CMS

2017 - NATIONAL REPORT OF PARTIES ON THE IMPLEMENTATION OF THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS

The deadline for submission of the reports is 24 April 2017. The reporting period is from May 2014 to April 2017.

Parties are encouraged to respond to all questions. Parties are also requested to provide comprehensive answers, including, where appropriate, a summary of activities, information on factors limiting action and details of any assistance required.

The reporting format was agreed by the Standing Committee at its 40th Meeting (Bonn, November 2012) for mandatory use by Parties, for reports submitted to the Eleventh Meeting of the Conference of the Parties (COP11). The 45th meeting of the Standing Committee recommended the use of the same format for reports submitted to COP12, with necessary adjustments to take into account relevant COP11 decisions, in particular amendments to the Appendices and resolutions.

COP Resolution 9.4 adopted at Rome called upon the Secretariats and Parties of CMS Agreements to collaborate in the implementation and harmonization of online reporting implementation. The CMS Family Online Reporting System (ORS) has been successfully implemented and used by AEWA in their last Meeting of the Parties (MOP 5, 2012) reporting cycle. CMS now offers the Convention's Parties to use the ORS for submitting their national reports for the COP11 (2014) reporting cycle.

Please enter here the name of your country
› Brazil

Which agency has been primarily responsible for the preparation of this report?
› Ministry of the Environment

Please list any other agencies that have provided input
› Department of Ecosystems Conservation – DECO/MMA
Territorial Zoning Department - DZT/MMA
Chico Mendes Institute for Biodiversity Conservation - ICMBio
The National Center for Bird Conservation- CEMAVE/ICMBio
National Center for Research and Conservation of Reptiles and Amphibians - RAN/ICMBio
National Center for Research and Conservation of Aquatic Mammals - CMA/ICMBio
National Center for. Research and Caves Conservation - CECAV/ICMBio
Departement of Sustainable Use of Biodiversity and Forests - DBFLO/IBAMA
Center for Research and Management of Fishery Resources in Southeast and South Coast – CEPSUL/ICMBio
National Center for Research and Conservation of Marine Turtles and Marine Biodiversity of the East - TAMAR

I(a). General Information

Please enter the required information in the table below:

Party

Date of entry into force of the Convention in your country
› Brazil approved the text of the Convention (Legislative Decree n° 387 of 15 October 2013); Brazil became a Party to the Convention on 1 October 2015; Brazil promulgated CMS (Executive Decree No. 9.080 of 16 June 2017)

Territories to which the Convention applies
› All Brazilian territory

Designated National Focal Point

Full name of the institution
› Ministry of the Environment
Ministry of Foreign Affairs

Name and title of designated Focal Point
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Ministry of the Environment
Carlota de Azevedo Bezerra Vitor Ramos
Third Secretary
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Submission

Name and Signature of officer responsible for submitting national report

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Implementation

Competent Authority:
› Ministry of the Environment

Relevant implemented legislation:
› Legislative Decree n° 387 of 15 October 2013
Executive Decree nº 9.080 of 16 June 2017

Other relevant Conventions/ Agreements (apart from CMS) to which your country is a Party:
› The Convention for the Protection of Flora, Fauna, and Natural Scenic Beauty of the Americas (Legislative Decree No. 3 of 1948 and Decree No. 58.054 of March 23, 1966);
Convention on Biological Diversity - CBD. Brazil ratified and promulgated CBD (Legislative Decree n° 2of 8 February 1994 and Decree n° 2,519 of 16 March 1998);
Convention on International Trade in Endangered Species of Wild Fauna and Flora – CITES. Brazil ratified and promulgated CITES (Legislative Decree n° 54 of 24 June 1975 and Decree n° 92,446 of 7 March 1986);
Ramsar Convention. Brazil ratified and promulgated the Ramsar Convention (The Convention on Wetlands of International Importance; Legislative Decree n° 33 of 16 June 1992 and Decree n° 1,905 of 16 May 1996).
Brazilian National Strategic Plan for Protected Areas (Decree n° 5,758of 13April 2006) contains objective and strategies to implement this Convention;
United Nations Convention on the Law of the Sea - UNCLOS. Brazil ratified and promulgated UNCLOS (Legislative Decree n° 5 of 9 November 1987and Decree n° 1,530 of 22 June 1995);
United Nations Framework Convention on Climate Change - UNFCCC. Brazil ratified and promulgated UNFCCC (Legislative Decreen° 1of 3 February 1994 and Decree n° 2,652of 1 July 1998);
United Nations Convention to Combat Desertification - UNCCD. Brazil ratified and promulgated UNCCD (Legislative Decree nº 28 of 12 June 1997 and Decree n° 2,741of 20 August 1998);
The Convention on the Conservation of Antarctic Marine Living Resources – CAMLR;
Inter-American Convention for the Protection and Conservation of Sea Turtles;
International Whaling Comission – IWC;
The International Commission for the Conservation of Atlantic Tunas – ICCAT;
International Convention for the Prevention of Pollution from Ships, 1973

National policy instruments (e.g. national biodiversity conservation strategy, etc.):
› National Biodiversity Strategy and Action Plan - https://www.cbd.int/doc/world/br/br-nbsap-v3-en.pdf
Brazilian National Biodiversity Targets 2011-2020 - CONABIO Resolution 06/2013
Brazilian National Program for the Conservation of Endangered Species (Pro-species) - was established by the Ordinance nº 43, of 31 January 2014, in order to adopt prevention, conservation, management and administration to minimize the threats and the risk of species extinction.
Lists of Endangered Brazilian Species of Fauna:
Ordinance No. 444/2014 Endangered Fauna:
pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014
Ordinance No. 445/2014 Endangered Fish and Aquatic Invertebrate:
pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=126&data=18/12/2014
National Action Plans for the Recovery and Conservation of Endangered Species – PANs
Ordinance ICMBio nº. 78, de 03 de setembro de 2009, que cria os Centros Nacionais de Pesquisa e Conservação do Instituto Chico Mendes e lhes confere atribuição;
Ordinance MMA n° 43, de 31 de janeiro de 2014, que institui o Programa Nacional de Conservação das Espécies Ameaçadas de Extinção PróEspécies;
DECREE No. 4.399, August 22, 2002. Establishes principles and guidelines for the implementation of the National Biodiversity Policy.

CMS Agreements/MoU

Please indicate whether your country is part of the following Agreements/MoU. If so, please indicate the competent national institution

Wadden Sea Seals (1991)

Wadden Sea Seals (1991)

☑ Non Range State

EUROBATS (1994)

EUROBATS (1994)

☑ Non Range State

ASCOBANS (1994)

ASCOBANS (1994)

☑ Non Range State

AEWA (1999)

AEWA (1999)
☑ Non Range State

ACAP (2001)

ACAP (2001)
☑ Party

You have attached the following documents to this answer.

sumario-ingles-albatrozes-petreis.pdf - National Action Plan for the Conservation of Albatrosses and Petrels (PLANACAP)

Focal Point

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Gorilla Agreement (2008)

Gorilla Agreement (2008)
☑ Non Range State

ACCOBAMS (2001)

ACCOBAMS (2001)
☑ Non Range State

Siberian Crane MoU (1993/1999)

Siberian Crane MoU (1993/1999)
☑ Non Range State

Slender-billed Curlew MoU (1994)

Slender-billed Curlew MoU (1994)
☑ Non Range State

Atlantic Turtles MoU (1999)

Atlantic Turtles MoU (1999)
☑ Non Range State

Middle-European Great Bustard MoU (2001)

Middle-European Great Bustard MoU (2001)
☑ Non Range State

IOSEA Marine Turtles MoU (2001)

IOSEA Marine Turtles MoU (2001)
☑ Non Range State

Bukhara Deer MoU (2002)

Bukhara Deer MoU (2002)
☑ Non Range State

Aquatic Warbler MoU (2003)

Aquatic Warbler MoU (2003)
☑ Non Range State

West African Elephants MoU (2005)

West African Elephants MoU (2005)
☑ Non Range State

Pacific Islands Cetaceans MoU (2006)

Pacific Islands Cetaceans MoU (2006)
☑ Non Range State

Saiga Antelope MoU (2006)

Saiga Antelope MoU (2006)
☑ Non Range State

Southern South American Grassland Birds MoU (2007)

Southern South American Grassland Birds MoU (2007)
☑ Signatory

Contact point

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Ruddy-headed Goose MoU (2006)

Ruddy-headed Goose MoU (2006)
☑ Non Range State

Monk Seal in the Atlantic MoU (2007)

Monk Seal in the Atlantic MoU (2007)
☑ Non Range State

Dugong MoU (2007)

Dugong MoU (2007)
☑ Non Range State

Western African Aquatic Mammals MoU (2008)

Western African Aquatic Mammals MoU (2008)
☑ Non Range State

Birds of Prey (Raptors) MoU (2008)

Birds of Prey (Raptors) MoU (2008)
☑ Non Range State

High Andean Flamingos MoU (2008)

High Andean Flamingos MoU (2008)
☑ Non Range State

Sharks MoU (2010)

Sharks MoU (2010)
☑ Non-signatory Range State

South Andean Huemul MoU (2010)

South Andean Huemul MoU (2010)
☑ Non Range State

Involvement of other government departments/NGOs/private sector

1. Which other government departments are involved in activities/initiatives for the conservation of migratory species in your country? (Please list.)
› Chico Mendes Institute for Biodiversity Conservation – ICMBio
Brazilian Institute of Environment and Renewable Natural Resources (IBAMA)
Ministry of Agriculture, Livestock, and Supply (MAPA)
Ministry of Industry, Foreign Trade and Services (MDIC)

2. If more than one government department is involved, describe the interaction/relationship between these government departments:
› The Ministry of the Environment (MMA) is responsible for development and implementation of biodiversity conservation, restoration and sustainable use policies. ICMBio, established in 2007, is responsible for the implementation of the national policy on federal protected areas and endangered species. IBAMA is mainly responsible for law enforcement and licensing, in co-operation with ICMBio in protected areas and with state

and municipal agencies.
Ministry of Environment is responsible for implementing of Convention with cooperation of other ministries

3. Has a national liaison system or committee been established in your country?
☑ Yes

› The National Biodiversity Commission (CONABIO) co-ordinates the design of the national biodiversity policy, oversees its implementation and monitors progress towards Brazil’s commitments under the Convention on Biological Diversity (CBD). Established in 2003, CONABIO is chaired by the MMA and includes respresentatives of nine ministries, civil society, the private sector and academia. Several other federal ministries and co-ordination bodies are involved in biodiversity policy.

4. List the main non-governmental organizations actively involved in activities/initiatives for the conservation of migratory species in your country, and describe their involvement:
› □ Albatroz Project - http://projetoalbatroz.org.br/
The Albatroz Project is a non governamental organization that aims to reduce the unintentional capture of albatrosses and petrels. Its main project is the development of research to support public policies and the promotion of environmental education aimed at fishermen and schools. A result of that effort is the development of protective measures for the birds, the sensibilization of the society about the importance of the albatrosses and petrels existance for the marine environment and the fishermen’s adhesion to measures that reduce the capture of those birds in Brazil.
□ SAVE BRASIL - http://www.savebrasil.org.br/
SAVE Brasil counts with the Shorebirds Conservation Program, which has as its main goal the assurance of long term conservation of shorebirds and its habitats. The actions and projects are carried out within the scope of the Shorebirds Conservation Program and are in line with the National Action Plan for Shorebirds Conservation (PAN Limícolas), the Atlantic Flyway Shorebird Initiative, e o BirdLife Americas Flyways Program.
□ OCEANA Brasil - http://brasil.oceana.org/
Oceana seeks to protect and increase the ocean’s biodiversity through changes in public policies in countries who hold the larger share of the world’s marine resources. Oceana is committed to promoting science based fisheries management and restoring the world’s oceans.
□ Tamar Project - http://tamar.org.br/
Tamar’s main mission is to carry out research on, conserve and handle five sea turtle species that exist in Brazil, all of which are currently endangered, protecting around 1.100 km of beaches, in 25 locations in feeding, spawning, growth and resting areas for those animals, at the shore of oceanic islands, in nine Brazilian states. The project is known worldwide as one of the most successful experiences in marine conservation and serves as a model to other countries, especially because it directly involves coastal communities in its socioenvironmental endeavors. The National Sea Turtle Conservation Program, executed in cooperation between the Brazilian Sea Turtle Protection and Research Center – Centro Itamar, linked to the Biodiversity Directorate of the Chico Mendes Institute for Biodiversity Conservation – ICMBio, an agency of the Ministry of the Environment, and the Pró-Tamar Foundation, a non-profit, non-governmental institution, founded in 1988 and considered of Federal Public Utility since 1996.
□ Brazilian Society for the Study of Elasmobranchs – SBEEL - http://sbeel.org.br/
DADE BRASILEIRA PARA O ESTUDO DE ELASMOBRÂNQUIOS – SBEEL
The Brazilian Society for the Study of Elasmobranchs, founded on August 01st 1997, is a non-profit civil entity of cultural-scientific nature. Its main goals are: gathering people interested in developing the study of elasmobranchs, advocated by their legitimate associate rights; promoting, stimulating and supporting elasmobranch studies in the areas of teaching, research and community actions; looking out for the conservation and rational use of the elasmobranch fauna.
□ Humpback Whale Institute - http://www.baleiajubarte.org.br
The Humpback Whale Institute (IBK) is a Civil Society Organization in the Public Interest (OSCIP) that has as its mission “conserving humpback whales and other cetaceans in Brazil, contributing to harmonize human activity and the preservation of our natural patrimony”.
□ Right Whale Project - http://www.baleiafranca.org.br/
Based on the National Right Whale Conservation Center, in Itapirubá Beach, Imbiatuba, SC, the Project carries out activities aimed at the research and long-term conservation of right whales.
□ Spinner Dolphin Project - www.golfinhorotador.org.br.
The Spinner Dolphin Project is executed by the Spinner Dolphin NGO and is sponsored by Petrobras. The project’s mission is to develop research, environmental education and community actions in support of the spinner dolphin conservation in Fernando de Noronha as well as the conservation of marine biodiversity.
□ “Friends of the Manatees” Association – AMPA - http://www.ampa.org.br/
The “Friends of the Manatees” Association was created 14 years ago with the objective of promoting research and the protection of the Amazonian aquatic mammals.

I(b). Information about involved Authorities

Identify the ministry, agency/department or organization that is responsible for leading actions relating to Appendix I species

1- Birds
› Biodiversity Conservation Directorate - DIBIO/ICMBio
The National Center for Bird Conservation- CEMAVE/ICMBio

2- Aquatic Mammals
› Biodiversity Conservation Directorate - DIBIO/ICMBio
National Center for Research and Conservation of Aquatic Mammals - CMA/ICMBio

3- Reptiles
› Biodiversity Conservation Directorate – DIBIO/ICMBio
National Center for Research and Conservation of Reptiles and Amphibians (RAN/ICMBio)
National Center for Research and Conservation of Marine Turtles and Marine Biodiversity of the East - TAMAR Project

4- Terrestrial Mammals
› Biodiversity Conservation Directorate – DIBIO/ICMBio
National Research Centrefor the Conservation of Natural Predators – CENAP/ICMBio
National Center for Research and Conservation of Brazilian Primates – CPB/ICMBio
National Center for Research and Caves Conservation - CECAV/ICMBio

5- Fish
› Biodiversity Conservation Directorate – DIBIO/ ICMBio
National Center Research forConservation of Freshwater Fishes CEPTA/ICMBio
Center for Research and Management of Fishery Resources of the North Coast - CEPNOR/ICMBio
Center for Research and Management of Fishery Resources in Southeast and South Coast – CEPSUL/ICMBio
National Center for Research and Conservation of Northeast Marine Biodiversity – CEPENE/ICMBio

II. Appendix I species

1. BIRDS

1.1 General questions on Appendix I bird species

1. Is the taking of all Appendix I bird species prohibited by the national implementing legislation cited in Table I(a) (General Information)?
☑ No

1a. If the taking of Appendix I bird species is prohibited by law, have any exceptions been granted to the prohibition?
☑ No

2. Identify any obstacles to migration that exist in relation to Appendix I bird species:
☑ By-catch
☑ Habitat destruction
☑ Wind turbines
☑ Pollution

2a. What actions are being undertaken to overcome these obstacles?
› Some actions were related on an National Action Plan for Shorebirds Conservation (PAN Aves Limícolas Migratórias) and have been promoted by institutions and researchers involved since 2013 (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-aves-limicolas-migratorias/matriz-planejamento-aves-limicolas-versao-ingles.pdf).
The following actions are conducted by CEMAVE/ICMBio/MMA and partners involved in PAN:
1. Identify and map areas used by shorebirds species in Brazil (landing, spot-over, wintering, breeding) to determine the critical habitats for their conservation;
2. Conduct studies on biology and ecology of threatened shorebirds species in Brazil; on zoonosis and on contamination of shorebirds;
3. Elaborate proposals to create new protected areas on critical habitats for shorebird conservation;
4. Develop and implement a monitoring program for threatened shorebird species in Brazil, especially in wintering sites on protected areas, including the maintenance of the National Banding System (SNA http://www.icmbio.gov.br/cemave/sna.html) and adoption of panamerican protocols for marking migratory birds (PASP http://www.whsrn.org/sites/default/files/file/pasp_shorebird_marking_protocol_-_final_sept_2014.pdf)
5. Elaborate and share the annual report of concentration areas and migratory routes for birds, including shorebirds, with recommendations for the environmental licensing of windfarms.

2b. Please report on the progress / success of the actions taken.
› 1. Many important wintering areas for shorebird have already been identified. Some of them are already protected by law and some are recognized as important by Convention on Wetlands of International Importante (Ramsar Convention) or as Western Hemisphere Shorebird Reserves Network site (WHSRN). See attached file.
For sites as Maranhão Recesses and Salgado of Pará – both important and very big, there is a project to identify the critical habitats inside the large area
2. Independent studies about shorebirds have been conducted by Brazilian Universities, mainly FURG, UNISINOS, UFRPE, UFSE, UFPB, USP e UFMA. CEMAVE has been coordinating since 2016 the project “Monitoring and conservation of shorebirds in Brazil”, wich makes feasible studies in partnership with Brazilian and foreing researchers to meet National Plan’s actions.
3. The following areas were indicated for creation of protected areas and ICMBio has been working on the means of forwarding some of them:
For Calidris subruficollis protection: Torotama Island, Rio Grande, RS; Albardão and Molhes, Rio Grande, RS.
For Calidris canutus rufa, Calidris pusilla and other migratory Scolopacidae and Caradriidae spp: Timonhas dam area, PI; Cajuais Bank, Icapuí, CE; Restinga Island, Cabedelo, PB; Coroa do Avião, Igarassu, PE; Mangue Seco/Jandaíra, BA; Feia Lagoon and Ribeira Lagoon, RJ; Babitonga Bay, São Francisco Southern Coastline, SC; médio coastline, Albardão and molhes, RS.
4. Once established the protocol for National Program for Monitoring Shorebirds by Advisory Group of National Action Plan for Shorebird Conservation (PAN) it has been developed in Parque Nacional da Lagoa do Peixe (RS) by National Park’s team and shared to use on the federal protected areas managed by ICMBio. CEMAVE have been distributed bands and disseminate the PASP protocol to brazilian researchers and have been including shorebirds marking and monitoring protocols in its regular trainings.
5. The annual report of concentration areas and migratory routes for birds in Brazil were produced in 2015 and 2016 (http://www.icmbio.gov.br/portal/images/stories/comunicacao/publicacoes/Miolo-Relatorio-Rotas-Migratorias_10-02-2015_Corrigido.pdf).

You have attached the following documents to this answer.

Anexo_-_Tabela_Important_Sites_Shorebirds.pdf - Important sites in Brazil for shorebird conservation

2c. What assistance, if any, does your country require in order to overcome these obstacles?
› Increasing the knowledge concerning migratory birds and its habitats, which requires greater resources for research and conservation and more specialists studying the theme.
Also, improve the Monitoring Shorebird Program ICMBio and the SNA (National Banding System), do more training for staff from protected areas, institutions and researchers.

3. What are the major pressures to Appendix I bird species (transcending mere obstacles to migration)?
☑ Other

› Human disturbance, habitat loss and change

3a. What actions have been taken to prevent, reduce or control factors that are endangering or are likely to further endanger bird species beyond actions to prevent disruption to migrating behaviour?

› Actions to guide tourism development and occupation on wetlands have been made in Protected Areas for sustainable use and public areas, but still in an incipient way.

3b. Please report on the progress / success of the actions taken.
› Taim Ecological Station and National Park of Lagoa do Peixe, on RS state, developed during summer season educational campaigns to control the traffic of vehicles on the beaches. The municipality of Rio Grande, RS and Ilha Comprida, SP has been developing similar educational campaigns to tourists. In Coroa do Avião, Igarassu, PE.

3c. Describe any factors that may limit action being taken in this regard:
› The material to use in educational campaigns, staff to do the activities, priority given by tourism agencies and municipalities.

3d. What assistance, if any, does your country require to overcome these factors?
› Support to improve educational campaigns for reduce human disturbance in wintering sites for shorebirds.

1.2 Questions on specific Appendix I bird species

In the following section, using the table format below, please fill in each Appendix I bird species for which your country is considered to be a Range State. Please complete each table as appropriate, providing information in summary form. Where appropriate, please cross-reference to information already provided in national reports that have been submitted under other conventions (e.g. Convention on Biological Diversity, Ramsar Convention, CITES). (Attach annexes as necessary.)

Species name: Agelaius flavus

1. Please provide published distribution reference:
› Fontana, C. S., Rovedder, C. E., Repenning, M., & Gonçalves, M. L. (2013). Current state of knowledge and conservation of birds of Campos de Cima da Serra in southern Brazil, Rio Grande do Sul and Santa Catarina. Revista Brasileira de Ornitologia-Brazilian Journal of Ornithology, 16(35), 27.
Serafini, P.P. (org.). 2014. Plano de Ação Nacional para a Conservação dos Passeriformes Ameaçados dos Campos Sulinos e Espinilho. Série Espécies Ameaçadas, 31. 213p.

2a. Summarise information on population size (if known):
☑ decreasing

› It is estimated that there are less than 10,000 mature individuals in Brazil, and that there is a continuous population decline of at least 10% in three generations (14 years) due to great habitat loss observed and projected (occupation of natural grasslands by Eucalyptus and Pinus plantations).
It has declined owing to a number of human impacts on grasslands, including stock-raising, cultivation, pesticides, burning, pine and eucalypt plantations, drainage and settlement (Pearman and Abadie 1995). In strongholds at Rio Grande do Sul, Brazil and Bañados del Este, Uruguay, the greatest threats are the damming of marshy valleys for irrigation (Dias and Maurício 2002, A. Azpiroz in litt. 2007), and high rates of nest failure owing to trampling by cattle (Fonseca et al. 2004). It is trapped for the pet trade. Brood-parasitism by the Shiny Cowbird Molothrus bonariensis can be significant (Azpiroz 2000), particularly if populations are reduced by habitat loss (Fraga et al. 1998).

2b. Summarise information on distribution (if known):
☑ decreasing

› Occurs in southeastern Paraguay, northeastern Argentina, Uruguay and southern Brazil, in the states of Rio

Grande do Sul and Santa Catarina (Fontana et al. 2013, Serafini et al. 2014). In Santa Catarina, the records are concentrated in grasslands at higher altitude (Araucarias Plateau), while in Rio Grande do Sul they are sparsely distributed throughout the entire State (Fontana et al., 2013). Habitat loss observed and projected in both States by occupation of natural grasslands by Eucalyptus and Pinus plantations or other agricultural activities (Serafini et al. 2014).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› Several Master degree students have been engaged in research and monitoring of this species in Santa Catarina and Rio Grande do Sul States, southern Brazil. Both breeding behavior and distribution were assessed. Supervisors contacts include: Prof. Carla Surtegaray Fontana, PhD., PUC RS (Laboratório de Ornitologia. Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul) - carla@pucrs.br and Prof. Maria Virginia Petry, PhD., UNISINOS (Coordenadora do Laboratório de Ornitologia e Animais Marinhos) - mavipetry@gmail.com.
☑ Education/awareness rising

› Since 2011, the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) have undertaken several opportunities to increase public awareness and education for this species and others that share its habitat. One book was published online with complete information about this taxon as well as brochures to the general public (all available for download at http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf). Universities have been contacted in order to stimulate research/monitoring involving this bird species.
☑ Species protection

› CITES Appendix I. CMS Appendix I. This species is considered nationally Vulnerable in Brazil and Uruguay (Silveira & Straube 2008, Azpiroz et al. 2012, MMA 2014); It is protected by law in Brazil, Uruguay and Paraguay, and occurs in at least one protected area in Brazil, two in Uruguay, and two in Paraguay. Since birds are highly mobile, it is difficult to designate sufficiently large reserves to provide adequate protection (Fraga et al. 1998). A CMS Memorandum of Understanding targeting this and other southern South America grassland species has been approved by Argentina, Brazil, Paraguay and Uruguay.

