



CONSERVATION EFFORTS AND AWARENESS CAMPAIGNS FOR THE MARINE MANATEE (*Trichechus manatus*) PRESERVATION ALONG THE NORTHEASTERN COAST OF BRAZIL

ABSTRACT

Due to high hunting pressure practiced against marine manatees since the period of colonization of Brazil, it was found the reduction of the remaining populations. Despite the ban on laws prohibiting hunting of manatees, only in the early 80's that a strategy to promote conservation of the species began to be structured. Thus, this paper reports the development of the first two stages of the Plan of Work Center Peixe-Boi/IBAMA, with emphasis on the Awareness Campaign. The campaign was to reach the coastal area of Sergipe to Piauí, and the route taken by a mobile unit called "Igarakuê", which is a Toyota 4x4 Bandeirantes. Interviews were conducted with fishermen, given lectures to students and residents of local communities, linking audio messages on radio and in printed articles and broadcast. During these occasions were distributed posters, books, shirts and brochures. At the end of the activities, approximately 2,000 km of coastline were covered, with 199 locations visited, 522 people interviewed and 40 speeches conducted. With it, it was possible to establish an exchange of information among researchers involved and the fishermen, where it was found knowledge of the local population about the existing legislation prohibiting hunting of the species. The material played an important role in education still serving as a tool for illustration. A network consisting of 63 employees, who came to help us stranding events involving marine manatees. It was concluded that the mobile unit "Igarakuê" played an important role in spreading the message of preservation of the manatee, triggering an educational process, that with its success and continuity, can lead to behavioral change in coastal communities and the cooperation needed to reverse the sirenian process of extinction.

KEYWORDS: Aquatic Mammals; Sirenian; Environmental Education; Community; Igarakuê.

ESFORÇOS CONSERVACIONISTAS E CAMPANHAS DE CONSCIENTIZAÇÃO PARA A PRESERVAÇÃO DO PEIXE-BOI MARINHO (*Trichechus manatus*) AO LONGO DO LITORAL NORDESTE DO BRASIL

RESUMO

Em decorrência a alta pressão de caça praticada aos peixes-bois marinhos desde o período da colonização do Brasil, constatou-se a redução das populações remanescentes. Apesar da proibição de leis proibindo a caça do peixe-boi, somente no início da década 80 é que uma estratégia conservacionista em prol da referida espécie começou a ser estruturada. Desta forma, o presente trabalho relata o desenvolvimento das duas primeiras etapas do Plano Geral de Trabalho do Centro Peixe-Boi/IBAMA, com ênfase na Campanha de Conscientização. A campanha teve como abrangência a área litorânea dos estados de Sergipe até o Piauí, sendo o percurso realizado por meio de uma unidade móvel denominada "Igarakuê", sendo esta uma Toyota Bandeirantes 4x4. Foram realizadas entrevistas com pescadores, ministradas palestras para estudantes e moradores das comunidades locais, vinculação de mensagens de áudio nas rádios e reportagens na imprensa escrita e televisionada. Durante estas ocasiões foram distribuídos cartazes, cadernos, camisetas e folders. Ao término das atividades foram percorridos aproximadamente 2.000 km de litoral, sendo visitadas 199 localidades, entrevistadas 522 pessoas e realizadas 40 palestras. Com isto foi possível estabelecer uma troca de informação entre os pesquisadores envolvidos e os pescadores artesanais, onde constatou-se o conhecimento da população local acerca da legislação existente proibindo a caça da espécie. O material utilizado cumpriu importante função educativa servindo ainda como instrumento ilustrativo. Foi constituída uma rede composta por 63 colaboradores, os quais passaram a ajudar nos eventos de enalches envolvendo os peixes-bois marinhos. Concluiu-se que a unidade móvel "Igarakuê" cumpriu importante papel na disseminação da mensagem preservacionista do peixe-boi marinho, desencadeando um processo educativo que, com seu sucesso e continuidade, pode acarretar uma mudança comportamental das comunidades costeiras e a colaboração necessária para reverter o processo de extinção deste sirênio.

