

Brazil. Progress report on cetacean research, March 2008 to February 2009, with statistical data for the *calendar year* 2008.

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1. Species and stocks studied

A tabular format is most appropriate. Please indicate where in the report the species is mentioned and use IWC recommended names (see IWC, 2006, Annex L). For subsequent items, common names are preferred. e.g.:

IWC common name	IWC recommended scientific name	Area/stock(s)	Items referred to
Bottlenose dolphin	<i>Tursiops truncatus</i>	Southwestern Atlantic (RS, SC, PR, SP, RJ, ES, BA, CE)	2.1.1; 2.1.2; 2.2; 3.1; 3.1.1; 3.2; 4.1; 4.3; 5; 7.3.2; 7.3.3; 8
Franciscana	<i>Pontoporia blainvillei</i>	Southwestern Atlantic, (RS, SC, PR, SP, RJ, ES), FMAII (SC, PR, SP, RJ)	2.1.1; 3.1.2; 4.2; 4.3; 5; 7.3; 7.3.3; 8
Minke whale	<i>Balaenoptera bonaerensis</i>	SC	4.3; 8
Dwarf Minke whale	<i>Balaenoptera acutorostrata</i>	SC, ES, BA	2.1.2; 4.3; 8
Humpback whale	<i>Megaptera novaeangliae</i>	Breeding Stock A (SC, SP, RJ, ES, BA, SE, CE, FN), Antarctic Peninsula (Areas I and II)	2.1.1; 2.1.2; 2.2; 3.1.1; 4.1; 4.3; 5; 8; 9
Southern right whale	<i>Eubalaena australis</i>	RS, SC, SP	2.1.1; 2.1.2; 3.1.1; 3.2; 4.1; 4.3; 6.2; 6.3; 8; 9; 10; 11.2
Bryde Whale	<i>Balaenoptera edeni</i>	Western South Atlantic (SP, RJ, ES)	2.1.2; 4.3; 5; 8
Fin whale	<i>Balaenoptera physalus</i>	Western South Atlantic	4.3; 8
Baleen whale	<i>Balaenoptera sp.</i>	PR, SP	4.3; 8
Guiana dolphin	<i>Sotalia guianensis</i>	SC, SP, RJ, ES, BA, SE, CE	2.1.1; 2.1.2; 2.2; 3.1.1; 4.1; 4.2; 4.3; 4.4; 5; 7.3.1; 7.3.2; 8
Rough-toothed-dolphin	<i>Steno bredanensis</i>	SP, RJ, ES, BA, CE	2.1.1; 2.1.2; 4.2; 4.3; 5; 8
Atlantic spotted dolphin	<i>Stenella frontalis</i>	Southwestern Atlantic (SC, RJ, CE)	2.1.2; 4.3; 5; 8
Pantropical spotted dolphin	<i>Stenella attenuata</i>	FN	2.1.2, 2.2, 7.4, 9
Spotted dolphin	<i>Stenella sp.</i>		
Spinner dolphin	<i>Stenella longirostris</i>	SP, ES, BA, CE, FN	2.1.1, 2.1.2; 2.2, 2.3, 3.1.1., 3.2, 4.3; 4.4, 5; 7.1, 7.3, 7.4, 8; 9
Clymene dolphin	<i>Stenella clymene</i>	CE	8
Fraser dolphin	<i>Lagenodelphis hosei</i>	RJ	5
Dwarf sperm whale	<i>Kogia sima</i>	CE	4.3; 5; 8
Sperm whale	<i>Physeter macrocephalus</i>	SP, ES, BA, SE, CE	4.3; 8
Killer whale	<i>Orcinus orca</i>	SP, RJ	2.1.1; 2.1.2; 5
False killer whale	<i>Pseudorca crassidens</i>	Southwestern Atlantic (SC)	4.3; 8
Common dolphin	<i>Delphinus sp.</i>	Southwestern Atlantic (SC, PR, RJ)	4.3; 5; 8
Long-finned pilot whale	<i>Globicephala melas</i>	BA	4.3; 8
Short-finned-pilot-whale	<i>Globicephala macrorhynchus</i>	FN	7.4
Melon-headed whale	<i>Peponocephala electra</i>	FN	7.4
Cuvier's beaked whale	<i>Ziphius cavirostris</i>	TI, CE, FN	4.3; 7.4, 8

Legend for states: AM – Amazonas, AP – Amapá, BA – Bahia, CE – Ceará, ES – Espírito Santo, FN – Fernando de Noronha Archipelago (Pernambuco State), PA – Pará, PR – Paraná, SC – Santa Catarina, SP – São Paulo, RJ – Rio de Janeiro, RN – Rio Grande do Norte, RS – Rio Grande do Sul; TI – Trindade Island (Espírito Santo State).

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

(R2) – Systematic surveys are conducted for determining habitat use patterns, abundance, trends and reproductive and survival rates of common bottlenose dolphins in the Patos Lagoon estuary and adjacent coastal area, southern Brazil.

(R3) – Guiana dolphin

Project 1 - During an effort of more than 288 hours with 24,2 hours of direct observation, and 52 one-day surveys, Guiana dolphins were monitored by boat cruises in 2008/2009, when 51 groups of dolphins were sighted, including calves. This research project, which began in 2002, aims to study the population dynamics (through photo-identification technique), ecology and behaviour of the species in the southern coast of Bahia State, northeastern Brazil. (Contact person: Leonardo L. Wedekin, IBJ).

Target species	Date	Area	No. of sightings	Contact person/institute and references
Guiana dolphin	All year	Abrolhos Bank	52 (201 dolphins)	Leonardo Wedekin/ IBJ

(R3) – Humpback Whale

Project 1 – Population dynamics, ecology and behaviour through different techniques (photoidentification, biopsy sampling, bioacoustics) of humpback whales have been carried out from on board surveys in Bahia and Espírito Santo States, northeastern Brazil, from 12°20'S to 20°18'S, including the Abrolhos Bank. In Abrolhos Bank from July to november, 692 humpback whales, including 102 calves, were detected during 2,558 nautical miles of boat surveys (442 hours of effort). In northern coast of Bahia 293 humpback whales were sighted, including 26 calves during 1,493 nautical miles of boat surveys (236 hours of effort). (Contact persons: Clarêncio Baracho & Milton Marcondes IBJ).

Target species	Date	Area	No. of sightings	Contact person/institute and references
Humpack whale	July to November	Abrolhos Bank (BSA)	317 (692 whales)	Milton Marcondes/ IBJ
Humpack whale	July to October	Northern coast of Bahia (BSA)	132 (293 whales)	Clarêncio Baracho/IBJ

Project 2 – An aerial survey was conducted along the Brazilian coast (from 5° to 24°S) to assess distribution, density and abundance of humpback whales in the peak of the breeding season, on September, 2008. The surveys were conducted following standard line transect distance sampling. More than 2.700 nautical miles were flew during 84 transect lines, and 308 groups of humpback whales were observed. Preliminary results of this aerial will be presented as a working paper in the scientific committee (Wedekin *et al.* SC/61/SH12). (Contact person: Leonardo L. Wedekin, IBJ).

(R4)

Target species	Date	Area	No. of sightings	Contact person/institute and references
Humpback whale	29/8-23/9/2008	Eastern coast of Brazil from 5 to 23°S and from 10 to 500m isobaths	419	A. Zerbini (IA). Reference: Danilewicz <i>et al.</i> (2008)
Franciscana	11-23/12/2008	Coast of Santa Catarina, Paraná and São Paulo States from coastline to 30-50m isobath	31	D. Danilewicz (GEMARS/IA)

A sighting/satellite tagging cruise was carried out from 29 August to 23 September 2009 on board the R/V Atlantico Sul (FURG). The cruise was carried out through a partnership project between FURG and IA and involved scientists from these two organizations plus GEMARS and UFJF. The main objective of the cruise was to deploy satellite transmitters on humpback whales throughout the range of the species in the wintering grounds (see item XXX). Sighting data was collected using standard line transect methods. A total of 419 humpback whale sightings (785 individuals) were recorded. Other species sighted were Atlantic spotted dolphins (n=1), bottlenose dolphins (n=18), Guiana dolphin (n=3), killer whales (n=2), minke whales (n=1), and southern right whales (n=2).