4. If no activities have been carried out for this species in the reporting period, what has prevented such action being taken?
› Since 2011, the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) have undertaken a massive effort to avoid habitat loss within Brazilian grasslands. Several actions are focused on this habitat loss reduction and habitat restoration (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf).

5. Describe any future activities that are planned for this species:
› The National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) will continue to gather all stake-holders, governments and conservationists in its effort to avoid habitat loss within Brazilian grasslands. Actions will continue to focus on habitat loss reduction and habitat restoration (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf).

Species name: Alectrurus risora

1. Please provide published distribution reference:
› Farnsworth, A. & Langham, G.M. 2004. Alectrurus risora, p.389. In: del Hoyo, J.; Elliott, A. & Christie, D. 2004. Handbook of the birds of the world, Vol 9: Cotinga to Pipits and Wagtails. Lynx Edicions. 863p.
Grantsau, R.K.H. 2010. Guia completo para a identificação das aves do Brasil. Parte I. Vento Verde. 624p.
Di Giacomo, A.S. & Di Giacomo, A.G. 2004. Extinción, historia natural y conservación de las poblaciones del Yetapá de Collar (Alectrurus risora) en la Argentina. Ornitologia Neotropical, 15 (Suppl.): 145-157.

2a. Summarise information on population size (if known):
☑ decreasing

› Considered rare in Brazil, locally unusual. Estimated total population of 10,000 individuals, in continuous decline (Farnsworth & Langham 2004). Most of the global population is in Argentina and southern Paraguai (Di Giacomo & Di Giacomo 2004).

2b. Summarise information on distribution (if known):
☑ decreasing

› It occurs from the east portion of Paraguai, north of Argentina, Uruguai, with few records to Brazil including

the following States: Southern Mato Grosso, Mato Grosso do Sul, São Paulo and Rio Grande do Sul (Grantsau 2010).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› CMS Appendix I. It is legally protected in Brazil, Paraguay and Uruguay. The Grassland Alliance, a conservation initiative acting in Paraguay, Argentina, Brazil and Uruguay, is working to encourage cattle ranchers to keep natural grasslands in their properties (H. del Castillo in litt. 2012).

4. If no activities have been carried out for this species in the reporting period, what has prevented such action being taken?
› In Brazil the species is very rare and it was not even evaluated within the national red list effort (NA). Most of the global population is in Argentina and southern Paraguai (Di Giacomo & Di Giacomo 2004). No specific action has been undertaken for this species in Brazil. Nevertheless, the potential main threats for this species in Brazil (habitat loss due to fires, Eucalyptus and Pinus monocultures and agriculture) are shared with other grassland passerines. Thus, a continuous effort to minimise those threats is undertaken by all stakeholders involved on the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (Campos Sulinos and Espinilho PAN - (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf)

Species name: Alectrurus tricolor

1. Please provide published distribution reference:
› 1) Conservation International. 2009. Plano de Manejo da Reserva Particular do Patrimônio Natural Fazenda Rio Negro. 145p.
2) Farnsworth, A. & Langham, G.M. 2004. Alectrurus tricolor, p.388-389. In: del Hoyo, J.; Elliott, A. & Christie, D. 2004. Handbook of the birds of the world, Vol 9: Cotinga to Pipits and Wagtails. Lynx Edicions. 863p.
3) Grantsau, R.K.H. 2010. Guia completo para a identificação das aves do Brasil. Parte II. Vento Verde. 656p.
4) Hass, A. 2008. Alectrurus tricolor (Vieillot, 1816), p.626-627. In: Machado, A.B.M.; Drummond, G.M.; Paglia, A.P. (orgs.). Livro Vermelho da Fauna Ameaçada de Extinção no Brasil. Ministério do Meio Ambiente e Fundação Biodiversitas. v.2, 460p.
5) IUCN (International Union for Conservation of Nature and Natural Resources). 2012. IUCN Red List of Threatened Species. Versão 2012.1. www.iucnredlist.org (Acesso em 22/2/2013).
6) Kanegae, M.; Levy, G. & Freitas, S.R. 2012. Habitat use by Sharp-tailed Tyrant (Culicivora caudacuta), and Cock-tailed Tyrant (Alectrurus tricolor) in the Cerrado of Southeastern Brazil. Revista Brasileira de Ornitologia, 20(1): 52 58.
7) Koproski, L.; Ferreira, M.P.; Goldammer, J.G. & Batista, A.C. 2011. Modelo de zoneamento de risco de incêndios para unidades de conservação brasileiras: o caso do Parque Estadual do Cerrado (PR). Floresta, 41(3): 551-562.
8) Lopes, L.E.; Malacco, G.B.; Alteff, E.F.; Vasconcelos, M.F.; Hoffmann, D. & Silveira, L.F. 2009. Range extensions and conservation of some threatened and little known Brazilian grassland birds. Bird Conservation International, 19: 1-11.
9) Marini, M.A.; Barbet-Massin, M.; Lopes, L.E & Jiguet, F. 2009. Major current and future gaps of Brazilian reserves to protect neotropical savanna birds. Biological Conservation, 142: 3039-3050.
10) Marini, M.A.; Barbet-Massin, M.; Lopes, L.E. & Jiguet, F. 2013. Geographic and seasonal distribution of the Cock-tailed Tyrant (Alectrurus tricolor) inferred from niche modeling. Journal of Ornithology, 154: 393-402.
11) Medeiros, M.B. & Fiedler, N.C. 2004. Incêndios florestais no Parque Nacional da Serra da Canastra: desafios para a conservação da biodiversidade. Ciência Florestal, 14(2): 157-168.
Minas Gerais. 2010. Deliberação Normativa COPAM nº 147 de 30 de abril de 2010. Aprova a lista de espécies ameaçadas de extinção da fauna do estado de Minas Gerais. Diário do Executivo - Minas Gerais, de 4 de maio de 2010.
12) Motta-Júnior, J.C. 2009. Alectrurus tricolor (Vieillot, 1816) Passeriformes, Tyrannidae, p.230. In: Bressan, P.M.; Kierulff, M.C.M. & Sugieda, A.M. (eds.). Fauna ameaçada de extinção no Estado de São Paulo: vertebrados. Fundação Parque Zoológico de São Paulo: Secretaria do Meio Ambiente. 648p.
13) Motta-Junior, J.C.; Granzinolli, M.A.M. & Develey, P.F. 2008. Aves da Estação Ecológica de Itirapina, estado de São Paulo, Brasil. Biota Neotropica, 8(3): 207-227.
Oliveira, A.C.; Kanegae, M.F.; Amaral, M.F.; Fávaro, F.L. 2010. Guia para Observação das Aves do Parque Nacional de Brasília. MMA/ICMBio. 157p.
14) Pacheco, J.F; Parrini, R.; Lopes, L.E.; Vasconcelos, M.F. 2008. A avifauna do Parque Estadual do Ibitipoca e áreas adjacentes, Minas Gerais, Brasil, com uma revisão crítica dos registros prévios e comentários sobre biogeografia. Cotinga, 30: 16-32.
15) Pereira, C.A.; Fielder, N.C. & Medeiros, M.B. 2004. Análise de ações de prevenção e combate aos incêndios florestais em unidades de conservação do Cerrado. Floresta, 34(2): 95-100.
16) Ragusa-Netto, J. 2002. Vigilance towards raptors by nuclear species in bird mixed flocks in a Brazilian savannah. Studies on Neotropical Fauna Environment, 37: 219-226.

17) Ridgely, R.S. & Tudor, G. 1994. The birds of South America. Vol. II: The Suboscines Passerines. University of Texas Press. 814p.
18) Serafini, P.P. (org.). (2014). Plano de Ação Nacional para a Conservação dos Passeriformes Ameaçados dos Campos Sulinos e Espinilho. Série Espécies Ameaçadas, 31. 213p.
19) Sick, H. 1997. Ornitologia brasileira. 3ª. Ed. Nova Fronteira. 912p.
20) Straube, F.C.; Urben-Filho, A. & Kajiwara, D. 2004. Aves, p.143-496. In: Mikich, S.B. & Bérnils, R.S. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Mater Natura - Instituto de Estudos Ambientais. 764p.
21) Straube, F.C.; Vieira, B.P.; Dias, D.; Serafini, P.P. 2013. Alectrurus tricolor. In: ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade). Plano de Ação Nacional para a Conservação dos Passeriformes dos Campos Sulinos.No prelo.
22) Tubelis, D.P. & Cavalcanti, R.B. 2000. A comparison of bird communities in natural and disturbed non-wetland open habitats in the Cerrado's central region, Brazil. Bird Conservation International, 10: 331-350.

2a. Summarise information on population size (if known):
☑ decreasing

› Considered unusual or rare in Brazil; global population is estimated 6,000 to 15,000 mature individuals in steady decline (Birdlife International 2015). The species is extinct in part of its original distribution within Brazil, including in the natural grasslands of Rio Grande do Sul State, and most of the remaining subpopulations are isolated (Hass 2008, Serafini 2014). Although in low numbers, its occurrence seems to be regular in protected grasslands of Itirapina Esec, São Paulo State, at least since the 1980s (Motta-Júnior et al., 2008).

2b. Summarise information on distribution (if known):
☑ decreasing

› Occurs in Bolivia, Paraguay and Argentina. While in Brazil it is recorded within its Central-West region as well as at São Paulo, Minas Gerais, Paraná and Rio Grande do Sul States (Grantsau 2010, Marini et al. 2013). The species is extinct in part of its original distribution in Brazil, the natural grasslands of Rio Grande do Sul State (Hass 2008).
Alectrurus tricolor occurs in Bolivia, Paraguay, Argentina and Brazil, usually in natural fields of the Cerrado biome, a highly threatened habitat. Nowadays the population is almost completely restricted to conservation units, and is highly fragmented. The species occupation area is no wider than 1.500 km2. Even though the species occurrence is mainly restricted to protected areas, those areas still suffer from uncontrolled fires, which results in the reduction of occupied areas, loss of habitat quality and continued populational decrease. That being the case, A. tricolor was categorized as Vulnerable (VU), according to the B2ab criteria (ii,iii).
The species can be found in Brazil: Campos Gerais do Paraná; Cerrados South of Brasília; Águas Emendadas Ecological Station; Itirapina; Chapada dos Veadeiros National Park and Surroundings; Emas National Park; Brasília National Park; Ilha Grande National Park; Rios Negro and Aquidauana; Serra da Canastra. Occurs in central and southern Brazil (R. E. Fernandes Santos in litt. 2011), in Mato Grosso, Mato Grosso do Sul, Goiás, Distrito Federal, Minas Gerais and Espírito Santo south to Paraná, where there are few records (Santos 2007, R. E. Fernandes Santos in litt. 2011), and possibly Rio Grande do Sul (Ridgely and Tudor 1994, Machado et al. 1998, L. F. Silveira in litt. 2000).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Education/awareness rising

› Since 2011, the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) have undertaken several opportunities to increase public awareness and education for this species and others that share its habitat. One book was published online with complete information about this taxon as well as brochures to the general public (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf).
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna
☑ Habitat protection

› Protected areas holds about 24% of the Cerrado species records. Very few records have been made recently outside of protected areas (Hass 2008, Marini et al. 2013). Nevertheless, only 0.49% of its distribution is located in large protected areas (Marini et al. 2009).

5. Describe any future activities that are planned for this species:
› Since 2011, the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) have undertaken a massive effort to avoid habitat loss within Brazilian grasslands. Several continuous actions are focused on this habitat loss reduction and habitat restoration (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf).

Species name: Larus atlanticus

1. Please provide published distribution reference:
› De Luca, A.; Develey, P. F. & Olmos, F. 2006. Final report, waterbirds in Brazil. SAVE Brasil, São Paulo. 61p.
FZBRS (Fundação Zoobotânica do Rio Grande do Sul). 2014. Revisão da Lista das Espécies da Fauna Silvestre Ameaçadas de Extinção no Rio Grande do Sul.
http://www.fzb.rs.gov.br/upload/2014090911580809_09_2014_especies_ameacadas.pdf. FZBRS e SEMA/RS. (Acesso em 02/03/2017).
Grantsau, R.K.H. 2010. Guia completo para a identificação das aves do Brasil. Parte I. Vento Verde. 624p.
Mohr, L.V. & Bugoni, L. 2008. Larus atlanticus Olrog, 1958, p.445-447. In: Machado, A.B.M.; Drummond, G.M.; Paglia, A.P. (orgs.). Livro Vermelho da Fauna Ameaçada de Extinção no Brasil. Ministério do Meio Ambiente e Fundação Biodiversitas. v.2, 460p.
Pacheco, J.F.; Branco, J.O. & Piacentini, V.Q. 2009. Olrog's Gull Larus atlanticus in Santa Catarina, Brazil: northernmost occurrence and first state record. Cotinga, 31: 149-150.

2a. Summarise information on population size (if known):
☑ stable

› The world population is estimated at 10,500 individuals. In Brazil, about 150 individuals are assumed to occur regularly, a figure that corresponds to just over 1% of the global population. However, the majority of the Brazilian population (about 80%) are composed of immature individuals (FZBRS 2014).

2b. Summarise information on distribution (if known):
☑ stable

› Larus atlanticus is distributed from southeastern Uruguay to Argentina, breeding only in Argentina (Grantsau 2010). In Brazil it is considered a winter visitor (March to November) of sparse occurrence on the coast of Rio Grande do Sul State and Lagoa dos Patos estuary (De Luca et al. 2006, Mohr & Bugoni 2008, Pacheco et al. 2009, FZBRS 2014).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› Surveys to increase this species records in Santa Catarina and Rio Grande do Sul States in Brazil have been accomplished for the past five years, with very low numbers registered only in Rio Grande do Sul. Seabird monitoring projects within both States have been conducted by the following researchers and their teams: Prof. Leandro Bugoni, PhD (Editor-in-chief - Revista Brasileira de Ornitologia, Universidade Federal do Rio Grande / FURG) - lbugoni@yahoo.com.br, Patricia Pereira Serafini, MSc. (National Center for Bird Conservation and Research – CEMAVE) – patricia.serafini@icmbio.gov.br, Prof. Joaquim Olinto Branco, PhD (Centro Ciências Tecnológicas, da Terra e do Mar – CTTMar/UNIVALI) - branco@univali.br

4. If no activities have been carried out for this species in the reporting period, what has prevented such action being taken?
› In Brazil the species is very rare and it was not even evaluated within the national red list effort (NA). Most of the global population is in Argentina and Uruguay. In Brazil, about 150 individuals are assumed to occur regularly as winter visitors, a figure that corresponds to just over 1% of the global population. However, the majority of the Brazilian population (about 80%) are composed of immature individuals (FZBRS 2014). No specific action have been undertaken lately for this species conservation in Brazil.

Species name: Numenius borealis

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› CATEGORY AND CRITERIA
EX (BR)
Ordinance No. 444/2014 Endangered Fauna
http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014

Species name: Sporophila cinnamomea

1. Please provide published distribution reference:
› Dornas, T., Pacheco, J. F., & Olmos, F. (2013). Ocorrência de caboclinhos austrais (Emberizidae, Sporophila sp.) no Cerrado Norte, Brasil: extensão da distribuição geográfica e implicações para conservação. Atualidades Ornitol, 176, 58-63.
Develey, P. F., Setubal, R. B., Dias, R. A., & Bencke, G. A. (2008). Conservação das aves e da biodiversidade no

bioma Pampa aliada a sistemas de produção animal. Revista Brasileira de Ornitologia, 16(4), 308-315.
Bencke, G. A., & Dias, R. A. (2010). Levantamento da avifauna em campos de pecuária extensiva da região da Campanha Meridional, Rio Grande do Sul, Brasil.
Krügel, M.M.; Dias, R.A.; Bencke, G.A. & Repenning, M. 2014. Sporophila cinnamomea, p.103-107. In: Serafini, P.P. Plano de Ação Nacional para a Conservação dos Passeriformes Ameaçados dos Campos Sulinos e Espinilho. Série Espécies Ameaçadas, 31. 213p.
Repenning, M., & Fontana, C. S. (2008). Novos registros de aves raras e/ou ameaçadas de extinção na Campanha do sudoeste do Rio Grande do Sul, Brasil. Revista Brasileira de Ornitologia, 16(1), 58-63.
Carrano, E. (2008). Sporophila cinnamomea (Lafresnaye, 1839). Livro vermelho da fauna brasileira.

2a. Summarise information on population size (if known):
☑ decreasing

› The species has suffered rapid decline and the global population seems to be small and fragmented. In Brazil, for the States of Paraná, São Paulo and Mato Grosso, chestnut seedeater is considered rare, only a few individuals are seen in each breeding site (Krügel et al., 2014). It is suspected that the Brazilian population is larger than 2,500 and less than 10,000 mature individuals. Brazil has faced probably a continuous population decline of more than 10% over three generations (about 15 years), considering both the past and the future, information inferred based on the habitat loss rates of native grasslands by forestry and agricultural monocultures. Nevertheless, it is known that there is a demographic flow between the populations of Rio Grande do Sul State and the Uruguayan and Argentinean populations, with the contribution of individuals to the Brazilian population.

2b. Summarise information on distribution (if known):
☑ decreasing

› Breeding areas are found in northeastern Argentina, the extreme southeast of Paraguay and Brazil and the west and southeast of Uruguay. Chestnut seedeaters migrate to the north and to the center-south of Brazil. The breeding population in Brazil is distributed in three main areas of the Pampa gaucho: one in Serra do Sudeste and two areas on Campanha (Krügel et al., 2014). Several threats have contributed to habitat loss within its distribution: wet areas drainage, forestry activities (mainly Eucalyptus and Pinus plantations), and rice monocultures and other agricultural activities. The loss of feeding and resting stops for migrating individuals is another serious threat, as well as coal mining in Rio Grande do Sul (Carrano 2008). An additional threat that occurs in the Serra do Sudeste breeding areas is the installation of wind farms, in Rio Grande do Sul (Krügel et al., 2014).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› Post graduate students have been engaged in research and monitoring of this species in Rio Grande do Sul State, southern Brazil. Both breeding behavior and distribution were assessed. Supervisors contacts include: Prof. Carla Surtegaray Fontana, PhD., PUC RS (Laboratório de Ornitologia. Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul) - carla@pucrs.br
☑ Education/awareness rising

› Since 2011, the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) have undertaken several opportunities to increase public awareness and education for this species and others that share its habitat. One book was published online with complete information about this taxon as well as brochures to the general public (all available for download at http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf). Universities have been contacted in order to stimulate research/monitoring involving this bird species.
☑ Species protection

› A CMS Memorandum of Understanding targeting this and other southern South American grassland species has been approved by Argentina, Brazil, Paraguay and Uruguay (A. B. Azpiroz in litt. 1997, 1999, 2007). Non-breeding birds have only been recorded numerously at Emas National Park, Goiás (Ridgely and Tudor 1989). It is protected under Brazilian law, and occurs in Emas and Ilha Grande National Parks, São Donato Biological Reserve, Itirapina Ecological Station (E. Machado in litt. 2007).

5. Describe any future activities that are planned for this species:
› Since 2011, the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) have undertaken a massive effort to avoid habitat loss within Brazilian grasslands. Several continuous actions are focused on this habitat loss reduction and habitat restoration (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf).

Species name: Sporophila hypochroma

1. Please provide published distribution reference:
› Bencke, G. A., & Dias, R. A. (2010). Levantamento da avifauna em campos de pecuária extensiva da região da Campanha Meridional, Rio Grande do Sul, Brasil.
Cestari, C. (2006). Novos registros de aves do gênero Sporophila para o Pantanal. Atualidades Ornitológicas, 129(7). Dornas, T., Pacheco, J. F., & Olmos, F. (2013). Ocorrência de caboclinhos austrais (Emberizidae, Sporophila sp.) no Cerrado Norte, Brasil: extensão da distribuição geográfica e implicações para conservação. Atualidades Ornitológicas, 176, 58-63.
Nunes, A. P. (2010). Estado de conservação da avifauna ameaçada de extinção ocorrente no Pantanal, Brasil. Atualidades ornitológicas, 157, 85-98.
BirdLife International. 2016. Sporophila hypochroma. The IUCN Red List of Threatened Species 2016: e.T22723495A94821329. http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22723495A94821329.en. Downloaded on 02 March 2017.

2a. Summarise information on population size (if known):
☑ decreasing

› In general, unusual or rare and irregularly distributed. Its distribution can be presented as very broad, but appears to be comprised of two separate populations, one in eastern Bolivia and one in northeastern Argentina. The global population is rapidly declining (Birdlife International 2016). There are few records of the species in Brazil, occurring only vagrant individuals or a marginal population. Population estimates for the country are not available.
Widespread destruction and modification of grasslands in central South America for mechanised agriculture, intensive cattle-grazing and afforestation with non-native tree genera, and pressure from trappers suggest that the species is declining rapidly. However, it has been claimed that Argentine populations are expanding in range and number (Pearman and Abadie 1995), but this may be an artifact of improved observer awareness and knowledge. (Birdlife, 2017). This species is described as 'uncommon and patchily distributed' (Stotz et al. 1996).

2b. Summarise information on distribution (if known):
☑ decreasing

› Sporophila hypochroma distribution includes Bolivia, Paraguay, Argentina, central-west and southern Brazil. There are very few records of the species in Brazil, occurring only vagrant individuals or a marginal population. Thus, S. hypochroma was evaluated as Not Applicable (NA) for a regional red list species evaluation in Brazil.

4. If no activities have been carried out for this species in the reporting period, what has prevented such action being taken?
› In Brazil the species is very rare and it was not even evaluated within the national red list effort (NA). Most of the global population is in Bolivia, Paraguay and Argentina. No specific action have been undertaken for this species in Brazil. Nevertheless the potential main threats for this species in Brazil (habitat loss due to fires, Eucalyptus and Pinus monocultures and agriculture) are shared with other grassland passerines. Thus a continuous effort to minimise those threats is undertaken by all stakeholders involved on the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho - (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf)

Species name: Sporophila palustris

1. Please provide published distribution reference:
› Vizentin-Bugoni, J., Areta, J. I., Di Giacomo, A. G., Di Giacomo, A. S., Jacobs, F., Coimbra, M. A. A., & Dias, R. A. (2013). Breeding biology and conservation of the Marsh Seedeater Sporophila palustris. Bird Conservation International, 23(02), 147-158.
Olmos, F., & Pacheco, J. F. (2011). Marsh Seedeater Sporophila palustris and Tawny-bellied Seedeater S. hypoxantha recorded in Tocantins state, Brazil. Cotinga, 33, 137-138.
Maurício, G.N.; Dias, R.A.; Repenning, M. & Vizentin-Bugoni, J. (2014). Sporophila palustris, p.98-102. In: Serafini, P.P. (org.). Plano de Ação Nacional para a Conservação dos Passeriformes Ameaçados dos Campos Sulinos e Espinilho. Série Espécies Ameaçadas, 31. 213p.
Bencke, G.A.; Mauricio, G.N.; Develey, P.F. & Goerck J.M. 2006. Áreas importantes para a Conservação das aves no Brasil: Parte I - Estados do Domínio da Mata Atlântica. SAVE Brasil. 494p.
Conservation International. 2009. Plano de Manejo da Reserva Particular do Patrimônio Natural Fazenda Rio Negro. 145p.
FZBRS (Fundação Zoobotânica do Rio Grande do Sul). 2013. Revisão da Lista das Espécies da Fauna Silvestre Ameaçadas de Extinção no Rio Grande do Sul. Consulta Pública. http://www.liv.fzb.rs.gov.br/livcpl/?id_modulo=1&id_uf=23. FZBRS e SEMA/RS. (Acesso em 9/1/2014).
Grantsau, R.K.H. 2010. Guia completo para a identificação das aves do Brasil. Parte II. Vento Verde. 656p.
IUCN (International Union for Conservation of Nature and Natural Resources). 2012. IUCN Red List of

Threatened Species. Versão 2012.1. www.iucnredlist.org (Acesso em 22/2/2013).
Lima, E.M.C. 2008. Sporophila palustris (Barrows, 1883), p.549-550. In: Machado, A.B.M.; Drummond, G.M.; Paglia, A.P. (orgs.). Livro Vermelho da Fauna Ameaçada de Extinção no Brasil. Ministério do Meio Ambiente e Fundação Biodiversitas. v.2, 460p.
Machado, E. 2009. Sporophila palustris (Barrows, 1883) Passeriformes, Emberizidae, p.261. In: Bressan, P.M.; Kierulff, M.C.M. & Sugieda, A.M. (eds.). Fauna ameaçada de extinção no Estado de São Paulo: vertebrados. Fundação Parque Zoológico de São Paulo: Secretaria do Meio Ambiente. 648p.
Marques, A.A.B.; Fontana, C.S.; Vélez, E.; Bencke, G.A.; Schneider, M. & Reis, R.E. 2002. Lista de Referência da Fauna Ameaçada de Extinção no Rio Grande do Sul. FZB/MCT–PUCRS/PANGEA. 52p.
Maurício, G.N.; Dias, R.A.; Repenning, M. & Vizentin-Bugoni, J. 2013. Sporophila palustris. In: ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade). Plano de Ação Nacional para a Conservação dos Passeriformes dos Campos Sulinos. No prelo.
Nunes, A.P. & Tomas, W.M. 2008. Aves migratórias e nômades ocorrentes no Pantanal. Embrapa Pantanal. 122p.
Rising, J.D. 2011. Family Emberizidae, p.428-683. In: del Hoyo, J.; Elliott, A. & Christie, D. Handbook of the birds of the world, Vol 16: Tanagers to New World Blackbirds. Lynx Edicions. 893p.
Straube, F.C.; Urben-Filho, A. & Kajiwara, D. 2004. Aves, p.143-496. In: Mikich, S.B. & Bérnils, R.S. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Mater Natura - Instituto de Estudos Ambientais. 764p.

