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# Advocacy, Ecotourism, and Biopolitics of Whale Conservation in Ecuador

Bradley Tatar 

Ulsan National Institute of Science and Technology, Ulsan 44919, Republic of Korea; bradleytatar@gmail.com

**Abstract:** Whale-watching tourism in Ecuador thrives through the spectacular image of a flagship species, the humpback whale. Seemingly, it is an example of an industry regulated and managed in accordance with sustainable principles of nature conservation, thanks to the work of Ecuadorian scientists who advocate for policies to protect whales from harmful exploitation. However, does the use of the whale as an icon of conservation result in its utilization as a mere commodity for profit? Through ethnographic fieldwork including interviews, observations, and textual analysis, it is shown that the Ecuadorian practices of whale conservation have resulted in the whale becoming a subject of governance, by which the wild animals are recognized as entities worthy of ethical treatment. Using the humpback whale as a flagship species, the Ecuadorian scientists practice biopolitics through the strategies of categorizing, monitoring, and regulating human interactions with the whale population. The success of this approach to wildlife governance highlights the role of NGO-affiliated scientists as knowledge producers and policy advocates.

**Keywords:** biopolitics; conservation; ecotourism; flagship species; whale-watching



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## 1. Introduction

Every year in the month of June, the city of Puerto López in the Province of Manabí in Ecuador celebrates the Festival de Ballenas to welcome the migrants who have journeyed from the frigid waters of Antarctica. The migrants are the humpback whales (*Megaptera novaeangliae*), known locally as *ballenas jorobadas*. The jorobadas move northward along the coast of South America as they journey from their feeding areas in the cold Southern Ocean to the warm tropical waters where the pregnant whales will give birth and others will find a mate. When they approach the shore, the whales can be watched by passenger boats and seem to put on a show for the tourists by leaping out of the water. This has led to the development of a tourist industry called whale-watching, which has stimulated the local economy in Puerto López and other coastal communities, with a resulting increase in the number of hotels, restaurants, and other businesses catering to tourists [1].

The research focuses on the practices of humpback whale conservation on the mainland coast of Ecuador within the context of a growing ecotourism industry around whale-watching. It examines the role of conservation scientists as communicators positioned between transnational advocacy networks and local institutions. An ethnographic research methodology is employed to investigate how the scientists utilize specific conservation practices to govern human-nonhuman relations, while also addressing debates on flagship species and the potential for fostering ecotourism that can be equally beneficial to humans and to wild cetaceans. The research highlights the importance of biopolitics as an outcome of the implementation of international conservation norms at national and local levels.

International agencies, NGOs, and advocacy networks produce the agendas and concepts for biodiversity conservation, but their concepts do not smoothly translate into policies at the local level, where cultural, political, and economic institutions impact the extent and way in which conservation is carried out [2,3]. Widely used concepts in international conservation parlance include *endangered species* and *flagship species*; these concepts

shape public policies for the management of resources as well as the manner of carrying out research to support the policies [4,5]. Flagship species are often connected to ecotourism and used in support of its claim to be an economically viable path to conservation.

The cetacean experts in Ecuador have contributed to two major policy outcomes: the adoption of a national anti-whaling position and the ratification of regulations for whale-watching. The role of whale conservation experts in fomenting these policies in Ecuador illustrates how experts act as communicators to express the needs of conservation to policymakers and members of the public. In the following, the specific research practices of whale conservation are described to argue that research on whales is carried out in a manner that facilitates the Ecuadorian state's capacity to govern whales as well as the capacity to govern marine territories that are identified as the whale's habitat.

In the following, the activities of conservation experts are referred to as *practices of conservation*, denoting not only the scientific activities such as designing research, securing funding, training students, and analyzing data but also involvement in tourism-related events, such as providing workshops for tour boat operators or park rangers. Practices also include meetings with government or intergovernmental agencies, and they include social events to communicate with the public, such as talking to the news media or appearing at public festivals and ceremonies. Through conservation practices, conservation experts translate the concepts of international conservation to the local context.

This location-specific case study contributes to the growing body of international research on flagship species. The main finding of this study is that whale conservation practices in Ecuador help to transform the whale population into a subject of governance, analogous to the way that human populations are governed. In the Ecuadorian case, the management of whale-watching tourism does not simply lead to the conceptualization of the animals as an economic resource for tourism industries. This finding contradicts the other studies, which emphasize the economic value of animal species in the tourist industries allied with conservation [6–9]. However, this finding supports the studies that demonstrate how living things, valued as “lively commodities”, are governed through human-nonhuman relations that obligate the ethical treatment, care, and mitigation of threats to the survival of wildlife [10–12].

Finally, this study highlights the importance for conservation of the nation-state as a social entity that wields power to govern and regulate both territories and populations [13]. Foucault's concept of *biopolitics* was to refer only to the use of scientific and statistical techniques for governance, regulation, and maintenance of human populations; however, recent investigations point to the fact that wild animal populations also become subjects of state management in ways that make animals into subjects of governance [14,15]. Biopolitics is practiced through the definition of collectivities such as species, subspecies, stocks, or populations, and it becomes political by utilizing knowledge of the collectivity to intervene in its management. Examples of biopolitical practices affecting nonhuman populations include turtle conservation in India [16], wolf reintroduction in Canada [17], and the practice of rewilding cattle on nature reserves in the Netherlands [18].

The objective of the research undertaken here is to determine how the actions of conservation professionals contribute to the making of the humpback whale a flagship species. In the context of previous studies that claim that ecotourism leads to the exploitation of wildlife species as merely economic resources, this study focuses on the Ecuadorian case to investigate the type of human-nonhuman relations that are formed through the practices of ecotourism, and through the government policies that support ecotourism. Focusing on the actions of Ecuadorian conservation experts who create knowledge about whales, the study identifies the research practices of the conservationists and how these practices contribute to the governance of whales.

## 2. Materials and Methods

To investigate the forms of communication by which experts create public knowledge of whales for ecotourism policy, the author traveled to Ecuador in 2012 to carry out

observations and interviews. Three methods were used: interview, participant observation, and the collection and analysis of relevant publications and documents.

First, to discover the connection between whale-watching tourism and whale conservation, the author sought to interview the conservation professionals who are known to be proponents of whale-watching tourism, who are based in Ecuador, and who are affiliated with conservation NGOs. Three researchers agreed to be interviewed: Fernando Félix representing FEMM (Fundación Ecuatoriana para el Estudio de Mamíferos Marinos), Cristina Castro representing the Pacific Whale Foundation, and Ben Haase representing the Museo de Ballenas. In addition, two officials were interviewed from the Ministry of the Environment, the agency that has been most directly involved in the management of public areas where whale-watching tourism takes place. Hence, a total of five professionals were interviewed directly by the author.

In addition, the author participated in whale-watching tourism, carrying out participant observation. In the city of Salinas, the author boarded a tourist boat to observe a researcher and graduate students carrying out photographic identification of whale flukes. In the city of Puerto López, the author boarded licensed whale-watching tour vessels four times to confirm that the protocols of whale-watching regulations are obeyed and to observe tourists' reactions to the whales. These observations provided a contextual frame for the research, demonstrating the marketability and attractiveness of whale-watching to foreign and domestic tourists in Ecuador.

Documents of many types were collected and analyzed. These included government regulations and statements by government agencies about whale conservation policies, policy studies, recommendations by NGOs, journalistic reports from the news media, books written by experts to inform the general public, as well as scientific publications by whale conservation researchers.

"Flagship species" is not a scientific concept but one that communicates the social value of a species [19–21]. Hence, to evaluate the relevance of scientific research to the creation of a flagship species, the scientific publications are not reviewed here for their scientific validity or merit. Rather, the purpose of using these materials is to identify the communication methods used by conservation professionals, which in turn can impact policy discussions and practices. This follows the example of other social science studies of human-nonhuman relations, carried out through the observation of wildlife researchers in the field and analyzing the published works through which they disseminate their ideas to society as a whole [22–24].

The combination of three methods (interview, observation, and document analysis) was utilized for the location-specific case study of whale-watching ecotourism in coastal Ecuador to discover the role of wildlife conservation research in the management of human-nonhuman relations. The focus is to identify the ways that conservation research contributes to extending the power of governance over animals and the territories they inhabit [15]. During the investigation, four main practices of humpback whale conservation were identified: (1) collecting data to define the local whale population and to advocate for protected status; (2) setting boundaries for whale-watching and conservation policies; (3) connecting the population of humpback whales to a specific territory; and (4) creating personalized relations with individual whales. These practices were discerned through the careful perusal of research articles, reports by conservation NGOs, press releases, journalists' reports, and official communiqués of government ministries.

### 3. Results

#### 3.1. Ecotourism and Whale Conservation

Whale-watching is a form of ecotourism that presents nature for the enjoyment of tourists by immersing them in natural landscapes. Advocates of ecotourism claim that it contributes to preserving nature by encouraging non-exploitative relations with natural entities and that the experience contributes to tourists' knowledge of nature and ecology [14,25]. Advocates claim ecotourism is a market-based path to nature conservation,

but others argue that it may have the opposite effect, causing harm to wildlife [26]. However, the case of whale-watching in Ecuador provides an example of ecotourism in which conservation scientists have taken a leading role in communicating with the public and with authorities to advocate for wildlife-friendly policies.

