

Article

Conservation Debates: People's Perceptions and Values towards a Privately Protected Area in Southern Ecuador

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Abstract: The perceptions and values that local communities have towards protected areas are of great value for the improvement of these territories' management. Such perceptions and values are often absent in the conservation planning process, particularly in those privately protected areas that are established in areas where the land tenure system is based not only on ownership but also on customary uses. Drawing on qualitative and quantitative data obtained through semi-structured interviews with key stakeholders and members of communities surrounding a privately protected area in southern Ecuador, we identify that the level of collaboration with the managers, the distance to the protected area, the percentage of untitled land, and the dependence on the resources (customary uses) are among the variables affecting these perceptions and values. Positive perceptions towards protected areas and naturalistic values are developed among those who collaborate with the protected area managers, whereas negative perceptions, and a mix of naturalistic and biospheric values are developed among those who have a sense of a lack of attention to social needs although supporting nature conservation at the same time. The evidence presented shows the importance of matching local peoples' expectations with conservation goals during the establishment of a protected area.

Keywords: tropical dry forest; conservation values; perceptions; customary land uses; Ecuador



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1. Introduction

Privately protected areas (PAs) play a pivotal complementary role in the protection of under-represented ecosystems [1]. However, these areas are ecologically more fragile partly because of their reduced territorial surface. In Latin America, for example, 75% of privately PAs comprise less than 2500 hectares each [2]. Small-size PAs facilitate border effects, the introduction of exotic species, biodiversity loss, pollution, among other issues. This fragility, prompts conservation practitioners to protect these territories through private, exclusive, and individualistic property rights, which is highly criticised for their lack of compatibility with long-term conservation and development objectives [3], particularly among those peoples restricted from their customary land-uses. According to [2], privately PAs overlap with two important social and political conservation issues: the decentralization of resource control and public participation in decision-making on their use. In this context, the decentralization of resource control needs to transfer the responsibilities for land use and occupation to local governments, which in turn ought to include citizen's participation by considering their perceptions and values towards PAs and conservation.

The establishment of PAs is seen as beneficial for animal and plant species, but also for people in that they provide financial incentives and employment [4–8]. However, for other groups of researchers people living within and around PAs are frequently victims of land dispossession, poverty, cultural and social change, including loss of subsistence activities [9–11]. Previous studies further indicate that the formation of positive perceptions towards PAs are influenced by environmental discourses, which develop ecological values

that replace people's viewpoints regarding resource-use and agriculture [12–14]. These discourses have been highly criticised because they use people's livelihoods to convince them that conservation is more important than customary uses, to the extent that people forget about their own needs [12,15]. In this sense, naturalism (1) and positive perceptions developed towards PAs seem to be connected to financial incentives and environmental discourses and disconnected from traditional customary uses. This could be true for many developing countries wherein land tenure systems have moved from customary systems of multiple parties adjusted to the use rights (not necessarily transferable), toward simpler systems which accord full and transferable ownership rights to a single individual [16].

Despite that some conservation initiatives genuinely seek to involve local communities in the management of PAs, the establishment of these territories continues to be an imposed project that positions local communities at a disadvantage vis-à-vis conservation organisations [17]. According to [18], when the resource-use within PAs is considered 'illegal', a persecution of residents is triggered, creating social conflicts and the subsequent rejection of the area. In this respect, [19] argues that cattle ranchers, farmers and local inhabitants are adversely affected by restricted access to resources within these areas. Indeed, people tend to reject PAs or other conservation initiatives because they do not perceive social benefits but resource-use deprivation and lack of contribution to social-economic development [11,17,20]. [21], further indicate that the restrictions imposed within PAs lead people to lose interest to collaborating or even visiting the area, whereas the work by [7,22,23], assert that some communities disagree or are disappointed with PAs because they perceive that conservationists give priority to animals and plants rather than people's basic needs and economic development, contradicting thus previous claims about social benefits provided by PAs.

In contributing to this scientific debate, this paper aims to explore the type of perceptions and values towards a privately PA located in southern Ecuador. More specifically, using a case study approach the objective is to analyse how people's relationship with a privately PA shapes their perceptions and values towards PAs and conservation programmes. It is hypothesized that the formation of perceptions and values towards PAs is not defined by a single variable but by the direct or indirect intervention of several social factors such as the distance to the PA, the level of collaboration with managers/owners, the allowance of customary uses and the percentage of untitled lands. The evidence presented is valuable for conservation practitioners to make decisions for PA's management.