PALAVRAS-CHAVE: Mamíferos aquáticos; Sirênios; Educação ambiental; Comunidade; Igarakuê.

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INTRODUCTION

In Brazil, dating back in European colonization, the marine manatee (*Trichecus manatus*) was hunted and its meat appreciated by the *Tupis-Guaranis*, being known as *guarabá* or *igarakuê*, which means “flipped canoe” – allusion to the similarity found in its back when it floats.

Indiscriminate hunting practiced by settlers, especially the Dutch installed in the northeast region in the 17th century, contributed to its populations’ reduction, formerly important feeding resource and means of therapeutic functions (Whitehead, 1978). Since then, the marine manatee has been slaughtered by small fishermen, without any kind of control or limit.

Despite the creation of the Law nº5.197/1967, through the *Código de Proteção à Fauna*, which prohibits the manatee hunting and the trade of the derived products, it was only in 1980 that the *Instituto Brasileiro de Desenvolvimento Florestal* – *IBDF* started works with the sense of knowing better and to preserve the marine manatee. Albuquerque and Marcovaldi (1982) conducted one survey about the species’ distribution in the north and northeast Brazilian coasts, with most promising estimates for the north coast (Maranhão, Pará and Amapá States).

The present work refers to the first two stages of the *General Plan of Work of the Manatee Center/IBAMA*, emphasizing the Awareness Campaign. The job execution was through a Mobile Unit, named “Igarakuê”, which toured the coast of seven Brazilian states.

RESULTS

Campaign elaboration

The technicians liable for the awareness campaign had the major concern of stimulating the coastal communities to take part of the marine manatee preservation. The main objectives were to bring the coastal communities from the northeast of Brazil to the awareness campaign for the marine manatee preservation, to promote the broadcast of the work which is being developed by the Manatee Center/IBAMA; to clear and to divulge the relating and existing laws, to form a collaborators’ network of the Manatee Center along the northeast of Brazil.

The campaign, because of its mobile character, should arouse the curiosity and receptivity of some persons. Moreover, after direct contact with the fishermen, educational materials with picture of the manatee and with texts by easy take-up should be posted in public places so that the preservation message would be passed on for more time. Important was also to indicate to people how to help and tell to IBAMA when happened any animal occurrence.

Thus, three types of posters were devised, where one had printed on a picture of a female manatee with its puppy in natural environment; other showed designs with clear images of the species and that informed about protection and existing laws and one small poster with the

telephone number and logo of the Manatee Center and the message "AVISE". 1.000 posters of each were produced.

Fifteen thousand notebooks with their cover showing some information and picture of the marine manatee were produced in partnership with the *Fundação de Apoio ao Estudante (FAE/MEC)*, addressed to the fishermen's children. T-shirts carrying the sentence "I don't kill manatee" and signposts with the words "Area for the marine manatee protection – endangered species", informing the law and telephone number for contacts, were produced for collaborators.

A folder containing pictures with bio-ecological information about the species and presenting the work proposal was devised for schools, Prefectures, IBAMA Regional Superintendence, Authority of Ports and Universities. In that way, a broad coverage educational material was produced. On Fishermen's Day, June 20th, 1990, with the attendance of several authorities and the community from the estuary of the Mamanguape River (PB), the Campaign for the Marine Manatee Preservation was officially launched by the mobile unit *Igarakuê*.

The campaign development

The work was started up in the Paraíba State, due to the logistical support facilities there provided at the Manatee Center Basin. It was used a vehicle suitable for the local conditions of the route to be followed - a 4x4 mobile Toyota Bandeirantes, roof and luggage rack. From the Paraíba State, the vehicle went to the Bahia and Sergipe States borders, the southern point of distribution occurrence of the *Trichechus manatus*, according to Albuquerque and Marcovaldi (1982).