2a. Summarise information on population size (if known):
☑ decreasing

› Relatively rare, its global population estimate are from 600 to 1700 mature individuals (Birdlife Inernational 2016). The largest Brazilian breeding population is located in the municipalities of Rio Grande and Arroio Grande (Rio Grande do Sul State) and it was estimated in 200-300 individuals. Smaller populations are found over the Campanha region (Maurício et al., 2014). Considering global population estimates and the proportion of the world distribution of the species inserted in Rio Grande do Sul, it is inferred that the Brazilian subpopulations have no more than 250 mature individuals. Continued decline is inferred because of the continuity of several threats. Recently, the implantation of wind farms on the south coast of Rio Grande do Sul State proved to be able to eliminate breeding territories (Maurício et al. 2014, FZBRS 2013).

2b. Summarise information on distribution (if known):
☑ decreasing

› Sporophila palustris breeds in northeastern Argentina, the extreme south of Brazil, Uruguay and possibly in southeastern Paraguay. Migrates to the cerrado fields of the central-west and southeast of Brazil and east of Paraguay (Maurício et al. 2014). The breeding population of Brazil is restricted to Rio Grande do Sul State and seems to represent about half of the global reproductive population (Vinzentin-Bugoni et al., 2013, Maurício et al. 2014). It is inferred the existence of five main breeding subpopulations in the State: three in the south coast and two in the western frontier of Rio Grande do Sul (FZBRS 2013, Maurício et al. 2014).
It is deduced that the continued decrease is due to the replacement of fields with arboreal monocultures, in addition to other threats such as the expansion of yearly monocultures, overgrazing and the invasion of alien species. Recently, the implementation of wind farms in the southern coastline of the state has proved to be capable of eliminating reproductive territories, a situation that was merely envisioned before. Therefore, the species is qualified as Endangered, according to the C2a(i) criteria.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› A few researchers have been engaged on the study and recording of this species, mostly in Rio Grande do Sul State in southern Brazil. Both breeding behavior and distribution were assessed. Specialists include Rafael A. Dias (Universidade Federal de Pelotas) - rafael.dias@ufpel.edu.br, Jeferson Vizentin-Bugoni (UNICAMP – Campinas University) - jbugoni@yahoo.com.br, Giovanni N. Maurício (GEEPAA-RS) - gnachtigallmauricio@yahoo.com.br, Glayson A. Bencke (FZB/SEMA) - gabencke@fzb.rs.gov.br, Márcio Repenning (PUCRS) - mrepenning@gmail.com. University supervisor contact that have worked Sporophila genus with her students include also Prof. Carla Surtegaray Fontana, PhD., PUC RS (Laboratório de Ornitologia. Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul) - carla@pucrs.br
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna
http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014
A CMS Memorandum of Understanding targeting this and other southern South American grassland species has been approved by Argentina, Brazil, Paraguay and Uruguay (A. B. Azpiroz in litt. 1999, 2007). It is legally protected in Brazil and Uruguay, and trapping is prohibited in Argentina and Uruguay, although this is not effectively enforced (A. B. Azpiroz in litt. 1999, 2007). It breeds at Mata Grande Biological Reserve, Rio Grande do Sul, Brazil (Vizentin-Bugoni in litt. 2011), Potrerillo de Santa Teresa Reserve, Uruguay (A. B. Azpiroz in litt. 1999, 2007), and Iberá Provincial Reserve, Argentina (Chebez et al. 1998). Emas National Park, Brazil, is

possibly an important wintering site, and it has also been recorded in Espinilho Ecological Park, Ibirapuitã and São Donato Biological Reserves and Itirapina Ecological Station (E. Machado in litt. 2007).

4. If no activities have been carried out for this species in the reporting period, what has prevented such action being taken?
› Since 2011, the National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) have undertaken a massive effort to avoid habitat loss within Brazilian grasslands. Several actions are focused on this habitat loss reduction and habitat restoration (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf). Nevertheless, pressures from the forestry, industry and agriculture have surpassed all initiatives.

5. Describe any future activities that are planned for this species:
› The National Plan of Action for the Conservation of Endangered Grassland Birds of Brazil (PAN Campos Sulinos e Espinilho) will continue to gather all stake-holders, governments and conservationists in its effort to avoid habitat loss within Brazilian grasslands. Ongoing actions will continue to focus on habitat loss reduction and habitat restoration (http://www.icmbio.gov.br/portal/images/stories/docs-plano-de-acao/pan-passeriformes-campos-sulinos/sumario_campossulinos.pdf).

Species name: Tryngites subruficollis

1. Please provide published distribution reference:
› Almeida, J.B. 2009. Wintering ecology of Buff-breasted Sandpipers (Tryngites subruficollis) in Southern Brazil. Tese (Doutorado). University of Nevada.
Blanco, D.E.; Lanctot, R.B.; Isaac, J.P.& Gill, V.A. 2004. Pastizales templados del sur de América del Sur como hábitat de aves playeras migratorias. Ornitología Neotropical, 15 (Suppl.):159–167.
Cintra, R. & Rosas, M. 2011. Parque Nacional de Anavilhanas, p.55-58. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org) 2011. Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Dias, R.A.; Gianuca, D.; Gianuca, A.T.; Gomes-Junior, A.; Chiaffitelli, R. & Ferreira, W.L.S. 2011a. Estuário da Lagoa dos Patos, p.335-341. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade). 2012. Memória da Oficina de Avaliação do Estado de Conservação das Aves Limícolas Brasileiras. Relatório Técnico. 3p.
Lanctot, R.B.; Blanco, D.E.; Isacch, J.P; Dias, R.A.; Gill, V.A.; Read, L.; Delhey, K.; Petracci, P.F.; Azpiroz, A. & Martinez, M.M. 2002. Conservation status of the Buff-breasted Sandpiper: historic and contemporary distribution and abundance in South America. Wilson Bulletin, 114:44-72.
Lanctot, R.B.; Yezerinac, S. ; Aldabe, J.; Almeida, J.B.; Brown, S. Castresana, G. ; Saalfeld, S. T. & Fox, J.W. 2016. Light-level geolocation revels migration patterns of Buff-breasted Sandpiper. Wader Studies 123(1): 29-43.
Lanctot, R.B.; Aldabe, J.; Almeida, J.B.; Blanco, D.; Isacch, J.P.; Jorgensen, J.; Norland, S.; Rocca, P. & Strum, K.M. 2010. Conservation Plan for the Buff-breasted Sandpiper (Tryngites subruficollis).Version 1.1. U.S. Fish and Wildlife Service, and Manomet Center for Conservation Sciences, Manomet.
Nascimento, J.L.X. 2011. Parque Nacional da Lagoa do Peixe, p.321-324. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Vallejos, M.A.V.; Lanzer, M.; Silva, M.A.; Meijer, A.A.R.; Carrano, E. & Straube, F.C. 2011. Parque Regional do Iguaçu e adjacências, p.292-297. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.

2a. Summarise information on population size (if known):
☑ decreasing

› The global population size was estimated at 56,000 individuals (Lanctot, 2010). A group of 2,000 individuals was observed on the vicinity of Lagoa do Peixe National Park, RS, Brazil, on Feb - 2003 (Almeida 2009). Maximum populacional density recorded on 2002/2003 austral winter, south of Brazil was 15±13, 19±7 e 16±7 ind/ha on Lagoa do Peixe National Park, Ilha da Torotama and Taim Ecological Station (Almeida 2009). This author found densities increasing from October to December. A group of 800 individuals was recorded on Ilha da Torotama, Lagoa dos Patos/RS (Dias et al. 2011a). On Praia da Capilha, the maximum was 21,6 individuals/km on December (Dias et al. 2011b).

2b. Summarise information on distribution (if known):
☑ stable

› › This neartic species migrates using Brasil Central flyway in Brazil (Lanctot et al. 2002). Ilha da Torotama, at Lagoa dos Patos/RS, receive the highest concentration of buff-breasted sandpiper in Brazil. Grasslands around Lagoa do Peixe National Park, RS, are the most important wintering site in Brazil and one of the most important in world (Lanctot et al. 2002). The extension of occurrence (EOO) of Calidris subruficollis was

estimated as 3.196,46 km2, only for RS state (ICMBio 2012).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Monitoring
☑ Habitat protection

› Lagoa do Peixe National Park (ICMBIo)

5. Describe any future activities that are planned for this species:
› Plan of management of cattle and grass on Lagoa do Peixe National Park and Taim Ecological Station areas to conserve the habitat for buff-breasted sandpiper.

Species name: Calidris canutus rufa

1. Please provide published distribution reference:
› Aguiar, K.M.O.; Naiff, R.H. & Xavier, B. 2010. Aves da Reserva Biológica do Lago Piratuba, Amapá, Brasil. Ornithologia, 4(1): 1-14.
Almeida, B.J.M. 2010. As aves limícolas migratórias nas praias de Aracaju: avaliação da influência antrópica e contribuição para ações de desenvolvimento costeiro. Dissertação (Mestrado em Desenvolvimento e Meio Ambiente). Universidade Federal de Sergipe, 90p.
Baker, A.J.; González, P.M.; Serrano, I.L.; Telino-Júnior, W.R.; Efe, M.A.; Rice, S.; D'Amico, V.L.; Rocha, M.C. & Echave, M.E. 2005. Assessment of wintering area of Red Knots in Maranhão northern Brazil in February 2005. Wader Study Group Bulletin 197: 3-11.
Barbieri, E. 2011. Ilha Comprida, p.237-241. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Dias, R.A., Gonçalves, M.S.S.; Martins, J.T. & Andretti, C.B. 2011. Praia da Capilha, p.358-363. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org) Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Efe, M.A.; Azevedo, M.A.G. & Filippini, A. 2007. Avifauna da Estação Ecológica de Carijós, Florianópolis- SC. Ornithologia, 2(1): 1-13.
Fedrizzi, C. E., Carlos, C.J. & Campos, A. 2016. Annual patterns of abundance of Nearctic shorebirds and their prey at two estuarine sites in Ceará, NE Brazil, 2008–2009 Wader Study 123, 1: 122-135.
Gonçalves, M.S.S. 2009. Ecologia e conservação de aves dos ecossistemas associados ao estuário do Parque da Lagoa do Peixe, Brasil. Dissertação (Mestrado em Ciências Biológicas). Universidade do Vale do Rio dos Sinos, 67p.
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade). 2012. Memória da Oficina de Avaliação do Estado de Conservação das Aves Limícolas Brasileiras. Relatório Técnico. 3p.
Lima, P.C. & Lima, R.C.F.R. 2011. APA do Litoral Norte da Bahia (Mangue Seco), p.181-185. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Nascimento, I.L.S. 1995. As aves do Parque Nacional da Lagoa do Peixe. Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis. 45p.
Niles, L.; Sitters, H.; Dey, A. & Red Knot Status Assessment Group. 2010. Red Knot Conservation Plan for the Western Hemisphere (Calidris canutus), Version 1.1. Manomet Center for Conservation Sciences. 173p.
Rodrigues, A.A.F. 2000. Seazonal abundance of neartic shorebirds in the Gulf of Maranhão, Brazil. Journal of Field Ornithology,71(4): 665-675.
Scherer, A.L. & Petry, M.V. 2012. Seasonal variation in shorebird abundance in the State of Rio Grande do Sul, Southern Brazil. The Wilson Journal of Ornithology, 124(1): 40-50.
Schulz-Neto, A. 2004. Aves marinhas do Atol das Rocas, p.169-192. In: Branco, J.O. (org.) Aves marinhas e insulares brasileiras: bioecologia e conservação. Editora da Univali. 266p.
Serrano, I.L. 2011. Ilha do Parazinho, p.24-27. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Sousa, M.C. 2011a. Estuário do Rio Sergipe, p.167-170. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Sousa, M.C. 2011b. Complexo do Estuário dos Rios Piauí, Fundo e Real, p.171-174. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Sousa, M.C. 2011c. Estuário do Rio Vaza Barris, p.175-177. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Souza, E.; Nunes, M.F.C; Roos, A.L. & Araújo, H.F.P. 2008. Aves do Parque Nacional do Cabo Orange: guia de campo. ICMBio/Cemave. 100p.
Veiga, L.A.; Oliveira, A.T. & Gastal, N.A. 1995. Aves do Taim. ABRAPA. 12p.
Vooren, C.M. & Chiaradia, A. 1990. Seasonal abundance and behavious of coastal birds on Cassino Beach, Brazil. Ornitologia Neotropical, 1: 9-24.

2a. Summarise information on population size (if known):
☑ decreasing

› The global population of Calidris canutus rufa was estimated around 17,200 individuals (Niles et al 2010). On the north-northeast Brazilian coast, 8,326 individuals were recorded on January, 1982, 1983 and 1986 (Morrison & Ross 1989).
Calidris canutus is a migrant species that spends its non-reproductive period in Brazil, populational concentration exists especially in Maranhão and Rio Grande do Sul. For the rufa species, the only one that occurs in Brazil, there has been a populational decrease of 80% in the last 26 years, with a tendency of maintenance of the decrease rate at 3% per year for the next 2,5 years (completing a period of three generations). The main threats described for the species are: decrease in food availability at the Delaware Bay (Limulus), ectoparasites occurrence and, in Brazil, a decrease in habitat quality due to human activity on the beaches. Even if there is a tendency to protect the Limulus at the Delaware Bay, it cannot be asserted, based on current data, to what degree this will positively affect the Calidris canutus population. Besides, the species' diet and eating behavior are rather specific, which makes the threat more severe. That being the case, there was no down listing, and the species remains classified as Critically Endangered – CR, according to the A4bce criteria.

2b. Summarise information on distribution (if known):
☑ decreasing

› Calidris canutus rufa was recorded in high concentration on Pará and Maranhão states, mainly APA Reentrâncias Maranhenses (Rodrigues & Carvalho 2011b; Baker et al, 2005; Morrison & Ross 1989; Rodrigues, 2000). They were recorded in higher numbers on Lagoa do Peixe National Park by Harrington et al (1986) – more than 11,000, Nascimento (2011) – 7,000 individuals, and Gonçalvez (2009) – 11,243 individuals. They were recorded in groups on RS coast (Vooren & Chiaradia 1990; Scherer & Petry 2012), and CE coast (Fedrizzi et al, 2016). Smaller groups and individuals had been recorded along the atlantic coast by diferent authors.
☑ unclear

› There are still few studies along the coast. More records have been made and published recently from studies along the northeast and southeast coast.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research
☑ Identification and establishment of protected areas
☑ Monitoring
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna:
pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014
☑ Other

› Calidris canutus rufus is one of the 28 species covered by National Action Plan for Shorebird Conservation. The main objective of the Plan is assure habitat conservation for the species. There are many protected areas on Brazil in landing, spot-over and wintering sites for red knots. On the north coast: Cabo Orange National Park, Rebio do Lago Piratuba e Esec Maracá Jipioca (AP), Resex Mocapajuba, Resex Mãe Grande de Curuçá, Resex Mestre Lucindo, Resex Cuinarana, Resex Maracanã, Resex Chocoaré-Mato Grosso, Resex Marinha de Soure, Resex de Tracuateua, Resex Marinha Caeté-Taperaçu, Resex marinha Gurupi-Piriá, Resex Marinha Araí-Peroba (PA). On the northeast coast: Resex Cururupu e APA Reentrâncias Maranhenses (MA), APA Litoral norte da Bahia (BA), APA do Litoral Sul do Estado de Sergipe (SE), Rebio Atol das Rocas (RN). On the southeast coast: Jurubatiba National Park, APA Cananéia-Iguape Peruíbe). On the south coast: Taim Ecological Station and Lagoa do Peixe National Park.
From 2015 to 2016, three new Resex were recognized on Pará Coast on important wintering sites for Calidris canutus rufa.
From 2014 to 2016 three surveys were conduct on the north northeast coast to study shorebirds and mapping its habitats with focus on Calidris canutus rufa. During those surveys many individuals were banded and marked with flags and geolocators and have been monitored in partnership with north americans institutions (project "Monitoring and conservation of shorebirds in Brazil" and project "Shorebird conservation in Brazil and Delaware Bay" (CEMAVE/ CWF -SISBIO 42418, AEX Portaria MCT 162 de 2016 funded by MBCA-USFWS).

5. Describe any future activities that are planned for this species:
› CEMAVE/ICMBio planned to do systematic surveys on three sites along atlantic coast from 2017 to 2019 to monitor and mark Calidris canutus rufa, funded by GEF Mar. Also, the implementation of the National Action Plan for Shorebird Conservation and implementation of the protected areas already created.

Species name: Calidris pusilla

1. Please provide published distribution reference:

› Aguiar, K.M.O.; Naiff, R.H. & Xavier, B. 2010. Aves da Reserva Biológica do Lago Piratuba, Amapá, Brasil. Ornithologia, 4(1): 1-14.
Albano, C. & W. Girão. 2011. Região Metropolitana de Fortaleza, p.133-136. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Almeida, B.J.M. 2004. Estrutura da população e aspectos ecológicos das aves da praia da Atalaia e do Mangue da Coroa do Meio. Relatório Técnico. Iniciação a Pesquisa PIBIC/CNPq. 34p.
Almeida, B.J.M. 2010. As aves limícolas migratórias nas praias de Aracaju: avaliação da influência antrópica e contribuição para ações de desenvolvimento costeiro. Dissertação (Mestrado em Desenvolvimento e Meio Ambiente). Universidade Federal de Sergipe, 90p.
Almeida, B.J.M. & Ferrari, S.F. 2010. Seasonal and longitudinal variation in the abundance and diversity of shorebirds (Aves, Charadriiformes) on Atalaia beach in northeastern Brazil. Ornitologia Neotropical, 21: 56-580.
Almeida, B.J.M. & Ferrari, S.F. 2011. Migratory Shorebirds at a stopover site in Northeastern Brazil: Habitiat Use and Anthropogenic Impacts, p.22-23. In: 4th Meeting of Western Hemisphere Shorebird Group. Abstracts. Simon Fraser University. 137p.
Antas, P.T.Z. 1983. Migration of Neartic shorebirds (Charadriidae and Scolopacidae) in Brazil – flyways and their different seazonal use. Wader Study Group Bulletin,39: 52-56.
Araújo, H.F.P.; Rodrigues, R.C.; Nishida, A.K. 2006. Composição da avifauna em complexos estuarinos no estado da Paraíba, Brasil. Revista Brasileira de Ornitologia, 14(3): 249-259.
Azevedo-Júnior, S.M. & Larrazábal, M.E. 1999. Captura e anilhamento de Calidris pusilla (Scolopacidae) na costa de Pernambuco. Ararajuba, 7(2): 63-69.
Azevedo-Júnior, S.M. & Larrazábal, M.E. 2011a. Salina Diamante Branco, p.146-149. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Barbieri, E. 2007. Seasonal abundance of shorebirds at Aracaju, Sergipe, Brazil. Wader Study Group Bull., 113: 40-46.
Carvalho, D.L. & Rodrigues, A.A.F. 2011. Spatial and temporal distribution of migrant shorebirds (Charadriiformes) on Caranguejos Island in the Gulf of Maranhão, Brazil. Revista Brasileira de Ornitologia, 19(4): 486-492.
Fedrizzi, C.E. & Carlos, C.J. 2011. Planície Costeira Central do Rio Grande do Sul, p.364-367. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Girão, W. & Albano, C. 2011. Ilha Grande, p.129-132. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade). 2012. Memória da Oficina de Avaliação do Estado de Conservação das Aves Limícolas Brasileiras. Relatório Técnico. 3p.
Larrazábal, M.E.; Azevedo-Júnior, S.M. & Pena, O. 2002. Monitoramento de aves limícolas na Salina Diamante Branco, Galinhos, Rio Grande do Norte, Brasil. Revista Brasileira de Zoologia, 19 (4): 1081-1089.
Lima, P.C. & Lima, R.C.F.R. 2011. APA do Litoral Norte da Bahia (Mangue Seco). In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Rodrigues, A.A.F. 2000. Seazonal abundance of neartic shorebirds in the Gulf of Maranhão, Brazil. Journal of Field Ornithology,71(4):665-675.
Rodrigues, A.A.F. & Carvalho, D.L. 2011a. Reentrâncias Maranhenses e Golfão Maranhense, p.122-124. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Rodrigues, A.A.F. & Carvalho, D.L. 2011b. Reentrâncias Paraenses, p.85-87. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Santos, T.R. & Alves, M.A.S. 2011. Região costeira do Rio de Janeiro, no corredor da Serra do Mar, p.251-263. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Serrano, I.L. 2011a. Arquipélago de Fernando de Noronha, p.155-158. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.
Souza, E.; Nunes, M.F.C; Roos, A.L. & Araújo, H.F.P. 2008. Aves do Parque Nacional do Cabo Orange: guia de campo. ICMBio/Cemave. 100p.
Xavier, B.F & Boss, R.L. 2011. Estação Ecológica Maracá-Jipioca, p.28-32. In: Valente, R.; Silva, J.M.C.; Straube, F.C. & Nascimento, J.L.X. (org). Conservação de aves migratórias neárticas no Brasil. Conservation International. 406p.

2a. Summarise information on population size (if known):

☑ decreasing

› Calidris pusilla population was estimated at 2,2 million on 2006 (Morrison et al. 2012, Birdlife International 2012). In Brazil, Morrison and Roos did aerial surveys in 1989 and estimated 192.157 individuals from north to

northeast coast. Carvalho & Rodrigues (2011) counted 35,000 individuals on Ilha dos Caranguejos, MA and 26,000 on Panaquatira beach, MA. Their abundance was estimated at 2,800 ind. on Bacia Potiguar, RN (Irusta & Sagot-Martin 2011), 1,455 ind on Salina Diamante, RN (Azevedo-Júnior & Larrazábal 2011a), 1,500 ind on SE coast (Almeida 2010, Almeida & Ferrari 2011). On Parque Nacional da Lagoa do Peixe/RS, Fedrizzi & Carlos (2011) recorded 350 individuals on november 2005.
Calidris pusilla is a migrant specie that spends its non-reproductive period in Brazil, it has suffered a 90% decrease in population in the northern-center of the Brazilian coastline in a period of 25 years, covering a three-generation period (18 years). Considering that this population represents over 90% of the total of the C. pusilla individuals that migrate to this country, such a decrease might be inferred for the total population occurring in Brazil. It is suspected that this decrease will continue in the near future, due to habitat degradation caused by anthropic use of the beaches. For that reason, the species is categorized as Critically Endangered – CR according to the A2bc criteria. However, considering that a great threat afflicting this species outside of Brazil (a decrease in food availability in the Delaware Bay) is currently being tackled and considering its generic diet and varied eating behavior, the category has been down listed to Endangered – EN according to the A2bc criteria.

2b. Summarise information on distribution (if known):
☑ stable

› In Brasil Calidris pusilla winter on north and northeast coast, with esporadic records in other places. Groups were recorded on south coast at Lagoa do Peixe National Park (ICMBio 2012).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research
☑ Identification and establishment of protected areas
☑ Monitoring
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna
☑ Habitat protection
☑ Other

› Calidris pusilla was included as species-focus in National Action Plan for Shorebird Conservation. This species also is focus of studies conducted by brazilians and north american researchers, as Dra. Roberta Costa Rodrigues (UFPB) and Dr. Bruno Jackson Melo de Almeida (UFSE) and Dr. David Mizhari (New Jersey Audubon Society) and was included on project “Monitoring and conservation of shorebirds in Brazil” (CEMAVE/ NJAS -SISBIO 42418, AEX Portaria MCT 162 de 2016).
The National Action Plan (PAN) main to assure habitat conservation for the shorebird species. There are many protected areas on Brazil in landing, spot-over and wintering sites for semipalmated sandpiper. On the north coast: Cabo Orange National Park, Rebio do Lago Piratuba e Esec Maracá Jipioca (AP), Resex Mocapajuba, Resex Mãe Grande de Curuçá, Resex Mestre Lucindo, Resex Cuinarana, Resex Maracanã, Resex Chocoaré-Mato Grosso, Resex Marinha de Soure, Resex de Tracuateua, Resex Marinha Caeté-Taperaçu, Resex marinha Gurupi-Piriá, Resex Marinha Araí-Peroba (PA). On the northeast coast: Resex Cururupu e APA Reentrâncias Maranhenses (MA), APA Delta do Parnaíba (PI), APA Barra de Mamanguape (PB), Fernando de Noronha National Park (PE), APA Piaçabuçu (AL), APA Litoral norte da Bahia (BA), APA do Litoral Sul do Estado de Sergipe (SE). On the southeast coast: Jurubatiba National Park, APA Cananéia-Iguape Peruíbe). On the south coast: Taim Ecological Station and Lagoa do Peixe National Park.

5. Describe any future activities that are planned for this species:
› From 2017 to 2019 CEMAVE/ICMBio plans to continue and to increase activities of the project “Monitoring and conservation of shorebirds in Brazil” (CEMAVE/ New Jersey Audubon Society -SISBIO 42418, AEX Portaria MCT 162 de 2016).
CEMAVE/ICMBio planned to do systematic surveys on three sites along atlantic coast from 2017 to 2019 to monitor and mark Calidris pusilla, funded by GEF Mar. The implementation of the National Action Plan for Shorebird Conservations and implementation of the protected areas already created.

Miscellaneous information or comments on Appendix I birds in general:
› Current knowledge about the Brazilian birdlife suggests that at least 197 species present some sort of movement pattern considered migratory. Of that total, 53% (104 species) reproduce in Brazil and 47% (93 species) have reproduction sites in other countries, whether in the circumpolar region related to North America and Greenland (northern birds), or in southern areas of South America and Antarctica (southern birds). Those birds leave their reproduction areas to continue biological processes such as moulting, subsequently returning to its areas of origin and thus completing its biological cycle.
MoU on the Conservation of Southern South American Migratory Grassland Bird Species and Their Habitats
The Memorandum of Understanding on the Conservation of Southern South American Migratory Grassland Bird Species and Their Habitats was concluded under de auspices of CMS and came into force on August 26th 2007. That same year, the MoU was signed by representatives of the Argentinian, Bolivarian, Paraguayan,

Uruguayan and Brazilian governments who committed themselves to uniting efforts in working for the conservation of the migratory bird species that use natural fields in southern South America (Annex 3).
In December 14th 2010, the First Formal Meeting of Memorandum of Understanding on the Conservation of Southern South American Migratory Grassland Bird Species and Their Habitats Signatories was held in Asunción/Paraguay. The International Action Plan for the Conservation of Southern South American Migratory Grassland Bird Species and Their Habitats (Annex 2) was approved in that meeting, to come into force between 2010 and 2015.
In the scope of the MoU, this Action Plan has as its Main Goal: “To improve the state of conservation of Southern South American Migratory Grassland bird species and their habitats, in reproduction, migration and non-reproductive concentration areas”. Six specific goals were conceived for this comprehensive action plan: I. To promote the protection and management of natural fields of importance to the migratory species, through 07 actions; II. To develop and coordinate monitoring and investigation programs for the MoU species and its habitats, through 11 actions; III. To create awareness about the importance of the natural fields and threatened species, through 08 actions; IV. To strengthen public policies for the preservation of natural fields, through 07 actions; V. To strengthen the institutions involved in the MoU, through 03 actions; VI. To strengthen international cooperation between MoU signatories, through 07 actions.
In this context, considering the necessity of internalizing the responsibilities Brazil has undertaken by signing this CMS MoU and considering that ICMBio has established a strategy for the collaboration and implementation of the national plans of action for endangered species involving external partners as well as for the coordination of the action plans in the terms of the Joint Ordinance ICM-MMA No 316/2009, which defines the plans as instruments of the National Biodiversity Policy, and the ICMBIO Ordinance No 78/2009, which provides for the attributions of its research and conservation centers. CEMAVE/ICMBio has agreed to elaborate and consolidate information about the Southern Grasslands and to identify possible threats. It has also elaborated, in a planning workshop, a National Action Plan – PAN in the form of a collective agreement, which counts with several partners and reflects demands and commitments already discussed internationally as well as feasible necessary activities agreed upon amongst several articulators and collaborators and aimed at reducing the threats to southern grasslands species in a pre-determined timeframe (2012-2017).
The participative planning workshop for the elaboration of the Southern Grasslands and Espinilho PAN was held from September 13th to 16th of 2011 in Florianópolis – SC and had 27 attendees who represented 22 institutions. There were representatives from Argentina, Uruguay and Paraguay who were involved with the aforementioned MoU as well as with the CMS Action Plan.
The Main Goal elaborated for the Southern Grasslands PAN during the 2011 workshop was: “To improve the state of conservation of the PAN target species reducing the loss, degradation and fragmentation of its habitats and the illegal capture and imprisonment of the birds”.
The taxa addressed by the Memorandum of Understanding on the Conservation of Southern South American Migratory Grassland Bird Species and Their Habitats includes migratory passerine and non-passerine birds that were listed as: Numenius borealis, Tryngites subruficollis, Alectrurus risora, A. tricolor, Sporophila cinnamomea, S. hypochroma, S. palustris, S. ruficollis, Xanthopsar flavus e Polystictus pectoralis pectoralis.
Only passerine birds were contemplated by the Southern Grasslands PAN elaborated in 2011. The final list of common species contemplated both by the CMS Memorandum of Understanding and the Southern Grasslands PAN is: Alectrurus tricolor, Sporophila cinnamomea, S. palustris, S. ruficollis, Xanthopsar flavus e Polystictus pectoralis pectoralis.

You have attached the following documents to this answer.

3_sumario_campossulinos.pdf - SUMÁRIO EXECUTIVO DO PLANO DE AÇÃO NACIONAL PARA A CONSERVAÇÃO DOS PASSERIFORMES AMEAÇADOS DOS CAMPOS SULINOS E ESPINILHO

2. AQUATIC MAMMALS

2.1 General questions on Appendix I aquatic mammals

1. Is the taking of all Appendix I aquatic mammals species prohibited by the national implementing legislation cited in Table I(a) (General Information)?
☑ Yes

If other legislation is relevant, please provide details:
› Fauna Protection Act n° 5.197/1967,
Normative Sudepe n°11/1986 Prohibition of persecution, hunting, fishing or capture of small cetaceans, pinnipeds and sirenians;
Cetaceans Protection Act n° 7.643/1987;
Normative Ibama nº117/1996 Regulation of the prohibition of whaling of cetaceans in Brazilian jurisdictional waters;
Criminal law environment nº 9.605.

1a. If the taking of Appendix I aquatic mammals species is prohibited by law, have any exceptions been granted to the prohibition?

☑ No

2. Identify any obstacles to migration that exist in relation to Appendix I aquatic mammals:
☑ By-catch
☑ Collision with fishing traffic
☑ Pollution
☑ Illegal hunting
☑ Other

› Entanglement, shipstrike

2a. What actions are being undertaken to overcome these obstacles?
› Law enforcement (based on revised regulations)

2b. Please report on the progress / success of the actions taken.
› Illegal Hunting: for the hunting of amazon river dolphins for use as a bait for the fishery of piracatinga, there´s a national moratorium in the fishery and trade of piracatinga fish. This moratorium is for protection of the river dolphins that are already protected by national federal legislation. High success
By cactch – creation of no take zones, review of law enforcement Moderate success
Entanglement; Entanglement response training with the support of IWC . This training aims to capacit several teams in all Brazilian coast to act in the safe and correct procedure in entanglement of large whales, especially during the humpback and right whales breeding time. Moderate succes

2c. What assistance, if any, does your country require in order to overcome these obstacles?
› Financial assistance for environmental education and awareness creation
Finacial for boats and equipment for entanglement response teams

3. What are the major pressures to Appendix I aquatic mammals species (transcending mere obstacles to migration)?
☑ Pollution
☑ By-catch

3a. What actions have been taken to prevent, reduce or control factors that are endangering or are likely to further endanger acuatic mammals species beyond actions to prevent disruption to migrating behaviour?
› Law enforcement and revision of laws to improve protection, Environmental licenses with conditions for mitigation of impacts, PMP (Beach Monitoring Program seeking for animals stranded on the beach).
National Action Plan for large cetaceans and pinniped
National Action Plan for small cetaceans and sirena
National Action Plan for amazon river dolphin
National Action Plan for Franciscana
IWC Conservation Management Plan for Southwest Right Whale Population in conjuction with Argentina and Uruguay (Brazil Coordinate)
IWC Conservation Management Plan for Franciscana Dolphin (Pontoporia blainvillei) in conjuction with Argetina and Uruguay (Argetina coordinate)
Creation of no take zones for fishery activities
Creation of Protected Areas

3b. Please report on the progress / success of the actions taken.
› National Action Plan for large cetaceans and pinniped – Moderate success
National Action Plan for small cetaceans and sirena – Moderate success
National Action Plan for amazon river dolphin – Moderate succes
National Action Plan for Franciscana - -Moderate succes
IWC Conservation Management Plan for Southwest Right Whale Population in conjuction with Argentina,and Uruguay (Brazil Coordinate) – Moderate succes
IWC Conservation Management Plan for Franciscana Dolphin (Pontoporia blainvillei) in conjuction with Argetina and Uruguay (Argetina coordinate)- Moderate succes
Creation of no take zones for fishery activities – Moderate success
Creation of Protected Areas – High succes

3d. What assistance, if any, does your country require to overcome these factors?
› Concentrate efforts for increase the goverment budget for implementation of the National Policies for consevation of aquatic mammals.

2.2 Questions on specific Appendix I aquatic mammals

In the following section, using the table format below, please fill in each Appendix I aquatic mammals species for which your country is considered to be a Range State. Please complete each table as

appropriate, providing information in summary form. Where appropriate, please cross-reference to information already provided in national reports that have been submitted under other conventions (e.g. Convention on Biological Diversity, Ramsar Convention, CITES). (Attach annexes as necessary.)

Species name: Balaenoptera borealis

1. Please provide published distribution reference:

› The sei-whale is a cosmopolitan species and occurs from the tropics to polar regions of all oceans. However, its distribution in the world is little known, mainly because this species has been confused during long time with the baleen-de-bryde (Balaenoptera edeni). In addition, the sei whale has an unpredictable pattern of occurrence, being observed in an area for several years and may disappear afterwards (JEFFERSON et al., 2015; LODI & BOROBIA, 2013).

In Brazil, in addition to the records from commercial hunting in Paraíba and Rio de Janeiro, there are records of specie strandings in Espírito Santo (Barros, 1991; Zerbini et al, 1997), São Paulo (M.C.O.Santos personal communication), Santa Catarina (Simões-Lopes & Ximenez, 1993) and Rio Grande do Sul (Zerbini et al 1997).

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2a. Summarise information on population size (if known):
☑ decreasing

› Balaenoptera borealis can be found in all oceans. The exploitation of sei-whales in the South Hemisphere has occurred since the beginning of the last century and was rather intense between 1950 and 1970, when the stocks were seriously reduced. The commercial exploitation came to a halt in 1979. It is estimated that commercial whaling reduced the global population by 80-90% in the last three generations (around 70 years). The populations in Brazil and Antarctica were simultaneously reduced, and abundance rates in the Paraíba whaling area have indicated a decrease of almost 90% in the period of 1966-72. The cause for such a reduction is well understood, reversible and has been discontinued. Therefore, the species was categorized as Endangered (EN) according to the A1ad criteria. Research cruises held between 1998 and 2001 suggest that this population has not fully recovered yet. A larger and more recent time series would be necessary in order to evaluate the current tendency of this population.

2b. Summarise information on distribution (if known):
☑ unclear

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna:
pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=121&data=18/12/2014
☑ Control hunting / poaching

› All cetaceans by federal law

5. Describe any future activities that are planned for this species:
› Population estimate;
Searches to reduce bycatch and entanglement;
Environmental awareness;
Researchs to evaluate the health of specimens;
Inspection activities.

Species name: Balaenoptera musculus

1. Please provide published distribution reference:

› Occurred in all the world's oceans, but due to the small population size, the records of the species in Brazil are rare (Dalla Rosa & Sechi, 1997)
JEFFERSON, T.A., WEBBER, M.A. & PITMAN, R.L. 2015. Marine Mammals of the World: a comprehensive guide to their identification. 2nd edition. Academic Press,Amsterdam.
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2a. Summarise information on population size (if known):
☑ decreasing

› Balaenoptera musculus seems to have always been rare in the Brazilian coastline, however there is no historical data to substantiate the abundance of the species before the intense whaling period. Several recent cetaceans mapping efforts in the Brazilian coastline have not resulted in any sightings of the blue-whale. Although there is evidence that some populations are recovering, it is estimated that the remaining population of the Southern Hemisphere (Antarctica) represents less than 1% of the existing population before commercial whaling (before 1904), which represents a decrease of at least 90% in a three-generation period (93 years). The cause for such a reduction is understood, reversible and has been discontinued. Therefore, the species was categorized and Critically Endangered (CR) according to the A1abd criteria.

2b. Summarise information on distribution (if known):
☑ unclear

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna
☑ Control hunting / poaching

› All cetaceans by federal law.
☑ Species restoration

5. Describe any future activities that are planned for this species:
› Population estimate
Searches to reduce bycatch and Entanglement
Environmental awareness
Researchs to evaluate the health of specimens
Inspection activities

Species name: Balaenoptera physalus

1. Please provide published distribution reference:
› Tropical oceanic waters, temperate to circumpolar of all Oceans (JEFFERSON et al., 2015)
In Brazil, the specie has been recorded from Rio Grande do Norte to Rio Grande do Sul (Pinedo et al, 1992: Zerbini et al, 1997). The specie, however, does not appear to be abundant anywhere in the Brazilian coast (Zerbini et al, 1997). In contrast, the specie is relatively common in subantarctic and Antarctic regions.
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2a. Summarise information on population size (if known):
☑ not known

› Balaenoptera physalus occurs in all oceans. The fin-whales were depleted by commercial whaling all over the world in the 20th Century. The global population suffered a decrease superior to 70% between 1929 and 2007 (three-generation period), the greater decreased was noted in the Southern Hemisphere. In Brazil, Balaenoptera physalus has always been rare in the Paraíba former whaling area, however, there has been records of exploitation of this species in Cabo Frio (currently Arraial do Cabo) in the early 60's. There is no information available concerning the proportions of population reduction in Brazilian waters. It is assumed that Brazil's fin-whales migrate to Antarctica, however the migration routes and location of the animals remain unknown. It is believed that the Brazilian and Antarctica populations were simultaneously reduced. Therefore, the species was categorized as Endangered (EN) according to the A1ad criteria. It is likely that the populations are currently increasing, seeing as the cause for decrease has been suspended and is reversible.

2b. Summarise information on distribution (if known):
☑ unclear

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Education / awareness rising
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna
☑ Control hunting / poaching

› All cetaceans by federal law

4. If no activities have been carried out for this species in the reporting period, what has prevented such action being taken?
› Reduced staff to carry out research and inspection activities and scarce resource

5. Describe any future activities that are planned for this species:
› Population estimate
Searches to reduce bycatch and Entanglement
Environmental awareness
Researchs to evaluate the health of specimens
Inspection activities

Species name: Eubalaena australis

1. Please provide published distribution reference:
› Cosmopolitan. There are four major reproductive stocks of southern-right whales recognized in the Southern Hemisphere, located in South Africa, Australia, South America and sub-Antarctic region of New Zealand. A small population found in southern Brazil is probably related to the population of Argentina (IWC, 2001; Best et al 1993). The current records of the specie in Brazil comprise the coastal waters between Rio Grande do Sul and Bahia, although most are concentrated in Santa Catarina and Rio Grande do Sul (Castello & Pinedo, 1979;Câmara &Palazzo Jr,1986; Simões-Lopes et al, 1992;Lodi et al, 1996;Engel et al, 1997;Flores et al, 2000;Greig et al, 2001; Baracho et al, 2002)
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2a. Summarise information on population size (if known):

☑ increasing

› Eubalaena australis has a circumpolar distribution in the southern hemisphere. Illegal whaling held up until 1973 has reduced the right whale population in the Brazilian coastline to almost zero, and the populational estimative is still quite reduced, especially if compared to historical pre-whaling data. A decrease of at least 70% in the last 86 years (three generations) is estimated due to whaling. There is evidence of a genetic bottleneck intensified by the intense whaling held in all southern hemisphere. The total population in Brazil’s southern coast is estimated at around 555 individuals, approximately 206 of those being mature. The population is currently increasing. However, the current population is extremely small if compared to original

estimates, representing less than 10%. Therefore, the species has been categorized as Endangered (EN) according to A1d and D criteria.

2b. Summarise information on distribution (if known):
☑ stable

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research
☑ Identification and establishment of protected areas
☑ Monitoring
☑ Education / awareness rising
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna
☑ Control hunting / poaching

› All cetaceans by federal law

5. Describe any future activities that are planned for this species:
› Population estimate
Searches to reduce bycatch and Entanglement
Environmental awareness
Researchs to evaluate the health of specimens
Inspection activities

Species name: Megaptera novaeangliae

1. Please provide published distribution reference:
› Globally found in tropical, temperate and circumpolar waters of all oceans (JEFFERSON et al., 2015)
The main reproductive concentration in the Western South Atlantic is the Banco dos Abrolhos, situated in the extreme south of Bahia and north of Espírito Santo (Engel, 1996; Siciliano, 1997; Martins et al., 2001; Andriolo et al. 2006). The records of the species occur along the Brazilian coast, from Rio Grande do Sul to Pará and Fernando de Noronha (Pinedo et al., 1992; Lodi, 1994; Pretto et al., 2009). Studies in areas of historical occurrence suggest the reoccupation of old reproduction areas on the Bahia coast (Más Rosa et al 2002, Bisi & Morete, 2004) and the State of Rio de Janeiro, especially the Campos Basin region, which has been identified as a migratory corridor of the species (Siciliano, 1997)
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2a. Summarise information on population size (if known):
☑ increasing

2b. Summarise information on distribution (if known):
☑ increasing

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research
☑ Identification and establishment of protected areas
☑ Monitoring
☑ Education / awareness rising
☑ Species protection

› All cetaceans by federal law
☑ Control hunting / poaching

› All cetaceans by federal law
☑ Habitat protection

5. Describe any future activities that are planned for this species:
› Population estimate
Searches to reduce bycatch and Entanglement
Environmental awareness
Researchs to evaluate the health of specimens
Inspection activities

Species name: Physeter macrocephalus

1. Please provide published distribution reference:
› The species is cosmopolitan, widely distributed. Females and immature species live in tropical and subtropical waters. The males move gradually to the temperate and circumpolar regions of all the oceans, remaining more solitary but returning to tropical waters for breeding (WHITEHEAD & WEILGART, 2000).
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2a. Summarise information on population size (if known):
☑ decreasing

› Physeter macrocephalus can be found in all oceans. The species was intensely hunted in the past, it is suspected that there has been a population decrease of at least 50% in the last three generations (96-year period), including in Brazil. The causes for reduction (whaling) are clearly reversible, understood and have been discontinued. Therefore, the species has been categorized as Vulnerable (VU), according to the A1d criteria.

2b. Summarise information on distribution (if known):
☑ unclear

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna

5. Describe any future activities that are planned for this species:
› Population estimate
Searches to reduce bycatch and Entanglement
Environmental awareness

Researchs to evaluate the health of specimens
Inspection activities

Species name: Pontoporia blainvillei

1. Please provide published distribution reference:
› Coastal waters of eastern South America, from the Espirito Santo (18ºS), in Brazil, to Chubut (42ºS), in Argentina.(CREMER & SIMÕES-LOPES, 2005; DANILEWICZ et al., 2009)
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2a. Summarise information on population size (if known):
☑ decreasing

› Pontoporia blainvillei is the most threatened small cetacean in South America due to the high levels of accidental capture and habitat degradation. The main threat is drift and trawl fishing, both artisanal and industrial. That variety of fishing has not been discontinued and is instead growing in effort, there is no prospect for its termination within the species area of occurrence. Because it is a coastal species, it also suffers from diminishing habitat quality, mainly due to pollution. Quantitative analyses held in 2002 indicated that the species might reach its “virtual collapse”, reaching 10% of the original populational size, in approximately 23 years in the south of Brazil. Other populational simulations for this species held in 2006 suggest a 30% decrease in stock in a particular handling unit (Rio Grande do Sul/Uruguay) in 25 years, and an over 50% decrease in Brazil within a three-generation period. Additionally, more recent data regarding accidental capture indicates that the yearly captured quantities approximately double the values employed, which makes the populational decrease greater than 80% in a three-generation period (36 years). Therefore, based on occurred and expected decreases, the species was categorized as Critically Endangered according to the A4cde criteria.

2b. Summarise information on distribution (if known):
☑ stable

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna
☑ Control hunting / poaching

› All cetaceans by federal law

5. Describe any future activities that are planned for this species:
› Population estimate
Searches to reduce bycatch and Entanglement
Environmental awareness
Researchs to evaluate the health of specimens
Inspection activities

Species name: Trichechus manatus (populations between Honduras and Panama)

1. Please provide published distribution reference:
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2a. Summarise information on population size (if known):
☑ decreasing

› Trichechus Manatus presents a visibly reduced population if compared to its original population. The existing abundance estimates indicate a very small population of about 500 individuals. The main cause of the population reduction in the past were hunting practices. Currently, the main threats are the continuous loss of habitat and the increase in anthropogenic activities in its occupation area. Moreover, pathogens, parasites and pollutants, such as heavy metals and organochlorines, have been identified in rescued hatchlings and stranded carcasses. Considering past threats, especially hunting, and prospects of habitat loss and degradation, a population decrease of at least 50% over a three-generation period (about 60 years), or a 20% decrease in a two-generation period is envisioned if mitigating measures are not implemented. Therefore, the species has been categorized as Endangered (EN) according to A4cde and C1 criteria.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Ordinance No. 444/2014 Endangered Fauna

3. REPTILES

3.1 General questions on Appendix I reptiles

1. Is the taking of all Appendix I reptiles species prohibited by the national implementing legislation cited in Table I(a) (General Information)?
☑ No

1a. If the taking of Appendix I reptiles species is prohibited by law, have any exceptions been granted to the prohibition?
☑ Yes

If Yes, please provide details (Include the date on which the exception was notified to the CMS Secretariat pursuant to CMS Article III(7):
› The Brazilian Federal government, through Ibama Normative Instruction No. 7 of 30 April 2015 (establishing and standardizing the categories of usage and handling of wildlife in captivity), authorizes the creation and marketing of Podocnemis expansa, through the ex situ (ranching) handling system for the species.

2. Identify any obstacles to migration that exist in relation to Appendix I reptiles species:
☑ By-catch
☑ Pollution
☑ Other

› Alteration and Habitat reduction (hydroelectric stations, deforestation and fires):
The species habitat shall be potentially reduced and disconnected due to the implantation of waterways and reservoirs of hydroelectric power plants. The damming of water bodies, notably in hydroelectric ventures, might hinder the migration of the turtles both downstream or upstream of their nesting sites (beaches), and the deforestation of meadow areas affects the feeding of the species during the flood season. In the upper part of the amazon river the large number of vessels in traffic transporting ores and other materials might inhibit the turtles (P. expansa) from going upstream of the river (Vogt 2014).

2a. What actions are being undertaken to overcome these obstacles?

› The Brazilian Federal government, in a shared administration between Ibama and ICMBio, coordinates the National Action Plan for the Conservation of the Amazonian Turtles (Amazonian Turtles PAN), regulated by Joint Ordinance Ibama/ICMBio No. 01 of 04, April 2015. The PQA (Amazonian Turtles PAN) has been an instrument to further Brazilian biodiversity conservation and has, as its basic premise, the conservation of amazonian turtle species in its natural habitats and in a sustainable manner.
The Amazonian Turtles PAN has as a main goal improving amazonian turtles' conservation strategies and promoting actions for its recovery and sustainable use, especially for the Podocnemis expansa species.
Tamar Project
Since the 1980s, Projeto TAMAR has been acting for the conservation and research of the five species of sea turtles that occur in Brazil, in order to ensure their recovery and survival at healthy levels able to fulfill their ecological roles.
Projeto TAMAR (in English: TAMAR Project) is a name given to the combined efforts of Centro TAMAR/ICMBio and the NGO Pro-Tamar Foundation. Projeto TAMAR acts on research, beach monitoring and sea monitoring. It also contributes to environmental impact asssessment in important areas for sea turtles, management of federal Protected Areas, environmental education and social inclusion.
In 2011 the first version of the National Action Plan (NAP) for the Conservation of Sea Turtles (in portuguese: PLANO DE AÇÃO NACIONAL Tartarugas Marinhas) was published, covering a five-year period. The second version of NAP hasn´t been published yet, however, its seven goals have already been defined, with several actions in order to achieve each goal. The seven goals are:
1. Estimation of numbers of bycatch, mortality and identification of areas where there is the greatest interaction of sea turtles and priority fisheries *
* Priority fisheries: those that interact with sea turtles and cause mortality at relevant and worrying levels for conservation purposes, considered each species.
2. Reduction of bycatch and mortality of sea turtles in fishing activities
3. Protection of main sea turtle nesting areas
4. Monitoring and protection in other identified sea turtle nesting areas
5. Conservation of sea turtle feeding areas
6. Reduction of pollution impacts on sea turtles
7. Improvement of public policies to protect sea turtles

You have attached the following Web links/URLs to this answer.

PLANO DE AÇÃO NACIONAL PARA CONSERVAÇÃO DAS TARTARUGAS MARINHAS - PLANO DE AÇÃO NACIONAL PARA CONSERVAÇÃO DAS TARTARUGAS MARINHAS

Sumário Executivo do Plano de Ação Nacional para a Conservação dos Quelônios Amazônicos - Sumário Executivo do Plano de Ação Nacional para a Conservação dos Quelônios Amazônicos

2b. Please report on the progress / success of the actions taken.

› The Amazonian Turtles Program (PQA) and the National Action Plan for the Amazonian Turtles Conservation (Amazonian Turtles PAN) have promoted and influenced their partner entities in carrying out population studies for the Podocnemis expansa, including migratory dynamics profiling, aiming to qualitatively analyze potential impacts that this species different types of habitat modification might cause.
Thus, through monitoring the population via traditional means (e.g. capturing-marking-recapturing) it has been possible to define, amongst other important factors, the rate of primiparous females' recruitment, as well as young individuals and adults who comprise the monitored populations, the sex ratio (population structure), in addition to the degree of interference (degradation) and exploitation. Population studies are primarily relevant to characterize these species conservation status at local and regional levels, which is, therefore, influenced by the knowledge existent about the structure and dynamics of their populations. This knowledge will anchor the establishment of conservation, recovery and/or use guidelines for species of interest, including handling practices.
Tamar Project
In 2016, Projeto TAMAR celebrated the mark of 25 million hatchlings returned to the sea after 35 years of protection and research work on sea turtles along the Brazilian coast.
After decades of continuous work toward the protection of sea turtle scientific literature indicates an increase in the Brazilian nesting populations of Caretta caretta, Eretmochelys imbricata, Lepidochelys olivacea, Dermochelys coriacea (Marcovaldi & Chaloupka, 2007; Silva et al., 2007; Thomé et al., 2007), and stable numbers for Chelonia mydas (Almeida et al., 2011). However, all populations are still considered threatened and further studies are needed in order to verify these trends, considering the late maturation and long life

cycle for these vertebrates.
Nowadays Projeto TAMAR operates 25 Reseach Stations along the Brazilian coast, covering up to 1,100 km of beaches. Nearly 1,300 direct jobs were generated by sea turtle conservation activities, and most of the employees (more than 80%) are natives of local communities. In most places where the stations are present, Projeto TAMAR is the primary source of income, both directly and indirectly, with almost 900 local people benefitting from income generating programs (e.g. artisanal and embroidery groups, handicrafts production, etc.).
More than 2,000,000 people attended the Visitors and Environmental Education Centers, educational campaigns and exhibitions,
Furthermore, human consumption of turtles and eggs in Brazil are present in few areas but in most of the country it is now so rare as to be insignificant in the context of monitoring data (SILVA et al., 2015)
References:
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SILVA, A.C.C.D.; CASTILHOS, J.C.; LOPEZ, G.G. & BARATA, P.C.R. 2007. Nesting biology and conservation of the olive ridley sea turtle (Lepidochelys olivacea) in Brazil, 1991/1992 to 2002/2003. Journal of the Marine Biology Association of the United Kingdom, 87: 1047-1056.
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2c. What assistance, if any, does your country require in order to overcome these obstacles?
› Interchange of data with other countries (e.g. data on main fisheries and bycatch, the main cause of mortality in Brazil and other countries).

3. What are the major pressures to Appendix I reptiles species (transcending mere obstacles to migration)?
☑ Collection of eggs
☑ Predation of eggs
☑ Destruction of nesting beaches
☑ Other

› Illegal hunting practices
Illegal trade
Habitat alteration and reduction (hydroelectric stations, deforestation and fires):
Past anthropogenic pressures persist in the Amazon countries (excessive harvesting of matrices and eggs, and deforestation of riverbanks) and have only decreased in locations where there is uninterrupted and intensive care and management.
X Coastal development: accelerated beachside construction, intense beach use during the reproductive season (September to March), irregular artificial illumination, and use of motorized vehicles on the beach
X Incidental capture (bycatch)
X Pollution/marine debris
X Others: Climate change
Illegal hunting practices
Illegal trade
Habitat alteration and reduction (hydroelectric stations, deforestation and fires):
Past anthropogenic pressures persist in the Amazon countries (excessive harvesting of matrices and eggs, and deforestation of riverbanks) and have only decreased in locations where there is uninterrupted and intensive care and management.
X Coastal development: accelerated beachside construction, intense beach use during the reproductive season (September to March), irregular artificial illumination, and use of motorized vehicles on the beach
X Incidental capture (bycatch)
X Pollution/marine debris
X Others: Climate change

3a. What actions have been taken to prevent, reduce or control factors that are endangering or are likely to further endanger reptiles species beyond actions to prevent disruption to migrating behaviour?
› Conservation actions implemented by the Amazonian Turtles Project (PQA) have long been making every effort to protect some of these species. The monitoring of spawning areas, combined with the management of P. expansa, P. unifilis and P. sextuberculata nests and hatchlings conducted over 35 years by the PQA in 11 areas and 212 spawning sites, demonstrated a large fluctuation in number of nests sampled in most of these

locations.
Despite the conservation efforts undertaken by the PQA and countless other entities with similar initiatives, significant population decreases in amazonian turtle species, notably the Amazon Turtle, are highlighted in many locations in its larger areas of occurrence.
For marine turtles (Tamar Project) - Same as 2a

3b. Please report on the progress / success of the actions taken.
› In 35 years of PQA activities (1979 to 2014), over 65 million of hatchlings were handled and 800,000 matrices in the spawning process were monitored in North and Midwest regions of Brazilian states. These actions have contributed to the conservation and recovery of these species natural populations and, consequently, collaborated for the conservation of associated biodiversity.
For marine turtles (Tamar Project) - Same as 2b

3c. Describe any factors that may limit action being taken in this regard:
› The main threat to Podocnemis expansa is the excessive consumption of its meat, eggs and byproducts by riverside populations, restaurants and commerce ever since the beginning of the Amazon region occupation up until today (Bates 1863, Smith 1979, Bataus 1998, Rebêlo & Pezzuti 2000, Peres, 2000, Fachín-Terán 2005, Vogt 2008, Ataíde 2010, Pezzuti et al. 2010, Cantarelli et al. 2014, Pantoja-Lima et al. 2014). Unprotected beaches may have up to 100% of its eggs predated by humans (Vogt, 2008).
These innate vulnerabilities to the species are strengthened by anthropogenic interventions, through historical, diversified and severe means of habitat alteration and reduction, especially fires, wetlands and riparian forests deforestation (shelter and food sources during the flood season), watercourses canalization and contamination, drainage, grounding and compression of flooded areas, agricultural activities expansion (replacing native forests), and damming of water bodies by the construction of reservoirs that hinder the turtle's up or downstream migration from the nesting beaches. However, it should be emphasized that long-term studies for the effective qualification and measurement of adverse factors motivated by these anthropogenic transformations are still lacking, especially in relation to the population dynamics of this species (Mogollones et al. 2010, Pantoja-Lima 2012).
After Ibama resumed the Amazonian Turtles Program coordination (Ibama Decree No. 259 of 2011), up to this moment, a myriad of problems motivated primarily by the severe contingency of financial resources imposed by the federal government and the prioritisation of supervision actions against deforestation and forest fires, notably in the Amazon Biome, have imputed to the project (in different governmental spheres). Such operational limitations have greatly restricted the coverage and systematization in reproductive monitoring data collection, intensely exposing the Amazon Turtle (Podocnemis expansa) subpopulations to over-exploitation (Rafael Balestra-ICMBio and Roberto Victor Lacava and Silva-Ibama, personal communication, 2016).

3d. What assistance, if any, does your country require to overcome these factors?
› - The creation of a Sustainable Use Units pilot project is recommended, aiming to implement extensive breeding of the species.
- The regimentation of the species extensive breeding in Sustainable Use Units is recommended, as well as the re-evaluation of existing regimental legislation on commercial breeding with regards to its effectiveness.
-It is recommended for studies to evaluate whether the captive breeding of Podocnemis expansa contributes to the decrease of hunting for subsistence practices and illegal trade of meat and by-products, considering the breeding system of the species currently permitted.
-The continuity and improvement of the Amazonian Turtles Programme (PQA) is paramount. It is important to emphasize that dynamic strategies, with improved scientific basis, should be applied in a standardized way in the project's locations, aiming to optimize the resources allocated and to improve the precision of the population trends results.
The implementation of the National Action Plan for Amazonian Turtles Conservation - Amazonian Turtles PAN is recommended.
For marine turtles (Tamar Project) - Same as 2c.

3.2 Questions on specific Appendix I reptiles

In the following section, using the table format below, please fill in each Appendix I reptiles species for which your country is considered to be a Range State. Please complete each table as appropriate, providing information in summary form. Where appropriate, please cross-reference to information already provided in national reports that have been submitted under other conventions (e.g. Convention on Biological Diversity, Ramsar Convention, CITES). (Attach annexes as necessary.)

Species name: Caretta caretta

1. Please provide published distribution reference:
› IUCN, 2015. Caretta caretta. The IUCN Red List of Threatened Species 2015: e.T3897A83157651. http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T3897A83157651.en. Downloaded on 17 March 2017.
SANTOS, A. S.; SOARES, L. S.; MARCOVALDI, M. Â.; MONTEIRO, D. S.; GIFFONI, B. & ALMEIDA, A. P. Avaliação do

estado de conservação da tartaruga marinha Caretta caretta (Linnaeus, 1758) no Brasil. Biodiversidade Brasileira, 2011, 1(1): 1-9. Número Temático: Avaliação do Estado de Conservação das Tartarugas Marinhas no Brasil. ICMBio/MMA.
MARCOVALDI, M.A. & CHALOUPKA, M. Conservation status of the loggerhead sea turtle in Brazil: an encouraging outlook. Endangered Species Research, 3: 133-143.
ÁLVAREZ-VARAS, R.; BERZINS, R.; BILO, K.; CHEVALIER,J.; CHEVALLIER, D.; THOISY, B.; FALLABRINO, A.; CRUZ, M. G.; KELEZ,S.; LOPEZ-MENDILAHARSU, M.; MARCOVALDI, M. A.; MAST, R. B.; MEDRANO, C.; MIRANDA, C.; NALOVIC,M. A; PROSDOCIMI, L.; RGUEZ-BARÓN, J. M.; SANTOS, A.; SOARES, L.; THOME, J.; VALLEJO, F.; VÉLEZ-RUBIO, G. Sea turtles of south America. SWOT report: the state of the World's sea turtles. Special feature south America, USA, v.11, p. 14-27, 2016.
MARCOVALDI, M.A.G.; LÓPES-MENDILAHARSU, M.; SANTOS, A.S; LOPEZ, G.G.; GODFREY, M.H.; TOGNIN, F.; BAPTISTOTTE, C.; THOMÉ, J.C.; DIAS, A.C.C.; CASTILHOS, J.C.; FUENTES, M.M.P.B. Identification of loggerhead male producing beaches in the south Atlantic: Implications for conservation. Journal of Experimental Marine Biology and Ecology, v.477, p. 14–22, 2016.
LIMA, E. P.; WANDERLINDE, J.; ALMEIDA, D. T de; LOPEZ, G.; GOLDBERG, D. W. Nesting Ecology and Conservation of the Loggerhead Sea Turtle (Caretta caretta) in Rio de Janeiro, Brazil. Chelonian Conservation and Biology, v.11., n.2., p.249-254, 2012.
BARCELÓ, C.; DOMINGO, A.; MILLER, P.; ORTEGA, L.; GIFFONI, B.; SALES, G.; MCNAUGHTON, L.; MARCOVALDI M. A.; HEPPELL, S. S.; AND SWIMMER, Y. Movements of Juvenile Loggerheads in the Southwestern Atlantic. In: ANNUAL SYMPOSIUM ON SEA TURTLE BIOLOGY AND CONSERVATION, 31., 2011, San Diego. Proceedings... Miami: U.S.Department of Commerce, p.129. 2012.
MARCOVALDI, M.A.; LÓPEZ-MENDILAHARSU M.; VERISSIMO, L.; LARA, P.H.; SANTOS, A.S.; LÓPEZ, G.G. Saturation tagging of loggerheads nesting at Praia do Forte, Brazil: preliminary results. In: ANNUAL SYMPOSIUM ON SEA TURTLE BIOLOGY AND CONSERVATION, 32., 2012, Huatulco, Proceedings... Miami: U.S.Department of Commerce.
PONS, M.; DOMINGO, A.; GIFFONI, B.; SALES, G.; MILLER, P. Update Of Standardized Catch Rates Of Loggerhead Sea Turtles, Caretta Caretta, Caught By Uruguayan And Brazilian Longline Fleets (1998-2012). Collective Volume of Scientific Papers ICCAT, v.71, n.6, p. 2977-2982, 2015.
LIMA, E. H. S. M.; MELO, M. T. D.; SANTOS, A. S.; ARENAS, A. A.; GODFREY, M. H. Second record of tagged loggerhead moving between South and North Atlantic. Marine turtle newsletter, n. 143, p. 16, 2014.
SHAMBLIN, B.M.; BOLTEN, A.B.; ABREU-GROBOIS, F.; BJORNDAL, K.A.; CARDONA, L.; CARRERAS, C.; CLUSA, M.; MONZÓN-ARGUELLO, C.; NAIRN, C.J.; NIELSEN, J.T.; NEL, R.; SOARES, L.S.; STEWART, K.R.; VILAÇA, S.T.; TURKOZAN, O.; DUTTON, P.R. Geographic patterns of genetic variation in a broadly distributed marine vertebrate: new insights into loggerhead turtle stock structure from expanded mitochondrial DNA sequences. Plos One, v.9, 2014. doi:10.1371

2a. Summarise information on population size (if known):
☑ increasing

› Brazilian nesting populations.
The proposed category for this taxon is "Endangered (EN)" according to the A2ab criterion, (i.e. threatened). The loggerhead is considered endangered, especially in the Pacific Ocean, where there have been substantial declines in all the major nesting populations. On the other hand, some loggerhead nesting populations in the northwest Atlantic are apparently increasing, but the conservation status of loggerheads in the Atlantic-Mediterranean is not well known. According to Marcovaldi and Chaloupka (2007), the Brazilian nesting population is probably one of the largest remaining loggerhead nesting populations in the world. These authors report a substantial long-term increase in nesting abundance of this species, following the cessation of egg and turtle harvesting in the 1980s.

2b. Summarise information on distribution (if known):
☑ stable

› The Loggerhead Turtle is globally distributed throughout the subtropical and temperate regions of the Mediterranean Sea and Pacific, Indian, and Atlantic Oceans (IUCN, 2015). In Brazil, it occurs from Pará (Northern Brazil) to Rio Grande do Sul (Southern Brazil), with females tagged in Brazil found stranded in Uruguayan beaches. Telemetry studies have shown a migratory corridor between Bahia State, located in Northeastern Brazil and foraging/resting areas in the north/northeastern coast, mainly in Ceará. Juveniles occur in high numbers at the Rio Grande rise (incidental capture data) and along the continental shelf and slope of Rio Grande do Sul (incidental capture and stranding records). The loggerhead turtle is the most common species nesting along the mainland coast of Brazil. The main nesting area for this species extends from Sergipe, northeastern Brazil, to the northern state of Rio de Janeiro, southeastern Brazil.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› One of the primary goals of Projeto TAMAR is to conduct scientific research. Sea turtles spend most of their lives in the water and migrate thousands of kilometers. This makes it very difficult to elucidate many

biological and behavioral aspects of their lives. Scientific research can help revealing critical information for us to provide sea turtle protection. Projeto TAMAR in collaboration with other institutions have conducted extensive research, using different methods such as: data logging, satellite telemetry, tagging, genetics, surveys, hematology, biochemistry, and many others.
Projects: Satellite telemetry of female loggerheads in Northeastern Brazil (Neca Marcovaldi – neca@tamar.org.br); Genetic composition, population structure and phylogeography of loggerhead sea turtle in Brazilian rookeries; Identification of loggerhead male producing beaches in the south Atlantic (Neca Marcovaldi – neca@tamar.org.br);
☑ Monitoring

› Projeto TAMAR operates 25 Research Stations along the Brazilian coast, covering up to 1,100 km of beaches. Intensive study areas (ISA) and protection areas (PA) have been implemented in each of Projeto TAMAR's stations at nesting beaches. The classification of a nesting area as either ISA or PA facilitates standardizing the monitoring methodology among all nesting areas on the Brazilian coast (Marcovaldi and Marcovaldi 1999). Sea turtle feeding grounds became a priority for directed and consistent action in the early 1990's. Incidental capture in coastal fisheries, some of which are artisanal, was proven to be high in these areas.
The main nesting area of loggerheads along the Brazilian coast extends from Sergipe, northeastern Brazil, to the northern state of Rio de Janeiro, eastern Brazil (Marcovaldi and Chaloupka 2007).
☑ Education/awareness rising

› One of the most important aspects of the Project is Community outreach and education within the coastal villages, including school presentations of videos and slides, hatchling release ceremonies, and festivals. The goal is to increase local awareness of the importance of a healthy marine ecosystem, which includes turtles. To facilitate social integration and credibility, as well as enhance effectiveness of conservation initiatives, Projeto TAMAR has developed a wide variety of outreach activities. For instance: educational and community support, paper recycling workshop, educational campaigns (photopollution, vehicles on nesting beaches etc.), environmental education and awareness activities in fishing communities and many others.
☑ Species protection

› Projeto TAMAR monitors almost 1.100 km of coastline and islands through 25 Research stations across nine states: Ceará, Rio Grande do Norte, Pernambuco, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina. These stations are divided into sea turtle feeding and/or nesting grounds. The main strategies for the conservation and recovery of sea turtles in Brazil have been developed according to the Sea Turtle National Action Plan (NAP), which is an initiative to promote effective collaboration among stakeholders (e.g., research entities, governmental and nongovernmental organizations) to ensure the recovery and survival of the five species of sea turtles in Brazil. Additionally, Tamar has been working extensively to reduce sea turtle incidental capture and to improve national and international exchange of information on bycatch.
Ordinance No. 444/2014 Endangered Fauna
☑ Habitat protection

› Projeto TAMAR monitors almost 1.100 km of coastline and islands through 25 Research stations across nine states: Ceará, Rio Grande do Norte, Pernambuco, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina. These stations are divided into sea turtle feeding and/or nesting grounds.
Thanks to various conservation efforts that have employed sea turtles as flagship species, several marine and coastal protected areas have been created at federal, state, and municipal levels. These areas in turn benefit other species through the protection of their respective habitats. For instance: Atol das Rocas Biological Reserve, established in 1986 in the state of Rio Grande do Norte; Fernando de Noronha National Park, created in 1988, in the state of Pernambuco and many others.
☑ Other

› Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:
Contact: Centro TAMAR/ICMBio

5. Describe any future activities that are planned for this species:

› • Continue to develop environmental education and awareness activities and to promote income generating options for the local communities where Caretta caretta occurs;
• Maintain monitoring on nesting beaches, ensuring the protection of "in situ" nests and females;
• Maintain and enhance long-term research activities to evaluate population trends (growth, stability, decline);
• Identify loggerhead foraging areas and implement long-term conservation, management and research;
• Develop and implement new technologies to minimize anthropogenic impacts;
• Continue with the "Sea turtle and fisheries interaction" Program to reduce sea turtle bycatch;
• Stimulate participatory management in fishing communities to find alternative and planning solutions;
• Conduct a survey of loggerhead turtle-fishery interaction;
• Revise the legislation that requires and enforces the use of turtle excluder devices (TED);
• Maintain and enhance green turtle tagging program (adults and juveniles), to determine the areas of use and displacement and their reproductive biology;

• Continue to develop genetic studies to evaluate different populations (on foraging grounds and nesting beaches);
• Encourage the creation and management of coastal and marine Conservation Units;
• Develop and implement mitigation and compensatory measures for any constructions on loggerhead turtle nesting beaches and/or foraging grounds.
• Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:

Species name: Chelonia mydas

1. Please provide published distribution reference:
› IUCN, 2004. Chelonia mydas. The IUCN Red List of Threatened Species 2004: e.T4615A11037468. http://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T4615A11037468.en. Downloaded on 17 March 2017.
ALMEIDA A. P.; SANTOS, A. J. B.; THOMÉ, J. C. A.; BELINI, C.; BAPTISTOTTE, C.; MARCOVALDI, M. Â.; SANTOS, A. S. & LOPEZ, M. Avaliação do estado de conservação da tartaruga marinha Chelonia mydas (Linnaeus, 1758) no Brasil. Biodiversidade Brasileira. ICMBio/MMA, 2011, 1(1): 18-25.
TOREZANI, E.; BAPTISTOTTE, C.; MENDES, S. L.; BARATA, P. C. R. Juvenile green turtles (Chelonia mydas) in the effluent discharge channel of a steel plant, Espírito Santo, Brazil, 2000-2006. Journal of the Marine Biological Association of the United Kingdom, v. 90, n. 2, p. 233-246, 2010.
BELLINI, C.; MARCOVALDI, M.A.; SANCHES, T. M.; GROSSMAN, A. & SALES, G. 1996. Atol das Rocas Biological Reserve: second largest Chelonia rookery in Brazil. Marine Turtle Newsletter, 72: 1-2.
BELLINI, C. & SANCHES, T.M. 1996. Reproduction and feeding of marine turtles in the Fernando de Noronha Archipelago, Brazil. Marine Turtle Newsletter, 74: 12-13.
BJORNDAL, K.A. BOLTEN, A.B.; MOREIRA, L.; BELLINI, C. & MARCOVALDI, M.A. 2006. Population structure and diversity of brazilian Green Turtle rookeries based on mitochondrial DNA Sequences. Chelonian Conservation and Biology, 5(2): 262-268.
BUGONI, L. 2003. Diet of sea turtles in southern Brazil. Chelonian Conservation and Biology, 4: 685-688.
MASCARENHAS, R.; SANTOS, R. & ZEPPELINI, D. 2005. Stranded sea turtles on the coast of Paraíba – Brazil. Marine Turtle Newsletter, 107: 13-14.
MOREIRA, L.M.P.; BAPTISTOTTE, C.; SCALFONI, J.; THOMÉ, J.C. & ALMEIDA, A.P.L.S. 1995. Occurrence of Chelonia mydas on the island of Trindade, Brazil. Marine TURTLE NEWSLETTER, 70: 2.
PROIETTI, M. C.; LARA-RUIZ, P.; REISSER, J. W.; PINTO, L. S.; DELLAGOSTIN, O. A.; MARINS, L. F. 2009. Green turtles (Chelonia mydas) foraging at Arvoredo Island in Southern Brazil: Genetic characterization and mixed stock analysis through mtDNA control region haplotypes. Genetics and Molecular Biology, 32(3): 613-618.
WALLACE, B.P.; DIMATTEO, A.D.; HURLEY, B.J.; FINKBEINER, E.M.; BOLTEN, A.B.; CHALOUPKA, M.Y.; HUTCHINSON, B.J.; ABREUGROBOIS, F.A.; AMOROCHO, D.; BJORNDAL, K.A.; BOURJEA, J.; BOWEN, B.W.; DUEÑAS, R.B.; CASALE, P.; CHOYDHURY, B.C.; COSTA, A.; DUTTON, P.H.; FALLABRINO, A.; GIRARD, A.; GIRONDONT, M.; GODFREY, M.H.; HAMANN, M.; LÓPEZ-MENDILAHARSU, M.; MARCOVALDI, M.A.; MORTIMER, J.A.; MUSICK, J.A.; NEL, R.; PILCHER, N.J.; SEMINOFF, J.A.; TROËNG, S.; WITHERINGTON, B. & MAST, R.B. 2010. Regional management units for marine turtles: a novel framework for prioritizing conservation and research across multiple scales. PLoS ONE, 5(12): 1-11.

2a. Summarise information on population size (if known):
☑ stable

› (populations that nest in Brazil) – The conservation status of the sea turtle Chelonia mydas was evaluated according to IUCN (2001), based on the available data up to 2009.
The proposed category for this taxon is "Vulnerable (VU)" according to the A2ab criterion, (i.e. threatened). Nesting occurs mainly on oceanic islands: Rocas Atoll (RN), Fernando de Noronha (PE) and Trindade (ES), however, green turtles (i.e. juveniles) occur along the entire Brazilian coast.
Because the main nesting areas are in oceanic islands, which are isolated from the mainland coast, female C. mydas and their nests suffered less predation than other species. Additionally, these areas are not subject to disorderly occupation of the shoreline. However, juvenile green turtles are the most common species to strand along the mainland coast due to increased coastal gillnet fishing.

2b. Summarise information on distribution (if known):
☑ stable

› The Green Turtle has a circumglobal distribution, occurring throughout tropical and, to a lesser extent, subtropical waters (Atlantic Ocean – eastern central, northeast, northwest, southeast, southwest, western central; Indian Ocean – eastern, western; Mediterranean Sea; Pacific Ocean – eastern central, northwest, southwest, western central). Green turtles are highly migratory and they undertake complex movements and migrations through geographically disparate habitats. Nesting occurs in more than 80 countries worldwide (IUCN, 2004). In Brazil, Nesting occurs mainly on oceanic islands: Rocas Atoll (RN), Fernando de Noronha (PE) and Trindade (ES), however, juvenile green turtles occur along the entire Brazilian coast (strandings, sighting

and incidental captures in fisheries). There are data of individuals tagged in Brazil recaptured in Senegal (female), Nicaragua (juvenile) and Trinidad and Tobago (juvenile).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› One of the primary goals of Projeto TAMAR is to conduct scientific research. Sea turtles spend most of their lives in the water and migrate thousands of kilometers. This makes it very difficult to elucidate many biological and behavioral aspects of their lives. Scientific research can help revealing critical information for us to provide sea turtle protection. Projeto TAMAR in collaboration with other institutions have conducted extensive research, using different methods such as: data logging, satellite telemetry, tagging, genetics, surveys, hematology, biochemistry, and many others.
☑ Monitoring

› Conservation activities focus on major nesting and feeding grounds distributed along 1,100 of the 8,000 kilometres of mainland coastline, as well as sites on three oceanic islands, involving nine states (Marcovaldi and Marcovaldi 1999). Currently, Projeto TAMAR operates 25 research stations located in important feeding and nesting grounds for sea turtles.
Chelonia mydas occurs along the entire Brazilian coast (strandings, sighting and incidental captures in fisheries) and nesting occurs mainly on oceanic islands: Rocas Atoll (RN), Fernando de Noronha (PE) and Trindade (ES). There are data of individuals tagged in Brazil recaptured in Senegal (female), Nicaragua (juvenile) and Trinidad and Tobago (juvenile).
☑ Education/awareness rising
☑ Species protection

› Projeto TAMAR monitors almost 1.100 km of coastline and islands through 25 Research stations across nine states: Ceará, Rio Grande do Norte, Pernambuco, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina. These stations are divided into sea turtle feeding and/or nesting grounds. The main strategies for the conservation and recovery of sea turtles in Brazil have been developed according to the Sea Turtle National Action Plan (NAP), which is an initiative to promote effective collaboration among stakeholders (e.g., research entities, governmental and nongovernmental organizations) to ensure the recovery and survival of the five species of sea turtles in Brazil. Additionally, Tamar has been working extensively to reduce sea turtle incidental capture and to improve national and international exchange of information on bycatch.
Ordinance No. 444/2014 Endangered Fauna
☑ Habitat protection
☑ Other

› Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:
Contact: Centro TAMAR/ICMBio

5. Describe any future activities that are planned for this species:
› • Continue to develop environmental education and awareness activities and to promote income generating options for the local communities where C. mydas occurs;
• Maintain monitoring on nesting beaches, ensuring the protection of “in situ” nests and females;
• Maintain and enhance long-term research activities to evaluate population trends (growth, stability, decline);
• Identify green turtle foraging areas and implement long-term conservation, management and research;
• Develop and implement new technologies to minimize anthropogenic impacts;
• Continue with the “Sea turtle and fisheries interaction” Program to reduce sea turtle bycatch;
• Stimulate participatory management in fishing communities to find alternative and planning solutions;
• Conduct a survey of green turtle-coastal fishery interaction;
• Maintain and enhance green turtle tagging program (adults and juveniles), to determine the areas of use and displacement and their reproductive biology;
• Continue to develop genetic studies to evaluate different populations (on foraging grounds and nesting beaches);
• Encourage the creation and management of coastal and marine Conservation Units;
• Develop and implement mitigation and compensatory measures for any constructions on green turtle nesting beaches and/or foraging grounds.
• Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:

Species name: Dermochelys coriacea

1. Please provide published distribution reference:
› ALMEIDA A. P.; Thomé, J. C. A.; Baptistotte, C.; Marcovaldi, M. Â.; Santos, A. S. & Lopez, M. Avaliação do estado de conservação da tartaruga marinha Dermochelys coriacea (Vandelli, 1761) no Brasil. Biodiversidade Brasileira. ICMBio/MMA, .2011, 1(1): 10-17.
IUCN, 2013. Dermochelys coriacea. The IUCN Red List of Threatened Species 2013: e.T6494A43526147. http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T6494A43526147.en. Downloaded on 17 March 2017.
ALMEIDA, A. P.; ECKERT, S. A.; BRUNO, S. C.; SCALFONI, J. T.; GIFFONI, B. & THOMÉ, J. C. A. Satellite-tracked movements of leatherback sea turtles, Dermochelys coriacea, from southeastern Brazil. In: Proceedings of the 29th Annual Symposium on Sea Turtle Conservation And Biology. NOAA.
BARATA, P.C.R. & FABIANO, F.F.C. 2002. Evidence for leatherback sea turtle (Dermochelys coriacea) nesting in Arraial do Cabo, State of Rio de Janeiro, and a review of occasional leatherback nests in Brazil. Marine Turtle Newsletter, 96: 13-16.
BARATA, P.C.R.; LIMA, E.H.S.M.; BORGES-MARTINS, M.; SCALFONI, J.T.; BELLINI, C. & SICILIANO, S. 2004. Records of the leatherback sea turtle (Dermochelys coriacea) on the Brazilian coast, 1969–2001. Journal of the Marine Biological Association of the United Kingdom, 84: 1233–1240.
BILLES, A.; FRETEY, J.; VERHAGE, B.; HUIJBREGTS, B.; GIFFONI, B.; PROSDOCIMI, L.; ALBAREDA, D. A.; GEORGES, J.Y. & TIWARI, M. 2006. First evidence of leatherback movement from Africa to South America. Marine Turtle Newsletter, 111: 13–14.
LÓPEZ-MENDILAHARSU, M.; ROCHA, C.F.D.; MILLER, P.; DOMINGO, A. & PROSDOCIMI, L. 2009. Insights on leatherback turtle movements and high use areas in the Southwest Atlantic Ocean. Journal of Experimental Marine Biology and Ecology, 378(1-2): 31-39.
SALES, G.; GIFFONI, B.B. & BARATA, P.C.R. 2008. Incidental catch of sea turtles by the Brazilian pelagic longline fishery. Journal of the Marine Biological Association of the United Kingdom, 88 (4): 853-864.
SOTO, J.M.R.; BEHEREGARAY, R.C.P.; REBELLO, R.A.R.P. 1997. Range extension: nestin by Dermochelys and Caretta in Southern Brazil. Marine Turtle Newsletter, 77: 6-7.
THOMÉ, J.C.; BAPTISTOTTE, C.; MOREIRA, L.M.P.; SCALFONI, J.T.; ALMEIDA, A P.; RIETH, D. & BARATA, P.C.R. 2007. Nesting biology and conservation of the leatherback sea turtle (Dermochelys coriacea) in the State of Espírito Santo, Brazil. Chelonian Conservation and Biology, 6(1): 15-27.
VARGAS, S. M.; ARAÚJO, F. C. F.; MONTEIRO, D. S.; ESTIMA, S.C.; ALMEIDA, A.P.; SOARES, L. S. & SANTOS, F. R. 2008. Genetic diversity and origin of leatherback turtles (Dermochelys coriacea) from the Brazilian coast. Journal of Heredity, 99 (2): 215-220.

2a. Summarise information on population size (if known):
☑ increasing

› populations that nest in Brazil
› The conservation status of the sea turtle Dermochelys coriacea was evaluated according to IUCN (2001), based on the available data up to 2009.
The proposed category for this taxon is "Critically Endangered (CR)" according to the A2ab criterion, (i.e. threatened).
The leatherback sea turtle (Dermochelys coriacea) population that nests in Brazil is restricted to a few individuals (1- 19), regularly nesting on the north coast of Espírito Santo State. However, high densities of pelagic individuals are observed along the southern and southeastern Brazilian coast. An increasing trend in the overall number of nests has been observed since the early 90s (Thomé et al., 2009).

2b. Summarise information on distribution (if known):
☑ stable

› Leatherbacks are distributed circumglobally, with nesting sites on tropical sandy beaches and foraging ranges that extend into temperate and sub-polar latitudes (IUCN, 2013). In Brazil, the only area where regular leatherback turtle nesting is known to occur is located on the northern coast of the state of Espírito Santo. The higher numbers of strandings occur in Rio Grande do Sul, while incidental captures records are higher near the Rio Grande rise, along the slope between Uruguay and Santa Catarina and oceanic waters off São Paulo. Gabon tagged females have been incidentally captured in the Brazilian coast and a female tagged in Espírito Santo have been found dead in Namibia, showing the wide distribution of this species in the Atlantic Ocean.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› One of the primary goals of Projeto TAMAR is to conduct scientific research. Sea turtles spend most of their lives in the water and migrate thousands of kilometers. This makes it very difficult to elucidate many biological and behavioral aspects of their lives. Scientific research can help revealing critical information for us to provide sea turtle protection. Projeto TAMAR in collaboration with other institutions have conducted extensive research, using different methods such as: data logging, satellite telemetry, tagging, genetics, surveys, hematology, biochemistry, and many others.
Recently, the collapse of a dam at the Samarco mine in Brazil, negatively impacted the area that surrounds river Doce, which is one of the only regular nesting grounds for the leatherback turtle. Studies are being

conducted on sea turtles and their nests to evaluate the effects of the toxic mud on the animals.
☑ Monitoring

› In Brazil, the only area where regular leatherback nesting is known to occur is located on the northern coast of the state of Espírito Santo, eastern Brazil, around latitude 19oS. Nesting occurs mainly on Comboios Beach, about 90 km north of Vitória, the state capital, but less dense nesting also occurs to the north of Comboios. Projeto TAMAR has been working on the northern coast of the state of Espírito Santo since 1982, initially at Comboios and later gradually extending its activities northward, up to the border with the state of Bahia. Currently, Projeto TAMAR maintains 5 field stations in that region, monitoring 240 km of nesting beaches and conducting environmental conservation, and educational activities with the coastal communities (Marcovaldi and dei Marcovaldi 1999).
☑ Education/awareness rising

› One of the most important aspects of the Project is Community outreach and education within the coastal villages, including school presentations of videos and slides, hatchling release ceremonies, and festivals. The goal is to increase local awareness of the importance of a healthy marine ecosystem, which includes turtles. To facilitate social integration and credibility, as well as enhance effectiveness of conservation initiatives, Projeto TAMAR has developed a wide variety of outreach activities. For instance: educational and community support, paper recycling workshop, educational campaigns (photopollution, vehicles on nesting beaches etc.), environmental education and awareness activities in fishing communities and many others.
☑ Species protection

› Projeto TAMAR monitors almost 1.100 km of coastline and islands through 25 Research stations across nine states: Ceará, Rio Grande do Norte, Pernambuco, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina. These stations are divided into sea turtle feeding and/or nesting grounds. The main strategies for the conservation and recovery of sea turtles in Brazil have been developed according to the Sea Turtle National Action Plan (NAP), which is an initiative to promote effective collaboration among stakeholders (e.g., research entities, governmental and nongovernmental organizations) to ensure the recovery and survival of the five species of sea turtles in Brazil. Additionally, Projeto TAMAR has been working extensively to reduce sea turtle incidental capture and to improve national and international exchange of information on bycatch.
Ordinance No. 444/2014 Endangered Fauna
☑ Habitat protection
☑ Other

› Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:
Contact: Centro TAMAR/ICMBio

5. Describe any future activities that are planned for this species:
› • Continue to develop environmental education and awareness activities and to promote income generating options for the local communities where D. coriacea occurs;
• Maintain monitoring on nesting beaches, ensuring the protection of “in situ” nests and females;
• Maintain and enhance long-term research activities to evaluate population trends (growth, stability, decline);
• Identify green turtle foraging areas and implement long-term conservation, management and research;
• Develop and implement new technologies to minimize anthropogenic impacts;
• Continue with the “Sea turtle and fisheries interaction” Program to reduce leatherback turtle bycatch;
• Stimulate participatory management in fishing communities to find alternative and planning solutions;
• Conduct a survey of leatherback-fishery interaction;
• Maintain and enhance green turtle tagging program (adults and juveniles), to determine the areas of use and displacement and their reproductive biology;
• Continue to develop genetic studies to evaluate different populations (on foraging grounds and nesting beaches);
• Encourage the creation and management of coastal and marine Conservation Units;
• Develop and implement mitigation and compensatory measures for any constructions on green turtle nesting beaches and/or foraging grounds.
Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:

Species name: Eretmochelys imbricata

1. Please provide published distribution reference:
› IUCN, 2008. Eretmochelys imbricata. The IUCN Red List of Threatened Species 2008: e.T8005A12881238. http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T8005A12881238.en
MARCOVALDI, M. Â.; LOPEZ, G. G.; SOARES, L. S.; SANTOS, A. J.B.; BELLINI, C.; SANTOS, A. S. & LOPEZ, M. Avaliação do estado de conservação da tartaruga marinha Eretmochelys imbricata (Linnaeus, 1766) no Brasil.

Biodiversidade Brasileira, ICMBio/MMA, 2011, 1(1): 26-34.
BELLINI, C.; SANCHES, T. M. & FORMIA, A. 2000. Hawksbill turtle tagged in Brazil captured in Gabon, Africa. Marine Turtle Newsletter, 87: 11-12.
LARA-RUIZ, P.; LOPEZ, G. G.; SANTOS, F. R. & SOARES, L. S. 2006. Extensive hybridization in hawksbill turtle (Eretmochelys imbricata) nesting in Brazil revealed by mtDNA analyses. Conservation Genetics, 7: 773-781.
MARCOVALDI, M. A.; LOPEZ, G. G.; SOARES, L. S.; SANTOS, A. J. B.; BELLINI, C. & BARATA, P. C. R. 2007. Fifteen years of Hawksbill sea turtle (Eretmochelys imbricata) Nesting in Northern Brazil. Chelonian Conservation and Biology, 6(2): 223-228.
MARCOVALDI, M. A.; LOPEZ, G. G.; SOARES, LIMA E.H.S.M.; BARATA, P. C. R, BRUNO S.C..; ALMEIDA A.P. 2009. In press. Satellite telemetry studies highlight an important feeding ground for loggerheads and hawksbills in northern Brazil. In: Proceedings of the XXIX Annual Symposium On Sea Turtle Conservation and Biology. NOAA.
MARCOVALDI, M. A.; VIEITAS C.F; GODFREY M. H. 1999. Nesting and conservation management of hawksbill turtles (Eretmochelys imbricata) in northern Bahia, Brazil. Chelonian Conservation and Biology, 3 (2): 301-307.
MASCARENHAS, R., SANTOS, R.G.; SANTOS, A.S.; ZEPPELINI, D. 2004. Nesting of hawksbill turtles in Paraiba-Brazil: avoiding light pollution effects. Marine Turtle Newsletter, 104: 1-3.
SANCHES, T.M. & BELLINI, C. Juvenile Eretmochelys imbricata and Chelonia mydas in the Archipelago of Fernando de Noronha, Brazil. Chelonian Conservation and Biology, 3(2): 308-311, 1999.

2a. Summarise information on population size (if known):
☑ increasing

› populations that nest in Brazil
› Hawksbill turtles are currently classified as Critically Endangered by both the International Union for the Conservation of Nature and the Brazilian Red List for Threatened Species (Marcovaldi et al. 2011). Marcovaldi et al. (2007) reported an increasing trend for Brazilian hawksbills in the states of Bahia and Sergipe, but it remained undetected for the southern coast of Rio Grande do Norte, where the historical series of data still need to be explored to identify trends.

2b. Summarise information on distribution (if known):
☑ stable

› The Hawksbill has a circumglobal distribution throughout tropical and, to a lesser extent, subtropical waters of the Atlantic Ocean, Indian Ocean, and Pacific Ocean. Hawksbills are migratory and individuals undertake complex movements through geographically disparate habitats during their lifetimes. Hawksbill nesting occurs in at least 70 countries, although much of it now only at low densities. Their movements within the marine environment are less understood, but Hawksbills are believed to inhabit coastal waters in more than 108 countries (IUCN, 2008).
The priority nesting areas of hawksbills along the Brazilian coast are located on northern Bahia and southern Rio Grande do Norte. Juvenile and adult Eretmochelys imbricata occur in coastal areas of several Brazilian states, with developmental and foraging areas known and studied in Atol das Rocas and Fernando de Noronha. Individuals tagged in Atol das Rocas and Fernando de Noronha have been recorded in Gabon and Senegal. Telemetry studies indicated that adult females from Bahia migrated to foraging areas located between Salvador and Abrolhos and to the northeast and northern coast of Brazil.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› One of the primary goals of Projeto TAMAR is to conduct scientific research. Sea turtles spend most of their lives in the water and migrate thousands of kilometers. This makes it very difficult to elucidate many biological and behavioral aspects of their lives. Scientific research can help revealing critical information for us to provide sea turtle protection. Projeto TAMAR in collaboration with other institutions have conducted extensive research, using different methods such as: data logging, satellite telemetry, tagging, genetics, surveys, hematology, biochemistry, and many others. For instance, mark/capture and recapture studies showed that individuals tagged in Atol das Rocas and Fernando de Noronha were recorded in Gabon and Senegal. Telemetry studies indicated that adult females from Bahia migrated to foraging areas located between Salvador and Abrolhos and to the northeast and northern coast of Brazil.
Mark/capture and recapture study in Fernando de Noronha – Armando Barsante Santos (armando@tamar.org.br)
☑ Monitoring

› In Brazil, 2 major hawksbill nesting sites have been identified on the coastlines of northern Bahia and southern Rio Grande do Norte (Marcovaldi et al. 2007). Smaller numbers of nests also occur in the states of Sergipe (Marcovaldi et al. 2007), Paraíba (Mascarenhas et al. 2004), Pernambuco (Moura et al. 2012) and southern Bahia (Camilo et al. 2009).
In northern Bahia and Sergipe, the study area comprises 339 km of beaches between lat 108318S (the mouth of the São Francisco River, at the border between the states of Sergipe and Alagoas) and lat 128288S (Salvador, the state of Bahia capital; Fig. 1). TAMAR started operating in that region in 1982, protecting nests,

hatchlings, and nesting females initially at Praia do Forte, Bahia, and Pirambu, Sergipe, and later extending its activities to the whole study area in these states.
In the state of Rio Grande do Norte, Projeto TAMAR initiated nesting beach surveys during the 2003/2004 nesting season; in these surveys the number of clutches was determined. In addition, mark and recapture efforts using flipper tags applied to nesting hawksbill turtles began in 2004/2005, with the goal of estimating the number of nesting turtles in the region.
Brazilian waters also host 2 known important feeding grounds for immature hawksbills: the Rocas atoll and the Fernando de Noronha archipelago (Marcovaldi et al. 1998, Sanches & Bellini 1999). However, there is no information regarding foraging habitats of adult individuals in Brazil.
☑ Education/awareness rising

› One of the most important aspects of the Project is Community outreach and education within the coastal villages, including school presentations of videos and slides, hatchling release ceremonies, and festivals. The goal is to increase local awareness of the importance of a healthy marine ecosystem, which includes turtles. To facilitate social integration and credibility, as well as enhance effectiveness of conservation initiatives, TAMAR has developed a wide variety of outreach activities. For instance: educational and community support, paper recycling workshop, educational campaigns (photopollution, vehicles on nesting beaches etc.), environmental education and awareness activities in fishing communities and many others.
☑ Species protection

› TAMAR monitors almost 1.100 km of coastline and islands through 25 Research stations across nine states: Ceará, Rio Grande do Norte, Pernambuco, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina. These stations are divided into sea turtle feeding and/or nesting grounds. The main strategies for the conservation and recovery of sea turtles in Brazil have been developed according to the Sea Turtle National Action Plan (NAP), which is an initiative to promote effective collaboration among stakeholders (e.g., research entities, governmental and nongovernmental organizations) to ensure the recovery and survival of the five species of sea turtles in Brazil. Additionally, Tamar has been working extensively to reduce sea turtle incidental capture and to improve national and international exchange of information on bycatch.
Ordinance No. 444/2014 Endangered Fauna
☑ Habitat protection

› Projeto TAMAR monitors almost 1.100 km of coastline and islands through 25 Research stations across nine states: Ceará, Rio Grande do Norte, Pernambuco, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina. These stations are divided into sea turtle feeding and/or nesting grounds.
Thanks to various conservation efforts that have employed sea turtles as flagship species, several marine and coastal protected areas have been created at federal, state, and municipal levels. These areas in turn benefit other species through the protection of their respective habitats. For instance: Atol das Rocas Biological Reserve, established in 1986 in the state of Rio Grande do Norte; Fernando de Noronha National Park, created in 1988, in the state of Pernambuco and many others.
In northern Bahia and Sergipe, the study area comprises 339 km of beaches between lat 108318S (the mouth of the São Francisco River, at the border between the states of Sergipe and Alagoas) and lat 128288S (Salvador, the state of Bahia capital; Fig. 1). Projeto TAMAR started operating in that region in 1982, protecting nests, hatchlings, and nesting females initially at Praia do Forte, Bahia, and Pirambu, Sergipe, and later extending its activities to the whole study area in these states.
In the state of Rio Grande do Norte, Projeto TAMAR initiated nesting beach surveys during the 2003/2004 nesting season; in these surveys the number of clutches was determined. In addition, mark and recapture efforts using flipper tags applied to nesting hawksbill turtles began in 2004/2005, with the goal of estimating the number of nesting turtles in the region.
☑ Other

› Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:
Contact: Centro TAMAR/ICMBio

5. Describe any future activities that are planned for this species:

› • Continue to develop environmental education and awareness activities and to promote income generating options for the local communities where E. imbricata occurs;
• Maintain monitoring on nesting beaches, ensuring the protection of “in situ” nests and females;
• Maintain and enhance long-term research activities to evaluate population trends (growth, stability, decline);
• Identify hawksbill turtle foraging areas and implement long-term conservation, management and research;
• Develop and implement new technologies to minimize anthropogenic impacts;
• Continue with the “Sea turtle and fisheries interaction” Program to reduce hawksbill turtle bycatch;
• Stimulate participatory management in fishing communities to find alternative and planning solutions;
• Conduct a survey of hawksbill-fishery interaction;
• Maintain and enhance hawksbill tagging program (adults and juveniles), to determine the areas of use and displacement and their reproductive biology;

• Continue to develop genetic studies to evaluate different populations (on foraging grounds and nesting beaches);
• Encourage the creation and management of coastal and marine Conservation Units;
• Develop and implement mitigation and compensatory measures for any constructions on hawksbill nesting beaches and/or foraging grounds.
Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:

Species name: Lepidochelys olivacea

1. Please provide published distribution reference:
› IUCN, 2008. Lepidochelys olivacea. The IUCN Red List of Threatened Species 2008: e.T11534A3292503. http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T11534A3292503.en. Downloaded on 17 March 2017.
CASTILHOS, J. C. de; COELHO, C. A; ARGOLO, J. F., SANTOS, E. A. P dos; MARCOVALDI, M. A.; SANTOS, A. S dos & LOPEZ, M. Avaliação do estado de conservação da tartaruga marinha Lepidochelys olivacea (Eschscholtz, 1829) no Brasil. Biodiversidade Brasileira, ICMBio/MMA, 2011, p. 26-34.
ABREU-GROBOIS, A. & PLOTKIN, P. 2008. Lepidochelys olivacea. IUCN Red List of Threatened Species. http://www.iucnredlist.org/apps/redlist/details/11534/0.
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LIMA, E.H.S.M.; MELO, M.T.D. & BARATA, P.C.R. 2003. First Record of olive ridley nesting in the State of Ceará, Brazil. Marine Turtle Newsletter, 99: 20.
MATOS, L. M.; SILVA, A. C.; WEBER, M. I.; CASTILHOS, J. C. & VICENTE, L. M. 2008. Olive ridley sea turtle interesting intervals at Pirambu, Brazil, p.242. In: Proceedings of the 27th Annual Symposium on Sea Turtle Biology and Conservation. NOAA. 262p.
SILVA, A.C.C.D.; CASTILHOS, J.C.; LOPEZ, G.G. & BARATA, P.C.R. 2007. Nesting biology and conservation of the olive ridley sea turtle (Lepidochelys olivacea) in Brazil, 1991/1992 to 2002/2003. Journal of the Marine Biology Association of the United Kingdom, 87: 1047-1056.
SILVA, A.C.C.D.; CASTILHOS, J.C.; SANTOS, E.A.P.; BRONDÍZIO, L.S. & BUGONI, L. 2010. Efforts to reduce sea turtle bycatch in the shrimp fishery in Northeastern Brazil through a co-management process. Ocean and Coastal Management, 53: 570-576.
Soto, J.M.R.; Beheregaray, R.C.P. 1997. New records of Lepidochelys olivacea (Eschscholtz, 1829) and Eretmochelys imbricata (Linnaeus, 1766) in the Southwest Atlantic. Marine Turtle Newsletter, 77: 8-10.

2a. Summarise information on population size (if known):
☑ increasing

› An increasing trend was observed in the estimated number of nests per nesting season: from 252 nests in 1991/1992 to 2606 in 2002/2003, an approximately 10-fold increase in 11 years. The available data and biological knowledge suggest that Projeto TAMAR's conservation efforts may have contributed to the significant increase in olive ridley nesting in Sergipe and Bahia. Currently, more than 8,000 olive ridley nests have been recorded in Sergipe and Alagoas (SITAMAR, 2017). That increase is not only of regional importance, but also of significance at the western Atlantic level (Silva et al., 2007).

2b. Summarise information on distribution (if known):
☑ stable

› The Olive Ridley sea turtle has a circumtropical distribution, with nesting occurring throughout tropical waters (except the Gulf of Mexico) and migratory circuits in tropical and some subtropical areas. Nesting occurs in nearly 60 countries worldwide. Migratory movements are less well studied than other marine turtle species but are known to involve coastal waters of over 80 countries (IUCN, 2008).
The coasts of the states of Alagoas, Sergipe and northern Bahia, Brazil, are considered the main nesting grounds for olive ridleys along the Brazilian coast. However, most nesting activity takes place in Sergipe State.
Lepidochelys olivacea individuals have been registered from Maranhão to Rio Grande do Sul and in the oceanic region along the northeastern coast of Brazil throughout the southern Brazil (incidental capture in longline fisheries). Monitored females found nesting in Sergipe showed coastal migrations from Espírito Santo to Pará and migratory movements through the equatorial Atlantic. Foraging sites suggested for this species are located in Pará, Rio Grande do Norte, Alagoas and Espírito Santo.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› One of the primary goals of Projeto TAMAR is to conduct scientific research. Sea turtles spend most of their lives in the water and migrate thousands of kilometers. This makes it very difficult to elucidate many

biological and behavioral aspects of their lives. Scientific research can help revealing critical information for us to provide sea turtle protection. Projeto TAMAR in collaboration with other institutions have conducted extensive research, using different methods such as: data logging, satellite telemetry, tagging, genetics, surveys, hematology, biochemistry, and many others.
As mentioned before, the coasts of the states of Alagoas, Sergipe and northern Bahia, are considered an important sea turtle nesting ground. However, the region is also considered an important fishing area, leading to high rates of adult sea turtle bycatch. Recently, two studies on olive ridley bycatch have been conducted in the area. Since shrimp trawls have the higher bycatch rates for adult olive ridleys along the coasts of the states of Alagoas, Sergipe and northern Bahia, the studies have focused on this fishery. Both studies aim to reduce trawling impacts on adult olive ridleys, since it compromises the viability of these animals.
☑ Monitoring

› Projeto TAMAR operates 25 Reseach Stations along the Brazilian coast, covering up to 1,100 km of beaches. Intensive study areas (ISA) and protection areas (PA) have been implemented in each of Projeto TAMAR's stations at nesting beaches. The classification of a nesting area as either ISA or PA facilitates standardizing the monitoring methodology among all nesting areas on the Brazilian coast (Marcovaldi and Marcovaldi 1999). Projeto TAMAR (Marcovaldi & Marcovaldi, 1999) began working in Sergipe and northern Bahia in 1982, initially at Pirambu (Sergipe) and Praia do Forte (Bahia) and later extended its activities to other sections of the coastline. When Projeto TAMAR started working in Sergipe, nearly all clutches were being collected for human consumption and local inhabitants indicated that no hatchlings had been Today, Projeto TAMAR maintains seven field stations in Sergipe and northern Bahia to monitor nesting activity over 339 km of beach. Additionally, Projeto TAMAR since the beginning sought to incorporate the interests and needs of the coastal communities in its conservation work through various educational, economic and cultural activities.
☑ Education/awareness rising

› One of the most important aspects of the project is community outreach and education within the coastal villages, including school presentations of videos and slides, hatchling release ceremonies, and festivals. The goal is to increase local awareness of the importance of a healthy marine ecosystem, which includes turtles. In Brazil, the most important nesting area for olive ridleys is on the northeastern coast, in the state of Sergipe (around latitude 10o 30'): about 85% of olive ridley nesting in Brazil occurs in that state. Nesting occurs mainly at Santa Isabel Biological Reserve, on the northern part of the state, and, in smaller numbers, at the Environmental Protection Area in the south.
Projeto TAMAR, the Brazilian sea turtle conservation program, has been working in the state of Sergipe since 1981, initially on Pirambu beach and at Santa Isabel Biological Reserve and gradually extending the scope of its activities. Nowadays, Projeto TAMAR maintains three stations in Sergipe, monitoring 125 km of nesting beaches. Moreover, since the beginning of its activities TAMAR has been conducting environmental conservation and educational activities with the coastal communities in that region, and has also been involved in their socio-cultural life through the promotion of alternative sources of income, like oyster culture (an alternative to fishing) and embroidery, and of local cultural activities, like dance and folklore groups.
☑ Species protection

› Considering the threats to sea turtles, and based on the experience obtained over 35 years of existence of Projeto TAMAR, Instituto Chico Mendes de Conservação da Biodiversidade – ICMBio, supported by the MMA/ICMBio ordinance 316/2009, established a national action plan (NAP) defining the main strategies for the conservation and recovery of these species. The institutionalization of the action plan has the purpose of improving and optimizing ICMBio efforts and society initiatives, in a complementary way by the renewing of an effective collaboration among research entities, governmental and nongovernmental organizations, and local communities for the conservation of biodiversity.
The coasts of the states of Alagoas, Sergipe and northern Bahia, are considered an important sea turtle nesting ground, along the coast. However, the region is also considered an important area for fishing activities, a fact that often leads to high rates of incidental capture of these animals. Shrimp trawls has the higher bycatch rates for adult olive ridleys along the coasts of the states of Alagoas, Sergipe and northern Bahia. The incidental capture of animals at this life stage and with such biological importance, is one of the most serious threats to the survival of the olive ridley nesting population in Northeastern Brazil. For this reason, in 2004 a Normative Rule (NR) was established extending the shrimp seasonal closure from 50 to 90 days, divided into two periods, the first in the austral fall (01 April to 15 May) and the second in the summer (01 December to 15 January). This NR has aimed to reduce trawling impacts on L. olivacea population, since it compromises the viability of these animals.
Ordinance No. 444/2014 Endangered Fauna
☑ Habitat protection

› Projeto TAMAR monitors almost 1.100 km of coastline and islands through 25 Research stations across nine states: Ceará, Rio Grande do Norte, Pernambuco, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina. These stations are divided into sea turtle feeding and/or nesting grounds.
Thanks to various conservation efforts that have employed sea turtles as flagship species, several marine and coastal protected areas have been created at federal, state, and municipal levels. These areas in turn benefit other species through the protection of their respective habitats. For instance: Atol das Rocas Biological Reserve, established in 1986 in the state of Rio Grande do Norte; Fernando de Noronha National Park, created in 1988, in the state of Pernambuco and many others.

Projeto TAMAR began working in Sergipe and northern Bahia in 1982, initially at Pirambu (Sergipe) and Praia do Forte (Bahia) and later extended its activities to other sections of the coastline. When Projeto TAMAR started working in Sergipe, nearly all clutches were being collected for human consumption and local inhabitants indicated that no hatchlings had been Today, Projeto TAMAR maintains seven field stations in Sergipe and northern Bahia to monitor nesting activity over 339 km of beach. Additionally, Projeto TAMAR since the beginning sought to incorporate the interests and needs of the coastal communities in its conservation work through various educational, economic and cultural activities.
☑ Other

› The available data and biological knowledge suggest that Projeto TAMAR's conservation efforts may have contributed to the significant increase in olive Ridley nesting in Sergipe and Bahia; that increase is not only of regional importance, but also of significance at the western Atlantic level.
Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:

5. Describe any future activities that are planned for this species:
› • Continue to develop environmental education and awareness activities and to promote income generating options for the local communities where L. olivacea occurs;
• Maintain monitoring on nesting beaches, ensuring the protection of "in situ" nests and females;
• Maintain and enhance long-term research activities to evaluate population trends (growth, stability, decline);
• Identify green turtle foraging areas and implement long-term conservation, management and research;
• Develop and implement new technologies to minimize anthropogenic impacts;
• Continue with the "Sea turtle and fisheries interaction" Program to reduce olive ridley turtle bycatch;
• Stimulate participatory management in fishing communities to find alternative and planning solutions;
• Conduct a survey of olive ridley-fishery interaction;
• Revise the legislation that requires and enforces the use of turtle excluder devices (TED);
• Maintain and enhance olive turtle tagging program (adults and juveniles), to determine the areas of use and displacement and their reproductive biology;
• Continue to develop genetic studies to evaluate different populations (on foraging grounds and nesting beaches);
• Encourage the creation and management of coastal and marine Conservation Units;
• Develop and implement mitigation and compensatory measures for any constructions on olive Ridley nesting beaches and/or foraging grounds.
Several activities, described on:
ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), 2011. PAN – Plano de Ação Nacional para a Conservação das Tartarugas Marinhas. Série Espécies Ameaçadas, nº25. Organizadores: Maria Ângela Azevedo Guagni Dei Marcovaldi, Alexsandro Santana dos Santos. Brasília. 2011. Available at:

Species name: Podocnemis expansa (Upper Amazon populations)

1. Please provide published distribution reference:
› Aguirre, L. F.; Aguayo, R.; Balderrama, J.A.; Cortez, C.; Tarifa, T. & Rocha, O. (Eds.). 2009. Libro rojo de la fauna silvestre de vertebrados de Bolivia. Ministerio de Medio Ambiente y Agua, La Paz, Bolivia. Xx pp.
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Campinas do Médio Rio Negro- AM. Dissertação (Mestrado em Biologia Tropical e Recursos Naturais). Universidade Federal do Amazonas. 112p.
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› The Podocnemis expansa species presents extensive distribution in South America, occurring in the largest tributaries of the Orinoco and Essequibo rivers as well as in drainage basins of the Amazon River located in Colombia, Venezuela, Guyanas, in the northeast of Peru, in the east of Ecuador, in the north of Bolivia and in the North and Midwest regions of Brazil (Emysystem 2010, TTWG 2014).
In Brazil, the species occurs in the Amazon and Cerrado biomes, in the basins of the Amazon, Tocantins/Araguaia and the North Atlantic rivers. Its distribution covers the states of Acre (AC), Amapá (AP) (TTWG 2014), Amazonas (AM) (Vogt 2001, Padma-Lima 2009, Emysystem 2010, SisQuelônios 2016), Goiás (GO) (Bataus 1998, Ferreira Júnior & Castro 2005, Castro & Ferreira Jr. 2008, SisQuelônios 2016, Gomes & Ferreira 2011, Vogt 2008) Mato Grosso (MT) (Pritchard & Trebbau 1984, TTWG 2014, Moreira et al. 2011), Pará (PA) (Emysystem 2010, Padua 1981, Haller & Rodrigues 2006 , Ferrara et al. 2010, SisQuelônios 2016), Rondônia (RO) (Emysystem 2010, Fachín-Terán et al. 1995, Portela et al. 2008, SisQuelônios 2016), Roraima (RR) (Nascimento 2002, Emysystem 2010, SisQuelônios 2016), and Tocantins (TO) (Bonach 2003, Dornas 2009, Portelinha 2009, Ataídes et al. 2010, Portelinha et al. 2013, SisQuelônios 2016).
In Brazil, its occurrence span is 3,426,685 km2, calculated by the sum of the area of Level 6 river basins (Lehner & Grill 2013) that intersect the species occurrence records.

2a. Summarise information on population size (if known):
☑ decreasing

› › In the last national evaluation of this species state of conservation, in 2010, the index used for the population trend analysis was the number of nests/per station reproduction/location, comprising the 11 areas of operation of the Amazonian Turtles Project (PQA), for a period of 30 years (1997 – 2008). At the time, a large fluctuation in number of nests over the years and among the localities was observed, suggesting a possible population stability dependent on protection and handling actions. Based on this uncertainty and in view of the history of over-exploitation of the matrices (breeding females) and eggs, a population decrease was suspected, which led the species to be categorized as nearly threatened (NT) (Vogt et al, 2015).
Researchers report that the overall P. expansa population trend is decreasing if compared to historical abundances, and that it is difficult to assert, based on current data, if the populations in each of the countries considered are decreasing or recovering although they recognize that specific conservation interventions in certain locations have achieved relative success (that is the case of some locations monitored and protected by the Brazilian government).
Although the PQA is one of the largest currently functioning governmental conservation initiatives for turtle species due to its exorbitant target species coverage area, its actions have been historically punctual. Therefore, the relative success attributed to the project does not allow for a safe extrapolation of the entire population of handled/monitored species in its extents of occurrence in the Brazilian territory, that is the case with Podocnemis expansa populations in the Upper Amazon region.
Thus, in a more conservative approach, it is inferred that the species situation in Brazil has worsened in recent years, mainly due to the decrease in protection/handling actions, and that it can still worsen because of hydroelectric stations construction, therefore, it is possible to assume that the population trend is decreasing. In which case, the decision was made to extrapolate the species population trend in Brazil to the populations located in the Upper Amazon.

2b. Summarise information on distribution (if known):
☑ not known

› Current knowledge about the state of this species populations in Brazilian territory, especially in the region being analyzed (Upper Amazon), does not allow for a satisfactory characterization of whether the different patterns of habitat alteration, i.e. in the Amazonian aquatic ecosystem, has motivated any decreases in the area potentially inhabited by the species. It is estimated that the species habitat will be potentially reduced and disconnected due to the setting up of waterways and reservoirs for hydroelectric power plants. The damming of water bodies, notably in hydroelectric ventures, might hinder the migration of the turtles both downstream or upstream of their nesting sites (beaches), and the deforestation of meadow areas affects the feeding of the species during the flood season. In the upper part of the amazon river the large number of vessels in traffic transporting ores and other materials might inhibit the turtles (P. expansa) from going upstream of the river (Vogt 2014).
In Brazil, its occurrence span is 3,426,685 km2, calculated by the sum of the area of Level 6 river basins (Lehner & Grill 2013) that intersect the species occurrence records. Outside of Brazil, it is 1,896,340 km2, calculated using TTWG (2014), adapted by NGeo RAN/ICMBio, including Level 6 river basins that intersect the species occurrence records in neighboring countries. Thus, the overall occurrence of the species is of 5,323,025 km2. Therefore, most of its distribution (64.4%) is in national territory.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› According surveys contained in the database of the Authorization system for Activities with Scientific and Didactic Purposes – SISBIO/ICMBio and ran by taxon-related research lines, the most discussed topics between the years of 2007 and 2016 were ecology (30.93%), Reproductive Biology (16.49%), Monitoring (15.46%), Conservation (9.28%), Morphology (7.22%), genetic variability (7.22%), consumption assessment (6.19) and others (5.15%), among the 87 research permits related to Podocnemis expansa granted by ICMBio between the years of 2007 and 2016.
The main research and conservation institutions that work with the species are:
• Brazilian Institute of Environment and Renewable Natural Resources
(Ibama) – Amazonian Turtles Program (PQA) – Roberto Victor Lacava e Silva
• Chico Mendes Biodiversity Conservation Institute (ICMBIO) – National Action Plan for Amazonian Turtles Conservation (Amazonian Turtles - PAN) – Rafael Antônio Machado Balestra
• National Center for Reptiles and Amphibians Research and Conservation (RAN) – National Continental Turtles Conservation Program –Rafael Antônio Machado Balestra
• National Institute of Amazonian Research (INPA) – Amazonian Turtles Ecology – Rafael Bernhard
• Ichthyologists and Herpetologists of the Amazonas Association (AIHA) – Amazonian Turtles Conservation and Population Monitoring -Richard C. Vogt
• Climate Change and Conservation Units Management Department (DEMUC) – Protection and Reproductive Handling of Amazonian Turtles
• Pé-de-Pincha Project – Community Handling of Amazonian Turtles - Paulo César Machado Andrade
• Amazonian Turtles Project: looking out for the future – Research for Amazonian Turtles Conservation - Richard C. Vogt

• Amazonas State University (UEA) – Amazonian Turtles Biology and Conservation – Rafael Bernhard
• Amazonas Federal University (UFAM) – Amazonian Turtle Population Monitoring and Sustainable Handling – Paulo César Machado Andrade
• Wildlife Conservation Society (WCS-Brazil) – Population Monitoring and Environmental Prognosis in Relation to Amazonian Turtles
• Mamirauá Sustainable Development Institute (IDSM) – Conservation Handling and Monitoring of Amazonian Turtles
The Amazonian Turtles Program (PQA) and the National Action Plan for the Amazonian Turtles Conservation (Amazonian Turtles PAN) have promoted and influenced their partner entities in carrying out population studies for the Podocnemis expansa, including migratory dynamics profiling, aiming to qualitatively analyze potential impacts that this species different types of habitat modification might cause.
☑ Identification and establishment of protected areas

› › Trombetas River Biological Reserve was created by Federal Decree No. 84,018 in 1979, and was the 1st Federal Conservation Unit created for the protection of turtles and the second Biological Reserve in the country. The protection of breeding sites (nesting sites) for the Trombetas River Amazon turtles (Podocnemis expansa) stands out in its general purpose. In the 70s the area was known as the main P. expansa concentration area in Brazil (Mittermeier, 1978). The protection of the turtles is one of the Unit's main goals. The Unit maintains activities for the conservation and protection of three species: the Amazon Turtle (P. Expansa), the Tracajá (P. unifilis) and the Pitiú (P. sextuberculata).
The Abufari River Biological Reserve was created by Federal Decree No. 87,585, September 20th 1982, and situated in one of the most ecologically important regions of the Brazilian Amazon, in the basin of the Purus River, which is currently estimated to possess the Amazon Turtle (P. expansa) nesting site that brings together the largest spawning density in the state of Amazonas, with annual records of approximately 2,200 adult females spawning, originating up to 210,000 hatchlings in a single reproductive station.
Unnumbered Decree of October 2nd 1998, provides for the establishment of the Environmental Protection Area of the Araguaia River Meanderings, located in the borders of the states of Goiás, Mato Grosso and Tocantins. The main goal for this Unit's was protecting the fauna, especially the Amazon Turtle (P. expansa) and the gray river-dolphin (Sotalia fluviatilis), suspected of population decrease in the region. Ever since 1985 the RAN/ICMBio has conducted a conservation handling and reproductive monitoring system for the P. expansa species in this APA, however, in spite of the efforts, a population decrease of the species has been noticed in this region, notably in the last decade.
Tabuleiro do Embaubal Wildlife Refuge was created by State Decree No. 1566 of June 17th, 2016, and has among its goals: the preservation of the rich biological heritage of the Xingu river such as turtles, migratory birds and other species of the Amazonian fauna in vulnerability situations; the protection of the embaubal board (spawning sites) by virtue of its high vulnerability and extreme importance for the turtles reproduction (which spawn in large quantities at that site), notably P. expansa; and the preservation of the Xingu board as a biodiversity site and extremely high priority action, due to its high manatee occurrence and breeding of nests and turtles;
The Araguaia Turtles Wildlife Refuge was created by State Law No. 7,520 of September 28, 2001. Ever since 1980 the Amazonian Turtles Program - PQA fights for turtle conservation in the unit's region, and possesses a monitoring base that originated the Araguaia Turtles Wildlife Refuge. The turtle eggs and meat trade is rather common in the region and is fought by Ibama not only through supervision actions, but also through various environmental education initiatives.
☑ Monitoring

› The Amazonian Turtles Program – PQA, was established by the Ibama Decree No. 259, of March 21, 2011. The PQA (Amazonian Turtles PAN) has been an instrument to further Brazilian biodiversity conservation and has, as its basic premise, the conservation of amazonian turtle species in its natural habitats and in a sustainable manner. The PQA promotes and performs, in addition to the handling and reproductive monitoring, the monitoring of turtle populations in 11 important P. expansa nesting sites distributed throughout Brazilian states of the northern and center-west regions. In 35 years of PQA activities (1979 to 2014), over 65 million hatchlings were handled and 800,000 matrices in the spawning process were monitored in North and Midwest regions of Brazilian states. As for the monitoring of turtle populations undertaken by the PQA, the project "Population monitoring of Amazon (P.expansa) and Tracajá (P. unifilis) turtles in the Araguaia and Crixás-Açu Rivers" in the borders of the states of Goiás, Mato Grosso and Tocantins might be emphasized, its goals are: determining parameters for reproductive biology; determining sex ratio; Determining population size.
Both Ibama, through PQA, and ICMBio, through the Amazonian turtles National Conservation Program, carry out and stimulate their partner entities in carrying out the implementation of population monitoring for the P. expansa species.
☑ Education/awareness rising

› The Environmental Education Action Lines adopted for the conservation of amazonian turtles under the competence of Ibama and ICMBio are based on:
- Community, educators and environmental managers training - in order to prepare and provide tools for community leaders, non-governmental organizations and community members to have a voice in the process of formulating public policies through participatory management models for the use environmental resources;

- Development of environmental education methodologies - formulating and applying environmental education practices for evaluations and corrections in order to find indicators that orient and feed the PQA areas of action;
-Production of educational material - focused on the conservation of turtles through the concatenation of ideas, concepts and educational and environmental theories in order to facilitate the understanding of the environmental issue.
☑ Species protection

› The Amazonian Turtles Program is an inter-institutional initiative carried out by Ibama and ICMBbio, jointly with public and private sector entities and NGOs. The Program aims to protect freshwater turtles typical to the Amazon region as well as their nesting areas through integrated supervision actions, board monitoring and educational efforts alongside traditional riparian communities that make use of products and byproducts made from these turtles.
Currently, the Amazonian Turtles Program, together with its participating institutions and collaborators, is the main initiative for conservation of the species, combining protection, monitoring and the sustainable use of the species populations by communities living along the Amazon basin rivers. Therefore, an articulation between the wild boar population control activities and the Turtles PAN activities should be considered.
☑ Control hunting / poaching

› While any capture of individuals or harvest of eggs for trade and consumption that does not characterize a "subsistence practice" has been prohibited by Brazilian legislation ever since the decade of 1960 (Law No. 5,197, January 3rd 1967), these practices and the illegal use of the species not only persist but are becoming more intense in various Brazilian regions today. Between the years of 2000 and 2015 Ibama has issued 1803 infraction reports pertaining to the seizure of specimens and/or by-products (meat and skins) related to turtles in general, resulting in 61,623 individuals and 4,626 kg of seized by-products (Octavio Valente, representative of the Ibama CITIES authority, personal communication, 2016). Podocnemis expansa was the species with the largest number of seizures (308 autos), resulting in 15,526 individuals and 847 kg of seized by-products.
It is plausible to admit that such data is underestimated, seeing that it pertains solely to information from a single database restricted to the federal supervisory actions and is conducted exclusively by one institution, Ibama, and that, in addition to this limitation, it is only consistent with the mapping of infractions in which the registering of the species scientific name was correct.
☑ Species restoration

› Information described in detail in Item 2a.
☑ Habitat protection

› In addition to what is described in the item "Species protection", the presence of the species is reported in Protected Areas:
Podocnemis expansa occurs in Brazilian territory in the area covered by the following federal and state conservation units (who have confirmed the registration of the species):
Environmental Protection Area of the Araguaia River Meandrings (MT/GO), Environmental Protection Area of the Lower Rio Branco (RR), Environmental Protection Area of the Negro River's Right Bank - Paduari/Solimões sector (AM), Marajó Archipelago Environmental Protection Area (PA), Bananal/Cantão Environmental Protection Area (TO), Nhamundá Environmental protection Area (AM), Environmental Protection Area of the Madeira River (AM), Triunfo do Xingú Environmental Protection Area (PA), Araguaia State Forest (GO), Faro State Forest (PA), Trombetas State Forest (PA), Sustainable Yield State Forest of São Domingos (RO), Laranjeiras Extractive Forest (RO), Saracá-Taquera National Forest (PA), Tefé National Forest (AM), Tapajós National Forest (PA), Corumbiara State Park (RO), Serra do Araçá State Park (AM), Araguaia State Park (GO), Cantão State Park (to), Serra do Divisor National Park (AC), Anavilhanas National Park (AM), Araguaia National Park (to), Cabo Orange National Park (AP), Jaú National Park (AM/RR), Pico da Neblina National Park (AM), Viruá National Park (RR), Amazonian Fields National Park (RO/MT/AM), Lake Jari Springs National Park (AM), Serra da Mocidade National Park (AM/RR), Amanhã Sustainable Development Reserve (AM), Cujubim Sustainable development Reserve (AM), Mamirauá Sustainable development Reserve (AM), Piagaçu-Purus Sustainable Development Reserve (AM), Uacari Sustainable development Reserve (AM), Uatumã Sustainable development Reserve (AM), Uatumã Biological Reserve (AM), Abufari Biological Reserve (AM), Guaporé Biological Reserve (RO), Piratuba Lake Biological Reserve (AP), Trombetas River Biological Reserve (PA), Upper Juruá Extractive Reserve (AC), Lower Juruá Extractive Reserve (AM), Medium Purás Extractive Reserve (AM), Jutaí River Extractive Reserve (AM), Ituxí Extractive Reserve (AM), Cedro Lake Extractive Reserve (GO), Soure Navy Extractive Reserve (PA), Unini River Extractive Reserve (AM), Tapajós-Arapiuns Extractive Reserve (PA), Curralinho Resex (RR), Pedras Negras River Resex (RO), Araguaia Turtles Wildlife Refuge (MT).
☑ Habitat restoration

5. Describe any future activities that are planned for this species:

› ›-Supporting the implementation of participatory protocols for the population monitoring of amazonian turtles with potential for sustainable use.
- Pilot projects elaboration and development, especially in protected areas, aiming to implement the extensive or semi-extensive breeding of the species;
- Regulation of the extensive or semi-extensive breeding of those species, especially in protected areas, and

reassessing of the existing regulation and commercial breeding legislation, regarding to the supplementary project authorization for receiving hatchlings litters;
-It is recommended for studies to evaluate whether the captive breeding of the species contributes to the decrease of hunting for subsistence practices and illegal trade of meat and by-products, considering the handling system of the species currently permitted.

4. TERRESTRIAL MAMMALS

4.1 General questions on Appendix I terrestrial mammals

1. Is the taking of all Appendix I terrestrial mammals species prohibited by the national implementing legislation cited in Table I(a) (General Information)?
☑ No

If other legislation is relevant, please provide details:
› The resolution No. 462, 24th July 2014, of the Conselho Nacional do Meio Ambiente (CONAMA) defines the procedures for the environmental licensing of projects of wind energy production on land surface and institutes the entrepreneur the obligation to monitor populations bats' species.
The Ordinance No. 421, 26th October 2011 of the Instituto Nacional do Meio Ambiente e dos Recursos Naturais Renováveis, IBAMA, provides regulations for environmental licensing of electric power transmission systems and institutes the entrepreneur the obligation to inventory and identify migratory species and its routes, and to adopt measures to monitor and reduce the impacts on fauna and flora.

1a. If the taking of Appendix I terrestrial mammals species is prohibited by law, have any exceptions been granted to the prohibition?
☑ No

2. Identify any obstacles to migration that exist in relation to Appendix I terrestrial mammals species:
☑ Electrocution
☑ Lack of information
☑ Habitat fragmentation
☑ Wind turbines
☑ Other

› Although collision of bats with wind turbines and transmission lines are considered among the ten most relevant issues for the conservation of bats in Brazil (Bernard et al., 2012), the current knowledge about the causes of bat collisions is unsatisfactory (Kunz et al., 2007a), and some authors argued that the cumulative effects of this mortality can have significant impacts on long-term populations of species affected (Kunz et al., 2007b; Arnett et al., 2008). Collisions of Tadarida brasiliensis had already been registered, but there is no quantitative information on the dimension of population impacts. It is possible that the magnitude of these impacts on Tadarida brasiliensis might be reduced since the great flight ability allows these bats to reach altitudes higher than 1000 meters, and overcome major obstacles (McCracken et al. 2008).

2a. What actions are being undertaken to overcome these obstacles?
› The species is considered in the environmental licensing process of the two most potentially harmful ventures (wind energy generation and electric power transmission systems) in order to establish actions to monitor population and to reduce impacts.

2b. Please report on the progress / success of the actions taken.
› All developments in Brazil are subject to the procedures defined in the scope of federal, state and municipal licensing processes.

3. What are the major pressures to Appendix I terrestrial mammals species (transcending mere obstacles to migration)?
☑ Lack of information
☑ Habitat fragmentation

4.2 Questions on specific Appendix I terrestrial mammals

In the following section, using the table format below, please fill in each Appendix I terrestrial mammal species for which your country is considered to be a Range State. Please complete each table as appropriate, providing information in summary form. Where appropriate, please cross-reference to information already provided in national reports that have been submitted under other conventions (e.g. Convention on Biological Diversity, Ramsar Convention, CITES). (Attach annexes as necessary.)

Species name: Tadarida brasiliensis

1. Please provide published distribution reference:
› Gardner, A. L. (ed.). 2007. Mammals of South America. Vol. 1. Marsupials, Xenarthrans, Shrews, and Bats. The University of Chicago Press, Chicago and London. 669p.
Peracchi, A.L.; Lima, I.P.; Reis, N.R.; Nogueira, M.R. & Ortêncio-Filho, H. 2006. Ordem Chiroptera. p.153-230. In: Reis, N. R.; Peracchi, A. L.; Pedro, W. A. & Lima, I. P. (Eds). Mamíferos do Brasil. Londrina. 437p.
Santos, T. M. R. & Bordignon, M. O. 2011. Primeiro registro de Tadarida brasiliensis (I. Geoffroy, 1824) para o Pantanal brasileiro. Chiroptera Neotropical, 17(1): 832-835.

2a. Summarise information on population size (if known):
☑ stable

› Tadarida brasiliensis occurs in a great variety of habitats, from deserts to rainforests (Gardner 2007; Barquez et al. 2008). It is a very common, tolerant, abundant and widespread species. Its population is considered stable (Fabián & Marques 1996; Pacheco et al. 2010; Barquez et al. 2008). There are no major threats affecting this species across its entire range. (IUCN, 2016)

2b. Summarise information on distribution (if known):
☑ stable

› The species has a wide distribution in Americas, ranging from USA to Venezuela, Colombia, Ecuador, Peru, Bolivia and Chile, Argentina, Paraguay, and Brazil. Also occurs in Greater and Lesser Antiles (Gardner 2007). In Brazil the species had been registered in the States of Bahia, Rio de Janeiro, Minas Gerais, São Paulo, Paraná, Santa Catarina, Maranhão, Goiás, Rio Grande do Sul e Mato Grosso do Sul (Gardner 2007, Peracchi et al. 2006; Santos & Bordignon 2011).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research
☑ Identification and establishment of protected areas
☑ Monitoring
☑ Habitat protection
☑ Other

› Actions to the reduction, mitigation, compensation and monitoring of negative impacts on populations Tadarida brasiliensis have been taken as conditioning measures, defined in the environmental licensing process of wind farms, power transmission lines and other enterprises where potential impacts are detected.

Miscellaneous information or comments on Appendix I terrestrial mammals in general:
› Although more information is necessary, there is no evidence to indicate that populations of the species in Brazil are being significantly affected by anthropic impacts on its populations or migratory routes.

5. FISH

5.1 General questions on Appendix I fish species

1. Is the taking of all Appendix I fish species prohibited by the national legislation listed as being implementing legislation in Table I(a) (General Information)?
☑ No

If other legislation is relevant, please provide details:
› Species on National Legislation: Carcharodon carcharias; Cetorhinus maximus; Pristis pectinata; Pristis pristis; Manta birostris; Mobula japanica; Mobula thurstoni; Mobula tarapacana; Mobula hypostoma; Mobula rochebrunei
- The Brazilian List of endangered species of animals and plants in Brazil is established - Ordinance No. 303, of May 29, 1968
Recognizes the Official List of Species of Brazilian Fauna Threatened with Extinction - Ordinance No. 1522, of December 19, 1989
Prohibition of the rejection of shark carcasses and the landing of fins whose weight is disproportionate to the weight of carcasses (5%) - Normative instruction No. 121, of 24 August, 1998
Official List of Brazilian Fauna Threatened with Extinction (considering only amphibians, birds, terrestrial invertebrates, mammals and reptiles) - Normative Instruction No. 03, of May 27, 2003
Official List of Fishes and Aquatic Invertebrates Threatened with Extinction, Overexploited or Threatened by Overexploitation - Normative Instruction No. 05, of May 21, 2004
Amendment of Annexes I and II of Normative Instruction No. 05 - Normative Instruction No. 52, of November 08, 2005
Establishes the minimum catch size of marine and estuarine species on the southeast and southern coast of Brazil - Normative Instruction No. 53, of November 22, 2005
Prohibits catch, retention, landing, storage and marketing of thresher sharks (Alopias supeciliosus) -

Interministerial Normative Instruction No. 5 of April 15, 2011
Finning is prohibited (sharks and rays must be landed with naturally attached fins) - Interministerial Normative Instruction No. 14 of November 16, 2011
Prohibits catch, retention, landing, storage and marketing of oceanic white-tip sharks (Carcharhinus longimanus) - Interministerial Normative Instruction No. 1 of March 13, 2013
Prohibits catch, retention, landing, storage and marketing of mobulidae rays - Interministerial Normative Instruction No. 12 of March 13, 2013
Changes the Interministerial Normative Instruction No. 14, allowing to remove the tails of the rays on board - Interministerial Normative Instruction No. 6 of December 10, 2013
Control of the landing, storage, conservation, processing, transport, marketing or export of fins of sharks (does not apply to rays), fins naturally attached on land mandatory - Normative Instruction No. 2 of February 19, 2014
Prohibits catch, retention, landing, storage and marketing of silky sharks (Carcharhinus falciformis) - Interministerial Normative Instruction No. 8 of November 6, 2014
List of Endangered Fauna in force - Ordinance No. 444 of December 17, 2014
List of Endangered Fish and Aquatic Invertebrates in force - Ordinance No. 445 of December 17, 2014
Institution of the National Action Plan for the Conservation of Elasmobranch Fish (emphasis on 12 endangered species) - Ordinance No. 125, of December 4, 2014

1a. If the taking of Appendix I fish species is prohibited by law, have any exceptions been granted to the prohibition?
☑ Yes

If Yes, please provide details (Include the date on which the exception was notified to the CMS Secretariat pursuant to CMS Article III(7):
› Capture, transportation, storage, captive maintenance and management of threatened species of Brazil (Ordinances 444/445-2014 and 163-2015, Ministry of the Environment) may be allowed for research purposes or for the conservation of the species, upon authorization of Instituto Chico Mendes de Conservação da Biodiversidade – ICMBio (Ministry of Environment).

2. Identify any obstacles to migration that exist in relation to Appendix I fish species:

☑ Lack of legislation
☑ Other

› Difficulties in the control and inspection
Lack of traceability
Incidental catches (bycatch);
IUU (illegal, unreported, and unregulated) fishing;
Government budgets for research and conservation are limited and there are few experts and institutions available to support needed surveys and studies;
Lack of governmental fisheries monitoring programs, including on-board observers
Environmental bodies or inspection bodies overburdened and with insufficient number of agents or material resources to oversight the national territory.

2a. What actions are being undertaken to overcome these obstacles?
› In 2015, the Ministry of the Environment (MMA) instituted the National Plan of Action for the conservation of elasmobranchs in Brazil. The objective of the NAP is to mitigate the impacts on the endangered species (and their environments) in Brazil for short term conservation purposes. It is composed of nine specific objectives, with their respective actions (n = 67), expected to be implemented until 2020.Specific objectives (and number of planned actions) are listed below:
1 - Improvement of the fishery management process (5);
2 - Enhancement of the legal framework aiming its applicability (19);
3 - Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species (5);
4 - Reduction of bycatch and post-harvest mortality (various fishing modalities) (5);
5 - Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems (6);
6 - Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ) (3);
7 - Enhancement of monitoring and bycatch control initiatives (6);
8 - Expansion and integration of knowledge about populations, their environments and their ecological processes (14);
9 - Raise public awareness about incidents of sharks with humans (4).

2b. Please report on the progress / success of the actions taken.

› Current situation (overall) of the National Plan of Action (NAP) for Elasmobranch Conservation in Brazil. Total of 67 actions, distributed in nine specific objectives (source: ICMBio Technical Advisory Group - GAT 2016): Completed: 4%; In progress as planned (25%); In progress with problems (25%); Not completed or not started (31%); Planned to start in the future, including new actions that were introduced after the formal institutionalization of NAP in 2015 (15%).

2c. What assistance, if any, does your country require in order to overcome these obstacles?
› As fishing is by far the biggest threat to migratory fish in Brazil (as well as in the world), it is necessary that Brazil improve the implementation of the NAPs and the conservation measures of these species, on the risk of international sanctions, for example, on their exported products, since the country's fisheries management collapsed from mid-2000's. The most serious evidence of this collapse, the fact that the country does not collect integrated official fishery data of any sort of scale (small, artisanal, industrial, international) since 2007.This practically makes the country unable to provide accurate information on the conservation status of any species, whether they are from Appendix 1 or 2 (or not yet appended).

3. What are the major threats to Appendix I fish species (transcending mere obstacles to migration)?
☑ Other

› Threats to Elasmobranch Conservation
Excessive fishing is considered the main threat to marine elasmobranchs in Brazilian waters. In addition to the use of shark meat for consumption, there is the marketing of their fins, generating the finning (extraction of sharks ' fins, with the subsequent disposal of carcasses to sea during fishing operations) problem, since the fins value, if compared to the meat, is far superior. The main industrial types of fishery that focus on elasmobranchs are bottom trawls, drift (surface and bottom) and longline, while in small-scale fishing bottom trawl and drift (surface and bottom) stand out. Among the difficulties that hinder effective elasmobranch conservation the following stand out: (i) the establishment of chartered fleets, (ii) the deactivation of statistics pertaining to any type of fishery ever since 2012, (iii) The non-identification of extraction at a species level; (iv) The absence of monitoring programs for diverse types of fishery; (v) and deficiencies in supervisory activities.
Habitat degradation of marine-coastal ecosystems
Estuaries, mangroves and coral reefs are habitats and nurseries for various species of sharks and rays. The use of mangrove and estuary areas for aquaculture, ports, shipyards, among other human activities, leads to a dramatic set of negative effects that intensify environmental degradation and its consequences, as is the case with shark incidents on some beaches of Recife PE).
Seismic Research
Elasmobranchs are generally sound sensitive, particularly those with low frequencies. Intense or sudden sound stimuli, such as seismic surveys, may alter the behavior of these animals. Prospecting and exploration of oil and gas. These activities, by their nature, imply pollution risks, which can cause damage to the elasmobranchs, as well as to the structure and functioning of ecosystems.
Tráfego Marítimo
O tráfego marítimo é um risco potencial de colisão do casco e das hélices das embarcações com animais de grande porte, como é o caso dos tubarões-baleia e peregrino, além das raias-manta. Ao mesmo tempo, a movimentação das embarcações ocasiona mudanças comportamentais, a exemplo do que ocorre no Porto de Suape (PE), sendo um dos fatores atribuídos como responsáveis pelos incidentes envolvendo tubarões em algumas praias de Recife (PE).
Maritime Traffic
Maritime traffic is a potential risk of collision of the hull and propellers of vessels with large animals, such as whale and peregrine sharks, as well as manta rays. At the same time, the movement of the vessels causes behavioral changes, as is the case in the Port of Suape (PE), being one of the factors attributed as responsible for the incidents involving sharks in some beaches of Recife (PE).
Fisheries management
Considering the complexity of fisheries management, probably the major threats to Appendix I fish species be the effective implementation of adequate conservation measures stemming from participatory management of fisheries, involving government and society
For the coastal species, especially estuarine ones, the habitat degradation has also to be considered a threat (e.g. Pristis spp).

3a. What actions have been taken to prevent, reduce or control factors that are endangering or are likely to further endanger fish species beyond actions to prevent disruption to migrating behaviour?
› There aren’t specific actions, but several measures in the Brazilian fishery legislation, that if well implemented, could mitigates and reduce the mortalities by incidental caught.

3b. Please report on the progress / success of the actions taken.
› The action plans are being monitored and have already been described above.

3c. Describe any factors that may limit action being taken in this regard:
› The current management system in Brazil needs to be adapted to overcome the challenges of fisheries

management in order to guarantee the conservation of the species listed in both appendices highlighting the fact that there are a lack of fisheries monitoring program.

5.2 Questions on specific Appendix I fish species

In the following section, using the table format below, please fill in each Appendix I fish species, for which your country is considered to be a Range State. Please complete each table as appropriate, providing information in summary form. Where appropriate, please cross-reference to information already provided in national reports that have been submitted under other conventions (e.g. Convention on Biological Diversity, Ramsar Convention, CITES). (Attach annexes as necessary.)

Species name: Carcharodon carcharias

1. Please provide published distribution reference:

› Amorim, A. F. 1992. Estudo da pesca e reprodução do cação-azul Prionace glauca L. 1758, capturado no sudeste e sul do Brasil. Rio Claro. Departamento de Zoologia da Universidade Estadual Paulista, 205p. (Tese, Doutor em Ciências Biológicas).
Bressan, P. M., M. C. M. Kierulff, A. M. Sugieda. (Coordenação Geral). 2009. Fauna Ameaçada do Estado de São Paulo: Vertebrados. Fundação Parque Zoológico de São Paulo: Secretaria do Meio Ambiente.
Casey, J. G., & H. L. Pratt Jr. 1985. Distribution of the white shark, Carcharodon carcharias, in the western North Atlantic. South. Calif. Acad. Sci., Mem, 9, 2-14.
COSEWIC. 2006. Carcharodon carcharias, Atlantic population. Committee on the Status of Endangered Willife in Canada. Downloaded on 21 March 2012.
Decreto Estadual SP nº 60.133, de 07 de fevereiro de 2014. Publicado no DOE n.º 173, de 09 de setembro de 2014.
Fergusson, I., L. J. V. Compagno & M. Marks. 2009. Carcharodon carcharias. The IUCN Red List of Threatened Species 2009: e.T3855A10133872. http://dx.doi.org/10.2305/IUCN.UK.2009-2.RLTS.T3855A10133872.en . Downloaded on 1º October 2015.
Gadig, O. B. F. & R. S. Rosa. 1996. Occurrence and distribution of the white shark, Carcharodon carcharias, in Brazilian waters. P p. 347-350. In: Klimley, P. A.& Ainley, D. G. (eds.) Biology of White Shark. San Diego, Academic Press, 1996.
Gadig, O. B. F. 2001 Tubarões da Costa Brasileira. Tese de Doutorado. Instituto de Biociências, UNESP, Rio Claro. 343 p.
Gonzalez, M. M. B. & N. S. Amenomori. 2003. Osteologia e Utilização de Dentes de Tubarão-branco, Carcharodon carcharias (Linnaeus, 1758) (Elasmobranchii, Lamnidae) em Sambaquis do Estado de São Paulo. Revista do Museu de Arqueologia e Etnologia. 13: 25-37.
ICMBio, Instituto Chico Mendes de Conservação da Biodiversidade, 2016. Evaluation of the risk of extinction of elasmobranchs and chimeras in Brazil: 2010 - 2012. Available in: http://www.icmbio.gov.br/cepsul/especies-ameacadas.html. Accessed 03 october 2016.
Lessa R, Santana FM, Rincón G, Gadig OBF, El-Deir ACA. 2002. Biodiversidade de elasmobrânquios do Brasil. In: Workshop para avaliação e ações prioritárias para a conservação da biodiversidade das zonas costeira e marinha do Brasil. Technical report. Ministério do Meio Ambiente (MMA), Brasília.
Mikich, S. B. & R. S. Bérnils. 2004. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Disponível em: http://www.pr.gov.br/iap. Acessado em: 19 mar 2012
Passamani, M.; S. L. Mendes (Orgs.). 2007. Espécies da fauna ameaçadas de extinção no Estado do Espírito Santo. Vitória: Instituto de Pesquisas da Mata Atlântica. 140 p.
Soto, J. M. R. 2001, Annotated systematic checklist and bibliography of the coastal and oceanic fauna of Brazil. I. Sharks. Mare Magnum, 1(1): 51-120.

2a. Summarise information on population size (if known):

☑ unclear

› Due to such sporadic occurrences, population inferences are not plausible. Only 26 records are registered in Brazilian waters (EEZ; Gadig & Rosa 1996; Gadig in prep) and only one record in open ocean (Soto, 2001).
POPULATION
A rare shark that was recorded only 26 times in Brazilian waters (Gadig & Rosa, 1996; Gadig, in prep.) and only once in oceanic waters (Soto, 2001). In the USA, NMFS statistics between 1965 and 1983 show a decrease in CPUE of 1:67-1:210 (Casey & Pratt, 1985), suggesting a possible decrease in abundance. Data from beach protection networks in Australia show a gradual and irregular decrease in CPUE ever since 1960 (Fergusson et al., 2009). In Brazil, extractions are very sporadic and do not allow for population inference. There is a capture record for this species (by longline fishing) in Rio Grande do Sul, outside the continental shelf, which reinforces the possibility of exchange between Brazilian and Atlantic populations (Soto et al. 1998).
An important area of occurrence for this species in Brazil is in the South-East region, in the area influenced by the north of Rio's upwelling, which extends itself to the south of Espírito Santo and north of São Paulo in summer months, where and when most of the sightings were recorded (Gadig & Rosa, 1996; Gadig, 2001). Another important area is Rio Grande do Sul, in Torres and Passo de Torres/RS, where at least eight historical records have been made, one of which was documented with collected material. The occurrence is probably

due to its proximity with the Ilha dos Lobos, since in the last sighting a large quantity of pinniped hair was observed in the stomach contents (J. Soto, com. Pers., 2010. Brazilian records were made based on captured animals, predation of marine mammals or accidents involving humans (Gadig & Rosa, 1996; Gadig, 2001.

2b. Summarise information on distribution (if known):
☑ not known

› In Brazil, its occurrence is recorded in the states of Ceará (Northeast), Espirito Santo, Rio de Janeiro and São Paulo (Southeastern) and Rio Grande do Sul (South) (Gadig & Rosa 1996; Lessa et al 1999; Gadig 2001). However, most of the records occurred between the south-eastern regions. The records of the Northeast are from the mid- XX and there are no recent catches or observations in the region (ICMBio, 2016). Probably an important area for the species in Brazil is in the Southeast, in the region under the influence of the resurgence of northern Rio de Janeiro, which extends to the south of Espirito Santo and north of São Paulo in the summer months. This is the area that concentrates the majority of records (Gadig & Rosa, 1996; Gadig, 2001). Another apparently important area is around Torres and Passo de Torres (Rio Grande do Sul state), where there nine historical records (Soto, pers.comm, 2010).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Carcharodon carcharias (Ordinance n ° 445, Ministry of the Environment).
☑ Control hunting / poaching

› Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Carcharodon carcharias whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Carcharodon carcharias is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
Raise public awareness about incidents of sharks with humans.

Species name: Cetorhinus maximus

1. Please provide published distribution reference:
› Anonymous. 2002. Proposal to include the Basking Shark (Cetorhinus maximus) in Appendix II of the Convention on International Trade in Endangered Species (CITES). Santiago, Chile.
Compagno, L. J. V. 1984. Sharks of the world: An annoted and illustrated catalogue of shark species known to date. Part 1: Hexanchiformes to Lamniformes. FAO Species Catalogue, Rome, vol. 4, nº. 1. FAO.
Fowler, S. L. 2005. Cetorhinus maximus. In: IUCN 2010. IUCN Red List of Threatened Species. Version 2010.4. Avaliable from: http://www.iucnredlist.org (Date of acess: 30 September 2010).
Gadig, O. B. F. & R. S. Rosa. 2009. Cetorhinus maximus. Pp. 26-27. In: Livro Vermelho da Fauna Brasileira Ameaçada de Extinção. vol. 2. Brasília, MMA.
Gadig, OBF. 2001. Tubarões da Costa Brasileira. PhD. thesis. Instituto de Biociências, UNESP, Rio Claro. 343 p.
Holden, M. J. 1974. Problems in the rational exploitation of elasmobranch populations and some suggested solutions. In: F. R. Harden Jones (Eds.). Sea Fisheries Research, Paul Elek (Scientific Books) Ltd, London, England.
ICMBio, Instituto Chico Mendes de Conservação da Biodiversidade, 2016. Evaluation of the risk of extinction of elasmobranchs and chimeras in Brazil: 2010 - 2012. Available in: http://www.icmbio.gov.br/cepsul/especies-

ameacadas.html. Accessed 03 october 2016.
Lessa R, Santana FM, Rincón G, Gadig OBF, El-Deir ACA. 2002. Biodiversidade de elasmobrânquios do Brasil. In: Workshop para avaliação e ações prioritárias para a conservação da biodiversidade das zonas costeira e marinha do Brasil. Technical report. Ministério do Meio Ambiente (MMA), Brasília.
Machado, A. B. M., C. S. Martins & G. M. Drummond. 2005. Lista da fauna brasileira ameaçada de extinção: incluindo as espécies quase ameaçadas e deficientes em dados. Belo Horizonte, Fundação Biodiversitas, 160p.
Mikich, S. B. & R. S. Bérnils. 2004. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Disponível em: http://www.pr.gov.br/iap. (Acessado em: 19 de março de 2012).
Passamani, M. & S. L. Mendes. 2007. Espécies da Fauna Ameaçadas de Extinção no Estado do Espírito Santo. Instituto de Pesquisas da Mata Altântica, 140 p.
Pauly, D. 1978. A critique of some literature on the growth, reproduction and mortality of the lamnid shark Cetorhinus maximus (Gunnerus). ICES Pelagic Fish Committee Paper C. M. H:17.
Pauly, D. 2002. Growth and mortality of the basking shark Cetorhinus maximus and their implications for management of whale sharks Rhincodon typus. Pp. 199-208. In: S. L. Fowler, T. M. