

Article

Social Dimensions of 'Nature at Risk' in the Galápagos Islands, Ecuador

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Abstract

The Galápagos National Park is an iconic site of environmental conservation; hundreds of thousands of tourists, students, and scientists have visited the islands since the national park was founded in 1959. What a casual visitor to the region might fail to see, however, is the history of conflict that has accompanied the formation and maintenance of the park. In 2007, the tension on the Galápagos Islands became so great that UNESCO put it on their list of World Natural Heritage Sites 'In Danger', arguing that the Galápagos Islands residents had to resolve a set of problems before the effects of increasing population numbers and poor management overran the unique natural environment. We draw on the literature within political ecology and argue that while there was broad agreement on the 'facts' of the crisis, people on the islands interpreted those facts very differently; individual assumptions, beliefs, and experiences imbued the facts with different and often confrontational meanings that, in turn, shaped the possibility of managing the crisis. Based on in-depth qualitative research conducted between 2007 and 2011, we illustrate the differences in the way people 'see'—or understand and experience—the problems on the islands, and show how these differences continue to complicate the search for resolution.

Key words: conservation, environmental crisis, Galápagos Islands, Ecuador, World Natural Heritage Site

INTRODUCTION

Six hundred miles off the coast of Ecuador, the Galápagos Islands are widely known for their biological uniqueness and natural beauty, in addition to their contribution to the history of scientific thought. In 1959, the Ecuadorian government created the Galápagos National Park (GNP), putting 97% of the archipelago's landmass with its endemic species and ecosystems under protection from external disturbances. The remaining 3% of the landmass is reserved for the use of the people living on the Islands. Today, the protected area is a world-class tourist destination and generates the highest ecotourism revenue in Ecuador—approximately USD 100 million per year. Yet, in

many ways, the 'enchanted isles' have become victims of their own success. The Islands are the site of a perfect storm of rising tourism, human population growth (from ~5,000 in 1950 to ~30,000 in 2011), and the invasion of introduced organisms (Boersma et al. 2005). Four cargo boats and 33 jets per week bring goods and passengers, respectively, to the islands, acting as a potential transport 'land bridge' for diseases and exotic species of flora and fauna. Today, introduced plant species in the archipelago outnumber native species, with 870 alien plant species recorded compared to approximately 500 native species (Tye et al. 2002). This is still an early stage of plant invasion, with no known native plant extinctions so far, but there is significant evidence of the declining abundance of native plants, with many endemic species classified as threatened, and ecosystems as degraded (Trueman et al. 2010). The increasing development of seafood markets is also leading to the depletion of marine resources, such as sharks, sea cucumbers, groupers, and lobsters (Camhi 1995). In April 2007, these facts of environmental degradation prompted the President of Ecuador, Rafael Correa, to declare the Islands 'at risk' and a national conservation priority. Two months later, the United Nations Education, Scientific and Cultural Organization (UNESCO)

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reinforced the president's call to arms, and added the Galápagos Islands to its list of World Heritage Sites 'In Danger'.

In interviews and casual conversation, it is evident that local residents of the Islands agree with the Ecuadorian President and UNESCO that there is a problem on the Islands. They even agree on the facts that are marshalled to validate the narrative of 'nature at risk', but they differ in significant ways in their evaluations of how and why these problems matter. While these disagreements are increasingly recognised as important (cf. González et al. 2008), they are often set aside in the rush to govern the crisis. Governance on the Islands has increasingly enshrined participation as a key part of the process and outcome, but participation in times of duress has meant papering over disagreements and proposing technical solutions that address the manifestations of the crisis rather than the root causes. Following the declaration of crisis in 2007, a suite of protectionist approaches and policies were implemented or reinforced through institutions such as the GNP Service and the National Institute of the Galápagos, INGALA, a governance body for regional development. Key measures included restrictions to curtail immigration, bans on fishing to slow down resource depletion, and a more stringent approach to monitoring incoming vessels that carry non-native species. On July 28, 2010, UNESCO's World Heritage Committee met in Brasília and voted to remove the Islands from its endangered list (<http://ecuador-rising.blogspot.com/2010/07/ecuador-welcomes-removal-of-Galápagos.html>). The committee decided that Ecuador's government was committed to improving the state of the archipelago, based on increased restrictions on tourism, fishing, and non-native species. Members of the International Union for the Conservation of Nature (IUCN) said there was "still work to be done" and that the "situation in Galápagos remains critical" (<http://www.bbc.co.uk/news/world-latin-america-10808720>), but that for the moment the problems were being officially addressed.

In this paper, we examine how the technical solutions to address the environmental crisis on the Islands targeted concerns expressed by a majority of the Island residents (increasing population, weak administration, declining native species), but did not resolve the tensions arising from differences in how people understood and enacted those concerns. To support our argument, first, we situate the multiple meanings of 'facts' in the broader political ecology literature on environmental crisis. We then outline the five dominant narratives about the causes of the environmental crisis on the Islands that permeated discussions with a wide range of island residents, including conservationists, administrators, politicians, fisherfolk, farmers, and tourism operators, which echo the problems listed by UNESCO in 2007. This section shows how diverse actors make sense of the master narrative of 'nature at risk'; their specific interpretations are interwoven with how they position themselves and others within these narratives, showcasing how environmental crises are not 'natural' and the responses to conflict are not 'obvious', rather both are constructed within a highly politicised social environment of experiences, desires, and intentions that shape the local meaning and effects of

crises (e.g., Peluso 1994; Kull 2004; Forsyth and Walker 2008). Further complicating the understandings and the experiences of environmental crises are the mosaic identities characterising the Island residents that encompass not only the hybrid strategies people employ to make a living but also histories of migration, ethnicity, economic class, and social connections. Finally, we illustrate the ways in which these differences shaped two separate attempts at resolution: An organised Participatory Management Group meeting intended to reconcile fisherfolk and park rangers, and a public forum to deliberate changes to the primary law governing the archipelago. In both situations, the crisis and the strategies for resolution became a medium through which different interpretations of environmental facts were presented, challenged, and contested. This last section demonstrates how the measures to manage the facts of the crisis engender their own politics.

PUTTING GALÁPAGOS' 'NATURE AT RISK' IN CONTEXT

The various declarations of crisis on the Islands built upon a master narrative of 'nature at risk' similar to those that structure environmental crisis around the world such as climate change (Demeritt 2006), desertification in West Africa (Bassett and Zueli 2000), and deforestation (Fairhead and Leach 1996). Drawing on Bamberg (2004), master narratives are systems of knowledge that have an internal coherence and that have become privileged ways of making sense of the world, structuring how individuals locate themselves and others within a hegemonic story of how the world works. Much like a Foucauldian understanding of discourse, master narratives can be analysed from a macro perspective to gain a sense of the historical context in which they are produced, as well as the nature of their coherence, and ultimate effects. In the case of the Galápagos Islands, the master narrative of 'nature at risk' draws on calculations of the ways in which the loss of natural capital (e.g., drastic reductions in species numbers) and continuous external disturbances (e.g., ongoing introductions of non-native species and extensive habitat loss caused by human activity) can drive ecosystems into 'undesirable' states (Snell et al. 2002; González et al. 2008). Human activity and increasing numbers of people accessing, using, and removing resources put 'nature at risk', leading to profound changes in the relationships and structures of biophysical systems, changes that are considered detrimental to both human and non-human species (Dietz et al. 2010). Management of these biophysical drivers of environmental crises is fundamental to protecting 'nature at risk' and has typically translated into policies that govern humans and natural environments as separate, and frame the activities of the former as detrimental to the latter (Terborgh 1999; Dowie 2009). Efforts to physically exclude people from areas deemed fragile—such as national parks and wildlife reserves—are examples of the sorts of approaches used to minimise environmental crises (Fairhead and Leach 1996; Neumann 1998).

While master narratives provide a guide post for the living and managing of lives, deconstructing them sheds light on the ways in which individuals see themselves and others

within hegemonic structures, that is, into the construction of subjectivities. As Harding (2003: xv) put it: "Distinctive kinds of thinking have distinctive material conditions", though neither is wholly determined by the other. Thus, while 'nature at risk' pivots around stories of environmental degradation largely circulated and given meaning outside the Islands (e.g., via the Ecuadorian state or UNESCO), they have also become entangled with existing society-environment relations on the Islands. In the process, they have become a medium for struggles about a number of other concerns through which individuals make sense of their personal worlds (e.g., economic security, citizenship, political positions). Hence, although the effort to devise solutions to environmental problems on the Islands is presented as the search for technical and administrative competence, it is inextricably intertwined with people's efforts at forming and asserting identity, making meaning, and exercising disparate forms of power.

Political ecologists point out that conflicts over access to, and control of, resources (e.g., forests, water, land, hydrocarbons) are embedded within wider political-economic relations and ecological processes, and thus the interconnections between power, ecology, and identity are central to the production of environmental crises (Fairhead and Leach 1996; Watts and Peet 2004; Prudham 2005; Perreault 2008). Narratives of 'nature at risk' are powerful vehicles of truth-making that legitimise specific paths of socio-ecological regulation. They can mobilise scientific concerns over biophysical changes (e.g., the fact that there are now more non-native species than native species on the Islands) to endorse policies that curtail rights to access, use, and decision-making for the sake of avoiding crisis, often reproducing existing inequalities (Fairhead and Leach 1996; Forsyth and Walker 2008; Li 2007). As we demonstrate in this paper, the master narrative of 'nature at risk' was understood in different ways in the material reality of the Islands, where the narrative was articulated with other concerns such as citizenship, jobs, access to resources, or household economic security, to reproduce a surplus of stories of risk. Attempts to resolve the crisis through mechanisms of participatory governance were complicated by the variety of ways in which people defined each of the main concerns.

ENVIRONMENTAL NARRATIVES DURING MOMENTS OF CRISIS

Widely discussed factors that put 'nature at risk', e.g., deforestation, biodiversity loss, and climate change, have traction at coarse scales but often become decontextualised and taken for granted. As such, they run the risk of becoming 'placeless' narratives (Forsyth and Walker 2008) and much more difficult to read at the local scale (Harris 2009). A closer look at how globally-recognised narratives of 'nature at risk' play out in a place like the Galápagos Islands allows us to analyse how these are appropriated and contested, which claims are mobilised, by whom, and with what effects. Narratives of 'nature at risk', which are not unique to the

Islands, are rendered in ways that reflect certain understandings of human-environment relationships, constrain the realm of possibilities for ameliorative action, and reinforce relations of power, privilege, and class.

Our research team (Lu, Valdivia, and Wolford) conducted fieldwork at different times during five summers from 2007 to 2011. We draw on semi-structured interviews with 90 key informants from various economic sectors and professions on the islands of Isabela, San Cristóbal, and Santa Cruz (the fourth populated island, Floreana, only has about 120 permanent residents and is not included in this study). Twenty-eight people were interviewed more than once, and we were particularly privileged to capture reflections from the 3 year period during which the archipelago was declared 'endangered', i.e., 2007 to 2010. Interviewees, chosen through snowball and convenience sampling as well as identification of top governmental and non-governmental representatives, included resource users such as fisherfolk (n=18), farmers (n=22), and other island residents that cater to tourism (e.g., taxi drivers, retailers, restaurant and hotel owners; n=14); conservation practitioners such as representatives of environmental non-governmental organisations (e.g., World Wildlife Fund (WWF) and the Charles Darwin Foundation, CDF; n=7) and the Galápagos National Park (n=18); and local government (e.g., representatives of INGALA, SESA SIGAL¹, the municipality of Santa Cruz, and local districts in the highlands; n=11). Interviews focussed on how individuals saw themselves and others as well as the state of the islands during this particular period of crisis. We also held focus group discussions to explore social dynamics among actors who are typically seen as perpetuating the ecological degradation of the islands: Fisherfolk and farmers. To examine the discursive dimensions of the period of crisis, the interviews and focus groups were coded and analysed using a grounded theory approach (Charmaz 2006), a qualitative, systematic method that begins with an inductive approach followed by recurring data collection and analysis, and which allows for in-depth understanding and the recognition of multiple standpoints and realities. Our analysis focussed on the emerging stories of crisis and how different people understood and described both their characteristics and potential solutions.

The five dominant environmental narratives that emerged from the interviews were:

- There are too many people;
- Development is the problem;
- People lack concern for, and education about, the environment;
- Environmental resources are over-harvested;
- The problem is weak management.

Below, we explore these more fully, outlining how residents engage with these narratives and, in the process, derive counter-narratives and interpretations. Though different ideas, concepts, and categorisations about the root causes of crisis at times map on to particular subject positions, e.g., conservationists, administrators, fisherfolk, we do not suggest that structural position over-determines the way

people think and act. Distinct experiences of place—informed by intersecting axes of differences such as nationality, class, residency status, and gender—color how individuals know themselves and their futures *in relation* to places of work, home, and community, and to other emplaced subjects (Valdivia 2009).

