

Can Community-Based Ecotourism with the Amazon River dolphin contribute to its conservation in Brazil?

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Abstract

In Brazil, the Amazon River dolphin or boto (*Inia geoffrensis*) is considered a charismatic creature of the Amazonian culture and freshwater biodiversity, which attracts a lot of tourists searching for unique experiences with wildlife. Under several threats, boto's population is declining and opportunities/alternatives to develop conservation actions are needed, advised, and urgent. This study aimed to investigate from local riverside perspective if the dolphin-watching Community-Based EcoTourism (CBET) is a good conservation alternative for boto. By applying semi-structured interviews and participant observation methods, we studied the perception of 68 riverside people from the Mamirauá Sustainable Development Reserve (MSDR), central Amazon. Some 88.3% of respondents considered the dolphin-watching tourism as an important conservation measure, since it helps in the dissemination of local knowledge about the species,

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restrains 'outsider' fishermen presence, and generates alternative income to communities. The same respondents understand as important the conservation of boto, and 68% said that keeping ecological relations between animal and environment helps in the conservation of its habitats. The economic benefits of dolphin-watching tourism in the MSDR were reported by 32.8% respondents. Community-based wildlife tourism is one of the widely used tools to promote species conservation and their habitats, when following good practices and promoting awareness, economic benefits, and scale up impacts. The results from this study provide information which may support strategies for the touristic management and conservation of botos in the Amazon.

Introduction

The largest river dolphin and the most adapted to its habitat, the Amazon River dolphin (*Inia geoffrensis* Blainville 1817) is one of the three species of the genus *Inia* (Arctiodactyla: Odontoceti) recognized by South American river dolphin experts, although the Committee on Taxonomy of the Society for Marine Mammalogy has not yet accepted two of them (Committee on Taxonomy, 2024). These dolphins occur in South America river basins Amazonas, Orinoco, and Tocantins-Araguaia (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Venezuela) (Best & da Silva, 1993; Hrbek et al., 2014). Strong representative of the Amazonian culture, *Inia* is known as boto or pink dolphin, and attracts tourists from the entire world due to its natural charisma and legends associated with it (Gravena et al., 2008). The tourism with cetaceans is a widespread practice in many places in the world and comes up as an alternative to whaling (International Whaling Commission, 1994). This practice began as whale-watching, *i.e.*, activities focused on observation of whales in natural environment and later extended to dolphins - dolphin-watching (Parsons et al., 2003; Constantine et al., 2004). From this activity emerged the 'Wild Dolphin Provisioning Program', a way of tourism that promotes physical interactions between humans and dolphins such as swimming, touching, and

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feeding the animals. The most famous cases are Tangalooma Resort (Orams, 1995) and Monkey Mia, both in Australia, where dolphins have been conditioned to human presence/contact for more than 50 years (Connor & Smolker, 1985).

Over the last decade a tourism industry based on close interaction with boto settled in the Amazonas State, Brazil. The 'Boto Feeding Tourism' described by Alves et al. (2011) involves activities as feeding, swimming, and touching wild boto in natural environment - in the water. The current way of tourism developed with boto in Brazil does not meet the purpose of dolphin-watching tourism, which promotes conservation at the same time that promotes interaction. This kind of tourism was considered by Alves et al. (2011, 2013) and Romagnoli et al. (2011) as disordered, anti-ecological, and dangerous. Even after its regulation by the Amazonas State government, the feeding-swimming tourism with boto remains controversial. Much has been said about alternatives to the conservation of boto, but the conservation process of species or ecosystem depends on a set of actions, *i.e.*, a balance between social, cultural, economic, and ecological aspects (Pereira & Nelson, 2004). Ecotourism represents a segment that uses the natural and cultural heritage in a balanced way, encouraging conservation and the search for an environmental conscience (EMBRATUR, 2002). In order to

contribute to discussions about conservation strategies based on mutual gains to humans and wildlife, the present study aims to assess, according to traditional communities' perception, if the watching tourism with botos through a community-based tourism can contribute to boto's conservation.