2. Materials and Methods

2.1. Study Area and the Case Studied

Ecuador has attracted international attention in environmental affairs; mainly because it holds the first Constitution that grants rights to nature, promotes an avant-garde governance framework for the establishment of state, autonomous and decentralised, community based, and privately owned PAs, and recognizes the participation of local people in their establishment [24]. Yet, many PAs have been created constraining natural resource use and overlooking local traditional livelihoods [10]. These sorts of environmental dealings may have had an impact on local peoples' perceptions, regarding conservation and PAs, whose livelihoods rely heavily on the resources lying within these territories.

One of the ecosystems targeted for conservation in Ecuador, are the tropical dry forests (TDFs) located in Zapotillo, south-west of the country. For six months, TDFs lose their foliage, becoming a hostile ecosystem for those whose livelihoods depend on it. The main productive activities in Zapotillo are goat raising, beekeeping, bird hunting and logging, all of them part of the customary uses directly linked to the forests' resources [25]. The three main perceived ecosystem services provided by TDFs in Zapotillo are indeed agriculture, fodder, and raw material [26]. The 41% of rural parcels in Zapotillo do not count with formal property titles [27].

The high dependence on the natural resources provided by TDFs in Zapotillo has led to the over-exploitation of these forests which was accentuated in the 60 s after a severe

drought that hit the region [25]. This over-exploitation, led the Central Government in 1978 to ban the ‘guayacán’ (*Tabebuia chrysantha*) logging—a highly prized hardwood for manufacturing parquet floor—and in 2001, an international NGO created three privately Natural Reserves in Zapotillo [28]. Additionally, in 2012 the Central Government advertised these forests as a tourist attraction to witness the ‘guayacán blossoming’ during the wet season [29]. Finally, the high biodiversity contained in these forests prompted UNESCO to declare the TDFs of Zapotillo as Biosphere Reserve of Dry Forest in 2015.

This research focuses on one of the privately Reserves (Figure 1). This Reserve protects 10,200 ha of TDFs [30] and was created after buying the land from two ‘hacendados’ (landlords), gaining property rights over the natural resources within the area. Before the establishment of the Reserve, access to land was determined by the hacienda model. This model operated in Ecuador in the second half of the 20th century, whereby the landlord assigned to peasants a small plot of land, generally with low production characteristics, for the worker to build his house and cultivate the land in exchange of hacienda labours such as agriculture, housekeeping, or housework [31,32]. Due to the limitations of both surface area and productivity of such small plots, and the large areas of the hacienda, peasants could use vacant land of the hacienda, for collecting firewood, hunting and fishing, planting, grazing, or accessing water [32]. Although peasants did not have a property title, due to their (full) time dedication to working on the hacienda gave them a sense of belonging to it [33].

When the Reserve was established, the peasants who worked the former hacienda were deprived of the land and its resources. However, the new landlord—an international NGO—allowed peasants to stay. Currently, 370 families (1660 inhabitants) live within the Reserve boundaries who are still permitted to graze goats and grow maize under certain conditions and rules. The families are organized in a Livestock Association and are the ones who carry out permanent patrols to control poaching and logging (NCI, 2016). The NGO has also employed some community members to help in the management of the Reserve.

In selecting the communities for data collection, a buffer of up to 10 km around the Reserve was marked with the aim of including communities located at different distances from the Reserve (Figure 1). The number of communities were determined after reaching data saturation. A total of 10 communities were selected. Two communities—Cabeza de Toro, El Cabuyo—lie within the PA’s boundaries. Four communities—Revolcaderos, La Manga, Tutumos, El Oro de Pilares—are located between 69–1000 km from the PA. Four communities—Bolaspampa, Garzareal, Zapallal and Hualtacos—are located between 2294–6079 km from the PA. Additionally the cantonal capital—Zapotillo—was selected to collect data from the government administration offices (Municipality).

2.2. Methods

A semi-structured interview was used to collect data in order to explore deeply the perceptions and values towards PAs and conservation programmes rather than seeking generalisations for the population (after [34,35]). The interview was applied between 2017 and 2018. The sections structuring the interviews included: Personal data, perceptions of PAs and conservation, customary land-uses, benefits, and resources obtained from the PA and from the dry forest. A total of 44 interviews were conducted with key actors and community members as follows:

Rural Parish Council or Community Board representatives: ten participants, one per each community, were selected through a targeted sampling strategy. These key actors helped to introduce the researchers to community members.

