

## The Rufford Small Grants Foundation

### Final Report

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Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to [jane@rufford.org](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole**

**Grants Director**

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#### Grant Recipient Details

<b>Your name</b>	Verónica Iriarte
<b>Project title</b>	Interactions of boto and tucuxi dolphins with fisheries at Mamirauá and Amanã Reserves, Brazil
<b>RSG reference</b>	11651-1
<b>Reporting period</b>	June 2012-September 2012
<b>Amount of grant</b>	£ 6000
<b>Your email address</b>	verorcinus@gmail.com
<b>Date of this report</b>	October 9 <sup>th</sup> , 2013

**1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.**

Objective	Not achieved	Partially achieved	Fully achieved	Comments
<p>Characterize the piracatinga (<i>Calophysus macropterus</i>) fishery in four Sectors of Mamirauá Sustainable Development Reserve (Jarauá, Liberdade, Aranapu, Boa União) and one Sector of Amanã Sustainable Development Reserve (Coraci).</p>		X		<p>The fishery was characterized only in two sectors of MSDR: Aranapu and Boa União. Research at Jarauá is slowly evolving due fishermen unwillingness to collaborate with the project; surveys at Liberdade were stopped due total refusal of communities to researcher's presence, and surveys at Coraci were not done.</p>
<p>Comparatively quantify type of bait (caiman/dolphin), number of animals used, origin (incidental capture/intentional kills), productivity, and threats to the cetaceans' populations.</p>		X		<p>Type of bait, number of animals used, origin and productivity were preliminary quantified based on direct observations. Genetic analyses are currently under process and will bring exact information about that. With respect to threats to cetacean populations, information on incidental captures and intentional kills was generated for both Amazonian dolphin species.</p>
<p>Contribute with information to allow a better understanding of the fishery, its impact on dolphin populations, and contribute to MSDR's management plan.</p>		X		<p>Information on the social and economic characteristics of the fishery were obtained. Despite cetacean abundance numbers are unknown, taking into account dolphin social structure and odontocete vulnerability to anthropogenic removals, impacts on dolphin populations where these activities (intentional kills and the piracatinga fishery) occur are presumably important.</p>

Genetic analysis of 365 samples (pieces of bait, piracatinga vomits and stomach contents)		<b>X</b>	Results of 80 sequenced samples: -58 <i>Inia geoffrensis</i> -3 <i>Sotalia fluviatilis</i> -17 <i>Melanosuchus niger</i> -2 <i>Caiman crocodilus</i>
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**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

Difficulties are linked to working with poor communities in which economic options and education are scarce. Fear of law enforcement and disgust towards dolphins make fishermen unwilling to collaborate with the project. In consequence, project progress takes time and patience.

With respect to the genetic samples, their analysis at Dr. Fabrício Santos Lab (Minas Gerais Federal University) has been delayed due to low quality of the samples (they were not fresh when collected, please see documents attached).

**3. Briefly describe the three most important outcomes of your project.**

Published paper in Aquatic Mammals: River dolphin (*Inia geoffrensis*, *Sotalia fluviatilis*) mortality events attributed to artisanal fisheries in the Western Brazilian Amazon (pdf already sent to RSG);

Submitted paper to the Journal of Cetacean Research and Management: Preliminary insight about the use of dolphins (*Inia geoffrensis*, *Sotalia fluviatilis*) for bait in the piracatinga (*Calophrysus macropterus*) fishery in the Western Brazilian Amazon (proof of submission attached);

Discussion table at SOLAMAC meeting (December 2012): Use of dolphins as bait in the Central Amazon (proof in Spanish attached).

**4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).**

Although involvement of communities with the project has not been successful in Mamirauá and Amanã Reserves, I am going to collaborate with researchers from Piagaçu Institute and WDC (U.K) on a proposal in order to analyse the possibility of implementing local rangers in Piagaçu-Purus Sustainable Development Reserve to avoid dolphin killing for bait.

**5. Are there any plans to continue this work?**

No, the obtained information is enough to conclude that boto dolphins are not being protected even inside Conservation Units. There is no need of more evidence to start developing strategies to effectively conserve river dolphins in the Brazilian Amazon.