There are too many people

The Galápagos province has one of highest population growth rates in Ecuador, driven mostly by mainland migration to the Islands. This population growth is commonly linked to environmental degradation:

Today, about 35,000 colonists call the Galápagos home, and more arrive every day, despite new laws intended to limit immigration. The population growth is 6 percent per year, compared to only 2 percent on the Ecuadorian mainland; demographers predict the population could well surpass 50,000 in the next few decades... As the influx of settlers grows and towns begin straddling the park's boundaries, social, economic, and environmental problems have multiplied (Bassett 2009: 12).

Since 1998, when new laws were put into place restricting legal residence (the Galápagos Special Law), the 'undocumented' population of the Islands has been growing rapidly. The Director of INGALA estimated that in 2007, 7,000 people were living illegally on the Islands. As the representatives of INGALA, the municipalities of Isabela and Santa Cruz, and the conservation organisations emphasised, an increase in human population leads to more contamination and trash generation, use of resources (especially water), pressures on infrastructure and services such as health and education, conversion of wildlife habitat to housing and roads, and overall taxing the carrying capacity of such relatively small and fragile islands. And as one longstanding Galapagueño suggested, with such demographic increase, the demand for fossil fuels and the possibility of oil spills increases.

These concerns about unchecked migration to the Islands ran through our interviews. One of the biggest concerns with newcomers is that they will marry already settled residents, gain legal status, have children, and exacerbate human population pressure. As one conservation representative described, some newcomers "intermarry in their ethnic group and have [higher than average] rates of population growth." This is an emotionally charged argument apparently concerned with the rise of invasive species and pressure on natural resources, yet undergirded by trepidation about where the new migrants are coming from. For example, the newcomers are often people coming from places like Loja and Salasaca in the Andean region of Ecuador, seen as having unique cultural attributes different from those of many long-time Galapagueño residents of coastal origins. The newcomers are seen as embodying the possibility of change in the social fabric of the Islands, such as when they introduce practices of resource management and

use that is typically associated with Andean peoples. Another conservation scientist shared a similar opinion when describing the demographic and economic changes experienced in the rapidly growing city of Puerto Ayora: "Some parts of town feel like you are in little Ambato [in a central Andean valley], not Galápagos."

At the same time, residents who were engaged in economic activities on the Islands, such as fishing and tourism, argued that population was a problem but for reasons that differed wildly from those given by conservationists. These residents argued that the newcomers competed for a limited number of available jobs. Migrants illegally working on the islands tend to be concentrated in the construction industry, fishing, and farming, which some local residents insisted leaves those legally residing on the Islands without economic opportunities. As a representative of the fishing cooperative in Santa Cruz described, "When people from the mainland come, the native Galapagueño loses his job." Similar concerns were voiced by a representative of the union of construction workers in Santa Cruz, who suggested new arrivals had saturated the construction market. As another put it, "*Más gente, más fregado*" ("more people, more screwed"). According to these interviewees, the loss of economic opportunities occurs because the newcomers are willing to work for lesser wages than Galapagueños, as these wages are still more than what they would earn on the mainland. Another fisherman, for example, said that he gets paid 50% of the earnings of the catch, but "migrants come and ask for only 30%. Locals here are left without work."

Farmers viewed the problem in yet another way. They argued that migration was necessary to support the population already on the Islands. Those informants fully dedicated to agriculture were critical of the regulations that limited access to labor from the mainland because it negatively affected the possibility to create a strong agricultural sector. When asked about what is at risk on the Islands, farmers in San Cristobal and Santa Cruz—the two main agricultural islands—said that their greatest concern was the *lack* of labor. Without a flexible labor supply these farmers cannot maintain the farm, apply herbicides (a particularly onerous job given the difficulty of keeping back the spread of invasive species such as blackberry or guava), or harvest crops. Some have tried hiring fisherfolk during the fishing off-season but with little result. They pay what they can afford, but USD 25–35 per day is not enough for the physical demands of agricultural labor on the Islands. Hotel owners voiced similar concerns, and both farmers and hotel owners argued that labor from the mainland worked harder and better, and for less, than permanent residents.

Ultimately, whatever the reason behind the fear of population growth (and a neo-Malthusian framing of environmental problems is hardly new—see for instance Durham 1979), these concerns ignore the complex socio-political and economic forces that push people to leave the mainland and pull them towards the Islands. Ecuador has been crippled by repeated economic woes over the past 20 years, from a costly border war with Peru in 1995 and damages from el Niño floods a few years

later to a banking debacle in early 1999 (where 16 financial institutions were closed or bailed out) and dollarisation soon thereafter (devaluing the *sucre* 66%). Ignoring the structural basis for migration may make sense given the limited power that most Island residents have to address the underlying causes, but demonising migrants and putting up ever-higher and more punitive restrictions are ineffective ways of addressing the problem and will certainly lead to future iterations of the 2007 crisis. The demographic narrative of overpopulation fails to address the ethical dilemmas of expelling Ecuadorian citizens from a province that they feel is rightfully theirs. In a rather schizophrenic set of policies, the government offers subsidies to people living on the Islands (e.g., reducing the price of gasoline to be equivalent to the mainland, guaranteeing higher wages for public employees on the Islands as opposed to the mainland—salaries are legally set at double), and also sets up checkpoints throughout the Islands to track down illegal migrants attracted to such economic incentives. A journalist (Romero 2009) quotes one Galápagos resident who said, “We built this province with our own hands, so, yes, it pains us to see our countrymen deported like animals. After all, we are indigenous Ecuadoreans, how can we be illegal in our own country?”

The problem is the 3%

As mentioned earlier, in 1959, 97% of the Galápagos Islands was designated a national park to help conserve the ecological integrity of the Galápagos Islands. As the symbolic birthplace of Darwin's theory of evolution, UNESCO designated the Galápagos Islands as the very first World Natural Heritage Site in 1978. The organisation wished to honor the 'magnificent and unique' natural features of the Islands, and to ensure their conservation for future generations. It is not difficult to see why. Over 560 species of native plants, over 55 species of native land vertebrates, and 1,700 species of native insects are found on the Islands. Until the late 1800s, nearly half the plants and more than 70% of the land vertebrates were unique to these Islands. Nearly 20% of Galápagos land species are unique to just *one* of the hundred or so vegetated islands and islets (Stewart 2006: 87–88).