Material and Methods

Study Area

This study was conducted in the Mamirauá Sustainable Development Reserve (MSDR) (Fig. 1) located in the central Amazon, Amazonas State, Brazil, between Solimões and Japurá rivers (03°09' S 64°47' W, 02°32' S 67°22' W). This area is a natural reserve created by the Amazonas State government and it is the first protected area of this kind implemented in Brazil, covering an extension of 1,124,000 ha. It contains a unique ecosystem of flooded plains, which is important for wildlife conservation (Valsecchi, 2005; Instituto de Desenvolvimento Sustentável Mamirauá, 2010). The Mamirauá Reserve plays a key role along with the Amanã Sustainable Development Reserve (ASDR) within the Central Amazon Corridor project, which aims to connect portions of natural or semi-natural ecosystems to

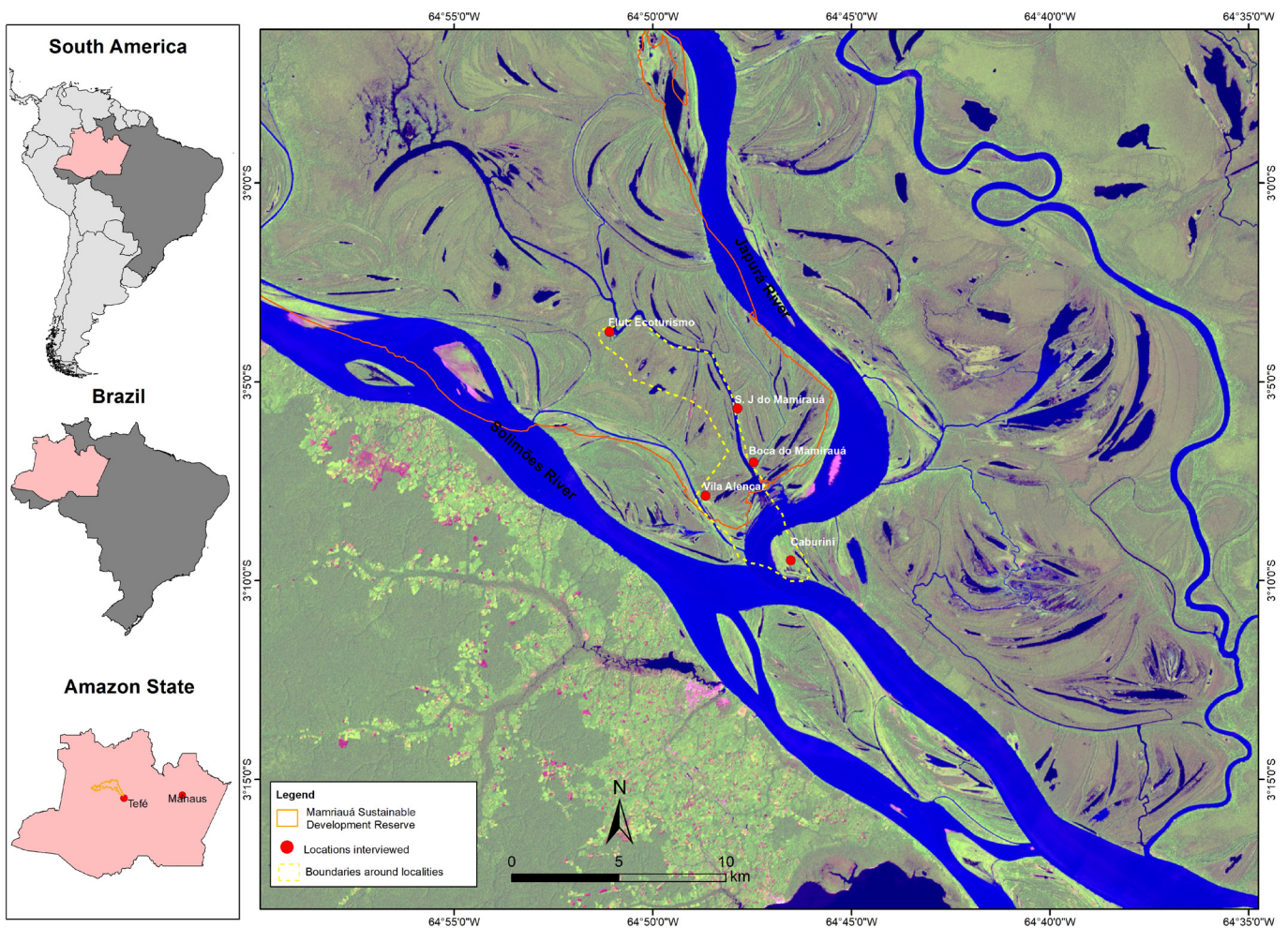


Figure 1. Mamirauá Sustainable Development Reserve (MSDR), Amazonas state, Central Amazon, north Brazil. Flut. Ecoturismo = Uakari Lodge

other protected areas, establishing a large mosaic of protected areas (Sistema Nacional de Unidades de Conservação, 2000). The region is abundant in wildlife (e.g., fish) which constitute an important source for economic activity. The local people are composed mostly by 'caboclos' (descendants of union of slaves and indigenous), 'arigós' (descendants of the Brazilian northeastern immigrants), and direct indigenous descendants, who have fishing and manioc farming as main economic activities (Valsecchi, 2005).