An aerial survey was conducted off the southern and southeastern coast of Brazil to estimate abundance of franciscanas by scientists from FURG, GEMARS, IA and UFJF. This region corresponds to the range of the Franciscana Management Area 2 (FMA2, sensu Secchi *et al.*, 2003). Sighting data was collected using standard line transect methods. A total of 31 sightings (82 individuals) were recorded.

(R7)

Target species	Date	Area	No. of sightings	Contact person/institute and references
Guiana dolphin	2008-2009	Rio de Janeiro state	N	MAQUA

(R8)

Target species	Date	Area	No. of sightings	Contact person/institute and references
Bottlenose Dolphin	2008	Laguna (Southern Brazil)		lamaqsl@ccb.ufsc.br daurajorge@yahoo.com.br
Humpback whale	2008	Abrolhos, BA	308 groups	lamaqsl@ccb.ufsc.br leonardo.wedekin@baleiajubarte.org.br

(R11) Behavioural ecology, population density, photo and video-identification, interactions with whalewatching boats, ethnobiology, bioacoustic and biopsy sampling studies of spinner dolphin have been conducted on a regular basis from land (312 days – 3071,65 hours), in snorkelling and skin diving (42 days – 31,5 hours) and boat based sightings (34 days - 105 hours) in the Fernando de Noronha Archipelago (03°50'S, 32°25'W - Northeast Brazil). Systematic monitoring of stranded studies of cetaceans has been conducted in the Fernando de Noronha Archipelago. (Contact person: José Martins da Silva Júnior / Centro Mamíferos Aquáticos/ICMBio).

(R12) A systematic field work was held during 2008-2009 using tourism boats, also mainly focused the MPAs of the north shore of S.Paulo State (23°46'07''S 45°48'06''W to 23°30'16''S 44°37'49''W). Surveys were conducted in the marine areas surrounding the Ilhabela State Park (S23 51' 13" -45 19' 29"), which encompasses Vitoria Island (S23 45' 00" W45 01' 00") and Búzios Island (S23 47' 55" W45 08' 21"). The other MPAs comprehended were Ilha Anchieta State Park (23° 32' S; 45°05' W), Tupinambás Ecological Station (Palmas Island – 23°32'30"S – 45°02'W) (24° 01' S; 45° 01' W) and the buffer zone of Serra do Mar State Park/Picinguaba around Couves Island (23° 25' S; 44° 51' W) and Rapada Island (23° 25' S; 44° 54' W). Recently, in October 2008, most of these full protection areas were included in new multiple-use Marine Protected Areas designated along the coast of São Paulo State, thus forming a mosaic of MPAs. These areas are called Areas de Proteção Ambiental-APAs, corresponding to IUCN Category V, and, in the north shore of S.Paulo is the APA do Litoral Norte.

Eleven individuals were recorded within the APA do Litoral Norte from February/2008 to March/2009. These data include 1 sighting of jumps during the feeding behaviour. Sighting efforts totalized 228 hours along 751 nautical miles, during 38 days of field trips.

Target Species Contact	Date	Area	N° of sightings	Person/Instituit and references
Bryde's whale	21/06/2008	S.Sebastião - APA Litoral Norte/Ypautiba Sector	1	Bruno Borbel Pitarello Bryde's Whale Project/CEMAR
Bryde's whale	20/12/2008	65km off São Sebastião	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR
Bryde's whale	10/01/2009	82km off Ubatuba	1	Bruno Borbel Pitarello and Julio Cardoso

				Bryde's Whale Project CEMAR
Bryde's whale	14/01/2009	34km off São Sebastião	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR
Bryde's whale	18/01/2009	S.Sebastião - APA Litoral Norte/Maembipe Sector	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR
Bryde's whale	30/01/2009	S.Sebastião – APA Litoral Norte – Ypautiba Sector	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR
Bryde's whale	01/02/2009	Vitoria Island – APA Litoral Norte / Maembipe Sector	1	Bruno Borbel Pitarello Bryde's Whale Project/CEMAR
Bryde's whale	08/02/2009	S.Sebastião / APA Litoral Norte – Ypautiba Sector	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR
Bryde's whale	21/02/2009	S.Sebastião / APA Litoral Norte – Ypautiba Sector	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR
Bryde's whale	23/02/2009	S.Sebastião / APA Litoral Norte – Ypautiba Sector	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR
Bryde's whale	01/03/2009	APA Litoral Norte – Ypautiba Sector	1	Bruno Borbel Pitarello and Julio Cardoso Bryde's Whale Project/CEMAR

Specific sighting cruises were also held within the APA Litoral Norte, encompassing Ilhabela State Park - around the islands Ilhabela (S23 51' 13" -45 19' 29"), Vitoria (S23 45' 00" W45 01' 00") and Búzios (S23 47' 55" W45 08' 21") - Ilha Anchieta State Park (23° 32'S; 45°05'W), Tupinambás Ecological Station (Palmas Island – 23°32'30"S – 45°02'W). Two sighting cruises of 2 days each were held: one in June/2008 and another in February/2009 totaling 16 hours along 164 nautical miles. Sightings: 5 sightings were recorded only in February, all in feeding behaviour.

Target Species Contact	Date	Area	N° of sightings	Person/Instituit and references
Bryde's whale	21/02/2009	Anchieta Island / APA Litoral Norte – Cunhambebe Sector	1	Bruno Borbel Pitarello Bryde's Whale Project/CEMAR
Bryde's whale	21/02/2009	Búzios Island / APA Litoral Norte – Maembipe Sector	2	Bruno Borbel Pitarello Bryde's Whale Project/CEMAR
Bryde's whale	21/02/2009	Ilhabela Island / APA Litoral Norte – Maembipe Sector	1	Bruno Borbel Pitarello Bryde's Whale Project/CEMAR
Bryde's whale	22/02/2009	Palmas Island/ APA Litoral Norte - Cunhambebe Sector	1	Bruno Borbel Pitarello Bryde's Whale Project/CEMAR

(R13)

Project 1 – Guiana dolphin

Photo and video-identification, behaviour, bioacoustic, age identification, reproductive biology, feeding ecology, population density, etnobiology and systematic studies of Guiana dolphin have been conducted on a regular basis from a land and boat based sightings in the Estuary Complex of Cananéia and Ubatuba (São Paulo, southeastern Brazil) and in Guaraqueçaba, Paranaguá bay and Guaratuba bay (Paraná, southern Brazil).

Systematic surveys are being conducted in the Estuarine Complex of Cananéia Southern of Sao Paulo State and in the Estuarine Complex of Paranaguá Bay, North of Paraná State for relating to the occurrence of Guiana dolphin in the harbour area and understand the impact of boat traffic and environmental factors on their activities. Animals are usually observed during the whole year in the area.

Project 2 – Franciscana

Age identification, reproductive biology, feeding ecology and systematic studies of Franciscana have been conducted on a regular basis from the accompaniment of stranded animals in the adjacent coast areas in south of São Paulo State (southeastern Brazil) and north of Paraná State (southern Brazil). (Contact person: Ana Rita dos Santos-Lopes/IpeC).

Project 3 – Strandings

Through regular accompaniment of stranding animals and coastal sightings. In the region along the São Paulo state southern coast and in the estuary complex of Iguape-Cananéia-Ilha Comprida – southeastern Brazil and northern of Parana state – southern Brasil. The accompaniment promote the rescue and rehabilitation of injured animals and generate data that will be used for future proposes of conservation of the species.

Studies of stranded cetaceans to determinate the cause of death, age identification, tissue and biological samples, contamination levels, anatomic studies and genetic analysis are being conducted through the material collected of the carcass of stranded cetaceans. These work is done during all the year with a constant monitoring for small animals and with more intensity during the whale's migration season. (Contact person: A. R. Santos-Lopes/IpeC).

Project 4 - General cetaceans

Sightings of Southern right whale have been done through land observation and boat surveys in São Paulo (south coast).

Sightings of bottlenose dolphins, rough-toothed dolphins were recorded during cruises from south coast of São Paulo State to north coast of Parana. (Contact person: Ana Rita dos Santos-Lopes/IpeC).

Target species	Date	Area	No. of sightings	Contact person/institute and references
Southern right whale	2-5/07/08; 10-13/07/08; 9-12/08/08; 3-5/09/08;	Southern of Sao Paulo State	13	A. R.Santos-Lopes – IpeC gruposgate_ipec@yahoo.com.br
Killer whale	3-5/09/08	Southern of Sao Paulo State	3	A. R.Santos-Lopes – IpeC gruposgate_ipec@yahoo.com.br
Rough-toothed dolphin	3-5/09/08	Southern of Sao Paulo State	1	A. R.Santos-Lopes – IpeC gruposgate_ipec@yahoo.com.br
Bottlenose dolphin	3-5/09/08	Southern of Sao Paulo State	2	A. R.Santos-Lopes – IpeC gruposgate_ipec@yahoo.com.br
Spinner dolphin	12/08/08	Southern of Sao Paulo State	1	A. R.Santos-Lopes – IpeC gruposgate_ipec@yahoo.com.br

(R14)

Primary species	Area	Data type/method	Collected by	Platform	Location of archive (if applicable)	Contact person/institute and refs
Guiana dolphin	Ceará	sightings	crew	land	Aquasis	Ana Carolina Meirelles

(R15)

Target species	Date	Area	No. of sightings	Contact person/institute and references
Guiana dolphin	02/08 'til 12/08	Sergipe river, Northeastern Brazil	28	A. Hubner, Instituto Mamíferos Aquáticos
Guiana dolphin	02/08 'til 12/08	Vaza-Barris river, Northeastern Brazil	09	A. Hubner, Instituto Mamíferos Aquáticos

(R21) – Southern right whales have been surveyed from helicopter in a coastline of 400km, from Santa Catarina Island (central coast of SC) to the northern coast of RS (Groch, 2005), and from shore in 16 observation stations covering about 100km of coastline in Santa Catarina State (Groch, 2005), and 15 km in the north of Rio Grande do Sul State. A total of 3950 whales including 1807 calves (includes double counting) were sighted during land-based surveys (Groch, unpublished). From four aerial surveys conducted from July to November (one per month, except August), we had 122 sightings totalizing 197 individuals, of which 75 were calves and 1 was a juvenil (including double counting) (K.R. Groch and J.T. Palazzo Jr., unpublished). In September, the peak of the breeding season, an extended aerial survey was made from the border of Uruguay with Rio Grande do Sul State (33°40'S 53°28'W) to Macaé (22°22'S 41°47'W) on the central coast of Rio de Janeiro State, covering ~2000 km of coast. This is the second time this area is surveyed in search for right whales (the first survey was conducted in 2004). A total of 137 different individuals (including 49 calves) were counted in two days along 560km of coast. 101 individuals (including 40 calves) were sighted in the regular surveyed area and 36 (including 9 calves) south of this area. No sightings of right whales were recorded to the North of the regular surveyed area (K.R. Groch and J.T. Palazzo Jr., unpublished).

Target species	Date	Area	No. of sightings	Contact person/institute and references
Southern right whale	July – Nov2008 (land based)	Central SC and North RS	3950 whales including 1807 calves (land based)*	Karina Rejane Groch, Brazilian Right Whale Project
	July - Nov 2008 (Aerial)	Central SC to North RS	197 whales including 75 calves and 1 juvenil (aerial)* (* all including double counting)	

SC = Santa Catarina State; RS = Rio Grande do Sul State

(R23)

Target species	Date	Area	No. of sightings	Contact person/institute and references
Bottlenose dolphin	August, 8 to October, 10, 2008	Cagarras Archipelago 23°01'50"S – 043°12'70"W	9	L. Lodi (Instituto ECOMAMA)

2.1.2 Opportunistic, platforms of opportunity

(R3)

Project 1

During 2008 humpback whale survey in Abrolhos Bank (Bahia and Espirito Santo States) 03 groups of Southern right whale, 25 groups of Guiana dolphin, 01 group of Rough-Toothed dolphins, 02 groups of Bottlenose dolphins and 06 groups of non-identified cetaceans were registered. The data were collected by researchers of IBJ. (Contact person: Milton Marcondes, IBJ).

Primary species	Area	Data type/method	Collected by	Platform	Contact person/institute and refs
Southern right whale	Abrolhos Bank	sightings	Researchers of IBJ	Humpback whale survey	Milton Marcondes, IBJ
Guiana dolphin	Abrolhos Bank	Photo-id; sightings	Researchers of IBJ	Humpback whale survey	Milton Marcondes, IBJ
Rough-toothed dolphins	Abrolhos Bank	Photo-id; sightings	Researchers of IBJ	Humpback whale survey	Milton Marcondes, IBJ
Bottlenose dolphin	Abrolhos Bank	Photo-id; sightings	Researchers of IBJ	Humpback whale survey	Milton Marcondes, IBJ

Project 2

During the 2008 humpback whale surveys in northern coast of Bahia 06 groups of Guiana dolphin, 01 group of Spinner dolphin, 07 groups of Bottlenose dolphin and 03 groups of Dwarf Minke whale were registered. The data were collected by researchers of IBJ. (Contact person: Clarêncio Baracho, IBJ.).

Primary species	Area	Data type/method	Collected by	Platform	Contact person/institute and refs
Guiana dolphin	Bahia State	Photo-id; sightings	Researchers of IBJ	Humpback whale survey	Clarêncio Baracho, IBJ
Bottlenose Dolphin	Bahia State	Photo-id; sightings	Researchers of IBJ	Humpback whale survey	Clarêncio Baracho, IBJ
Spinner dolphin	Bahia State	Photo-id; sightings	Researchers of IBJ	Humpback whale survey	Clarêncio Baracho, IBJ
Dwarf Minke whale	Bahia State	Photo-id; sightings	Researchers of IBJ	Humpback whale survey	Clarêncio Baracho, IBJ

Project 3

Opportunistic sightings and photo-identification of humpback whales have been made from whale watching boats in the Northern coast of Bahia State. During 143 cruises, 439 humpback whales were sighted with 56 photo-identifications. (Contact person: Sergio Cipolotti, IBJ)

Primary species	Area	Data type/method	Collected by	Platform	Contact person/institute and refs
Humpback whale	Bahia State (BSA)	Photo-id;	Researchers of IBJ	whalewatching vessel	Sergio Cipolotti, IBJ

(R7)

Primary species	Area	Data type/method	Collected by	Platform	Contact person/institute and refs
Rough-toothed dolphin	Rio de Janeiro state	sightings	Team	Research boat	Lailson-Brito / Azevedo - UERJ
Atlantic spotted dolphin	Rio de Janeiro state	sightings	Team	Research boat	Lailson-Brito / Azevedo - UERJ
Bottlenose dolphin	Rio de Janeiro state	sightings	Team	Research boat	Lailson-Brito / Azevedo - UERJ
Killer whale	Rio de Janeiro state	sightings	Team	Research boat	Lailson-Brito / Azevedo - UERJ
Bryde's whale	Rio de Janeiro state	sightings	Team	Research boat	Lailson-Brito / Azevedo - UERJ

(R8)

Primary species	Area	Data type/method	Collected by	Platform	Contact person/institute and refs
Bottlenose dolphin	Laguna, SC (Southern Brazil)	foto-id	Daura-Jorge, F.G.	small boat	daurajorge@yahoo.com.br
Humpback whale	Abrolhos, BA	Distance Sampling	Leonardo L. Wedekin	airplane	Leonardo L. Wedekin leonardo.wedekin@baleiajubarte.org.br

(R9) – Project: Opportunist land and boat based sightings of franciscana, Guiana, rough-toothed and Atlantic spotted dolphins were registered in São Paulo State (Ubatuba, Guarujá) (Contact person: Juliana Marigo, BioPesca).