In order to pay for the park and protect the native flora and fauna at the same time, UNESCO recommended establishing an ecotourism industry on the Islands. The plan succeeded beyond what anyone might have imagined at the time. The number of tourists visiting the Islands annually quadrupled between 1990 and 2009, rising to more than 160,000 visitors in 2010 (<http://news.bbc.co.uk/2/hi/americas/8549901.stm>). Ironically, the public declaration of crisis in 2007 actually increased the numbers of tourists the following year. Today, the tourism sector is the main driver of economic growth in the Islands; tourist services alone (agencies, boats, rentals, tours) account for about two-thirds of the gross domestic product of Galápagos (Taylor et al. 2006). A tourist fleet of 80 vessels circulates constantly in the marine areas of Galápagos, eight of the boats being large 40–100 person vessels. Additionally,

65 hotels in the archipelago now offer 755 rooms (a 150% increase from 1991 to 2006). As of 2006, Galápagos hotels and tour vessels had the capacity to accommodate 3,479 persons per night, with hotels accounting for 49% of the total (Epler 2007: 20).

Almost everyone references the tourism industry when explaining his or her interpretation of the latest crisis, though they cite very different reasons for linking the two together. For many local residents, the tourism industry is unfairly biased in favor of large-scale providers, foreign companies and foreigners. For 30 years, large-scale, usually transnational, tourism interests have garnered disproportionate benefits from this unique ecosystem, and undermined local microenterprise and economies. Tourist dollars are funneled to large agencies whose floating hotels benefit people who do not live on the Islands, with an estimated 85% of this income leaving the Islands (Watkins and Cruz 2007). Local residents insist that land-based tourism can be more ecologically sustainable than large-scale mass tourism on 'floating islands' that generate waste and bear little responsibility for sustaining the ecological or social landscape. Those most in favor of regulating large-scale providers and advocating the benefits of small-scale land-based enterprises are former fisherfolk and farmers hoping to diversify their livelihoods via land-based tourism. Conservationists, such as a former director of the Charles Darwin Foundation (CDF), disagree, arguing that land-based local tourism is more threatening to the environment because tourists pose more risk to the terrestrial environment than boats do to the marine environment and the multitude of family-owned businesses catering to those that work in the tourism sector are responsible for the degradation of the Islands. Residents, however, argue that the growth of ecotourism has already come at the expense of the local environment and local development. In order to support the growing tourism industry, services and infrastructure have had to increase in the remaining 3% of the archipelago, stretching the already limited municipal resources. As the director of Immigration Control of INGALA—the governmental office responsible for coordinating regional planning, government funding, and technical assistance in Galápagos—described, there is a historic lack of funding for urban planning, and development based on tourism has complicated the delivery of basic services such as clean water and waste treatment for locals. The director of Tourism of the Municipality of Santa Cruz supported this argument, suggesting that the divide between people and environment was taken for granted, such that any project that aims to improve local economic sectors was viewed as being intrinsically against the protection of nature. As he indicated: “It might seem counter intuitive to argue for development in a place like Galápagos... but local economies are in crisis, not functioning. The only industry with potential here is tourism. The problem is not a lack of money because there is money in the Galápagos. But historically there have been very unequal relations and we need to look for equitable participation if we want all to be part of the solution.”

Thus, most of our interviewees argued that tourism was responsible in some way for the crisis in 2007, but they had very different understandings of why tourism might have led to environmental degradation or conflict. These differences have complicated attempts to resolve issues. Perhaps the greatest problem is simply in framing the crisis as a ‘problem of the 3%’. This narrative ignores the way in which the very designation of the park as an ecotourism site set the 3% at the service of the 97%. The focus on local residents in ‘the 3%’ creates a false boundary between nature and society that vilifies certain spaces (e.g., urbanising zones populated mostly by locals) while failing to implicate others (e.g., the protected areas frequented by foreign tourists and managed by large-scale multinationals and conservationists). The discourse also fails to recognise the permeability between these zones. The narrative hides the diversity of human environments that exist on the Islands and ignores the role that government-sanctioned colonisation efforts played in encouraging ecotourism as well as development prior to the designation of the Islands as a World Heritage Site. For decades, from the 1950s to the early 1970s, the government did little to prevent, instead encouraged, migration to the Islands in an effort to establish an Ecuadorian presence and to build the economy. While most of the recent rapid growth has taken place in the urban areas where hotels, restaurants, and most tourist services are located, the highland areas that border the GNP were populated during this initial colonisation period and many people there feel unfairly blamed for what the Ecuadorian State set in motion years ago.

Local people lack concern for the environment

Our interviewees suggested that some people on the islands did not have the right attitude towards the environment, but few agreed as to who those people were or how to reach them. The targets of these accusations ranged from new migrants to older residents to politicians to tourists who visit for short periods of time and “throw their plastic bottles on the ground—so much plastic!” in the words of one hotel operator. Some interviewees argued that Galápagos residents are part of a “young society” without culture and thus have no ancestral or traditional management practices, lack organisational capacity, and have low human capital. This differentiation between those who know how to live with nature and those who do not, dominated the views of informants who saw the existence of people on the islands as the source of the crisis. For example, a European civil engineer working on a municipal recycling program argued that “people are the problem” particularly newcomers, as they “grew up on the continent and have a different perspective and way of life.” Similarly, representatives of conservation organisations described newcomers as “lacking an environmental consciousness,” only being “interested in making money,” and “not being aware that they live in a protected area.”

While assertions are made about how illegal migrants only care about making money, “take advantage of residents and nature,” “increase the incidence of crime and drug use”, and

reduce “the unification of the human community because they cling to the traditions from the continent,” local government representatives insist that it is possible to “educate people to think in a small island mentality.” The limiting factor, as several local government representatives argued, is the lack of funds and programs that venture beyond the park boundaries. As the representatives of FUNDAR, a grassroots organisation seeking to stimulate sustainable consumption practices, argued, the effort of education needs to occur in the areas beyond the park, specifically in the depressed agricultural areas. Nonetheless, not all interviewees agreed with this position. As a representative of a conservation organisation put it, “It doesn’t matter how much effort we put into educating people, if new people come, they are new, ignorant, and poor, what they are looking for is money.”

Moreover, some conservation representatives believe that international tourists, such as those from the USA and Europe, “know better” than locals in terms of their environmental awareness, as seen for example in their willingness to pay more for “green” lodging. One informant stated: “The community does not have an environmental consciousness, which causes them to commit many environmental errors.” Another interviewee stated, “People here are the villains: If workers aren’t prepared for that, they can leave the Galápagos National Park. People here are used to doing whatever they want, and the problem is the mentality of people who do not want any rules or sanctions. If I mess with one person, I mess with all of them because so many people here are related.”