Municipality representatives: two participants were also selected through a targeted sampling strategy. These participants live in the cantonal capital Zapotillo.

Conservation practitioners: likewise, four participants were selected through a targeted sampling strategy. Two of them live in the cantonal capital, while the other two live in one of the communities around the Reserve.

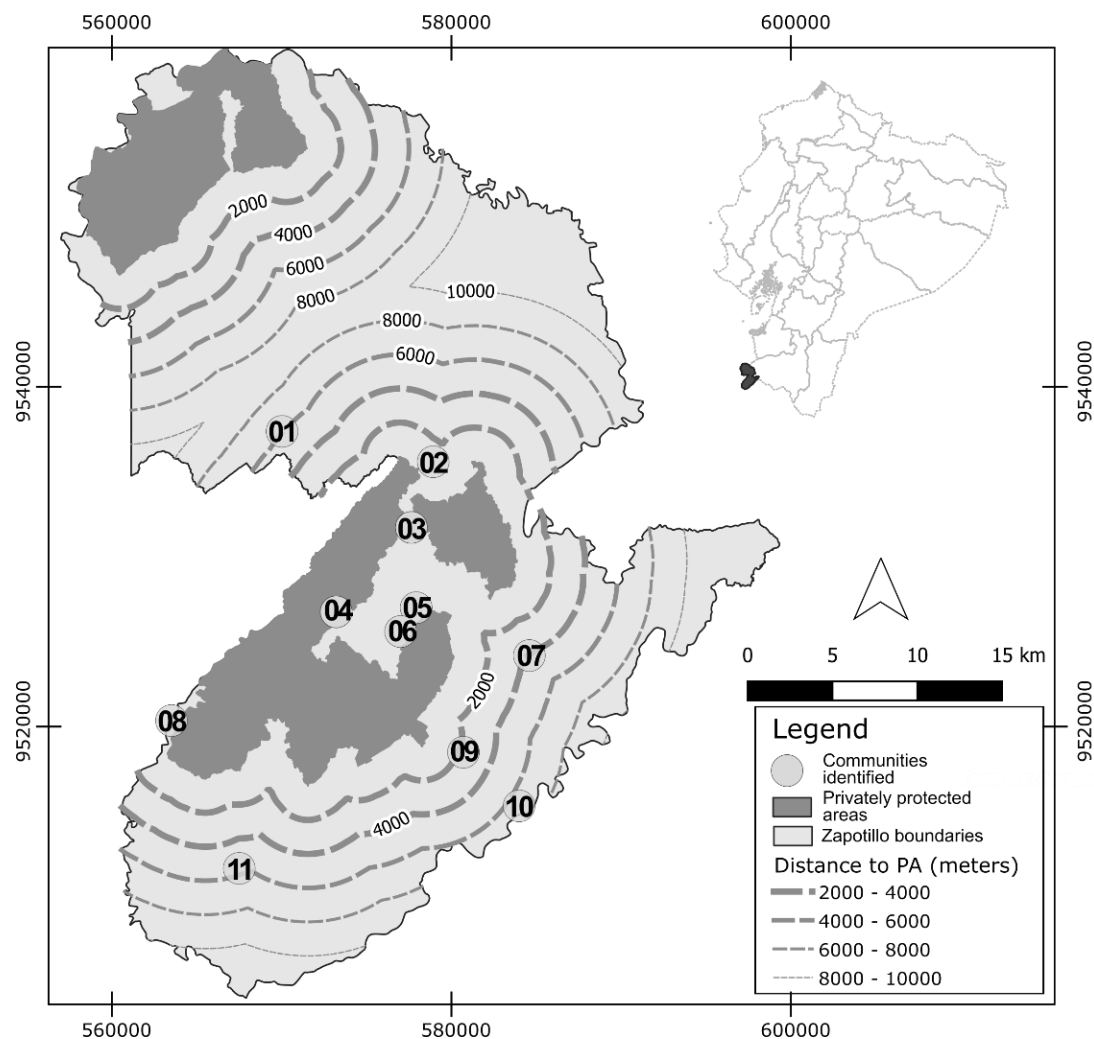


Figure 1. Spatial location of the study area, and description of the main characteristics of the communities under study. **01.** Hualtacos—dependence: medium; level of collaboration: none; untitled plots: 32%; distance from PA: 5711 m; perception: negative; values: biospheric and naturalist. **02.** Revolcaderos—dependence: medium; level of collaboration: low; untitled plots: 50%; distance from PA: 98 m; perception: negative; values: biospheric and naturalist. **03.** La Manga—dependence: high; level of collaboration: low; untitled plots: 54%; distance from PA: 69 m; perception: negative; values: biospheric and naturalist. **04.** Cabeza de toro—dependence: high; level of collaboration: high; untitled plots: 48%; distance from PA: −32 m; perception: positive; values: naturalist. **05.** Tutumos—dependence: high; level of collaboration: low; untitled plots: 56%; distance from PA: 656 m; perception: neutral; values: biospheric and naturalist. **06.** El Cabuyo; dependence: high; level of collaboration: low; untitled plots: 58%; distance from PA: −41 m; perception: neutral; values: biospheric and naturalist. **07.** Garzareal—dependence: medium; level of collaboration: none; untitled plots: 15%; distance from PA: 4198 m; perception: negative; values: biospheric and naturalist. **08.** El Oro de Pílares—dependence: high; level of collaboration: none; untitled plots: 13%; distance from PA: 302 m; perception: negative; values: biospheric and naturalist. **09.** Zapallal—dependence: medium; level of collaboration: none; untitled plots: 30%; distance from PA: 2294 m; perception: negative; values: biospheric and naturalist. **10.** Zapotillo (municipality)—dependence: none; level of collaboration: high; untitled plots: 0%; distance from PA: 6854 m; perception: positive; values: naturalist. **11.** Bolaspamba—dependence: none; level of collaboration: none; untitled plots: 70%; distance from PA: 6079 m; perception: neutral; values: biospheric.

Community members: 28 participants were selected through a chain-referral strategy. Sample size was determined upon reaching saturation. These participants were approached at their homes at different days and times in the ten communities selected previously.

In exploring how people's relationship with a privately PA shapes their perceptions and values towards PAs and conservation programmes, the data collected was analysed quantitatively and qualitatively. The quantitative analysis was conducted by creating seven