**6. How do you plan to share the results of your work with others?**

Besides the scientific paper under review, I am working on another publication. As soon as the genetic analyses of all the samples are available, another publication will be elaborated.

**7. Timescale: Over what period was the RSG used? How does this compare to the anticipated or actual length of the project?**

The grant was used in 2012-2013 to buy laboratory materials so as to analyse the biological samples already taken in the field (see receipts and proof of payment attached). As that work is carried out by Dr. Fabrício Santos' Lab (Minas Gerais Federal University) and as the quality of the samples is not good, the analysis is taken more time than I firstly predicted.

**8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Megabace genotyping		2,069.45		GE healthcare, BRL \$7,340.00
Chargeswitch, Platinum TAQ		1,447.81		Life Tech. BRL \$ 5,134.78
Nanocoat		1,829.10		Gene ID, \$ BRL 6,490.00
dNTPs		98.492		Sinapse Biotec. BRL \$ 350,00
Oligonucleotids		498.62		Oligos_Sintese Biotec. BRL \$ 1,770.78
<b>TOTAL</b>		<b>5,943.47</b>		

**9. Looking ahead, what do you feel are the important next steps?**

In the first place, publish all the information that has been presented in local meetings (SAP 2012, SIMCON 2013) plus the genetic analyses. The use of boto dolphins as bait is a delicate issue: exact numbers of killed dolphins are unknown, and human populations involved are fragile and without opportunities. In addition, as boto dolphin's occurrence is usually linked to certain specific areas, populations might be small, and females are philopatric, precautionary measures are urgently needed in order to avoid the loss of unique genetical and cultural traits.

**10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?**

Yes, besides the papers and organization of the discussion table at SOLAMAC, are the following ones:  
2013\_Oral Presentation: **Iriarte, V.** & Marmontel, M. Threats to Amazonian dolphins (*Inia geoffrensis*, *Sotalia fluviatilis*) in the lower Japurá River. Conservation and Participative Management Symposium (SIMCON). 3-5 July 2013, Mamirauá Institute, Tefé/AM, Brazil. (Presentation and abstract in Portuguese attached).

2012\_Lecturer: Use of dolphins for bait at Mamirauá and Amanã Reserves. Discussion Table on the use of dolphins (*Inia geoffrensis*, *Sotalia fluviatilis*) as bait in the Central Amazon. 15th RT and 9th SOLAMAC meeting, Puerto Madryn, Argentina, September 2012. (Presentation attached).

2012\_Poster presentation: **Iriarte, V.** & Marmontel, M. Preliminary data on the use of dolphins (*Inia geoffrensis*, *Sotalia fluviatilis*) as bait in the Central Amazon. 15 RT and 9th SOLAMAC meeting, Puerto Madryn, Argentina, September 2012. (Poster and abstract in Spanish attached).

2012\_Poster presentation: **Iriarte, V.** & Marmontel, M. Dolphin mortality (*Inia geoffrensis*, *Sotalia fluviatilis*) associated with fishing activities in the lower Japurá River. 9th Research Annual Seminary (SAP), 11-13 July 2012, Mamirauá Institute, Tefé/AM, Brazil. (Poster and abstract in Portuguese attached).

**11. Any other comments?**

I want to thank RSG for supporting the project. The genetic results will definitely bring new concrete information to present to decision takers. If Amazonian dolphins are to be protected, the

implementation of effective conservation measures must occur at different levels and needs to be interdisciplinary and involve different institutions.

## Appendix 1

### BLAST genetic data

Amostra	Tam. Sequência	%	BLAST
IDMS BP001			
IDMS BP002			
IDMS BP003			
IDMS BP004			
IDMS BP005			
IDMS BP006	360	89	<i>Zoarces gillii</i>
IDMS BP007			
IDMS BP008			
IDMS BP009			
IDMS BP010			
IDMS BP011			
IDMS BP012			
IDMS BP013			
IDMS BP014			
IDMS BP015			
IDMS BP016			
IDMS BP017			
IDMS BP018	644	94	<i>Inia geoffrensis</i>
IDMS BP019	588	94	<i>Inia geoffrensis</i>
IDMS BP020			
IDMS BP021	275	89	<i>Inia geoffrensis</i>
IDMS BP022			