Within MSDR is located the Uakari Lodge, a center of support and development of the Community-Based Eco Tourism program (CBET) developed by Mamirauá Institute and local residents of four communities: Vila Alencar, São José do Mamirauá, Boca do Mamirauá, and Caburini. This kind of ecotourism program has a partnership with the Association of Helpers and Ecotourism Guides of Mamirauá, which is composed by riverine people as staff. The association is supported by the Mamirauá Institute, which promotes training to local guides (Peralta, 2002).

Procedures

This study was conducted in partnership with the Research Group on Amazonian Aquatic Mammals from the Mamirauá Institute. Data were collected from March to May 2011 through ethnographic interviews with local inhabitants of four CBET communities: São José do Mamirauá, Boca do Mamirauá, Caburini, and Vila Alencar. Participation was voluntary and subjects were 18-years old or more, following the method of random sample (Huntington, 2000; Albuquerque et al., 2014). According to the criteria from the Ethics Committee on Research of MISD, participants were asked to sign a Consent Form. The research project and its ethics implications were approved under protocols No. 01/2011 of 04 March 2011 and No. 03/2011 of 26 January 2011.

Two techniques discussed by Ditt et al. (2003) and Vietler (2002) were applied: (1) participant observation technique, which allows the researcher to participate in the community routine and its activities of interest; and (2) interviews. The riverside people were interviewed individually to avoid possible

interference from other informants. Interviews were guided by a semi-structured questionnaire (Vietler, 2002) containing both open questions (which give the respondents the opportunity to be thorough and to make associations among the questions), and closed questions (yes or no answers or pre-established answers) previously elaborated. The questionnaire itself was divided into categories with (1) participant profile (age, gender, community, educational background), (2) questions about their perception of boto (the boto occurrence in the Mamirauá Reserve, people's feelings towards the boto, relationship human-boto), (3) questions about their perception on ecotourism with botos in Mamirauá Reserve. A perceptive approach was employed in this study as a tool to understand the inter-relations established between the four communities' samples and the ecotourism context displayed by the Uakari Lodge. To achieve this, the interviews were prepared to let the participants comfortable using the usual vocabulary employed by the locals. To keep the information reliable and transmit the local perception, the answers of each question were transcribed as accurately as possible.

Analysis

Data from open questions were analyzed by the 'Collective Subject Discourse' (Lefevre et al., 2009) and expressed during the text or in explanatory tables. Quantitative analyses are expressed in frequencies of the answers. Although every participant was asked all the questions, some questions were not answered. Thus, the number of locals who answered each question varied, resulting in different sample sizes for each question.

Results

Participant profile

Of the 68 interviews, 26 (38.3%) were from Boca do Mamirauá community, 17 (25%) were from Vila Alencar, 16 (23.5%) from São José do Mamirauá, and 9 (13.2%) from Caburini. Of all respondents, 39 (57.4%) were men and 29 (42.6%) were women. The predominant age group was 21 to 30 years, with a range

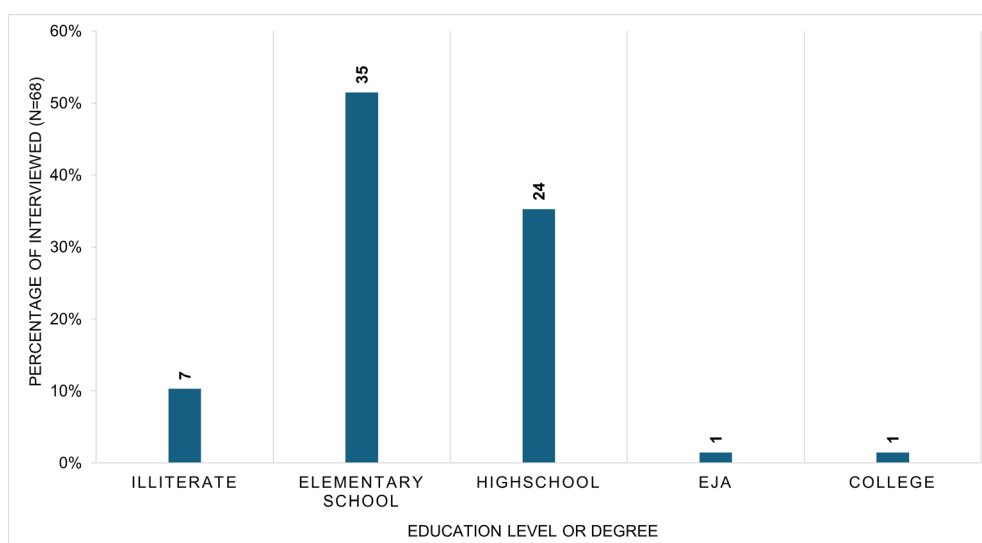


Figure 2. Percentage of general education level of respondents. (EJA) Education for Youth and Adults, from its name in Portuguese.