The problem with the willingness of interviewees to blame others for lacking concern is that everyone lives together on the islands, and behaviors or beliefs identified as problematic are often held or exhibited by one’s neighbors, friends, colleagues or (worse!) relatives. One example of the ways in which the easy identification of “bad behavior” is complicated by the social world in which behaviors are produced and perceived is the activity of the Terrestrial Monitoring Unit of the GNP, which monitors resources via practices such as park officials patrolling the boundaries of the park, where the park and agricultural areas of the Islands meet. Every week, a number of teams of park guards literally walk the boundaries of the park, observing the presence of human and vehicle tracks and trees felled on the park side of the boundary. Any disturbance, such as protected species removed from the park or the unofficial removal of non-native species, is reported back to the main office for further investigation. This technical solution to the exploitation of park resources is embedded within the webs of local politics and social relations. As one park guard in Santa Cruz commented, “Sometimes we risk our lives doing this job. People are not happy that we come after them for taking resources out of the park. We often know who the perpetrators are; they are our neighbors or family members. They know our families and where we live. That is why we bring a representative of the police with us, to make sure the laws of the park are respected and that protect us. We don’t carry guns or weapons, but the police do.” Another park guard shared a story of a difficult encounter with an individual who was fined

for taking resources out of the park: "The guy lives close to my parents. I showed up at a party once and he threatened me, he called me a *sapo* [literally translated as "frog," but figuratively signifying a nark] and said that if I showed up again I would get a beating. My job is risky; it forces me to tell on people I know and who know me, but I respect my job and it is my responsibility to protect the park."

For most interviewees, the solution to a "lack of concern" or misbehavior resides in education. However, when asked, it is evident that education means different things to different informants. For conservationists, the goal of education is to enlighten local residents to the ecological characteristics and threats on the Islands, thereby creating a populace more amenable to conservation policies and appreciative of technical expertise and science. For residents, education is equated with human capital development, which not only facilitates the attainment of economic success and stability, but also ameliorates the lack of adequate services available on the Islands. Indeed, during the 2011 community forums about the Special Law (discussed below), science and education featured prominently, in relation to the need for better instruction and infrastructure for local schools and universities, so that kids can be raised to be competent professionals concerned with their surroundings, who are competitive with those coming from the mainland, and who can improve standards of living on the Islands. The concern was about access to the opportunities of education, for urban livelihoods as well as for achieving desired levels of urban life in the context of the islands.

There is overexploitation of resources

Galápagos residents support the view that marine resources need to be harvested sustainably, but people disagree significantly on how to define what is sustainable. Fisherfolk, in particular, have been labeled as perpetrators of the environmental crisis in Galápagos. Bassett (2009) recounts the fisherfolk revolt in November 2000, when, in reaction to a stricter quota placed on spiny lobsters, 900 fisherfolk set park headquarters on fire, torched the local GNP director's home and belongings, blocked roads, took 10 endangered tortoises hostage, and destroyed incubators with tortoise eggs. Not only did these fisherfolk go "unpunished", but also the stricter quotas were not passed, demonstrating that these locals could "take the law into their own hands" and exhibit a "total disregard for laws and regulations to protect the island" (Bassett 2009: 171). Bassett likens the fishing sector to a mafia, and accuses the Ecuadorian government of having a case of homophobia—a political fear of fisherfolk.

The fisherfolk we interviewed were well aware of their reputation as predatory resource exploiters, the "villain of the movie that is Galápagos", blamed for all the ecological degradation on the Islands ("it is always the fisherman who is at fault"). However, the fisherfolk of the archipelago complain that often the media and the public ascribe to them actions of non-local and non-artisanal fishing boats, and even blame them for oil spills that are caused by tourism boats ("Tourism

has a greater ecological impact than fishing. Where a lot of tourist boats anchor, you hardly see any species any more"). As practitioners of one of the oldest economic sectors on the Islands, fisherfolk lament that they are being over-regulated by GNP in an effort to get rid of them. One fisherman from Isabela gave the example of being arrested for having taken 9 tourists instead of 8 (one more than allowed) on his boat and being put in prison for two days. When he was released and returned to the dock, he saw another boat breaking the rules by taking 15-16 people on board, and even though a representative from GNP was watching, he "did not say anything because the guilty party wasn't a fisherman." As another fisherman from Isabela put it, "We have more laws than food here... to be a fisherman, you need a ridiculous number of licenses and permits: From INGALA, PARMA, fishing permit, boat permit." And each of these permits has a series of costly requirements. Moreover, despite all the legalities, fisherfolk emphasised the vulnerability of the local fishing industry, as it is up to the park service to decide whether a fishing season will be open. However, there is an ongoing effort to include fisherfolk in more collaborative resource management.

The problem is weak management

Almost everyone we interviewed argued that poor management played a role in creating the crisis of 2007. However, people meant very different things when they referenced 'management'. For fisherfolk, as is evident in the section above, poor management was evident in the way that their economic sector was blamed for all of the Islands' ecological problems. They argued that by acting on this accusation, management unfairly constrained their use of resources and failed to provide them with realistic livelihood alternatives. They also argued that government and political authorities did not properly do their job, and that what was codified as law was not consistently upheld in practice.

For many working in administration, however, the real problem with management was its lack of technical capacity or precision. This conviction has generated enthusiasm for the Ecuadorian government's current effort to regulate the movement of humans and non-humans to and from the Islands through the migration control system and the Traffic Control Card (*Tarjeta de Control Tránsito*; TCT). When boarding a flight to the archipelago from Quito or Guayaquil, visitors are now required to purchase a card that digitally registers entry into Galápagos province, prevents re-entry by those expelled for previous infractions, and prevents tourists from entering if they have already overstayed their 90 day allowance. The TCT exemplifies a technical solution to a difficult problem of illegal migration; scanners and identification cards are high-tech means of trying to monitor people's movements, but as a former director of the GNP suggested, it is a band-aid to the larger issue of why people are desperate to come. Despite the immigration laws established in 1998 that make it illegal for residents of mainland Ecuador to settle on the Islands, the promise of lucrative opportunities linked to the Islands' rich

marine and terrestrial ecosystems as well as the employment opportunities in construction, fisheries, and tourism are powerful enticements for migrants. The potential benefits of the Islands are a welcome change from the economic crisis, social upheaval, and political volatility on the mainland. Disparities in income, and social and economic indicators means that mainland migrants have a comparative advantage as a source of cheap labor, but more importantly, these migrants are often the friends and family of the residents of the Islands. Migration laws and systems like the TCT often clash with the social norms that value social and familial linkages over laws and regulations (especially those perceived as unfair and imposed). As a fisherman living in Santa Cruz for 28 years said, while the law states that illegal migrants cannot work on the islands, the people who bring in such migrants will protect them and persecute any individual who threatens their presence on the islands: "If we say anything about the illegals, there will be retribution from their families."