(R11) – Opportunistic observations, photo and video-identification and interactions with whalewatching boats of pantropical spotted dolphin and humpback whales have been made on a regular basis from land and boat based sightings in the Fernando de Noronha Archipelago (03°50'S, 32°25'W -Northeast Brazil) .

(R12) – Opportunistic sighting efforts were held aboard the oceanographic vessel Prof. Wladimir Besnard, of the Oceanographic Institute of São Paulo University, from 08 September 2008 to 28 September 2008, totaling 1925nm, 385hours aboard and 130 hours of sighting effort, departing from Santos (S.Paulo State) along the coast of Rio de Janeiro, Espírito Santo and Bahia States till Camamu (Bahia State), depth varying from 15m to 3680m. No sightings of Bryde's whales occurred along this cruise (data provided by Debora Gomes Ruiz, Bryde's Whale Project/CEMAR).

(R13) – Opportunist sightings studies of cetaceans (and others marine mammals) are conducted along the São Paulo State southern coast and Parana state northern coast. These efforts contribute for more information of the animals that visit (pass along the coast) the region.

Primary species	Area	Data type/method	Collected by	Platform	Location of archive (if applicable)	Contact person/institute and refs
Southern right whale	Southern of Sao Paulo State	Sightings	crew	Fishery vessels	IPeC	A. R.Santos-Lopes – IPeC gruporesgate_ipec@yahoo.com.br
Killer whale	Southern of Sao Paulo State	Sightings	crew	Fishery vessels	IPeC	A. R.Santos-Lopes – IPeC gruporesgate_ipec@yahoo.com.br

(R14)

Primary species	Area	Data type/method	Collected by	Platform	Location of archive (if applicable)	Contact person/institute and refs
Guiana dolphin	Ceará	sightings	crew	land	Aquasis	Ana Carolina Meirelles

(R23)

Primary species	Area	Data type/method	Collected by	Platform	Location of archive (if applicable)	Contact person/institute and refs
Bottlenose dolphin	Cagarras Archipelago	Video-ID*; sightings	crew	Sailing boat	Instituto Ecomama	L. Lodi (Instituto ECOMAMA)

2.2 Analyses/development of techniques

(R4)

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Humpback whale	29/8-23/9/2008	Eastern coast of Brazil from 5 to 23°S and from 10 to 500m isobaths	Standard line transect survey	Distribution; sighting frequency	A. Zerbini (IA). Reference: Danilewicz <i>et al.</i> (2008)

(R5)

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Humpback whale	Data from years 2003 and 2005	Abrolhos Bank (BSA)	Passive acoustic monitoring	Distribution and movements of vocally active males	Renata S. Sousa-Lima / BRP and UFMG. References: Sousa-Lima & Clark 2008; Van Parijs <i>et al.</i> In press; Sousa-Lima &

					Clark in press; Sábato 2008
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(R11) – About five hundred spinners dolphins were identified based on dorsal fin shape and scars. On 92,95% days of this period, spinner dolphins groups ranging from 2 to 1535 (mean= 293,63; SD±262,83; N=301) entered in the Dolphins Bay at National Marine Park Fernando de Noronha (J.M. Silva-Jr., unpublished) to rest, reproduce, nurse or to look for protection from shark attacks (Silva-Jr. *et al*, 2005). During land base station (312 days – 3071,65 hours) and boat based sightings (42 days – 31,5 hours) in the Fernando de Noronha Archipelago, was sighted 22 humpback whale (8 mother and calf) and 12 pantropical spotted dolphin.

(R13) – Photo and video-identification, behaviour, bioacoustic, age identification, reproductive biology, feeding ecology, population density patterns of habitat use are being estimated on a regular basis from a land and boat based sightings in the Estuary Complex of Cananéia and Ubatuba (São Paulo, southeastern Brazil) and in Guaraqueçaba, Paranaguá bay and Guaratuba bay (Paraná, southern Brazil).

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Guiana dolphin	5-20/8/06	Southern of Sao Paulo State; Northern of Paraná State	Line transect survey; land and boat based sightings	Distribution; sighting frequency	A. R.Santos-Lopes – IPeC grupopresgate_jpec@yahoo.com.br

(R15)

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Guiana dolphin	02/08 'til 12/08	Sergipe river, Northeastern Brazil	Line transect survey	Distribution; sighting frequency	A. Hubner, Instituto Mamíferos Aquáticos
Guiana dolphin	02/08 'til 12/08	Vaza-Barris river, Northeastern Brazil	Line transect survey	Distribution; sighting frequency	A. Hubner, Instituto Mamíferos Aquáticos

(R23)

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Bottlenose dolphin	August, 8 to October, 10, 2008	Cagarras Archipelago 23°01'50"S – 043°12'70"W	Survey	Site fidelity, group composition and social organization	L. Lodi (Instituto ECOMAMA)

3. MARKING DATA

3.1 Field work

3.1.1 Natural marking data

(R2)

Species	Feature	Area/stock	Calendar year/season/ no. photographed	Catalogued (Y/N)	Catalogue total	Contact person/institute
Bottlenose dolphins	Dorsal fin	Patos Lagoon estuary – southern Brazil	96	Y	135	LTMM-FURG

(R3)

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Humpback whale	Fluke	Abrolhos Bank (BSA)	2008 / n = 284	N	2,587 (seasons 2007 and 2008 will be analysed and incorporated in catalogue)	Mariana Neves, IBJ
Humpback whale	Fluke	Northeast of Bahia State (BSA)	2008 / n = 101	Y (45) N (56)	789 (included 45 from season 2008)	Clarêncio Baracho, IBJ
Guiana dolphin	Dorsal	Bahia State	2008 / n = 50	Y	129 (until February 2009)	Leonardo L. Wedekin, IBJ

(R4)

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Humpback whale	Fluke	Breeding Stock A	XX	Y	XX	A. Andriolo (IA, UFJF)

(R7)

Species	Feature	Area/stock	Calendar year/season/ no. photographed	Catalogued (Y/N)	Catalogue total	Contact person/institute
Guiana dolphin	Dorsal	Guanabara Bay	30	Y	79	Lailson-Brito / Azevedo - UERJ

(R8)

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Bottlenose dolphin	Dorsal fin	.S. Western Atlantic	57	Y	6,970	F. G..Daura-Jorge

(R11)

Species	Feature	Area/stock	Calendar year/season/ no. photographed	Catalogued (Y/N)	Catalogue total	Contact person/institute
Spinner dolphin	Dorsal fin and flanks	Fernando de Noronha Archipelago	68	Y	1141	José Martins da Silva Júnior / Centro Mamíferos Aquáticos

(R15)

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Guiana dolphin	Dorsal fin	Northeastern Brazil (SE)	25	Y	ongoing analysis	A. Hubner, Instituto Mamíferos Aquáticos

(R19)

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Bottlenose dolphin	Dorsal fin	Southern Brazil	3	Y	15	Paulo H. Ott GEMARS/CECLIMAR

(R21)

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Southern right whale	Head callosities and dorsal marks	Southern Brazil	~90	N	405**	Karina R. Groch

* includes possible double identifications, ** catalogue up to 2004; photos from 2005 – 2008 aerial surveys under analysis

(R23)

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Bottlenose dolphin	Dorsal fin	Southeast Atlantic	29	Y	29	L. Lodi (Instituto ECOMAMA)

3.1.2. Artificial marking data

(R2) – A marking-recovery program using external artificial tags are being used to estimate the fraction of franciscana incidentally killed in gillnets that end washed ashore.

*3.1.3 Telemetry data***(R4)**

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
Humpback whale	Satellite	19	65 days	A. Zerbini (IA) and A. Andriolo (IA, UFJF)

3.2 Analyses/development of techniques

(R2) – Abundance, trends, survival, reproductive rates and seasonality are being estimated using photo-id of naturally marked bottlenose dolphins in the Patos Lagoon estuary, southern Brazil. Patterns of habitat use are also being investigated using photo-id.

(R11) – Data analyses on season residency, site fidelity, habitat use and behavior of spinner dolphin have been carried in Fernando de Noronha Archipelago. (Contact person: José Martins da Silva Júnior / Centro Mamíferos Aquáticos).