Beginning on July, 1990, the mobile unit went around the coastal side of the Alagoas, Pernambuco, Rio Grande do Norte, Ceará and Piauí States. The work was consisted by interviews and dialogues with fishermen in the beaches, fishing colonies, warehouses and fishing ports, market or even in their own houses. Explaining the visit aim, in the places where the species' occurrence was attested, a fisherman or a data collector from IBAMA was orientated to collaborate with the fixed posters renewing and communicating to IBAMA in case of manatees' groundings or deaths.

The posters were fixed in public places, like fishing colonies, warehouses and fishing ports, pubs, markets, telephone posts, schools and prefectures. In the places where the information showed a major frequency of manatee's occurrence, signposts were fixed in the beach, indicating the marine manatee protection area. The signposts were under collaborators' cares too.

The criteria to choose the locations where the speeches would be presented were the same used for the signposts. The speeches were presented in the schools, fishing colonies, pubs, pavilions and, sometimes, in front of the Churches (Bar of Catuamas, PE, Pirangi do Norte, RN).

The pedagogic resources used were VHS movies¹ and slides projections to aware children and adults. Local announcers served, transmitting live audio messages to the local population, through microphones in studio and acoustic boxes scattered at strategic points of the villages. Print

and televised reports informed about the arriving and the work of *Igarakuê*, in all the states, multiplying the working scope. The most difficulty faced during the campaign development stage was the roads bad conditions, becoming worst in the rain period. Many locations are not represented in the traditional maps, being needed to trace the paths in the cartographic sheet.

The campaign results

About 2.000 km of the coast were covered¹. 199 locations were visited and 552 persons interviewed. In average, for each interview applied, there were 4 to 5 persons gathered, so more than 2.000 persons were directly reached by the project technicians. 40 speeches were presented, being 5 at Universities (UFSE, UFPE, UFPB, UFRN, UFCE).

As a working method, the direct contact ("body to body") with the fishermen gathered in some function connected with the fishing allowed besides the manatee preservation information exchanging, the live experience with the fishing technics, habits and problems, as also the survey of the traditional significance of the marine manatee for the fishermen. The results will be published later.

Considering the interviewed answers about if they had a previous knowledge about the manatee, when asked if they knew the existing law about its hunting, it was detected that most of the coastal communities had this information. However, about 30% did not know the law.

The analysis about the form the interviewed had known the law indicates that 33% had had previous contact with some kind of educative material produced by the Marine Manatee Project. The means of communication, especially television and information from the Authority of Ports, Fishing Colonies and informal conversations between the fishermen, represent one direct way of the preservation message leaking.

Many respondents did not remember how they had known the law for the manatee protection. An educational material fulfilled important illustrative function. Normally, the fishermen view only the muzzle and, rarely, the back and the tail of the animals, due to their discretion typical of their behavior. Exception is made to the manatees' hunters or persons who live in the groundings sites, where the animals remain exposing themselves out of the water and are faithfully described. The draughts used in the posters allowed the illiterate fishermen (the great majority) to comprehend the information.

One important result was the creation of an information net formed by 63 collaborators connected to the Manatee Center/IBAMA. Four puppies grounded in the northeast coastal beaches in this summer 1990/1991, were rescued, and two others, returned to the sea. In all the cases, collaborator fishermen communicated to the Regional Superintendences of IBAMA and to the

¹ It was necessary to travel approximately 20.000 km to cover the 200 km of the coast.

Manatee Center. Considering that before the campaign development the grounded puppies were slaughtered and eaten, it means an important behavior changing.

It can be concluded that the mobile unit *Igarakuê* fulfilled its role in the dissemination of the marine manatee preservation message, unleashing an educational process that, having success and continuity, can cause a behavior changing in the coastal communities and the needed collaboration to revert the sirenian process of extinction.

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