Management of ecotourism depends on government agencies to control and regulate access to nature and to protect it for future generations [27,28]. This is the rationale of the National Code of Regulations for Whale-Watching in Ecuador (Interministerial Agreement No. 20140004), enacted in 2014 by agreement of the Ministry of Tourism, the Ministry of Defense, and the Ministry of the Environment [29]. The regulation establishes limits on the number of licensed operators of whale-watching tours, imposes requirements for licensing, and provides detailed restrictions on the speed of boats and their manner of approach to the whales [30]. Government officials arrange training sessions for whale tour operators and explain the regulation at the start of every tour season [31]. As a conservation measure, the regulation represents a crucial form of infrastructure for Ecuador's whale-watching industry.

The Ecuadorian whale-watching regulation is largely the outcome of the efforts of Ecuadorian biologists who study whales and have lobbied the government ministries to adopt policies for whale conservation. Affiliated with international non-governmental organizations (NGOs) that focus on conservation, they also participate in treaty agencies such as the International Whaling Commission (IWC) and the Convention on Biological Diversity. Influenced by the norms that have currency in international conservation networks, the locally based scientists adapt the norms to the Ecuadorian national context. This is an example of transnational advocacy networks, which are far-flung constellations of non-state actors connected by shared values, common discourse, and the exchange of information and resources [32]. Hence, the scientists studying whales in Ecuador are communicators positioned between international networks, national ministries, and the local communities where their research takes place.

The case study presented here will focus on the making of a flagship species, a conservation practice that is associated with ecotourism [21]. A flagship species is one that is emblematic of wildlife conservation and stimulates public support for conservation efforts [20]. The efforts of Ecuadorian scientists to use the humpback whale as a local flagship species involve the production of new knowledge, which obligates the state to see the whale as worthy of protective policies. At the same time, the knowledge they produce is targeted at tourists and members of the public, inviting people to relate to whales in new ways that spill over into respect for the environment. The knowledge provided through scientific investigations of whales is aimed at multiple audiences: the international conservation community, the Ecuadorian government, and the local citizenry.

Does whale-watching tourism contribute to sustainable development compatible with conservation management? The present investigation addresses this question by examining the efforts of conservation scientists to communicate the international ideals of conservation through four main forms of conservation practice. However, prior to describing these practices, the research setting will be described.

### 3.2. Research Setting

Although the code of regulations for whale-watching is in effect throughout Ecuador's national territory, Machalilla National Park (MNP) has been especially associated with whale-watching [1]. With large swathes of terrestrial (56,184 ha) and marine (14,430 ha) zones, the MNP offers tourists the chance to observe a variety of habitats and species [33]. The cost of travel to MNP is much more affordable than a visit to the Galápagos National Park, making the MNP a popular destination for Ecuadorian vacationers as well as tourists from abroad [34]. MNP is part of the National System of Protected Areas (NSPA) of Ecuador, under the administration of Ecuador's Ministry of the Environment, Water, and Ecological Transition [35]. Including 66 separate protected areas (as of 2021), the NSPA exists to

“guarantee the coverage and connectivity of important ecosystems”, including terrestrial, marine, and coastal ecosystems [36].

The establishment of MNP in 1979 caused conflict over the restriction of traditional subsistence activities related to agriculture, livestock, and logging, but crews have continued to operate out of four fishery landing sites within the park [37]. The fishing communities have considerable friction with the park authority over the restrictions on the use of the marine area of the park [34,38]. Ecotourism has propelled the development of the largest town, Puerto López, which has been transitioning from an economy based on fishing to tourism [39]. However, other communities within the park do not enjoy the same opportunities to develop ecotourism and must continue to rely on fishing as a livelihood [38].

The management of Machalilla National Park centers on three main goals: (1) conservation of biodiversity; (2) improvement of the welfare status of people who live in the park and its surrounding zone; and (3) strengthening the presence of the national government in the park [33]. These goals prioritize the need to develop tourism on a scale that brings economic benefit to local communities while also committing the park authority to “control and monitor the activities of visitors. . . and to maintain rules to limit the impacts or changes produced by public use of its flora, fauna and ecosystems” [33]. However, the park has struggled to erect a system of surveillance and enforcement, despite the assistance of the National Armed Forces of Ecuador in the role of maritime police [37].

In practice, Machalilla National Park is a space in which the authorities attempt to administer and control the interactions between animals and humans (residents as well as tourists). In addition to humpback whales, tourists visiting the park try to see manta rays, sea turtles, and marine birds like the blue-footed booby. Hence, the park is a locus of biopolitical methods to regulate encounters between migratory animal populations and transient human populations.

### *3.3. Collecting Data on the Humpback Whale Population*

For conservationists, the first important task is to define a wild population and its habitat. Ecuadorian NGOs have participated in the development of whale-watching since 1994, when the researchers affiliated with FEMM [Fundación Ecuatoriana para el Estudio de Mamíferos Marinos] cooperated with a fledgling group of whale-watch tour operators in the Machalilla National Park. The founders of FEMM, Fernando Félix and Ben Haase, had already carried out studies on lethal strandings of whales beginning in 1987 [40–42]; from 1995 onward, they carried out the first population studies of humpback whales in Ecuadorian waters [43–46]. The tourism operators collaborated by allowing the researchers to record their data while aboard the tourist vessels, which made the relationship mutually beneficial [45,46]. Félix noted that when whale-watching began in the early 1990s, it was the only form of nature-related tourism available on the mainland coast of Ecuador [47]. Ben Haase recalled, “Twenty-five years ago, all the attention was on the Galápagos, nobody knew anything about the [mainland] coast” [48].

Nevertheless, interest in the biodiversity of the Galápagos Marine Reserve did generate interest in whale conservation policies. In 1990, the reserve was declared a whale sanctuary, which was later extended to Ecuador’s entire marine jurisdiction [49]. This was important because many regional populations of whales had been hunted to the verge of extinction by commercial whaling interests in the 19th and 20th centuries [50]. Although whaling was halted in 1986 by the International Whaling Commission, Japan and other member nations have continued to hunt whales by applying for a scientific whaling permit [6]. Ecuador’s unilateral move to protect whales from targeted exploitation presaged the subsequent efforts to make whale conservation policies a conspicuous part of public discourse on marine conservation.

As a new generation of researchers emerged, additional NGOs contributed research. Notably, the Pacific Whale Foundation [PWF], directed by Cristina Castro and located in Puerto López, carried out studies in Machalilla National Park. In 2005, four organizations reported a collaboration to collect field data: FEMM, Fundación Natura, Yaqu-Pacha,



and the Pacific Whale Foundation [51]. Since 2004, Félix and Haase have continued their research through the nonprofit Museo de Ballenas, which maintains a database of 2000 whales [52]. In 2011, PWF and the Museo de Ballenas combined their databases to publish a study that included 1389 individual humpback whales [46]. As the tourism operators have cooperated with the researchers by offering the use of whale-watching boats for observing and photographing the whales, it has increased the capacity for data collection. In addition to facilitating research, the alliance between the scientists and the tourism operators also provided opportunities for raising public awareness of the value of whales and the urgency of conserving their habitat [53].

Ecuadorian NGOs affiliated with international conservation networks have carried out extensive work to categorize humpback whales as part of the natural patrimony and obligate the state to adopt whale conservation policies. The scientists who advocate for whale-watching as a market-based tool of conservation have documented their activities both in the Ecuadorian news media as well as in their scientific publications. Their tasks were twofold: first, to convince the Ecuadorian government that the humpback whale is an endangered subject in need of the state's protection; and second, to convince the government that the humpback whale is a reliable resource that appears regularly in the oceanic territories of Ecuador. This enabled the Ecuadorian state agencies to include the humpback in their calculations for economic and social planning and make the humpback whale central to the overall management of the coastal environment.

The Ecuadorian NGOs are networked into international organizations. While the research of FEMM was supported in the 1990s by the Whale and Dolphin Conservation Society [WDCS], PWF received support from its international affiliate. Both WDCS and PWF are among the NGOs that have been active in efforts to influence the policies of the International Whaling Commission [IWC] [54]. The Ecuadorian scientists have prepared and submitted numerous technical reports to the IWC, and they have served as delegates to the IWC meetings [55]. Through their activities of networking with colleagues in other Latin American countries, and with the goal of keeping the IWC moratorium in place, Ecuadorian NGOs have helped to create a Latin American anti-whaling lobby, known as the Buenos Aires Group [6].

In Ecuador, the link between whale-watching policies and international conflict over the whaling issue is expressed in the rhetoric of economic utility. For example, it was stated in the "Outline of the National Position" presented in 2010 by the delegates to the 62nd meeting of the International Whaling Commission that "Ecuador, in compliance with its environmental policies opposes the commercial hunting of whales. . .and favors the nonlethal use [of whales] through responsible whale-watching tourism as an alternative form of development for coastal communities" [56]. In 2019, the National Assembly's Parliamentary Group for Animal Welfare advocated for whale-watching, noting that 15 million dollars were earned nationwide through tourism related to whale-watching [57]. These arguments are based on the rational use of whales as a resource for tourist development.

However, other anti-whaling statements emphasized the rights of Nature, enshrined in the Ecuadorian Constitution of 2008 [58]. These include a public statement emitted by the Ministry of Environment and another by the Ecuadorian Ministry of Tourism, which reminded the public, "Within the constitutional framework of Ecuador, the hunting of whales is considered a violation of the defense of the rights of Nature. Our country recognizes the application of precautions and restrictions on activities that can lead to extinctions of species, the destruction of ecosystems, or the permanent alteration of natural cycles" [59]. Here, the language of rights displaces the language of economic utility.

Clearly, the knowledge produced by NGO-affiliated researchers is framed from the perspective that humpback whales are endangered at the international level as a result of past and current threats. Globally, the species may not be in danger since the IUCN has moved the humpback whale from the Red List category of "vulnerable" to "least concern" [60]. Nevertheless, the controversy over whaling enables Ecuadorian NGOs to categorize the humpback as a species in need of special protection. To convince the

Ecuadorian government that the humpback is worthy of protection, however, they have set out to document localized threats to the humpback. Furthermore, they have carried out research to document the reliability of the whales' migration patterns through Ecuadorian waters, providing proof that the whale is a "national" resource for development.

#### *3.4. Setting Boundaries for Policies on Whale-Watching and Conservation*

In addition to sharing their data for the analysis of conservation problems, the NGO-affiliated researchers provide data to support advocacy for conservation policies. They have collected and published data about threats to the whale population, such as interactions with fisheries [46,61,62] and ship strikes [63]. Interactions with fisheries occur when a whale encounters a fishing net, longline, or other gear that entangles the whale's fins, body, or tail, often leading to the eventual death of the animal [64]. The problem of cetacean interactions with fisheries has no clear solution since mitigation proposals such as closed seasons on fishing, restricted zones, and restrictions of fishing gear normally draw negative reactions in coastal communities where fishing is a crucial livelihood [65]. The researchers have used their data to estimate the number of whales entangled at 23–45 annually and call for improved surveillance and management [52,66]. Hence, research on fishery interactions represents the whales as threatened and leads to the argument that the government should take responsibility to mitigate the risks.

The author posed the question of cetacean interactions with fisheries during a brief interview with biologist Gustavo Iturralde, who at the time was Director of Regulations and Coastal Projects at the Ministry of the Environment [MAE]. His response was that the MAE could not intervene because not enough is known about the locations of the entanglements and the types of fishing gear involved in the whales' deaths [67]. He noted that any such entanglements that occur outside of the boundaries of the national parks and nature reserves are taking place outside of the MAE's jurisdiction. He also claimed that despite their undeniable scientific expertise, the conservation NGOs provide information that is inconsistent and of limited use to government planners and managers [67]. A different perspective was provided by marine biologist Fernando Félix, who suggested that the problem lies not with the fishing communities of Ecuador, but with the government's unwillingness to recognize the magnitude of the threat that fisheries represent for whales [47].

However, another major area of research for the NGOs has been the effects of whale-watching tourism on the humpback whales themselves. This research did capture the interest of government officials, as confirmed by Mr. Iturralde: "The main thing that the Ministry of the Environment wants [with whales]... is to regulate and control whale-watching activities" [67]. In 2002, a researcher in Machalilla National Park reported that tourist boats often surrounded the whales for an extended period of time [68]. A subsequent publication by another team confirmed that humpback whales in the park showed signs of disrupted behavior and other possible negative impacts of human contact [69].

The Ecuadorian government did support the ratification of the National Code of Regulations for Whale-Watching in Ecuador in 2014, incorporating the recommendations of the NGO-affiliated researchers [29]. The code is comprehensive, detailing the procedures for licensing tour operators, the types of vessels, the procedures of approach, the distance from the whales, the duration, and other aspects [49].

Here, it can be observed that whale conservation has followed a specific path of boundary-making. First, whale-watching as an activity has been determined to be feasible to regulate, and it has been earmarked as an activity suitable for the protected areas and national parks that fall under the jurisdiction of the Ministry of the Environment. In contrast, the harm to whales inflicted by fishing gear is deemed outside of regulation. This appears to be a result of the Ministry of the Environment's relative willingness to work with the NGOs, given that whale-watching is economically vital in the environs of the parks and protected areas. In contrast, the fisheries authority (Secretariat of Fishery Resources, Ministry of Agriculture, Livestock, and Fisheries) would view whale conservation as a threat or possible limitation on fisheries rather than as an opportunity. Second, the whale-

watching regulation is limited in its provision to include only cetacean species (whales and dolphins) and does not extend to other marine mammals. This boundary appears both arbitrary and counter-productive to NGO-based researchers like Ben Haase, who explained, “The decision to make Galápagos into a whale sanctuary was misguided. . .we said it should extend to all marine mammals” [48].