between 18 to 75 years. The main occupation of the participants, in the research time, was fishing and manioc cultivation. Moreover, they all mentioned they engaged on the ecotourism activities as alternative income. Half of the respondents ($n = 34$, 50%) was attending elementary school and the illiteracy rate was low ($n = 7$, 10.3%) (Fig. 2).

Locals' perception about boto

Almost all locals interviewed knew the boto ($n = 62$, 91.2%) and reported its occurrence near the communities and in the Reserve in general. Six (8.8%) interviewees employed another nomenclature given to boto: boto cor-de-rosa (pink dolphin in English). Fear and indifference were the main feelings expressed by the locals regarding the boto ($n = 25$, 37% for each one), followed by affection ($n = 18$, 26%). The most expressed feeling by women was fear. Men, however, stated indifference as their main feeling towards boto. Fifty-five participants out of 68 answered the question about the interaction between boto-locals during fishing. One (1.82%) said the boto helps in fishing activities, nine (16.36%) said it helps and disturbs, and 45 (81.82%) asserted that botos help because 'they show where the fish is'. Most respondents ($n = 51$ of 68, 75%) believed that the boto is a direct competitor for resource – fish, although a clear conflict (aggressive reaction) was not registered.

Locals' perception about the tourism with botos in the Mamirauá Reserve

Almost all locals interviewed ($n = 63$, 92.6%) asserted to know the tourism activities in the region. From the total interviewed, 66 answered the question about their involvement in the tourism activities, 65 (98.48%) reported participation of local communities in tourism activities, and one (1.52%) reported the lack of it. The roles performed by the locals interviewed in the Uakari Lodge were naturalist guide, boat pilot, cook, housekeeper, chambermaid, trail guide, janitor. However, they were asked about the specific touristic activity involving boto. Almost all answered these questions ($n = 67$): 47 (70.15%) reported boto coming close to people, seven (10.45%) reported that boto do not come close to people, and 13

(19.4%) did not know how to answer the question. Regarding the interaction between tourists and botos, 45 (67.2%) reported there is no physical interaction, 16 (23.9%) did not know how to answer the question, and six (8.9%) asserted there is interaction, but they did not know how it works. Participants were asked about their interest and work satisfaction in the CBET in the Uakari Lodge. Among the respondents ($n = 61$), 45 (73.77%) were satisfied and liked to work in the lodge, 16 (26.23%) were not satisfied. The negative answers were analyzed within each community, trying to identify facts which could explain that. We observed that, from the 16 negative answers, two (12.5%) were given by residents from Vila Alencar community, three (18.75%) from Caburini, five (31.25%) from Boca do Mamirauá, and six (37.5%) from São José do Mamirauá. The reasons mentioned by the participants were 'incompatibility of the payment and the service', and only in São José do Mamirauá community the respondents mentioned that 'tourists sell pictures of botos and make much more money than us working here'. Because each worker plays a relevant role to the whole community, it is important that they are aware of the different processes taking place there. The participants were asked their opinion about the specific touristic activity with botos. All 68 answered this question and the majority ($n = 56$, 82.4%) considered tourism with botos a 'good thing'. Among the positive answers it was possible to determine three categories as shown below (Fig. 3).

Most of positive answers ($n = 41$, 72%) refer to the tourism with boto like 'Good in general': because the boto is beautiful. In addition, the observation tourism is enjoyable, it generates knowledge about boto, brings income for the community, and tourists come from far away to see them. In the category 'Good only for tourists', the locals do not see any benefits for themselves or the boto, and the last category 'Good only for bringing income', the participants only see the benefit of this activity as an alternative income.