As the above analyses of crisis narratives in Galápagos illustrate, most efforts to respond to crisis focus on the biophysical and demographic facts that appear to be common sense and relatively straightforward to manage (e.g., with technical solutions like the TCT), such as the numbers of people using resources or inhabiting the islands. What is little understood from these narratives is how the 'facts' of the crisis articulate with local interests. It is one thing to reflect on why there is an environmental problem; another is to become part of the story of the crisis and to contribute to its discursive and material reproduction.

PARTICIPATING IN THE REGULATION OF 'NATURE AT RISK'

Governing 'nature at risk' on the Islands includes a combination of top-down regulatory programs that minimise ecological loss via control over local human activity (e.g., migration regulation, education, restrictions on resource extraction), and participatory approaches to collectively determine resource access and use. Participatory governance, in particular, has been heralded as a more careful form of conservation (Agrawal 2005), one that can potentially encourage the decentralisation of decision-making (e.g., by sharing management responsibility), promote a more equitable distribution of power among participants, and build mutual trust (Brosius and Russell 2003; Brown 2002). But participation does not necessarily translate into effective conservation (Berkes 2004). When narratives of risk that mobilise global concern for conservation intersect with peoples' lives, they are provincialised; people necessarily bring with them long histories, local struggles, knowledges, and positionings that are not only, or even primarily, about conservation. Solutions that seem 'obvious' or easy are often thwarted or complicated not because participants are against conservation but because conservation—like crisis—is not a thing but a relationship, and as such is as much a social issue as it is technical.

In this section, we take an ethnographic lens to the participatory governance of 'nature at risk' in the Galápagos

Islands. This allows us to examine how, in the process of participation, narratives of risk articulated with other island-specific concerns and create (mis) understandings that complicated a truly participatory resolution to the crisis (cf. Latour 1987; Goeminne and Francois 2010). We focus on two specific examples: The management of the Galápagos Marine Reserve (GMR), and the development of a new Special Law for the Galápagos Islands.

The Galápagos marine reserve

The management of the marine reserve is overseen by a participatory process called the Participatory Management Group (*Junta de Manejo Participativo*). A brief discussion of this co-management project highlights the way in which knowledges are produced and contested in political settings with important implications for the generation and resolution of conflict. Established in 1999, the *Junta* brings together representatives from the fishing, tourist, naturalist guide, science and education (CDF), and management (GNP) stakeholder groups, and meets approximately once a month to jointly make decisions about how to best manage the marine reserve (Baine et al. 2007). In *Junta* meetings, decisions on how much to harvest (quota) or whether to allow harvesting at all are based on counts made by scientists from the GNP and the CDF. Each year, these scientists quantify the number of species observed at particular sites in the marine reserve and use these data to determine the season's harvesting quota. When quota consensus is not reached in the *Junta*, harvesting decisions are taken to a national level organisation, the Inter-institutional Authority Management (AIM), made up of representatives of the Ministry of the Environment, Ministry of Defense, Ministry of Commerce and Fisheries, Ministry of Tourism, Chamber of Tourism of Galápagos, and one representative each of the fisheries and conservation sectors in Galápagos. The fisherfolk we interviewed have contested and resented this process because they see it as detrimental to their livelihoods. Fisherfolk from Santa Cruz, San Cristóbal, and Isabela, who were interviewed expressed distrust of GNP officials and the *Junta* process, stating that these regulations based on "technical studies" were in fact biased and designed to eliminate the fishery sector, or at least to prevent their economic development.

One specific case of a *Junta* meeting illustrates the politicised environment of this arena of conservation practice. The meeting was held in June 2008 to decide whether sea cucumber harvesting could take place that year. The decision was to be informed by scientific monitoring conducted by the GNP. Fisherfolk accused GNP representatives of setting up a faulty monitoring procedure, hidden behind a veneer of technical rigor, which was designed to keep the fishery closed for political reasons. Distrustful of the practices of the GNP, fisherfolk decided to carry out their own study of sea cucumber stocks. Aided by the son of one of the head fisherfolk in Isabela who was trained in biology, the fishing cooperatives conducted their own counts. They decided upon a linear transect methodology

as opposed to the GNP's circular count. After the data were collected, the representatives of fisher cooperatives got together to discuss the results and to propose a unified stance on their approach to sea cucumber harvesting for that season—weeks before the *Junta* meeting. The fisherfolk saw the production of their own technical knowledge and its articulation with a unified political stance as a means to assert their experience and expertise outside the politics of the PNG and CDS. In the *Junta* meeting, participants debated for several hours whether the linear or the circular methodology was more appropriate. Interestingly, the numbers were not significantly different. In fact, the circular count was slightly higher, which benefited the fisherfolk. However, the numbers from both counts were close enough to the threshold for deciding the quota for the season; thus discussions centered on how much exactly the quota would be. The quota must allow for the sea cucumber population to not only remain stable and but also have a chance to increase. Interviews with participants of this particular *Junta* meeting suggest that both sides knew roughly what the quota number would be—it is determined by published studies on the dynamics of sea cucumber populations. Yet because of political pressure, the fisherfolk felt that they needed to argue for an amount greater than what was scientifically-determined, whereas representatives from the GNP lobbied for less than this amount, leading to an argument that lasted three days. Clearly, technical studies in Galápagos have the potential to generate their own politics.

The following year, 2009, a similar issue arose between the fisherfolk and the PNG, contesting the criteria under which sea cucumber fishery would be re-opened. The PNG survey of sea cucumber populations indicated that numbers had plummeted from the previous year, but fisherfolk countered that the monitoring was done during a time in which the seas were rough, visibility impaired, and counting these animals extraordinarily difficult. As the fisherfolk representative that was present in this *Junta* meeting saw it, the *Junta* is about imposing regulations, not developing them. According to representatives of the PNG, the system is not perfect, and in some cases fisherfolk circumvent it to appeal to political representatives at higher levels of the system.