### 3.5. *Connecting Whales to a Particular Territory*

Overall, the most important research for conservation purposes has been the survey carried out to describe the population of humpback whales that migrate annually through Ecuador’s coastal waters. The researchers were able to identify and record the presence of individual whales through the method of photoidentification [45,70]. The tail fluke displays pigmentation patterns unique to each whale and can be used like a “fingerprint” to identify the individual [71]. As each whale was photographed and identified, the researchers also classified it by sex and age category (adult, subadult, or calf). This provided a statistical estimate of the ratio of males to females, their age structure, and their health status. The researchers used a method called mark-recapture, a statistical procedure for the estimation of population size and population parameters.

Photoidentification led to the discovery that a proportion of the population of whales consistently visits Ecuador on its yearly migration. This has led some promoters of whale-watching to claim that there is an “Ecuadorian” population of whales that returns every year to mate and give birth to calves in the vicinity of Machalilla National Park. However, the situation is more complicated. There is no doubt that the “presence of humpback whales off the Ecuadorian coast is. . . a seasonal event with reproductive and calving purposes” [45], but many of the whales pass through the Ecuadorian waters as they head northward to Colombia, Panamá, and Costa Rica [70]. Nevertheless, studies carried out on migratory whales using satellite telemetry confirm that humpbacks use areas of the Ecuadorian coast for breeding and nursing calves [72]. Currently, it is thought that the Ecuadorian humpbacks are part of the southeast Pacific stock, which is estimated at 11,780 individuals [73].

Hence, the identification and monitoring of the whale population has reinforced the idea that the whales are a reliable resource for tourism, and the population of whales can be calculated as part of the Ministry of Tourism’s strategy for the coastal region. The idea is supported by claims that humpback whales are migrants who faithfully return to a specific location in Ecuador year after year. For example, the Ministry of the Environment claimed that in “the Machalilla National Park, in the canton of Puerto López, in the province of Manabí. . .this place is known as the mating ground of this species, which crosses from the frozen waters of Antarctica to the warm Pacific waters. . . For the experts, this journey is part of the cetacean cycle of life which permits the normal reproduction of the species. However, for the romantics of Puerto López, it is a ritual of love which begins the gestation, that which will culminate in the journey of the following year, conceived in the seas of Ecuador” [74]. This discourse rhetorically assimilates the reproductive power of humpback whales to the biopower of the Ecuadorian nation. Hence, the advocates of whale-watching affirm that the humpback whales have an enduring connection to Ecuador, which the whales themselves pass down from generation to generation.

Here, it can be observed that whale conservation research has followed a specific path of boundary-making. First, conservationists have distinguished the national park and its boundaries as a special location for whale conservation since the jurisdiction makes it feasible to administer and regulate ecotourism activities. Next, they have categorized the humpback whales as Ecuadorian in nationality, a faithful population of migrant returnees. Finally, it should be noted that the research not only defines the whale as an Ecuadorian whale, but it also defines the Ecuadorian coastline as a location appropriate for ecotourism and conservation, to the preference or exclusion over other uses. For example, it was argued that aquaculture (fish farms) would be harmful for the whales and for the coastal habitat [75], as would offshore oil and gas drilling [76]. Barragán Paladines identified a



sociocultural transformation in Puerto López in which young adults came to view fishing as an inappropriate and outmoded livelihood, with preference given instead to tourism-related occupations [39]. In this manner, the boundaries imposed by NGO-led research may lead to biased public perceptions of the appropriate use of coastal habitats and resources [39].

Environmental governmentality requires not only knowledge for predicting numbers and the movements of the humpback whale population, since it also requires quantifying and monitoring the movements of humans who will come to see the whales. The former director of Machalilla National Park, Fernando Vera, explained that “we must control tourism” to maintain the species and the places that attract visitors [77]. In an interview with the author, Mr. Vera explained that it is important for the park to link whale-watching tourism to other nature-related attractions [78]. To this end, the park created a “Visitor Management System” to match each tourist with a nature-themed itinerary in the park [77]. Given that the number of tourists visiting the park has increased vertiginously from 517 in 1988 to 77,625 in 2019 [1], it is essential for the park administrators to control the spaces where the encounter between humans and nonhuman animals takes place so that the outcome of the encounter will not harm the animals. In essence, this is a practice of biopolitics.

Finally, it is important to note that NGO-affiliated scientists have devoted their own time to providing training for the whale-watch tour operators [79]. This represents a direct diffusion of knowledge from scientists to the handlers of human tourists, making it possible for the whale-human encounter to follow a routine procedure that prevents harm to the whales.

To summarize, Ecuadorian NGO-affiliated researchers have developed biopolitical technologies for classifying the whale population as one that is endangered and needs protection, identifying its individuals and tracking their movements, describing the population, and finally, practicing biopolitics by controlling the times and places where whales and humans can interact. Through these technologies, the whale is transformed into an animal worthy of conservation and protection by the Ecuadorian state.

### *3.6. Creating Personal Bonds with Individual Whales*

Since 1998, the municipality of Puerto López has celebrated the Humpback Whale Festival each year in June to officially open the whale-watching season. The festival is a civic event that invites the participation of the public while also bringing together local officials (municipal, cantonal, and provincial), representatives of the national ministries, and tourism operators. The whale festival of Puerto López is so important to the community’s hopes for prosperity and growth that it has been celebrated even during the COVID-19 pandemic, when tourists were necessarily absent [80]. As an event that fortifies the community identity of Puerto López, the festival serves to solidify the human community’s identification with the whales. It has been suggested that the tradition will endure as long as the humpbacks continue their migrations [53].

In addition to celebrating the community, the festival serves to instill and promote an ethical stance toward humpback whales and toward nature in general. In this manner, the festival is a biopolitical institution that has disciplinary functions, instilling social norms and principles for the ethical manner in which to think about, look at, and interact with wild animals. The ethical messages of the festival are premised on the three aspects of knowledge produced by the Ecuadorian NGOs that study whales: (1) the idea that whales are endangered; (2) the idea that whales are connected to Ecuadorian territory and the national park; and (3) the idea that tourism is the most appropriate use for this environment. From these ideas, they derive an ethical stance toward whales that advances a specific model of human/nature interactions that occur in environmentally valued spaces, such as the national park.

The ethical model is performed by citizens and officials at the festival. For example, a high school student who participated in a pageant during the festival explained that he

wanted to make people more aware that everyone ought to respect marine species and their habitat [77]. A tour guide on the whale-watching tour said that he considers his work to be “ecological”, and he is careful to follow all procedures necessary to safeguard the whales and their habitat [81]. A government official exhorted the local citizens not to discard rubbish in the sea and to take precautions against the improper use of fishing gear [74].

The ethical stance toward whales is justified by the scientific research methods based on the identification and tracking of individual whales. This individualization of the whale produces a metaphorical equivalence between the individuality of humans and the individuality of whales. It has been utilized to claim that humpback whales are individuals who can be named and known, just as human individuals can be named and known. Cristina Castro of the Pacific Whale Foundation is well known for having named a whale “Leonardo”, after her father; she also named a whale “Isabel”, in honor of a past Minister of the Environment who supported Ecuador’s reentry as a member nation in the International Whaling Commission [82]. According to Castro, not every humpback whale is given a personal name, as it is “only those that are special, that return each year or have beautiful histories” [82].

Castro has helped to promulgate this practice through her work as an organizer of the annual whale festival in Puerto López. Since 2009, the festival has promoted the “baptism” and godparenthood of whales, a practice by which an individual or a corporation bestows a name and becomes the godparent of the whale. The goal is for the godparent to become “like an adoptive parent, who will look out for the whales and the care of their ecosystem” [83].

The extension of fictive kinship to whales in the name of conservation is based upon assumptions about the whale’s individuality. Indeed, the assertion that each whale has a unique pattern on its tail fluke leads to the notion that “the tail is its . . . fingerprint or identity card” [84]. The whale’s identity is therefore made official by its entry into a master database and the assignment of an identification number. According to Castro and Mena, “We are something like a Civil Registry for the humpback whales; we enroll them with their photos, we baptize them with names. . . and we investigate them during their entire lives, to simply know and understand a little more about them” [71].

This official identity registry has resulted in the imagination of the whales in another type of social relationship: Ecuadorian nationality or citizenship. Hence, Ángel Pincay, the municipal director of tourism for Puerto López, announced that the humpback whales are “proudly Manabitas” (citizens of Manabí province) since they breed and give birth in the waters of the Manabí coastline [83]. Biologist Cristina Castro has argued that “by nationalizing the whales that are born in our waters, these remain protected [from whaling] when they migrate to Antarctica for feeding during the summer months” [85]. The civic celebration of whale tourism in Puerto López is a venue for publicly imparting Ecuadorian nationality to the humpback whales, which will (perhaps) give them diplomatic immunity against the harpoons of Japanese whalers.