Regarding the contribution of touristic activities for the conservation of boto, 60 of 68 participants answered the question. Fifty-three (88.3%) of the respondents asserted that tourism helps the local conservation of boto, six (10%) said it makes no

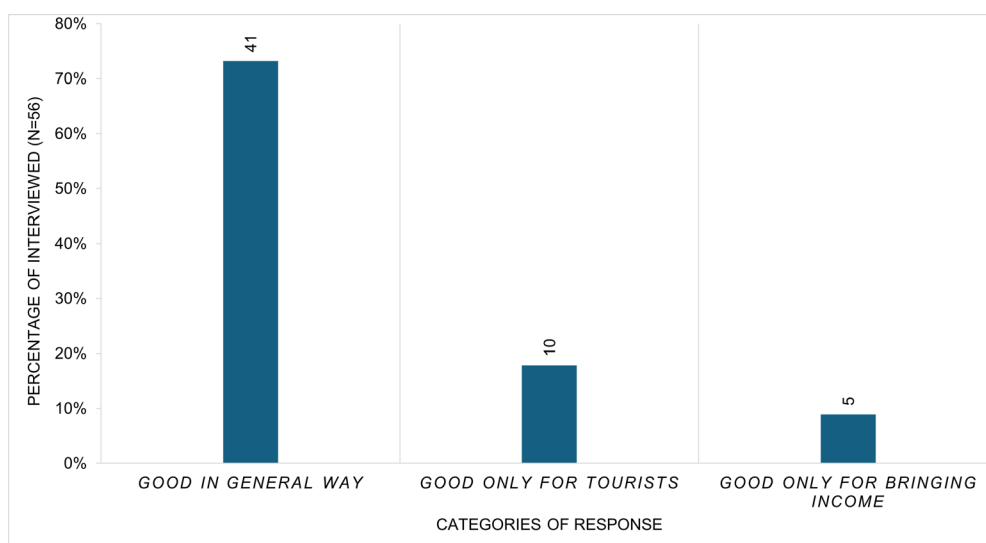


Figure 2. Percentage positive categories responses of the interviewees about their opinion on tourism with the boto.

difference, and one (1.7%) considers the tourism as negative, hindering conservation. The different positive answers about the contribution of tourism to boto conservation were clustered into two categories: helps directly (n = 24, 45.28%) and helps indirectly (n = 29, 54.72%).

Those answers regarding to the direct form of positive contribution to tourism were focused mainly on the protection of boto against fishermen who hunt them to use them as bait. The indirect contribution answers were focused on the benefits (income) generated by the tourism activities for communities. The most relevant and numerous answers of the locals can be seen in the framework below (Table 1). When asked about the importance of boto conservation, of all participants (n = 68), 58 (85.3%) asserted to be important and 10 (14.7%) considered not to be important. Among those who considered it to be important (n = 58), 39 (67.2%) justified this importance considering the ecological relationship between animal and environment, because it does not represent risk for humans as snakes or caimans, and again, the fact that it is important to protect the boto against fishermen. The rest of the respondents (n = 19, 32.8%) who considered important to conserve botos, said it represents an additional income source for communities. These answers can be seen in the framework below (Table 2). The respondents who did not consider the conservation of boto to be important (n = 10) claimed it was not necessary, since these animals were not endangered, had no commercial value, and were not used as food.

Discussion and Conclusions

Participant profile

The slightly higher number of men in the interviews reflects the reality of the Amazonian communities, where men are, in most cases, local leaders and more likely to hold knowledge about the community. Men are responsible for house maintenance such as food provisioning (fishing, hunting), and women for the children's care (Fraxe et al., 2007). However, in the Mamirauá communities, women are proactive, even in the presence of a man, and they showed interest in participating in the study. Both men and women work in the Uakari Lodge, sometimes playing similar roles and, according to Peralta & Alencar (2008), the ecotourism in Mamirauá has played an important role on women and gender relation. Therefore, there has been a change in the traditional organization observed in the literature for Amazonian communities (Pinedo-Vasquez et al., 2011), and Mamirauá communities should be viewed as unique, and their behaviors and attitudes must be interpreted carefully. The age group interviewed reflects the higher production stage, where people work harder and make improvements in their educational levels. Unlike most Amazonian communities, Mamirauá shows a high percentage of interviewed people at school and a low illiteracy rate. The Mamirauá communities' profile shows that the work at CBET and the presence of both tourists and research groups affected the locals, changing their way of life.

Participants' perception about boto

Boto is the term used by Amazonian riparian inhabitants to refer to the Amazon River dolphin *Inia geoffrensis*; the other term used by the respondents in the study, 'boto-cor-de-rosa', is commonly

used by tourists, either Brazilians from other regions or foreign (Gravena et al., 2008). The use of this expression by locals can be attributed to the exposure of communities to other cultures, and became ingrained in the popular language after Jacques Cousteau's visit to the Amazon. Incorporating new concepts is common in traditional communities, especially in protected areas exposed to visitors (Leuzinger, 2007) and it has direct impact under the historical construction of the local identity. According to Giddens (1991), the traditional and modern way of life are, somehow, connected. However, because societies are dynamic and susceptible to external interventions, they modify themselves as a result of these interventions. In fact, we can see this in Mamirauá communities, but not in the negative way. It is actually a way to promote interchange and the integration between local population and visitors. The interface of local people and tourists is, according to Peralta (2002), important to build a collaborative and sustainable relationship for both environment and socio-economic aspects.