IDMS BP023	341	92	<i>Inia geoffrensis</i>
IDMS BP024			
IDMS BP025			
IDMS BP026			
IDMS BP027	416	90	<i>Melanosuchus niger</i>
IDMS BP028			
IDMS BP029	625	92	<i>Melanosuchus niger</i>
IDMS BP030	687	93	<i>Inia geoffrensis</i>
IDMS BP031			
IDMS BP032			
IDMS BP033	295	97	<i>Inia geoffrensis</i>
IDMS BP034			
IDMS BP035	688	91	<i>Melanosuchus niger</i>
IDMS BP036			
IDMS BP037			
IDMS BP038			
IDMS BP039			
IDMS BP040			
IDMS BP041			
IDMS BP042			
IDMS BP043			
IDMS BP044			
IDMS BP045			
IDMS BP046			
IDMS BP047			
IDMS BP048			
IDMS BP049			
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IDMS BP051			
IDMS BP052			
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IDMS BP055			
IDMS BP056			
IDMS BP057			
IDMS BP058			
IDMS BP059	569	90	<i>Sotalia fluviatilis</i>
IDMS BP060	378	90	<i>Inia geoffrensis</i>
IDMS BP061	690	94	<i>Inia geoffrensis</i>
IDMS BP062	639	96	<i>Inia geoffrensis</i>
IDMS BP063	336	89	<i>Inia geoffrensis</i>
IDMS BP064	694	93	<i>Inia geoffrensis</i>
IDMS BP065	308	90	<i>Inia geoffrensis</i>
IDMS BP066	324	89	<i>Inia geoffrensis</i>
IDMS BP067			
IDMS BP068			
IDMS BP069			
IDMS BP070			
IDMS BP071			

IDMS BP072			
IDMS BP073			
IDMS BP074			
IDMS BP075			
IDMS BP076	707	91	<i>Melanosuchus niger</i>
IDMS BP077	326	89	<i>Caiman crocodilus</i>
IDMS BP078	623	93	<i>Caiman crocodilus</i>
IDMS BP079	701	90	<i>Inia geoffrensis</i>
IDMS BP080	621	92	<i>Melanosuchus niger</i>
IDMS BP081	447	90	<i>Melanosuchus niger</i>
IDMS BP082	767	90	<i>Melanosuchus niger</i>
IDMS BP083			
IDMS BP084			
IDMS BP085	691	93	<i>Inia geoffrensis</i>
IDMS BP086	436	95	<i>Sotalia fluviatilis</i>
IDMS BP087	382	93	<i>Melanosuchus niger</i>
IDMS BP088	380	89	<i>Inia geoffrensis</i>
IDMS BP089	717	91	<i>Inia geoffrensis</i>
IDMS BP090			
IDMS BP091	656	91	<i>Inia geoffrensis</i>
IDMS BP092			
IDMS BP093	697	91	<i>Inia geoffrensis</i>
IDMS BP094	408	91	<i>Inia geoffrensis</i>
IDMS BP095			
IDMS BP096			
IDMS BP097	391	88	<i>Melanosuchus niger</i>
IDMS BP098			
IDMS BP099			

IDMS BP100			
IDMS BP101	432	93	<i>Inia geoffrensis</i>
IDMS BP102			
IDMS BP103	312	89	<i>Melanosuchus niger</i>
IDMS BP104	354	93	<i>Melanosuchus niger</i>
IDMS BP105	463	91	<i>Melanosuchus niger</i>
IDMS BP106	467	90	<i>Inia geoffrensis</i>
IDMS BP107	753	91	<i>Inia geoffrensis</i>
IDMS BP108			
IDMS BP109			
IDMS BP110	402	88	<i>Melanosuchus niger</i>
IDMS BP111			
IDMS BP112			
IDMS BP113	675	92	<i>Inia geoffrensis</i>
IDMS BP114	423	94	<i>Inia geoffrensis</i>
IDMS BP115	683	90	<i>Inia geoffrensis</i>
IDMS BP116	419	90	<i>Inia geoffrensis</i>
IDMS BP117	598	94	<i>Inia geoffrensis</i>
IDMS BP118	349	91	<i>Inia geoffrensis</i>
IDMS BP119			
IDMS BP120	763	90	<i>Inia geoffrensis</i>
IDMS BP121	655	92	<i>Inia geoffrensis</i>
IDMS BP122	651	93	<i>Inia geoffrensis</i>
IDMS BP123	726	91	<i>Inia geoffrensis</i>
IDMS BP124	754	93	<i>Inia geoffrensis</i>
IDMS BP125	615	93	<i>Inia geoffrensis</i>
IDMS BP126	596	88	<i>Inia geoffrensis</i>
IDMS BP127	450	91	<i>Inia geoffrensis</i>
IDMS BP128	649	96	<i>Inia geoffrensis</i>
IDMS BP129	742	93	<i>Inia geoffrensis</i>
IDMS BP130	700	92	<i>Inia geoffrensis</i>
IDMS BP131	409	92	<i>Inia geoffrensis</i>
IDMS BP132	786	92	<i>Inia geoffrensis</i>
IDMS BP133	657	95	<i>Inia geoffrensis</i>
IDMS BP134	754	93	<i>Inia geoffrensis</i>
IDMS BP135			
IDMS BP136	728	89	<i>Melanosuchus niger</i>
IDMS BP137	672	92	<i>Melanosuchus niger</i>
IDMS BP138	442	92	<i>Inia geoffrensis</i>
IDMS BP139			
IDMS BP140			
IDMS BP141			
IDMS BP142			
IDMS BP143			
IDMS BP144	389	89	<i>Melanosuchus niger</i>
IDMS BP145	942	91	<i>Inia geoffrensis</i>
IDMS BP146			
IDMS BP147	408	92	<i>Inia geoffrensis</i>
IDMS BP148	408	92	<i>Inia geoffrensis</i>
IDMS BP149	429	93	<i>Inia geoffrensis</i>



IDMS BP150	376	91	<i>Inia geoffrensis</i>
IDMS BP151	744	93	<i>Inia geoffrensis</i>
IDMS BP152	715	94	<i>Inia geoffrensis</i>
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Espécie	Contagem
Inia geoffrensis	52
Sotalia fluviatilis	2
Melanosuchus niger	16
Caiman crocodilus	2

## Appendix 2

### INFORMACIÓN PRELIMINAR SOBRE EL USO DE DELFINES (*INIA GEOFFRENSIS*, *SOTALIA FLUVIATILIS*) COMO CARNADA EN LA AMAZONIA CENTRAL

V. Iriarte<sup>1</sup> & M. Marmontel<sup>1</sup>

<sup>1</sup> Grupo de Pesquisa em Mamíferos Aquáticos Amazônicos (GPMAA), Instituto de Desenvolvimento Sustentável Mamirauá. Estrada do Bexiga 2584, Tefé/AM, CEP:69470-000, Brasil.

En la Amazonia brasilera los primeros relatos sobre el uso del boto rosa (*Inia geoffrensis*) como carnada en la pesca de la piracatinga (*Calophysus macropterus*) datan del año 2003. Si bien se han especulado números de botos abatidos con base en la producción pesquera, como no se conocen tendencias poblacionales ni el número real de delfines utilizados, no es posible determinar el nivel de impacto de la misma. El objetivo de este trabajo es presentar datos preliminares obtenidos en una área de pesca intensiva de la piracatinga en el bajo río Japurá (S2 26.892, W65 05.641), límite de las Reservas de Desarrollo Sustentable Mamirauá (RDSM) y Amanã (RDSA). Entre Octubre de 2010 y Diciembre de 2011 se visitaron 22 comunidades, de las cuales 3 practican la actividad anualmente, 17 con intermitencia, y 2 no la practican. Consecuentemente, se efectuaron 171 salidas de monitoreo de eventos y/o evidencias de actividad en corrales de pesca de 7 comunidades clave, de las cuales 4 pescan mayormente con carnada de caimán negro (*Melanosuchus niger*) y 3 usan también de delfín. De 111 eventos de pesca registrados, en 76 se utilizó yacaré (96% *M. niger*, 4% *Caiman crocodilus*), mientras que en los 35 restantes delfín (91.4% *I. geoffrensis*, 8.58% *S. fluviatilis*), lo que representa una frecuencia de uso de un 68.4% para reptil y de un 31.5% para cetáceo. El origen de la carnada de los últimos puede ser incidental o intencional. Seis de los eventos de pesca registrados estuvieron asociados a enmalles (4 *Inia*, 2 *Sotalia*); aunque la imagen negativa de los delfines (especialmente *Inia*) podría ser un catalizador para la mudanza de “captura incidental” a “captura intencional/eliminación del competidor/disponibilidad inmediata de nuevo recurso económico”. En general, la captura intencional de los cetáceos acontece en áreas de hábitat crítico (forrajeo y descanso), en donde los delfines se encuentran más vulnerables. Es importante extender este tipo de monitoreo hacia otras áreas y realizar estimaciones de abundancia de ambas especies. Teniendo en cuenta el contexto socio-económico de las comunidades ribereñas, se recomienda ampliamente el desarrollo de una carnada sintética alternativa y la implementación de programas de educación ambiental en las escuelas.