#### 4. Discussion

The examples provided here illustrate that Ecuador’s whale experts are not merely communicating information about whales; they also create knowledge about whales and promote specific conservation practices. Through their involvement in transnational advocacy networks, Ecuadorian whale experts have advanced the idea that whales are threatened and must have legal protection. Through research on whale-watching, they have shown the need for regulating the interactions between tourists and whales. Through photo identification, they have shown that humpback whales return to Ecuadorian territory annually. Their research findings have led to the institutionalization of an ethical stance toward whales.

Hence, in coastal Ecuador, the humpback whale as a flagship species is not merely a form of tourism propaganda; it is part of an effort to promote and popularize an ethical stance toward wildlife. The baptism of whales at the annual festival and the comparison

of the whale's tail to an identity card are practices that inculcate the idea that it is normal or natural for the government as well as local citizens to take steps to care for the whales. Through this stance, the whales are made into protagonists, or subjects of conservation, and humans (tourists, boat operators, and others) are obligated to treat them ethically. In this manner, the institutional policies and discourses of whale-watching and ecotourism transform the whale into an environmental subject.

Does the humpback whale, as a flagship species, lead to improved conservation? In interviews, Fernando Felix [47] and Ben Haase [48] indicated that the whale-watching regulation is only useful to the extent that it will be enforced by the authorities. In other words, they believe that conservation ultimately depends on the state's capacity to intervene and implement protective policies.

Thus, the persistent problem of the flagship species in conservation is to discover how to extend the subjective engagement with a specific object (the flagship species) to instill a wider commitment to coastal habitats and the environment overall. If environmental governmentality in practice operates through several distinctive modes, there are multiple ways to compel compliance, including intervention through the application of rules and penalties and the disciplinary mode, which operates through the inculcation of market-based norms [86]. If the flagship species represents a mode of governmentality that operates through the promulgation of norms, it may be insufficient without the intervention of enforcement mechanisms. The Ecuadorian case supports the idea that governmentality necessarily involves "multiple modes of conservation biopolitics that coexist" [87].

In response to the concern about ecotourism serving to commodify nature in a harmful manner, because it "cuts the threads that binds ecosystems together" [7], whale conservation in Ecuador cannot wholly refute this argument. Instead of extending protected status to all living things, humpback whales have been selected through boundary-making technologies of biopolitics, which categorize and separate the whales from other species. The practice of naming and baptizing individual whales affiliates the whales with humans, conceptually separating them from less charismatic species. The relationship is designed to oblige the human godparent to speak on behalf of the whale's right to exist and to receive the protection of the state. Similarly, the practice of nationalizing whales gives them a political relevance and subjecthood that are not granted to other species, which remain inanimate objects of policy rather than national subjects.

Nevertheless, Ecuador's whale-watching tourism gives a powerful illustration of a situation in which the future of human lives and communities is inexorably linked to the fate of non-human populations. Striving for economic development through wildlife conservation indicates that economic goals are inscribed within conservation goals. As Cristina Castro explained in an interview with the author, "It is not true that I want to conserve a beautiful animal simply because it is beautiful. It is because I want to conserve something that will [also] be of economic benefit for the people [of Ecuador]" [55]. In a published interview with Oswaldo Báez Tobar, she elaborated, "I don't believe in sustainable development, which mentions just the economy and the environment. I believe fully in sustainable human development, which is the path by which the environment, the economy, and human beings interact to help each other mutually. The proper management of nature can provide a better quality of life and improve the local economy, conserving these ecosystems" [88].

## 5. Conclusions

Whale-watching in Ecuador demonstrates that biopolitics gains its power from the instrumental nature of its ethical claim to care for nature and humans. The knowledge of whales developed by whale-watching advocates has served to separate the humpback whale from other natural species, portraying it as a species especially deserving of the right to be protected from harm. Conservationists have categorized the whale as threatened (by whaling), individually identifiable, and faithfully returning to a specific habitat in Ecuadorian coastal waters. These bases for carrying out research on humpback whales

have extended the power of Ecuadorian government agencies to utilize the whales as an economic resource while also calling for an ethical and benevolent relationship between humans and whales. In this ethical frame, the advocates of ecotourism have argued for the most profitable way to save the whales and hence preferable to other uses of the coastline, such as fishing, aquaculture, or fossil fuel exploitation. When they assert the ethical nature of whale-watching tourism, backed up by the National Code of Regulations for Whale-Watching in Ecuador, the advocates hope to make whale-watching competitive so that it will prevent the more harmful industries from becoming established on the coast. In this manner, the “ethical” nature of whale-watching is instrumental, serving as a political and economic pathway to promote conservation in place of extractive industries that create more aggravated impacts on natural habitats.

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