The boto is an iconic animal in the local culture, transmitting an incognito magic surrounded by myths and legends, in which supernatural powers are attributed to these animals of having the ability to take a human form (Gravena et al., 2008). Most people who fear boto have this feeling due to the legends and myths entrenched in the riparian peoples' life (da Silva & Best, 1986; da Silva, 1990). As expected, this study registered high percentage of women who were afraid of boto. That is because in the legends the boto takes a human form and takes a beautiful woman to his underwater world. Thus, even having undergone changes, our samples from Mamirauá communities showed that this tradition was kept. Most men answered that the relation between fishermen and boto may be characterized as indifferent, but it is in fact, considering the whole context, a tolerance relationship. The boto-fishermen relationship is troubled. Many ethnobiology studies in the Amazon reveal conflicts between fishermen and boto (Vidal, 1993; Williams, 2009; Alves et al., 2012; Rodrigues & da Silva, 2012; Mintzer et al., 2013; Moraes & Santos, 2014). The boto is seen by the fishermen as a competitor for the same resource - fish. *I. geoffrensis* is an expert fisher and a generalist consumer, feeding on more than 40 species of fish (da Silva,

Table 1. Descriptive answers given by the interviewees about positive contribution of tourism to conservation of boto

Question	Answer Helps Directly	Answer Helps Indirectly
Tourism helps or hinders boto's conservation? Why?	"Because we learn about the animal and shows people the preservation"	"Because they bring people to look."
	"Because it conserves the boto because there are many people out there who kill them to feed the fish (piracatinga-catfish)."	"Because if there are botos the tourists come if there are no botos there is no tourist."
	"Because it is a way of promoting and protecting them from death"	"Because if it was not for the botos the guides would not have work."
	"Because the knowledge is not lost and the boto is known"	"Because when tourism comes we can have tourists admire botos."
	"Because if was not for it [tourism] they kill a lot of boto."	

Table 2. Most relevant descriptive answers given by participants about the importance of boto conservation

Question	Answer
It is important to conserve the boto? Why?	"Because it is as important as the manatee."
	"Because if there were no boto there would be no fish, because it shows where it has fish."
	"Because they help a lot bringing the fish from river to the margin."
	"Because it is an animal that does not harm anybody."
	"Because they may disappear because of fishermen."
	"Because they may disappear because of the killing due to piracatinga."
	"Because they are some little animals that do not hurt anyone and people have no conscience, kill to make bait."
	"Because out there they kill botos and have to preserve. They do it for piracatinga."
	"Because it is an animal of our fauna, from the water."
	"Because the boto helps in the control of fish."
	"Because it is beautiful and eats the sick fish."
	"Because it is part of the food chain."
	"Because everything has to be taken care of, otherwise the species will end and boto get away."
"Because if we do not preserve, they will die and disappear."	

2009). Loch et al. (2009) divided human-cetacean conflicts into two groups: (1) ecological conflict: depredation stocks of commercially important fish; (2) operational: physical encounters between animals and fishing gear, which may cause animals injury or death. In this study, we observed factors of both kinds of conflicts in the participants' answers. However, all those interviewed asserted not to react aggressively towards boto. This may be understood over three viewpoints: hidden conflict, when the participant did not feel comfortable to mention it (common in this type of research); natural conscience of preservation, the result of intrinsic perception of the individual; habituation of locals with the conservation model preached by scientific research carried out in the region. Because of the latter, people tend to answer questionnaires in the way they think researchers expect to hear. According to Walpole and Thouless (2005), we can link this with some kind of mantra – 'conservation with a human face' - in that the wildlife should be conserved for the benefit of local communities who bear the costs of coexistence.