categories: level of collaboration, dependence on PA's natural resources, distance from the PA, values, perceptions, land tenure, and customary land uses. These categories were assigned numbers (Table 1) which allowed determining the Spearman correlation and the statistical significance between criteria. A classification tree—algorithm Random tree—(after, [36]), was later applied in order to analyse first the relationship between categories and the perceptions and later the same categories with values. The qualitative analysis was conducted adapting the coding process suggested by [37]. The type of code used was 'values coding' recommended when looking at participant's values, attitudes and beliefs representing her or his worldviews. According to [37], a value is the importance attributed to ourselves, another person, thing or idea. Values coding is appropriate for exploring cultural values and belief systems, intrapersonal and interpersonal participant experiences and actions in case studies. Codes were built upon data collected which were later grouped into the same seven categories created during the quantitative analysis.

Table 1. Description of the coding and categories identified for the case study.

Categories	Description	Qualitative Codes	Quantitative Codes
Level of Collaboration	Measured through PA-based employment, PA resource use-allowance, and administrative support.	High	1
		Low	0.5
		None	0
Dependence on PA's natural resources	Measured through PA resource use, for example, fodder, land, or water.	High	1
		Medium	0.5
		None	0
Values	Biospheric: every living being has the right to live and develop. It dissolves any hierarchy among living beings (Valera 2017).	Biospheric	—
	Naturalism: from the theoretical/epistemological point of view, naturalism has a dichotomous vision of nature in relation to the social. Society and nature are separated entities (Santos 2014).	Naturalism	—
Untitled plots	Measured through the percentage of untitled plots within 2 km radius.	—	% of untitled plots
Perceptions towards PAs	Measured through the use of positive or negative adjectives, opinions over nature conservation, social welfare, and acceptance/rejection of PAs.	Positive	1
		Neutral	0.5
		Negative	0
Customary land uses	Measured according to the usufruct of the PA natural resources.	Continuing	1
		Restricted	0

3. Results

3.1. Participant's Perceptions of PAs and Conservation: Quantitative Analysis

The quantitative analysis indicates that there is a moderately strong correlation between the level of collaboration and the participant's perception of PAs and conservation (Figure 2). According to this correlation, the greater the level of collaboration with the PA managers, the greater the likelihood that a positive perception will be developed.

Although the percentage of untitled plots did not show any strong or significant correlation with any of the variables, it becomes an essential variable when analysing the perception generated through a random tree. As shown in Figure 3, when the percentage of untitled plots around communities is greater than 55%, participant's perception tends to be neutral, while with percentages lower of 55% of untitled plots but with little or no collaboration, the perception tends to be negative.

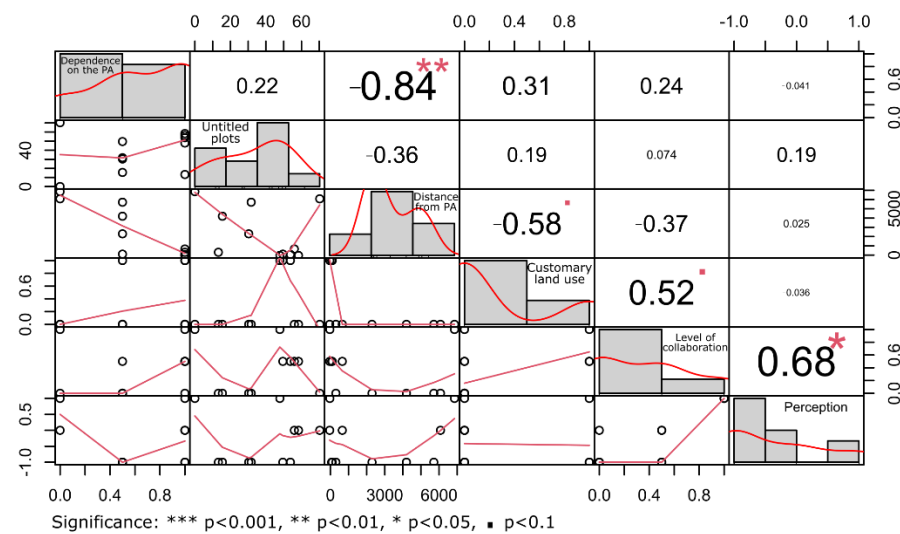


Figure 2. Spearman correlation between criteria and perception.

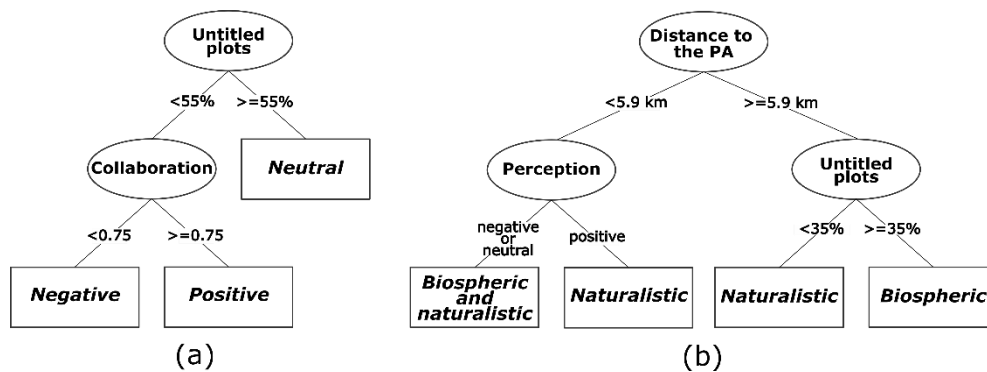


Figure 3. Decision tree regarding perception (a) and values (b) towards protected areas and conservation within the study area.

Additionally, it is observed that the distance of communities from the PA has a strong negative correlation with the dependence on PA resources, and a negative but weak correlation with respect to the level of collaboration, whereby, the greater the distance the lesser the dependency to the PA resources, although it does not determine the level of collaboration with the PA managers/owners. The results of the random tree further indicate that the distance to the PA influences the values identified in the communities. Both communities, those located away from the PA with less than 35% of untitled plots, or those located closer to the PA and holding positive perceptions of conservation tend to develop naturalistic values. Furthermore, communities located away from the PA with untitled plots higher than 35% generate biospheric values, whereas communities closer from the PA and having negative or neutral perceptions about the PA, generate either biospheric or naturalistic values (Figure 3).

3.2. Participant's Perceptions and Values towards Protected Areas and Conservation: Qualitative Analysis

Positive perceptions: according to data collected, positive perceptions were expressed by those participants who consider the establishment of the PA studied, as well as its managers and owners, as beneficial for the forest. These participants belong mainly to the group of conservation practitioners and some community members who collaborate with the PA managers and owners. These participants, moreover, did not mention any effect of the PA on social welfare, showing instead satisfaction with changing customary land uses that favours forest conservation as indicated by these informants:

Conservation practitioner 3: "We used to cut down the trees and plant maize or harvest honey, but we learned and now we take care after the forest. Since the PA was established, we feel pure air and that the rain comes more often, the forest is prettier."

Conservation practitioner 1: "Before the PA managers came here, we used to dedicate ourselves only to goat husbandry, and to agriculture in wintertime, now we protect the forest."

Community member 4: "The PA managers once taught us that it's much better to own only 10 goats with high yield rather than many goats harming the forest. There was even an Organisation that gave us steel wire to fence the area."

Participants holding positive perceptions also tend to have naturalistic values towards conservation, as they consider themselves to be 'destroyers or saviours' of nature. In this regard, the following informant mentioned:

Community member 16: "We used to deplete everything, even water! People used to cut down the trees to collect honey or to plant maize. Now, we have been trained that we should not do that, so that there has been an enormous change. We stopped logging, we don't cut down the trees, we take care of the trees now."

Other positive perceptions were related to tourism and local development, which were mainly expressed by Municipality representatives and conservation practitioners, who, despite recognizing that there are socio-economic problems, advocate for conservation:

Conservation Practitioner: "I care about that forest because of the local communities living there. Some of them even live in extreme poverty. If we manage them and polish them, they will understand the importance of natural resources."

Municipality representative: "The forest is the source of life and development, not only for people living in the forest but for all of us living in the urban centre. We see it as a good thing this Reserve, because it gives us tourism, we all benefit from tourism one way or another."

Neutral perceptions: neutral perceptions were expressed by those participants who support conservation as a socially inherent process that ensures people's livelihoods. Participants holding neutral perceptions do not separate nature from society revealing a mix of naturalistic and biospheric values. These participants tend to use the word 'forest' instead of 'Protected Area' or 'Reserve' to express their opinions over nature conservation. The following are some examples of these perceptions and values:

Parish representative 6: "In wintertime, the forest provides benefits for agriculturalists because they have their goats in there. In summertime, when leaves fall, they are used as fodder. It is a circle, the forest always benefits agriculturalists."

Community member 13: "... We don't cut down the trees because the soil will get damaged and the wood will be depleted. If we do it, we won't have forest and therefore we won't have rain. Thanks to the forest the air here is pure."

Parish representative 7: "*La hojarasca* (leaf litter) coming from the trees is our goat's fodder. That is their food source. I disagree with cutting down the trees. From the forests come the rain because the vegetation calls the water."

Negative perceptions: negative perceptions were expressed by those participants who have a critical opinion that mixes naturalistic and biospheric values in that they understand the importance of conservation activities but question at the same time its impact on social welfare. In this respect, the following informants pointed out:

Community member 11: "It is natural that we all look after the environment, not only for those who work in the PA, but for all of us who live here. All the good comes from the forests: fresh air, rain, it is also the home of our goats and cows."

Community board representative 9: “I am critical about the social aspects. I would rather look at people living within the protected area, for they deserve a better quality of life and access to basic services such as waste management that would help us all to have a forest well cared. Environmentally, logging has stopped, more research has been conducted, papers on local flora and fauna have been published. All that is spectacular. However, there hasn’t been any social change, people’s life conditions haven’t improved.”

Community member 16: “What would a peasant do here for a living if we say that we are going to protect everything? Let’s say we will protect the forest, that’s all right, but then, what are we going to plant/sow? Current authorities will never say ‘...come here, this job is for you’ so, what do we do for a living?”

Negative perceptions were also associated with land dispossession and restricted access to the PA’s resources, as informed by these participants:

Community member 5: “How could it be good that people are coming and buying lands. We know what our land needs, we don’t need anyone else to tell us what to do because we know our land.”

Community board representative 9: “The PA’s owners wanted to take this land by claiming that they had bought the *hacienda*. Because in this land they have a seed from which they extract oil to later send it to Brazil for perfume business. So, they wanted to take our land-rights away. I had a piece of land of 100 has. that indeed belongs to the *hacienda*, but I stood for my rights against the engineer in charge. Then people from the Secretary of Land came to establish the limits and the discussion started. They (PA-owners) wanted to own everything, they wanted to take the land away from us. Before it was an open field with an owner (the *hacendado*).”

In addition, negative perceptions revealed conflicts between community members regarding customary land uses, which continue despite the restrictions imposed by the PA owners as mentioned by these informants:

Conservation practitioner 3: “People said to me: ‘You, why do you ban me to cut down a tree or to hunt an animal if this (land) is not yours?’ However, since this (land) belongs to the PA, I have the right to claim it for the owners and say that no one can access it and that they need a permit to do so.”

Conservation Practitioner 1: “Our work has been hard; it has cost us lots of local criticism from people outside (of the Reserve). They do not realise what we have. Those who do not care, cut down the trees and get the honey. They don’t care about anything, but we are reallocating them, we are taking control.”

In brief, participant’s positive perceptions highlight the importance of forest conservation but neglect social welfare, neutral perceptions consider human activities that transform natural landscapes as part of the coexistence between nature and society, while negative perceptions are developed by a sense of a lack of attention to social needs although they support nature conservation.

4. Discussion

Our results indicate that different types of perceptions are directly associated with the level of collaboration with PA managers/owners. However, we found another type of indirect associations to analyse as they allow us to interpret the perceptions and values that were identified. Among them, the distance and the percentage of untitled land. It also highlighted the dependence on the PA’s resources (customary uses), which, despite not appearing in the trees generated, is strongly correlated with the distance to the PA.

Our quantitative results indicate that participants who collaborate with the PA managers tend to develop positive perceptions towards PAs and conservation. According to the qualitative results, except for the testimonies provided by municipal representatives, these

positive perceptions are detached from social welfare concepts and associated with forest conservation. Moreover, participants holding positive perceptions tended to develop a naturalistic value towards conservation. According to [38], the ideas of nature conservation are one of the central expressions of modern thought in relation to what we call “natural”. For this author, the notion of nature is socially constructed and its dichotomous vision in relation to the social is typical of Western cosmology which is recognized as “naturalism”. This naturalism has two expressions in the relationship between society and nature, one is predatory and the other is conservationist. In our data, this naturalism was visible among participants who collaborated with the PA managers who mentioned that the establishment of the PA has taken them away from a predatory vision to a conservationist one, but without mentioning any concern for social welfare improvement, reinforcing previous claims by [39] who indicate that when people trust the PA managers they also tend to hold positive perceptions.

The results also indicate that, although it is not a significant relation (at least in a linear correlation), the percentage of untitled plots around the communities seems to influence participants’ perceptions and values, as it is a recurrent variable in the decision trees. Thus, populations that develop neutral perceptions are surrounded by more than 55% of untitled land. It is important to clarify that there are only two communities that meet this condition: the first is located at a distance greater than 6 km and has no level of collaboration with the PA managers/owners, and the second community is located within the PA boundaries and has a low level of collaboration with the PA managers/owners. Furthermore, the percentage of untitled land allows us to determine participant’s values towards nature. When the percentage of untitled land exceeds 35%, the communities generate biospheric values (every living being has the right to live and develop), whereas when that percentage is lower than mentioned, naturalistic values are generated (society and nature are separated entities), like to those values found among communities holding positive perceptions and are located less than 5.9 km from the PA.

In short, land tenure plays an important role in shaping perceptions and values towards nature. However, it should be kept in mind that land tenure does not only refer to ownership, but also to dependence on resources and customary uses that are unofficial, “illegal” or occasional [40]. This is important in Latin America where land tenure is perceived as weak by a substantial proportion of the populations [41], being this region more vulnerable to land grabbing, land-buying processes for conservation purposes. In particular in Ecuador, land tenure systems shifted, between the 60s and 80s, from permissive customary land-uses to restricted [16,31]. Whilst both systems acknowledge private land-property, the permissive system [hacienda] allowed the usufruct of land resources, whereas the restricted system ban the access to customary land-uses. If we take into account that 41% of properties in Zapotillo lack formal titles [27], it would be explained why communities develop a more biospheric posture, since their full-time dedication to working on the land gives them a sense of belonging to it despite not having property titles, as suggested by other authors [33].

The above discussion is reinforced by our results which indicate that negative perceptions towards PAs are explained in the form of land dispossession among those participants who used to usufruct from the PA resources without any formal land title. For these participants, the PA owners do not care about social needs and welfare but conservation. Perceptions of land dispossession have been described in previous research indicating that people living within or around PAs perceive resource-use deprivation and lack of contribution to social-economic development [7,17,20,22,23]. The prohibition imposed to resource-use within PAs, is an anachronistic strategy highly criticised by several researchers (e.g., [9–11,42,43]). Eventually, these types of conservation actions produce the displacement of local communities and the change of customary land-uses [44], which deepen poverty and pressure on natural resources in other geographical areas, generating thus, negative perceptions towards PAs. In addition, insecurity of land tenure makes local communities especially vulnerable to the lack of transparency in large-scale land acqui-

sition contracts that often marginalize local populations [40]. Likewise, the dependence on the protected area for resources, whose land tenure system is based solely on property, leaves people in a condition of vulnerability in that their land and resources remain open to appropriation [9].

There is competition between local people and PA managers, resulting in a disadvantage for local people in relation to land tenure and resource use. We argue, therefore, that land titling will not ensure that perceptions and values towards conservation are positive until customary uses are incorporated into conservation plans. This is consistent with the mix of biospheric and naturalist values found among some participants who agree with conservation activities but critique the impact of PA on people's wellbeing. Whilst finding a common ground conciliating the protection of ecosystems and meeting the needs of people is difficult, [15] suggests that for conservation systems to be strong and enduring must reflect societal values by a broad spectrum. In other words, PAs need to incorporate customary uses in so much as these are sustainable with the forest's health, so the values of local people are incorporated along with those from conservation practitioners, and governments. In fact, previous research found that in Mexico people acknowledge an improvement of their economic conditions when allowing them to stay within the PA [45], which could even reduce the costs of financial compensation or wages while acquiring people's support at the same time. It could also reduce social conflicts generated by the restriction of resource-access and use, as suggested by [18,19,46].

While our analysis draws from a privately PA, the discussion applies to both privately PAs and public PAs in that both are criticised for neglecting people's welfare [9,10,47]. Likewise, peoples' perceptions and values towards PAs are highly dependent on the customary uses allowed within these areas regardless of their public or private status. Even so, we believe it is essential to apply a similar analysis in a public PA to accept or rule out similarities. Only by considering people's perceptions and values, conservation practitioners and local governments will be able to restore local people's confidence and participation in conservation planning, as well as to construct a dialogue governance framework for the establishment of PAs.

5. Conclusions

Our results indicate that there is a difference in perceptions between community members and conservation practitioners. Conservation practitioners have positive perceptions and naturalistic values, while community members develop their perceptions according to other factors. Such perceptions and values are highly associated with the level of collaboration with the managers/owners, and slightly related to the distance to the PA, percentage of untitled land and the dependence of the resources (customary land uses). Positive perceptions and naturalistic values towards PAs and conservation are developed among those collaborating with the PA managers, whereas negative perceptions, and a mix between biospheric and naturalist values, are developed among those who do not collaborate with the managers. Interestingly, all study participants consider nature conservation as relevant, whether from a naturalistic or biospheric value, however, social welfare concerns those more who do not collaborate with the PA managers/owners and live surrounded by more percentage of untitled land. The results provided identify nature conservation as a common denominator, suggesting that for positive perceptions to be developed, strategies that involve traditional land-uses compatible with conservation objectives are necessary, particularly in those places where land tenure is contested in scenarios familiarised only recently with restricted land systems. We recommend work that focuses upon peoples' perceptions and values in order to meet their expectations on conservation. By incorporating these, we will be closer to improve social wellbeing and the quality of ecosystem services. Buying land for conservation purposes is the easier task, ensuring people's wellbeing and life quality is the real challenge.

6. Glossary

Value: “values are mental and ideal, not actual or material, so that objective value is not part of nature as such, and thus forms no part of science. Values appear only in the human response to the world. To ask about values in nature is, then, to form a misleading question, for values are only in people, created by their decisions” [48]. While we used the definition of value provided by Rolston, we do not use the categories created by him for this paper.

Naturalism: we use the definition by [38], who claims that the notion of “nature” is one of the central expressions of modern thought in relation to what we can provisionally call “natural” and which have generated the “society–nature” dichotomy.

Biospheric: unlike naturalism, people holding biospheric values do not separate nature from society, for them nature and society is a whole [49]. Every living being has the right to live and develop. It dissolves any hierarchy among living beings [50].

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