(R21) – Southern right whale: distribution, coastal movements, within season residency and site fidelity (Groch, 2005), biological parameters (ongoing analysis on population estimates; Groch *et al.* 2005); behavior of right whales in Central-Southern Santa Catarina State (Groch, ongoing analysis).

(R23) – Systematic surveys have been lead since 2004 (August to November) for determining site fidelity patterns, group composition and social organization of common bottlenose dolphins in the Cagarras Archipelago, southeastern Brazil through video-id

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED**4.1 Biopsy samples (summary only)**

Species	Area/stock	Calendar year/season no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
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Bottlenose dolphin	Patos Lagoon estuary – southern Brazil	0	Y	25	26	LTMM-FURG
Bottlenose dolphin	Northeast of Brazil	2008 / 6	Y	-	113	Paulo H. Ott , Daniel Danilewicz & Larissa R. Oliveira, GEMARS/CECLIMAR
Guiana dolphin	Rio de Janeiro State	30	Y	-	-	Lailson-Brito / Azevedo - UERJ
Humpback whale	Antarctic, IWC Area II	27	Y	0	222	LTMM-FURG
Humpback whale	Abrolhos Bank (BSA)	2008 / 68	Y	68	496	Márcia Engel/ IBJ
Humpback whale	Northeast of Bahia State (BSA)	2008/ 2	Y	2	43	Márcia Engel/ IBJ
Humpback whale	Breeding Stock A	XX	Y	XX	XX	A. Andriolo (IA, UFJF) and D. Danilewicz (IA, GEMARS)
Spinner dolphin	FN	XX	Y	XX	XXX	Jose Martins da Silva-Junior (CMA-FN)

4.2 Samples from directed catches (commercial, aboriginal and scientific permits) or bycatches

Species	Area/stock	Calendar year/ season total	Archived (Y/N)	Tissue type(s)*	Contact person/institute
Franciscana	WS Atlantic (Southern Brazil)	10	Y	Skin, blubber, liver, gonads, teeth, kidney, parasites	LTMM-FURG
Franciscana	São Paulo	2008-09 / n = 09	Y	Brain, lung, heart, stomach, intestine, liver, kidney, pancreas, adrenals, gonads, muscle, blubber, skin, teeth	C. P. Bertozzi, J. Marigo, & V. Ruoppolo, Projeto BioPesca and Faculdade de Medicina Veterinária - USP
Guiana dolphin	RJ	10	Y	<i>Kidney, liver, lung, muscle, stomach, intestine, heart, blubber.</i>	Lailson-Brito / Azevedo - UERJ
Guiana tucuxi	CE	3	Y	Blubber, muscle, liver, kidney, stomach contents	Ana Carolina Meirelles/Aquasis
Rough-toothed dolphin	RJ	2	Y	<i>Kidney, liver, lung, muscle, stomach, intestine, heart, blubber.</i>	Lailson-Brito / Azevedo - UERJ

4.3 Samples from stranded animals

Species	Area/stock	Tissue type(s)	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Bottlenose dolphin	SC	skeletons, skin samples	4	Y	-	MOVI

Bottlenose dolphin*	WS Atlantic (Southern Brazil)	Skin, gonads, stomach, skull, teeth, liver, blubber, kidney	4	Y	-	LTMM-FURG
Bottlenose dolphin	WS Atlantic (Southeastern &Southern Brazil)	Skin, blubber, muscle, teeth, liver, gonads, kidney, stomach, skull	2	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.co m.br
Bottlenose dolphin	WS Atlantic (Southeastern &Southern Brazil)	Skin, blubber, muscle, teeth, liver, gonads, kidney, stomach, skull	2	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.co m.br
Bottlenose dolphin	CE	Kidney, Liver, muscle, skull, skin, teeth	2	Y	2	Ana Carolina Meirelles/Aquasis
Bottlenose dolphin	WS Atlantic (Southern Brazil)	Muscle, Blubber	1	Y	0	GEMARS
Southern right whale	WS Atlantic (SC)	skeleton	1	Y	-	MOVI
Southern right whale	WS Atlantic (RS)	Muscle, Blubber	1	Y	0	GEMARS
Humpback whale	BSA (SC)	skeleton , skin samples	1	Y	-	MOVI
Humpback whale	BSA (ES, BA)	Skin, blubber, lung, intestine, stomach, heart, liver, blood, kidney, bones	9	Y	0	Milton Marcondes/IBJ
Humpback whale	BSA (RJ)	Blubber, skin	1	N	-	Lailson-Brito / Azevedo - UERJ
Humpback whale	BSA (Southeastern Brazil)	Skull, skeleton	1	Y	0	A.R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.co m.br
Humpback whale	BSA (CE)	Skin	1	Y	1	Ana Carolina Meirelles/Aquasis
Humpback whale	BSA (SE)	Baleen, Liver, skin, bubbler, kidney, heart	2	Y	0	A. Hubner/IMA
Antarctic minke whale	SC	photography	1	Y	-	MOVI
Antarctic minke whale*	WS Atlantic (Southern Brazil)	Skin, gonads, stomach, skull, teeth, liver, blubber, kidney	1	Y	-	LTMM-FURG
Common minke whale	WS Atlantic (Southern Brazil)	Muscle, Blubber	1	Y	0	GEMARS
Dwarf minke whale	SC	photography *	1	Y	-	MOVI
Bryde's whale	BA	Bones; faeces; tongue; kidney; liver; lung; blubber; skin ; blood	1	Y	1	Milton Marcondes/IBJ
Bryde's whale	WS Atlantic (Southeastern Brazil)	Skin, blubber, muscle, liver, kidney, stomach, skull	2	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.co m.br
Fin whale	Northeastern Brazil, SW Atlantic	Liver, skin, bubbler, kidney, heart, intestinal tissue	1	Y	0	A. Hubner/IMA

<i>Balaenoptera sp</i>	WS Atlantic (Southeastern & Southern Brazil)	blubber, muscle, skull	3	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Franciscana*	WS Atlantic (Southern Brazil)	Skin, gonads, stomach, skull, teeth, liver, blubber, kidney	54	Y	-	LTMM-FURG
Franciscana	WS Atlantic (Southern Brazil)	Heart	1	Y	0	Simões-Lopes, P.C. - LAMAQ
Franciscana	WS Atlantic (Southeastern & Southern Brazil)	Skin, blubber, muscle, teeth, liver, kidney, stomach, skull	11	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Franciscana	WS Atlantic (Southern Brazil)	Muscle, Blubber	1	Y	0	GEMARS
Common dolphin	WS Atlantic (Southern Brazil)	skeleton of adult female and its fetus (preserved in alcohol)	1	Y	-	MOVI
Common Dolphin	WS Atlantic (Southern Brazil)	teeth, skull	1	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Common dolphin	WS Atlantic (Southern Brazil)	Muscle, Blubber	1	Y	0	GEMARS
Rough-toothed-dolphin	WS Atlantic (Southeastern Brazil)	Teeth, Skull, skeleton	1	y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Rough-toothed-dolphin						
Cuvier beaked whale**	Trindade Island	skull and vertebrae	1	Y	-	MOVI
Gervai's beaked whale	CE	Muscle	1	Y	1	Ana Carolina Meirelles/Aquasis
Guiana dolphin	States of Bahia and Espirito Santo	Skin, blubber, brain; liver; kidney and bones	4	Y	0	Milton Marcondes/IBJ
Guiana dolphin	RJ	<i>Kidney, liver, lung, muscle, stomach, intestine, heart, blubber, skin.</i>	15	Y	-	Lailson-Brito / Azevedo - UERJ
Guiana dolphin	WS Atlantic (Southeastern & Southern Brazil)	Skin, blubber, muscle, teeth, liver, kidney, stomach, gonads skull	29	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Guiana dolphin	WS Atlantic (CE)	Kidney, liver, muscle, blubber, stomach contents, skull, skin, teeth	10	Y	6	Ana Carolina Meirelles/Aquasis
Guiana dolphin	Northeastern Brazil (SE)	Stomach tissue and contents, liver, kidneys, muscle, lung tissue, parasites and complete skeleton	8	Y	0	A. Hubner/IMA
Killer whale*	WS Atlantic (Southern Brazil)	Skin, gonads, stomach, skull, teeth, liver, blubber, kidney	1	Y	-	LTMM-FURG
False killer whale	WS Atlantic (Southern)	Skin, blubber	1	Y	0	Simões-Lopes, P.C. -

