración del paisaje agrícola en las Islas Galápagos. [Internal Discussion Document. Galapagos: Conservation International].

Viteri, C. M., & Vergara, L. A. (Eds.). (2017). *Ensayos económicos del sector agrícola de Galápagos*. Conservación Internacional Ecuador.

Vohs, K. D., & Baumeister, R. F. (2011). What's the use of happiness? It can't buy you money. *Journal of Consumer Psychology*, 21(2), 139.

Von Hagen, V. W. (1940). *Ecuador the unknown: Two and a half years' travels in the Republic of Ecuador and Galápagos Islands*. New York: Oxford University Press.

Wallerstein, I. (1974). *The modern world-system I: Capitalist agriculture and the origins of the European world-economy in the sixteenth century*. New York: Academic Press.

Walsh, S. J., & Mena, C. F. (2013). *Science and conservation in the Galapagos Islands: Frameworks & perspectives* (Vol. 246). New York: Springer.

Waltz, M. (2020). 'How it is grown doesn't matter, as long as it's on the table': Pesticide use, uncertainty and future aspirations. *Anthropology Today*, 36(6), 25-28.

Wanderer, E. (2020). *The life of a pest: An ethnography of biological invasion in Mexico*. Oakland: University of California Press.

Warren, C. R. (2021). Beyond 'native v. alien': Critiques of the native/alien paradigm in the Anthropocene, and their implications. *Ethics, Policy & Environment*, 1-31.

Watkins, G. (2008). A paradigm shift in Galapagos research. *Galapagos Research*, 65, 30-65.

Watson, O. J., Barnsley, G., Toor, J., Hogan, A. B., Winskill, P., & Ghani, A. C. (2022). Global impact of the first year of COVID-19 vaccination: A mathematical modelling study. *The Lancet Infectious Diseases*, 22, 1293–30.

Watts, M., & Peet, R. (2002). Liberating political ecology. In R. Peet & M. Watt (Eds.), *Liberation ecologies* (pp. 3-43). Routledge.

Weber, E. U. (2006). Experience-based and description-based perceptions of long-term risk: Why global warming does not scare us (yet). *Climatic Change*, 70, 103-120.

West, C., & Vásquez-León, M. (2003). Testing farmers' perceptions of climate variability: A case study from the Sulphur Springs Valley, Arizona. In S. Strauss, & B. Orlove (Eds.), *Weather, Climate and Culture* (pp. 233–250). Oxford: Berg.

West, P. (2006). *Conservation is our government now: The politics of ecology in Papua New Guinea*. Duke University Press.

Westcoat, J. L. (2015). Political ecology of risk, hazards, vulnerability, and capacities. In *The Routledge handbook of political ecology* (pp. 293-302). New York: Routledge.

Wetherly, P. (1999). Marxism, “manufactured uncertainty” and the ecological crisis. *Contemporary Politics*, 5(3), 221–242.

Whyte, S. R. (1997). *Questioning misfortune: The pragmatics of uncertainty in eastern Uganda* (Vol. 4). Cambridge: Cambridge University Press.

Wilkinson, I. (2001a). Social theories of risk perception: At once indispensable and insufficient. *Current Sociology*, 49(1), 1–22.

———. (2001b). *Anxiety in a 'risk' society*. London: Routledge.

———. (2009). *Risk, vulnerability and everyday life*. London: Routledge.

Wisner, B., & Walker, P. (2005). The world conference on disaster viewed through the lens of political ecology: A dozen big questions for Kobe and beyond. *Capitalism Nature Socialism*, 16(2), 89-95.

Wolford, W., Lu, F., & Valdivia, G. (2012). Environmental crisis and the production of alternatives: Conservation practice (s) in the Galapagos Islands. In *Science and conservation in the Galapagos Islands: Frameworks & perspectives* (pp. 87-104). New York, NY: Springer New York.

World Health Organization. (2017). *Some organophosphate insecticides and herbicides*. IARC Monographs (Vol. 112, IARC Monographs).

Wray, N. (2021). Rendición de cuentas 2020. CGREG. Available at:

[https://www.gobiernogalapagos.gob.ec/wp-content/uploads/downloads/2021/05/Informe\\_Gestion\\_CGREG-2020-1.pdf](https://www.gobiernogalapagos.gob.ec/wp-content/uploads/downloads/2021/05/Informe_Gestion_CGREG-2020-1.pdf)

(Accessed 12 December 2022).

Yager, K. (2015). Satellite imagery and community perceptions of climate change impacts and landscape change. In J. Barnes, & M. Dove (Eds.), *Climate cultures: Anthropological perspectives on climate change* (pp. 146-168). New Haven: Yale University Press.

Zaleskiewicz, T., Gasiorowska, A., & Vohs, K. D. (2017). The psychological meaning of money. In R. Ranyard (Ed.), *Economic Psychology* (pp. 105-122). John Wiley and Sons Inc.

Zapata, C. (2009). Estudio de oferta y demanda de productos agrícolas de Galápagos, Ecuador. (Report). Puerto Ayora: BID-FOMIN, CAPTURGAL.

Zapata, J.P. (2015). Análisis de los costos de los insumos agrícolas en la región insular - Galápagos y sus efectos en la comercialización de los productos agrícolas del sector durante el año 2013. [Master's thesis, Universidad de Guayaquil]. Available at: <http://repositorio.ug.edu.ec/handle/redug/42800> (Accessed 22 November 2022).

Zhou, X., Vohs, K.D., & Baumeister, R.F. (2009). The symbolic power of money: Reminders of money alter social distress and physical pain. *Psychological Science*, 20(6), 700-706.

Zinn, J. O. (Ed.). (2009). *Social theories of risk and uncertainty: An introduction*. Chichester: John Wiley & Sons.

Zinn, J. O., & Brown, P. R. (2022). COVID-19 risks: Dynamics of culture and inequality across six continents. In P. Brown & J. Zinn (Eds.), *Covid-19 and the Sociology of Risk and Uncertainty* (pp. 1-26). Palgrave Macmillan.