The Special law for Galápagos

The underlying disagreements and tensions highlighted in the *Junta* meeting as well as in the Section 'Environmental Narratives During Moments of Crisis' became evident again during a set of important meetings we observed in July 2011 while on the Islands. These meetings were organised to debate revisions to the Special Law for Galápagos, a piece of "watershed legislation" (Durham 2008) first legally implemented in 1998. The Special Law in 1998 originally aimed to promote both conservation and sustainable development in the Province of Galápagos, and placed strict limits on activities seen as threatening the integrity of the Islands' ecosystems. Created with the revision of the Ecuadorian Constitution in 1998, and largely shaped by the views of a select group of longstanding

Island elite (Grenier 2007), the Special Law was crafted as a response to perceived threats of resource overexploitation, increasing population pressure, and introduction of non-native species. Thirteen years later, in 2011, the Special Law was being revised to better reflect the spirit of the new Ecuadorian Constitution approved in 2008. In light of an ongoing crisis of governability (Cruz 2009), the Correa government introduced revisions to the Special Law as a way to 'fix' the problems that continue on the Islands—over-population, poor management, and uncontrolled invasive species.

Our team witnessed public discussions of the changes proposed by the Correa administration and proposals offered by the Galápagos residents, between July 5 and 8, 2011, on the inhabited islands of San Cristóbal and Santa Cruz. These meetings were sponsored and mediated by state representatives but the discussions were meant to create a public space where all island residents could converse with one another and discuss the changes to the Special Law. In San Cristobal, the governor of the province, Jorge Torres, introduced the revision process by emphasising the need for local responsibility to resolve current governance problems on the Islands: "We are here to construct a better law project... Let's get rid of sentimentalism; we are responsible for these spaces." Fabián Zapata, director of the Galápagos Governing Council, continued: "We have to discuss things [together]; articulate our points of view. We have to be responsible citizens. These changes to the law come from the central state. Do not personalise but present your views and proposals." The representative from the Ministry of the Environment, Walter Justos, urged participants to "provide good proposals, legal ones, within the constitutional frame, so that they fit with the principle of *Buen Vivir*² ["living well"]. This is not a political soapbox but a place to look for the common good." A representative from the National Secretariat of Planning and Development (SENPLADES) concurred: "This is for the future of our children."

A few weeks before to the meetings, residents were informed on radio about the date and locations of the meetings and encouraged to attend. Local organisations and unions also encouraged residents to meet and discuss the new changes and to start working on proposals that would make sure their views were represented in the new law—what they called "socialising the law" or making it accessible, so that when residents attended the 'official' discussions they had a cogent and thoughtful response.

The meetings were organised to reflect the desired participatory spirit of responsible governance. Different tables were set up to represent key themes that residents had identified as important in earlier meetings: Migration, resources, science and education, institutions, and the environment. Each station was set up with a large screen with text of the proposed changes, a designated professional facilitator, and a typist recording the proposals made during the meetings. The process for public discussion was straightforward. Participants chose a table (theme) at which to participate, preferably, one that they felt strongly about. The facilitators put the section of the proposed law that corresponded to the table's theme on the

screen and the group went through the text, article by article, with people suggesting changes as they wished. In other cases, residents were asked to volunteer proposals for changes to begin discussion. Suggested changes (or no changes) were voted on and decided by the majority. Within three weeks the proposals for revisions of the Special Law would be sent to President Correa for review; ultimately, he would make the decision as to how the law should be modified.

While the method of participation seemed straightforward, actual participation revealed a lot about the politics of knowledge and conflicting interests among participants. Not all tables had equal participation or attendance. The environment table, on both Islands, had between 3 and 5 participants, mostly representatives of the Ministry of Environment, the GNP or local government. As a representative of an environmental organisation that was present at this table in Santa Cruz commented, he was quite happy that only three people participated: “With less participation, my changes flew right through,” he said. At the more popular tables, participants shuttled between topics and tables, seeking to be present when votes were counted, but not necessarily listening to the discussions taking place. The migration and resources tables had high attendance and participation, between 25 and 40 people each. The discussions over migration, residency status, and resources were particularly revealing.

At the migration table, a group of residents submitted a flash drive with a proposal to include a Citizenship Declaration of Rights in the new Special Law. They argued that the Law was all about restrictions and obligations and that their rights should also be spelled out. The rights included guarantees that residents working in public office would continue to be paid 100% more than the salary of those on the mainland and that they would pay half the cost of transport between the Islands and the mainland. This proposal was copied into the revisions document, and included in its entirety.

However, things got complicated quickly. Defining who belonged in each residence category—who was a permanent resident, who was temporary, who was a tourist, and who was a *transeunte* (a passer-through involved in non-tourist activities) became a heated discussion. A local resident set up the debate by pointing out that half of the people at the table were permanent residents and the other half were temporary residents who wanted to become permanent. A young man argued that people who came to the Islands and invested a lot of money—“say, 10 million dollars,” he said—ought to be given permanent resident status because how could they invest so much money and then just leave it? They need to be on the Islands to watch over their businesses. Another man responded that the young man’s argument seemed like a very personal one (as the young man was the entrepreneur in question) and that his proposal was akin to buying citizenship. He suggested that businesses such as the one the young man described could be left in the hands of Galapagueños. The investor had little support around the table and the discussion moved on.

Another proposal was made by a gentleman who argued that people who had been out of the Islands for around 20 years

should no longer be considered permanent residents. This was very contentious—the idea that there are not only a limited number of ways to become a permanent resident but that also such residents could *lose* their status seemed to be one of the main sticking points at the migration table. When the man argued that people who didn’t live on the Islands—and probably weren’t coming back except every five years to visit—should not be permanent residents, one older woman in particular got upset. According to another participant, this woman had two daughters who lived in foreign countries and rarely came back to visit but the mother did not want them to lose their residency. The man who raised the proposal said, with great conviction, “We have to call things by the names they have and if you are not living here on the Islands and you haven’t been for 20 years then you’re not a permanent resident!” This idea of canceling people’s residency if they left the islands was a bigger, very contentious issue. The proposal suggested that people who had been living out of the islands for three years or more would lose their residency. Most disagreed with this and voted to eliminate it.

Discussions on how to regulate residency status also uncomfortably straddled tables, indicating how the needs and interests of residents complicated the neat distinctions between themed tables. For example, in the resources table in San Cristobal, a woman farmer argued for the need to lax migration regulations so that more non-residents can come—on a temporary basis—to alleviate the shortage of agricultural labor during peak harvesting times. This proposal did not receive much support; the table was dominated by the tourism and fishing representatives and the facilitator asked the woman to join the adjoining migration table since that was a “more appropriate place to discuss such issues”—even though contract labor from the mainland is a central factor of agricultural production in Galápagos.