	Brazil)					LAMAQ
<i>Stenella spp.*</i>	WS Atlantic (Southern Brazil)	Skin, gonads, stomach, skull, teeth, liver, blubber, kidney	3	Y	-	LTMM-FURG
Atlantic spotted dolphin	SC	skeleton	1	Y	-	MOVI
Atlantic spotted dolphin	WS Atlantic (Southern Brazil)	Gonads	1	Y	0	SIMÕES-LOPES, P.C.- LAMAQ
Atlantic spotted dolphin	CE	Skin	2	Y	1	Ana Carolina Meirelles/Aquasis
Atlantic spotted dolphin	RS	Muscle, Blubber	1	Y	0	GEMARS
Atlantic spotted dolphin	SP	Brain, lung, heart, stomach, intestine, liver, kidney, pancreas, adrenals, gonads, muscle, blubber, skin, teeth	2	y	0	C. P. Bertozzi, J. Marigo. & V. Ruoppolo, Projeto BioPesca and Faculdade de Medicina Veterinária - USP
Spinner dolphin	WS Atlantic (Southeastern Brazil)	Teeth, Skull , skeleton	1	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.co m.br
Spinner dolphin	CE	Blubber, muscle, heart, lung, stomach, kidney, gonads, parasites, skull, teeth	1	-	-	Ana Carolina Meirelles/Aquasis
Spinner dolphin	RS	Muscle, Blubber	1	Y	0	GEMARS
Spinner dolphin	FN	Various	X	Y	X	José Martins da Silva Júnior / CMA-FN
Clymene dolphin	CE	Blubber, muscle, heart, lung, stomach, kidney, ovaries, parasites, skull, teeth	1	Y	1	Ana Carolina Meirelles/Aquasis
Fraser dolphin*	WS Atlantic (Southern Brazil)	Skin, gonads, stomach, skull, teeth, liver, blubber, kidney	1	Y	-	LTMM-FURG
Sperm whale	WS Atlantic (Southeastern Brazil)	Skin, blubber skeleton	1	Y	0	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.co m.br
Sperm whale*	WS Atlantic (Southern Brazil)	Skin, gonads, stomach, skull, teeth, liver, blubber, kidney	1	Y	-	LTMM-FURG
Sperm whale	BA	Skin; blubber; bones	1	N	1	Milton Marcondes/IBJ
Sperm whale	CE	Skin, Muscle, Stomach contents, heart, lung	2	Y	2	Ana Carolina Meirelles/Aquasis
Sperm whale	Northeastern Brazil	Baleen, Liver, skin, bubbler, kidney, heart	1	Y	0	A. Hubner/IMA
Dwarf sperm whale	RS	Muscle, Blubber	1	Y	0	GEMARS
Dwarf sperm whale	CE	Blubber, muscle, lung, heart, liver, testicles, parasites, skull	1	Y	1	Ana Carolina Meirelles/Aquasis
Long-finned pilot whale	BA	bones	1	N	1	Milton Marcondes/IBJ
Fin whale	SP	?	1	?	1	amaranho@iron.com.br
Humpback whale	SP	?	1	?	1	amaranho@iron.com.br

Franciscana	SP	?	9	?	9	amaranho@iron.com.br
Atlantic spotted dolphin	SP	?	1	?	1	amaranho@iron.com.br
Bottlenose dolphin	SP	?	1	?	1	amaranho@iron.com.br

*e.g. liver, skin, blubber etc. – Collected tissue type varied among species and was dependent to the degree of decomposition of the individuals.

** Identified as *D. capensis* but listed as *Delphinus sp.* here given the taxonomic uncertainty and upcoming discussion in the 61th IWC on the taxonomic status of *Delphinus spp.*

4.4 Analyses/development of techniques

(R1) – Opportunistic field monitoring (or when called by the community or authorities) of stranded cetaceans has been conducted along the north and central coasts of Santa Catarina state. Usually the whole skeleton, skin and tissue samples are collected, as well as photographic material. All specimens and catalogued in the MOVI marine mammals collection, where they are available to professors, researchers and students interested on different aspects of the marine mammals biology.

(R2) – Age and growth, genetic, pollution and feeding analyses are being carried out.

(R9) – Pathology occurring in bycaught animals has been investigated. Franciscana gonads and teeth are under histological analyses for reproduction and age determination. Stomach contents of Guiana dolphins and franciscanas are being studied for to determine the species food items in Sao Paulo State. Lung samples of Guiana dolphins and franciscanas are being used in immunological studies. (Contact person: Juliana Marigo, BioPesca).

(R11) – Determination of cause of death was made in stranding events, including analyses of the interaction with fishing and boat. Anatomic studies, stomach contents and genetic analysis of mtDNA and nuclear DNA sequencing in the Fernando de Noronha Archipelago.

(R19) – During the period of this report we conducted molecular analysis mainly related to population structure, effective population size and demography of two cetacean species: southern right whale and bottlenose dolphin. It is important to mention that both studies started previously of the period of this report. In this sense we just mentioned the number of biopsies related to southern right whale in the table 4.1, which was the only cetacean species biopsied during this period.

For the Southern right whale we sequenced mtDNA and genotyped 10 microsatellite loci. In order to establish the sex ratio of southern right whales, we genetically determined the sex of calves collected from biopsies along the coast of Rio Grande do Sul and Santa Catarina States, in southern Brazil (Oliveira *et al*, in press).

5. POLLUTION STUDIES

(R2) – Pollution analysis (both trace metals and organochlorine) of samples listed in 4 are being conducted in collaboration with other research groups. Some results are already published (see references).

(R7) – We performed trace metals and organochlorines determinations in cetacean tissues of the Brazilian and Antarctic waters. Species: humpback whale, Bryde's whale, Guiana dolphin, franciscana, rough-toothed dolphin, bottlenose dolphin, common dolphin, Atlantic spotted dolphin and Fraser's dolphin.

(R9) – Blubber samples of Guiana dolphins and franciscanas were analysed for organochlorinated compounds (Alonso, 2008; Alonso et al, 2008) (Contact person: Mariana Alonso, BioPesca).

(R13) – Pollution analysis of trace metals and organochlorine samples of Bryde's whale, franciscana and Guiana bottlenose and rough-toothed dolphins are being conducted in association with researchers of Universidade Positivo (PR) and UNESP, (SP)

(R14) – Tissue samples were sent to Dr. José Lailson Brito Junior, *Laboratório de Mamíferos Aquáticos e Bioindicadores, Universidade do Estado do Rio de Janeiro*, Brazil, for heavy metals and organochlorine analyses.

(R15) – Pollution studies on marine mammals tissues have been carried in Sergipe coast with the Sergipe Federal University support.

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

6.2 Direct catches of large whales (commercial, aboriginal and scientific permits) for the calendar year 2007

6.2.1 Strandings or dead whales encountered at sea

Whale species	Sex	Location	Cause of death	Det.	Source or contact institution, contact name and telephone and/or e-mail
3 Sperm whale 1 Dwarf minke whale 1 Antarctic minke whale 1 <i>Humpback whale</i>		Southern Brazil	U U U U		Laboratório de Tartarugas e Mamíferos Marinhos, Instituto de Oceanografia e Museu Oceanográfico "Prof. E.C. Rios"; Universidade Federal do Rio Grande – FURG (LMM-FURG), Cx.Postal 474, Rio Grande - RS, Brasil - 96201-900 Contact: Eduardo Secchi Tel.: ++55-53-32336749 E-mail: edu.secchi@furg.br
Comments:					

6.3 Anthropogenic mortality of large whales for the calendar year 2007

6.3.1 Observed or reported ship strikes of large whales (including non-fatal events)

(R13)

6.3.2 Fishery bycatch of large whales

7. STATISTICS FOR SMALL CETACEANS

Strandings or dead SMALL CETACEANS encountered at sea

Species	Sex	Location	Cause of death	Det.	Source or contact institution, contact name and telephone and/or e-mail
53 franciscana 4 bottlenose dolphin 1 killer whale 1 Fraser's dolphin 3 spotted dolphins 2 small cetaceans		Southern Brazil	Mostly bycatch At least 1 bycatch U U U U		Laboratório de Tartarugas e Mamíferos Marinhos, Instituto de Oceanografia e Museu Oceanográfico "Prof. E.C. Rios"; Universidade Federal do Rio Grande – FURG (LMM-FURG), Cx.Postal 474, Rio Grande - RS, Brasil - 96201-900 Contact: Eduardo Secchi Tel.: ++55-53-32336749 E-mail: edu.secchi@furg.br
Short-finned pilot whale	F	3°52'20"S, 32°26'12"W	U	U	Centro Golfinho Rotador, P. Box 49, Vila do Boldró, s/n ; Fernando de Noronha/PE, 53990-000, Brazil. Contact: José Martins da Silva Júnior (rotador@golfinhorotador.org.br).
Comments:					

7.1 Corrections to earlier years' statistics for small cetaceans

7.2 Direct catches of small cetaceans for the calendar year 2008

7.3 Anthropogenic mortality of small cetaceans for the calendar year 2008

7.3.1 Observed or reported ship strikes of small cetaceans (including non fatal events)

(R13)

Species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
Guiana dolphin	M	5	xx/xx	WS Atlantic (Southeastern Brazil)	U	U	D*	Post mortem	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
* one male had its dorsal fin clipped and cut off his back.									

Species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
Guiana dolphin	F	4	xx/xx	WS Atlantic (Southeastern Brazil)	U	U	D*	Post mortem	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
* three females were pregnant									

7.3.2 Fishery bycatch of small cetaceans

(R2)

Species	Sex	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Franciscana	Bycatch		Southern Brazil		Sciaenidae	GNS	logbooks	Laboratório de Tartarugas e Mamíferos Marinhos, Instituto de Oceanografia e Museu Oceanográfico “Prof. E.C. Rios”; Universidade Federal do Rio Grande – FURG (LMM-FURG), Cx.Postal 474, Rio Grande - RS, Brasil - 96201-900 Contact: Eduardo Secchi Tel.: ++55-53-32336749 E-mail: edu.secchi@furg.br
Comments								

(R3)

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Guiana dolphin	F	1	11/08	17° 06' S 039° 10' W	D		GN	M	Milton Marcondes/IBJ
Comments: Entangled in gear, cut off and sank.									

(R7)

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact

Guiana dolphin	M/F	10	2008-2009	RJ		Mugil sp., Centropomus sp., Cynosciym sp., Anchoa sp., Micropogoni as furnierii.	GN	Fisherman called the lab. to collected animals. Net marks along dolphin bodies.	Lailson-Brito / Azevedo - UERJ
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(R8)

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observ	Source or contact
Bottlenose dolphin	m	1	26/8/2008	Florianópolis, SC	-	U	U	Beach	lamaqsl@ccb.ufsc.br

(R13)

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed	Source or contact
Guiana dolphin	F	4	xx/xx	WS Atlantic (Southeastern & Southern Brazil)	D	U	GN	M	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Guiana dolphin	M	2	xx/xx	WS Atlantic (Southeastern Brazil)	D	U	GN	M	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Guiana dolphin	U	2	xx/xx	WS Atlantic (Southern Brazil)	D	U	GN	M	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Franciscana	F	2	xx/xx	WS Atlantic (Southeastern & Southern Brazil)	D	U	GN	M	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br
Franciscana	U	1	xx/xx	WS Atlantic (Southeastern & Southern Brazil)	D	U	GN	M	A. R.Santos-Lopes – IPeC gruporesgate_ipecc@yahoo.com.br

Comments: these data were collected by the monitoring team and rescue.

(R14)

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Guiana dolphin	-	1	Sep/2008	03°35'S; 33°46'W	D		GN	M	Ana Carolina Meirelles/Aquasis
Guiana dolphin	M	1	Jan/2009	04°32'S; 37°40'W	D		GND	M	Ana Carolina Meirelles/Aquasis
Guiana dolphin	-	1	Jan/2009	04°10'S; 38°5'W	D		GN	M	Ana Carolina Meirelles/Aquasis

Comments: Meat removed.

8. STRANDINGS

(R1)

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Antarctic minke whale	1	1	Michael Mincarone. MOVI	mincarone@univali.br

Antarctic minke whale	1		Michael Mincarone. MOVI	mincarone@univali.br
Southern right whale	1	1	Michael Mincarone. MOVI	mincarone@univali.br
Humpback whale	1	1	Michael Mincarone. MOVI	mincarone@univali.br
Common dolphin *	1	1	Michael Mincarone. MOVI	mincarone@univali.br
Franciscana	2	2	Michael Mincarone. MOVI	mincarone@univali.br
Atlantic spotted dolphin	1	1	Michael Mincarone. MOVI	mincarone@univali.br
Common dolphin	4	4	Michael Mincarone. MOVI	mincarone@univali.br
<i>Cuvier's beaked whale</i>	1	1	Michael Mincarone. MOVI	mincarone@univali.br

* Identified as *D. capensis* but listed as *Delphinus* sp. here given the taxonomic uncertainty and upcoming discussion in the 61th IWC on the taxonomic status of *Delphinus* spp.

(R2) – Systematic weekly beach surveys are conducted along the ca. 400Km central and southern coast of Rio Grande do Sul State, southern Brazil aiming to record and collect samples from stranded marine mammals. For further information, contact Eduardo Secchi: Laboratório de Tartarugas e Mamíferos Marinhos, Instituto de Oceanografia e Museu Oceanográfico “Prof. E.C. Rios”; Universidade Federal do Rio Grande – FURG, Cx.Postal 474, Rio Grande - RS, Brasil - 96201-900; E-mail: edu.secchi@furg.br

(R3) – The IBJ is member of the Brazil Northeastern Stranding Network since 2000. The Marine Mammal Stranding Response Program monitors strandings along the Abrolhos Bank and Northeastern Bahia state since 2002. The veterinary staff performs necropsies whenever possible in order to investigate the cause of death. Eventually the veterinary staff is required by the Brazilian Environmental Agency (ICMbio) to respond to live strandings of large whales along the Brazilian coast.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Humpback whale	13	6	Milton Marcondes/ IBJ	milton.marcondes@baleiajubarte.org.br
Guiana dolphin	4	1	Milton Marcondes/ IBJ	milton.marcondes@baleiajubarte.org.br
Sperm whale	2	0	Milton Marcondes/ IBJ	milton.marcondes@baleiajubarte.org.br
Long-finned pilot whale	1	0	Milton Marcondes/ IBJ	milton.marcondes@baleiajubarte.org.br
Bryde's whale	1	1	Milton Marcondes/ IBJ	milton.marcondes@baleiajubarte.org.br

(R7) – Cetacean strandings are monitored by a network.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Guiana dolphin	15	0	JOSÉ LAILSON BRITO JR; ALEXANDRE AZEVEDO AND PAULO RENATO DORNELES MAQUA	lailson@uerj.br
Humpback whale	1	0		azevedo.alex@uerj.br dornelespr@gmail.com

(R8) – Cetacean stranding reporting processes is opportunistic and also based on phone calls.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
False killer whale	1	1	Simões-Lopes, P.C.	lamaqsl@ccb.ufsc.br
Atlantic spotted dolphin	1	1	Simões-Lopes, P.C.	lamaqsl@ccb.ufsc.br
Common dolphin	1	1	Simões-Lopes, P.C.	lamaqsl@ccb.ufsc.br
Bottlenose Dolphin	1	1	Simões-Lopes, P.C.	lamaqsl@ccb.ufsc.br
Franciscana	4	4	Simões-Lopes, P.C.	lamaqsl@ccb.ufsc.br

(R11) –

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Short finned pilot whale	1	1	Jose Martins da Silva-Jr / CMA-FN	Jose-martins.silva-junior@icmbio.gov.br

(R13) – Through regular accompaniment of stranding animals and coastal sighting. Studies of stranded cetaceans to determinate the cause of death, age identification, tissue and biological samples, contamination levels, anatomic studies and genetic analysis are being conducted through the material collected of the carcass of stranded cetaceans. In the region along the São Paulo state southern coast and in the estuary complex of Iguape-Cananéia-Ilha Comprida - southeastern Brazil and northern of Parana state – southern Brasil. (**Contact person:** A. R. Santos-Lopes/IpeC).