Although a direct conflict relationship human-boto has not been registered in our sample, in other Mamirauá communities outside the area covered by ecotourism there is the use of boto for bait in *piracatinga* catfish (*Calophysus macropterus*) fishery. Iriarte & Marmontel (2013a, b) reported incidental mortality events and intentional killing of *I. geoffrensis* and *S. fluviatilis* (tucuxi dolphin) entangled in artisanal fishing gear and the opportunistic use of carcasses as bait, a practice that has become more prevalent as it requires only a few hours of work per night and provides immediate cash earnings. The impact of this practice in addition to the accidental deaths and the lack of information about population data makes it difficult to know how much the real damage caused for the populations is. Nevertheless, the conservation impacts of this activity are of serious concern. Different attitudes observed for locals interviewed and other Mamirauá residents regarding boto's conservation can be attributed to the large extension of the reserve. Kiss (2004) suggests that the size of the areas managed by CBET is a limiting factor for wildlife conservation and local economic development, because there are few people engaged in these activities. The sector where the communities sampled are located receives more support than other communities of the Mamirauá Reserve. Therefore, that promotes a rising sensitization, knowledge propagation, and transmission of conservationist practices in this region. It must be pointed out that it is not

right to look at these communities as a 'Hypothetical Model of Population', term coined by Blackstock (2005). It is believed that different individuals do not behave as a homogeneous and functional group. Believing that communities will be equally involved in initiatives and conservation actions is at least naïve, because locals have different backgrounds. Different values and views of the residents should be considered, what it is often not taken into account, one of the major failures of a CBET in a development perspective (Harper, 1997).

Participant knowledge and perception about the ecotourism in Mamirauá

Even not working directly with tourism activities with boto, most of the participants interviewed knew details about this activity. That is important, as it demonstrates that the ecotourism program is being effective to promote knowledge and inclusion of the residents in a diverse array of activities. This result confirms that the goals set by Peralta (2002) at the Implementation Plan for the Community-Based Tourism in Mamirauá Reserve are being achieved, and represents a good application of CBET. The proper implementation of CBET in Mamirauá Reserve can also be confirmed by the low level of dissatisfaction of the local participants about the work they performed in the Uakari Lodge.

Among the unsatisfied people, those of São José do Mamirauá community composed the most of this percentage. In this community the locals interviewed believed the tourists were exploring a source (the boto) when they take pictures of the animals, which until then is only for 'use' of the local communities. Here, the interviewed participants assume the animal as their benefit and assign to them an instrumental value, also attributed in their perception about the tourism with boto. Nevertheless, most of participants see the tourism with boto as something good, even those ones unsatisfied in the previous question. Moreover, among the answers three categories were identified which consider different perceptions:

Category 1 – 'Good in general': it is a recreational activity, that promotes disclosure of the place, appreciation and knowledge about the boto through lectures, and the contact with the animals during the activity, for both tourists and locals direct or indirectly involved.

Category 2 – ‘Good only for tourists’: boto is a very common and abundant animal in this region, therefore it is not interesting or attractive. Only tourists like to see them because there are no boto where they come from, thus it is something new and different for ‘them’ - tourists.

Category 3 – ‘Good to bring income for the community’: here the interviewed glimpse the financial return that the activity provides, since each worker receives for their services and the profits transferred by Uakari Lodge. Evaluating the categories presented from the human-environment relationship, the participants assigned to the animal an instrumental value, given in human biology as the utilitarian value of living for human interests (Oksanen, 1997; Gary, 2004).

Accordingly, the locals consider the tourism with boto in Mamirauá something good because an economic value is attributed to the animal, and it leads to the conservation importance to keep their financial source preserved. According to Rosas (2004) and Kellert (1997) the biodiversity is valued by human in two ways: (1) direct economic value, *i.e.*, consumptive value or for production (fishery, hunting, breeding); (2) indirect value, *i.e.*, the ‘being’ as a service provider related to the recreation and enjoyment of nature, the educational and scientific values, and the social value of the dependent employment. The three categories of answers given by the participants fit within the second value mentioned above, where the categories one and two are related to the recreational and educational aspect, whereas the category three to the financial source through the dependent employment on Uakari Lodge.

The financial source seems to be the most important aspect of the tourism with boto for the locals, appearing again in the participant perceptions about the contribution of the tourism for conservation and the importance to conserve the boto. Justus et al. (2009) consider that the adequate basis for wildlife conservation is to take the instrumental value as the best strategy, involving people in the whole process and making them responsible for this process, and create a link with nature and wildlife. This is in accordance with the basis of the community tourism giving an adequate condition for the development and empowerment of the communities, building a sustainable tourism able to conserve effectively (Russell, 2000; Bartholo et al., 2009).