15ª Reunión de Trabajo de Expertos en Mamíferos  
Acuáticos de América del Sur  
9º Congreso SOLAMAC

Puerto Madryn, 16 al 20 de septiembre de 2012

MESA REDONDA: USO DE DELFINES DE RÍO (*Inia geoffrensis*, *Sotalia fluviatilis*) COMO CARNADA EN LA PESQUERÍA DE LA PIRACATINGA (*Calophysus macropterus*) EN AMAZONIA

## USO DE DELFINES DE RÍO (*Inia geoffrensis*, *Sotalia fluviatilis*) COMO CARNADA EN LA PESQUERÍA DE LA PIRACATINGA (*Calophysus macropterus*) EN AMAZONIA

Coordinador: Miriam Marmontel  
Reserva Mamirauá

Participantes: Fernando Trujillo<sup>1</sup>; Brenda Santos<sup>2</sup>; Verónica Iriarte<sup>3</sup> & Vera da Silva<sup>4</sup>  
Fundación Omacha  
<sup>2</sup>IBAMA  
<sup>3</sup>IDSM  
<sup>4</sup>INPA

El primer reporte del uso de yacarés y delfines como carnada para la pesca de la piracatinga dentro de Unidades de Conservación Brasileñas data de 2003. Aunque hasta la fecha no existen publicaciones sobre el tema, algunos relatos mencionan la actividad en la Amazonia Central y posibles números de botos abatidos. Aparentemente esta actividad se ha esparcido desde Amazonas hacia otros estados, pero la información es escasa debido a que la pesca es efectuada en comunidades pequeñas del interior, en la noche, y las personas son muy desconfiadas para hablar sobre el asunto. Actividades de fiscalización del Instituto Brasileiro de Medio Ambiente y Recursos Naturales Renovables de Brasil (IBAMA) han generado información en varios Municipios del Estado de Amazonas. Asimismo, diferentes grupos de investigación están realizando esfuerzos para generar datos que puedan esclarecer la dimensión y posibles impactos de esta pesquería en las poblaciones de los grandes vertebrados acuáticos Amazónicos. El objetivo de la mesa redonda es presentar datos concretos obtenidos tanto en Brasil como en Colombia, discutir si existe una amenaza puntual debido a esta pesquería sobre las poblaciones de delfines, y determinar estrategias realistas a seguir en corto y mediano plazo. El evento es coordinado por el Grupo de Pesquisa en Mamíferos Acuáticos Amazónicos del Instituto de Desarrollo Sustentable Mamirauá (GPMMA-IDSM/Tefé, Amazonas, Brasil) y será moderado por la Dra. Miriam Marmontel. Contará con cuatro exposiciones de 15 minutos de duración: Dra. Vera da Silva (Instituto Nacional de Pesquisas Amazónicas, Manaus, Brasil), Dr. Fernando Trujillo (Fundación Omacha, Colombia), MSc. Tatiana Pimentel (Analista Ambiental y Agente Ambiental Federal de la División de Fiscalización de Fauna, IBAMA) y MSc. Verónica Iriarte (Investigadora del GPMMA-IDSM). Posteriormente, se se realizará un plenario/discusión de 60 minutos con todos los asistentes.



15ª Reunión de Trabajo de Expertos en Mamíferos Acuáticos de América del Sur  
9º Congreso SOLAMAC

Puerto Madryn, 16 al 20 de septiembre de 2012

### Appendix 3



## AMEAÇAS AOS GOLFINHOS AMAZÔNICOS (*Inia geoffrensis*, *Sotalia fluviatilis*) NO BAIXO RIO JAPURÁ

Verónica Iriarte<sup>1</sup>, Miriam Marmontel<sup>1</sup>

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No baixo rio Japurá, área limite das Reservas de Desenvolvimento Sustentável Mamirauá (RDSM) e Amanã (RDSA), as interações negativas do boto (*Inia geoffrensis*) e o tucuxi (*Sotalia fluviatilis*) com as atividades de pesca são comuns, incluindo emalhes incidentais, capturas oportunistas, e capturas intencionais de ambas espécies para a pesca da piracatinga (*Calophysus macropterus*). O objetivo do presente trabalho é apresentar uma compilação de dados atualizados da pesquisa em andamento desde setembro de 2010. Foram realizadas saídas de campo mensais de duas semanas de duração, usando como plataforma principal de pesquisa três bases de campo do IDSM. Baías, praias, e áreas com concentração de capim foram monitoradas na procura de carcaças. Paralelamente, realizaram-se conversas informais com pescadores e moradores em geral para obter informação específica sobre eventos de mortalidade. As informações obtidas incluem 33 interações com atividades pesqueiras (17 *I. geoffrensis*, 16 *S. fluviatilis*) com evidência de violência física pré-morte (dois *I. geoffrensis*, dois *S. fluviatilis*) e óbito em malhadeiras abandonadas (um *I. geoffrensis*, um *S. fluviatilis*). Evidências empíricas obtidas a partir de 41 eventos de pesca da piracatinga com isca de golfinho (90.2% *I. geoffrensis*, 9.75% *S. fluviatilis*) incluem um ou mais dos seguintes: carcaças frescas (N=7), pedaços de carne (N=19), restos de carcaças (N=5), vômitos e conteúdos estomacais de piracatingas (N=5), e carcaças de golfinhos já usados na pesca (N=11). Algumas áreas de alimentação e descanso dos cetáceos, como confluências, bocas de paranãs, lagos e praias -onde os golfinhos são particularmente vulneráveis- foram identificadas como áreas de caça dirigida, enquanto que outras apresentaram alta ocorrência de captura incidental em malhadeiras de 90-100 mm utilizadas para a pesca de tambaqui (*Colossoma macropomum*), pirapitinga (*Piaractus brachypomus*), e grandes bagres (Pimelodidae). Dentro das primeiras, se destacam o Paranã de Cubuá (2,902820 S; 64,795012 O), Boca do Jarauá (2,868721 S; 64,910755 O), Paranã de Aranapu/Lago Jutai (2,312285 S; 65,226497 O), e o Cano do Chapéu (2,973617 S; 65,096979 O) onde ribeirinhos, moradores das terras indígenas, e pescadores urbanos abatem golfinhos para isca. No rio Solimões (2,987934 S; 65,040520 O) aparentemente existe também comércio de carcaças (boto R\$ 250,00; tucuxi R\$ 150,00) que seriam utilizadas em Fonte Boa. A área identificada com maior número de mortes incidentais por emalhes é o Paranã do Coraci (2,569735 S; 64,979100 O). Embora as estimativas de abundância dos



stocks/populações e o número total de golfinhos mortos seja desconhecido, tendo em conta o crescimento do esforço pesqueiro na região e a alta vulnerabilidade dos cetáceos odontocetos frente às remoções antropogênicas, é importante que medidas precautórias sejam implementadas em curto prazo com o fim de garantir que as atividades pesqueiras dentro das RDS Mamirauá e Amanã sejam realmente sustentáveis. Algumas destas medidas poderiam incluir mudanças chave nas práticas pesqueiras, incentivos econômicos, fiscalização, e o manejo integrado dos recursos naturais.

Palavras-chave: golfinhos de rio, interações com atividades de pesca, isca de piracatinga.

Key words: river dolphins, interactions with fisheries, piracatinga bait.