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
<i>Bryde's whale</i>	2	2	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Humpback whale</i>	1	1	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Balaenoptera sp</i>	3	3	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Sperm whale</i>	1	1	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Franciscana</i>	11	11	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Guiana dolphin</i>	29	29	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Bottlenose dolphin</i>	2	2	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Common dolphins</i>	1	1	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Spinner dolphin</i>	1	1	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br
<i>Rough-toothed dolphin</i>	1	1	A. R.Santos-Lopes – IpeC	gruporesgate_ipec@yahoo.com.br

(R14) - Stranding records were obtained through opportunistic surveys and reports from fishermen, government officials and tourists, most of them as part of the collaboration network established during previous surveys. Some carcasses were also found during awareness campaigns.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Sperm whale	2	2	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Humpback whale	1	1	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Guiana dolphin	18	18	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Rough-toothed dolphin	1	1	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Cuvier's Beaked whale	1	1	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Atlantic Spotted dolphin	1	1	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Clymene dolphin	2	2	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Spinner dolphin	1	1	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Bottlenose dolphin	2	2	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br
Dwarf sperm whale	1	1	Ana Carolina Meirelles/ Aquasis	cameirelles@yahoo.com.br

(R15)

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Guiana dolphin	10	10	A. Hubner/IMA	adolfo@mamiferosaquaticos.org
Humpback whale	2	2	A. Hubner/IMA	adolfo@mamiferosaquaticos.org

Sperm whale	1	1	A. Hubner/IMA	adolfo@mamiferosaquaticos.org
Fin whale	1	0	A. Hubner/IMA	adolfo@mamiferosaquaticos.org

(R19) – Two-days of beach surveys along about 270km of coastline were conducted in one occasion only. Stranded animals were collect based on callings from local community.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Franciscana	1	1	GEMARS	gemars@gemars.org.br
Common minke whale	1	1	GEMARS	gemars@gemars.org.br
Southern right whale	2	2	GEMARS	gemars@gemars.org.br
Bottlenose dolphin	1	1	GEMARS	gemarsr@gemars.org.br
Spinner dolphin	1	1	GEMARS	gemars@gemars.org.br
Common dolphin	1	1	GEMARS	gemars@gemars.org.br
Dwarf sperm whale	1	1	GEMARS	gemars@gemars.org.br
Atlantic Spotted dolphin	1	1	GEMARS	gemars@gemars.org.br

(R21) – Strandings where reported by local authorities direct to the Right Whale Project team or through the REMASUL (Southern Brazil Aquatic Mammals Stranding Network).

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Southern right whale	3 (2 calves and one adult)	3*	Karina Rejane Groch, Brazilian Right Whale Project	krgroch@terra.com.br ; karina@baleiafranca.org.br

*All animals were found dead.

9. OTHER STUDIES AND ANALYSES

(R3) - Humpback Whales – Bioacoustic studies were conducted to recording humpback whales songs and anthropogenic noises in Bahia, Espirito Santo and Sergipe states. We got about 20 hours of recording from 30 different humpback whale groups. We also recorded in September 2008 oil platforms in Sergipe State, as well whale-watching boats in Praia do Forte, Bahia State. Contact person/institute: Marcos Rossi-Santos/IBJ.

(R5) – Humpback Whales - A multi-year study (2003 to 2005) on the behavioral ecology of humpback whale male singers and the effects of boat traffic (mostly from whale watching boats) on humpback whale communication using passive acoustics was completed in the Abrolhos Bank region (data collected during boat sightings and using autonomous recording devices called “popups” from BRP; data analyses partially done of the continuous 24-hour recordings at 2kHz sampling frequency covering most of the breeding season in the 3 years sampled; Sousa-Lima 2007 included in Van Parijs et al In press). Vocal males were located and their movements tracked to assess their distribution in space and time as well as the effect of boat traffic on these distributions. Results of the temporal distribution from 2003 (Sousa-Lima & Clark 2008) indicate that an increase in boat noise results in a decrease in the number of detections of vocally active males. The distribution of vocal males was also affected by time and moon phase (Sousa-Lima & Clark 2008). Preliminary results of a before-during-after study of the spatial-acoustic responses of male singers to an approaching whale-watching boat (2005 data) indicate that 45% of the singers stopped singing, and singers spend 23% more time swimming away from the approaching boat when it was within 4km (Sousa-Lima & Clark In press). Ongoing analyses of the 2005 data (two different popup arrays in a control area with rare boat traffic and in a treatment array with frequent boat traffic) already suggests a difference in the diel distribution of vocally active males between the control area (Sábato 2008) and the treatment area which is more pronounced during the period of peak traffic of whale-watching boats arriving in the area (Sousa-Lima, unpublished). (**Contact person:** Renata S. Sousa-Lima, BRP/UFGM)

(R21) – Southern right whale: whale/boat interaction during whalewatching operations (Groch and Correa, ongoing analysis).

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Appendix 1. FOA fishing descriptions and codes

FAO FISHING GEAR CATEGORIES:		FALLING GEAR	
SURROUNDING NETS		Cast nets	FCN
With purse lines	PS	Falling gear (not specified)	FG
One-boat operated purse seines	PS1	GILLNETS AND ENTANGLING GEAR	
Two-boat operated purse seines	PS2	Set gillnets (anchored)	GNS
Without purse lines (lampara)	LA	Driftnets	GND
SEINE NETS		Encircling gillnets	GNC
Beach seines	SB	Fixed gillnets (on stakes)	GNF
Boat seines	SV	Trammel nets	GTR
Danish seines	SDN	Combined gillnet-trammel nets	GTN
Scottish seines	SSC	Gillnets and entangling gillnets (not specified)	GEN
Pair seines	SPR	Gillnets (not specified)	GN
Seine nets (not specified)	SX	TRAPS	
TRAWLS		Stationary uncovered pounds nets	FPN
Bottom trawls	TBB	Pots	FPO
Beam trawl	OTB	Fyke nets	FYK
Otter trawls (side or stern)	PTB	Stow nets	FSN
Pair trawls	TBN	Barriers, fences, weirs, etc	FWR
Nephrops trawls	TBS	Aerial traps	FAR
Shrimp trawls (not specified)	TM	Traps (not specified)	FIX
Midwater trawls		HOOKS AND LINES	
Otter trawls (side or stern)	OTM	Handlines and pole-lines (hand operated)	LHP
Pair trawls	PTM	Handlines and pole-lines (mechanised)	LHM
Shrimp trawls	TMS	Set longlines	LLS
Midwater trawls (not specified)	TM	Drifting longlines	LLD
Otter twin trawls	OTT	Longlines (not specified)	LL
Otter trawls (not specified)	OT	Trolling lines	LTL
Pair trawls (not specified)	PT	Hooks and lines (not specified)	LX
Other trawls (not specified)	TX	GRAPPLING AND WOUNDING	
DREDGES		Harpoons	HAR
Boat dredges	DRB	HARVESTING MACHINES	
Hand dredges	DRH	Pumps	HMP
LIFT NETS		Mechanised dredges	HMD
Portable lift nets	LPN	Harvesting machines (not specified)	HMX
Boat-operated lift nets	LNB	MISCELLANEOUS GEAR	MIS
Shore operated stationary lift nets	LNS	RECREATIONAL FISHING GEAR	RG
Lift nets (not specified)	LN	GEAR NOT KNOWN OR NOT SPECIFIED	NK
		SHARK CONTROL NETS	NSC
		DERELICT FISHING GEAR	