The regulation of access to resources was also broadly discussed at different tables, often showing how specific sectoral interests mattered to the discussion. In San Cristobal, a park employee made a passionate argument about the need to change the number of allowable days for a tourism visa from 60 (in the proposal) to 30. He argued that a normal person worked a regular job and had 30 days of vacation a year so why did tourists ever need more than that? One of the cruise tourism people objected strenuously to this, saying that lots of people came for longer and it would ruin tourism to limit people in this way—that instead of 30 or 60 days, it should be 90. This tourism person had several people with him who seemed to be walking around to the different tables to strategically intervene in votes. The proposal for 90 days won the vote.

On both islands, participants argued over the potential increase in the tourist fee to enter the park. The new law proposal aimed to increase the fee from USD 100 to USD 300, which caused loud dissent on both islands as people saw the higher fee privileging the larger (mostly boat-based) tour operators who ran businesses catering to a wealthy clientele who would not be daunted by the fee hike. In Santa Cruz, participants argued that if there were an increase, then the

Park should increase the number of sites people are able to visit, namely sites on the inhabited islands. In San Cristobal, participants debated the possibility of a sliding fee depending on how many days tourists were spending on the island and what sort of tourism they were doing—rich boat tourism or less expensive land tourism. Those that voiced concern were particularly critical of the “hidden formulas” used by the GNP to decide the tourist fee. As a tourist operator that runs a bay tour business commented, “The science of the park is not clearly explained—on what scientific basis do they want to raise the fee?” A man who is a part-time fisher and part-time tourism operator also questioned the intent of raising tourism fees: “[The Park] wants to strangle the small operator.” In Santa Cruz, a similar debate ensued. Ground transportation representatives claimed that while the government wishes to restrict the circulation of taxis to reduce pollution, in their studies they found that boat tourism causes the most pollution—62%—and yet they are not being subject to further restrictions.

CONCLUSION

The placing of the Galápagos Islands on UNESCO's list of World Natural Heritages Sites “in danger” in 2007 was perhaps the most visible manifestation of ‘nature at risk’ in this archipelago. The “at risk” declaration was built on a foundation of seemingly incontrovertible ‘facts’ of a rapidly growing human population, introduction of invasive species, depletion of marine resources, and failures of management. All of these ‘facts’ were seen as amenable to technical solutions, from the TCT system to fishing quotas. We show how these facts obscure historical and contradictory processes of government-catalysed human settlement on the Islands, exaggerate the impermeability of socio-ecological borders and boundaries (e.g., the boundary between the 3% and the 97%, as well as the boundary between the national park and outside), and are part of complex assemblages of relationships, beliefs, and material livelihood practices. We articulate five specific narratives of ‘nature at risk’ on the Islands that point to overpopulation, development, lack of concern, resource over-exploitation, and ineffectual management as the root causes of environmental degradation. Using these narratives, we deconstruct the ways in which an environmental crisis is produced, and show how it becomes a medium for a myriad of socio-political and economic struggles such as delineating citizenship, acquiring jobs, accessing resources, and achieving household economic security. Through the *Junta* and Special Law examples, we show how attempts to resolve the crisis through mechanisms of participatory governance were complicated by the variety of ways in which people defined each of the main concerns. Environmental crises are not ‘a thing’ but are about relationships among those invested in living and making a living on the Galápagos Islands.

The articulation of ‘nature at risk’ with other concerns might be common, but it is not a smooth process. The “frictions” or “messy engagements” (Tsing 2005) between widely

circulated master narratives of ‘nature at risk’ and other local narratives of crisis were revealing of the socio-politics of knowledge and of their localised consequences on environmental management (Harris 2009; Nightingale 2009). One telling example is found in the theme of migration. Migration-led population growth is a prevalent discourse among conservationists and government officials explaining why nature is at risk—hence ‘migration’ was its own table at the Special Law forum. However, among residents of the Islands, the urgency to regulate residency is rather a response to ‘livelihoods at risk’—the fierce competition for jobs in sectors such as fishing or the inability to acquire sufficient labor for activities such as farming. Resource-dependent individuals (i.e., fisherfolk, farmers), and service workers (e.g., taxi drivers, tourism workers) thereby conceptualise the issue of demographic change on the Islands in different ways. Their engagement with ‘nature at risk’ is shaped by these other kinds of realities of living with protected nature.

Once these archipelago level narratives are disaggregated, we also see other dynamics of crisis emerging. Power positioning, in the form of regulations and limitations on citizenship, residency, access to resources that support livelihoods, for example, shapes the constellations of actions that are taken to encompass solutions to the environmental crisis. In public forums such as the meetings to discuss proposed changes to the Special Law, participants do not merely make suggestions promoting their own agendas, they advocate, ignore or undercut different sciences and facts. Facts of environmental crisis become the medium to promote one's own agendas and ignore those of others, to award or undercut expertise, and the struggle to construct a particular form of society-nature relationships. Expertise is awarded, challenged, and contested in messy and situated practices shaped by particular historical, socioeconomic, political, and cultural contexts. Uneven power relations are involved in the application, negotiation, and refashioning of environmental knowledge in the effort to dictate a course of action to ameliorate perceived threats and crises. Such environmental management entails a struggle not only over control of resources but also over how particular forms of society-nature relationships ought to be regulated. Over 170 years after Darwin's visit, it appears that these volcanic islands are still teaching us about the nature of struggle, albeit of a different sort.

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Notes

1. Galápagos Inspection and Quarantine System (Sistema de Inspección y Cuarentena de Galápagos, SICGAL) is a program of the Ecuadorian Agricultural Health Service (Servicio Ecuatoriano de Sanidad Agropecuaria; SESA). Its principal objective is the prevention of the introduction of new species and organisms to the Galápagos Islands in order to preserve their ecological integrity.
2. Buen Vivir stems from the Andean indigenous vision of Sumak Kawsay, and was incorporated as a governance guideline of the new Ecuadorian Constitution of 2008 to construct a new form of citizen coexistence, in diversity and harmony with nature (Walsh 2010). It proposes methods and means to sustain equilibrium and complementarity between human beings and nature, and the recognition of nature as the equal partner of human beings, not as something to be exploited for profit. In the new Constitution, Buen Vivir is linked to nature's "right to exist, persist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution" and to the government's role to take "precaution and restriction measures in all the activities that can lead to the extinction of species, the destruction of the ecosystems or the permanent alteration of the natural cycles."

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