Watching tourism with botos as a conservation strategy

The tourism with boto is not the main income source for the locals interviewed, but it has become an important alternative and complementary activity to artisanal fishing and agriculture. This is based on the Whale-Dolphin Watching, activity for close observation of cetaceans without disturbing the natural behavior or interacting physically with the animals (International Whaling Commission, 1994). The watching tourism may represent a conservation way for biodiversity using the value of the animal while alive (Parsons et al., 2003) and as a tool to teach environmental values (LaHart & Tillis, 1974). According to Hoyt (2009) whales and dolphins is one of the most profitable groups of the tourism industry with wildlife, responsible for more than billions per year, and is still able to expand benefits for local economy and animal welfare, when well-planned and managed.

The success of watching tourism can be noticed by the long time that this practice has been developed. Birdwatching is the best example of this activity, being one of the first segments in the wildlife observation sector, becoming a model of conservation and environmental education around the world (Law & Lynch, 1988; McFarlane & Boxall, 1996). A model that before the emergence of discussions about sustainable practices for tourism already posed in practice attitudes as contemplation of nature without continuous intervention in the behavior or the relation of the ‘beings’ observed with their environment (Moss, 2013).

The influence of CBET and boto-watching tourism in Mamirauá can be noticed in the perception of the participants about the threat represented by *piracatinga* fisheries. This threat was mentioned by the participants in two different moments and cited emphatically, revealing the concern of these people about the activity and impact on botos’ population. This concern is shared by researchers who have been trying to understand how it really affects the survival of botos’ populations (da Silva & Martin, 2007; Iriarte & Marmontel 2013a, b; Mintzer et al., 2013). Here we see the contribution from traditional ecological knowledge acquired as an important tool to develop strategies for the management and conservation of boto, since it is possible to trace more focused action plans.

The protection and conservation of nature and wildlife are one of the most global challenges currently, particularly in the tropics, where great part of biodiversity is concentrated. The dominant model of preservation tends to remove human populations to create protected areas; nonetheless, humans are part of the environment and key figures in this process (Peres & Zimmerman, 2001; Diegues, 2010). The touristic activity developed in Mamirauá Reserve has influenced the locals interviewed, shaping their attitudes. They are shaped by the formative influence of experience, learning, and culture transmitted by the Uakari Lodge, giving them a new perception of nature and living diversity, a motivation for conserving. Therefore, we see in practice that it is possible to ally human populations and conservation. Mamirauá Reserve plays a fundamental role on the conservation scenery of wildlife in Brazil. The ecotourism developed in this region has low impact on local fauna and flora (Storni et al., 2007), contributing with scientific research in the area and generating income for local communities (Koziell & Inoue, 2006). Recently, Scientific Tourism, another form of tourism established within the criteria of ecotourism, was implemented as an activity that increases the contribution to environmental preservation (Nassar et al., 2013). Both tourists and residents engaged in the activity are exposed to learning about the process of scientific research.

The watching tourism with boto through a CBET can be seen as an alternative for conservation of boto if properly harnessed, and represents an income source for the locals. Additionally, implementing effective techniques for managing boat tourism can facilitate the deployment of a monitoring program. This program would provide access to crucial short-term and intensive time-series data related to dolphin locations and boat tourism activity, which is currently unavailable. Such a tool would enable monitoring of both tourism activities and the dolphin population at specific sites.

The alliance between local communities and CBET programs might have important implications for actions of conservation not only for dolphins (boto and tucuxi), but also for many other species, directly or indirectly involved in touristic activities. However, we also highlight the need for more studies of both conservation and socio-economic impacts in the Brazilian Amazon, as well as in the Tocantins-Araguaia basin where lives the putative species *Inia araguaiaensis*, target of a recent disorderly food provisioning tourism and bad practices related to direct contact with animals following the controversial historical practices of this kind of tourism in the lower Rio Negro. A recent study has highlighted the potential shift from food supply to contemplative (observational) tourism in Anavilhanas National Park (Vidal et al., 2023). Moreover, the challenges and opportunities associated with mammal-based tourism in the Brazilian Amazon underscore the necessity for developing a well-structured model of wildlife tourism that benefits both nature and people (Vidal et al., 2024). Taking a step toward establishing responsible practices at a basin scale is crucial. Such a recommendation is not limited solely to the Brazilian Amazon territory but also extends to other countries within the distribution area of river dolphin species where similar practices of food provisioning have emerged. Well-managed and structured practices hold conservation value on a large scale and contribute to deliver important results under the National Action Plans for species protection.

Further studies on sustainable alternatives and responsible ecotourism practices are encouraged to contribute to develop a more equitable way of tourism focusing on community involvement and river dolphins. At last, we recommend applying this model (CBET) of tourism in the Amazon in general, once it provides social and environmental integration and spreads a conscious model of natural resource uses, setting an important management strategy of natural resources and biodiversity conservation.

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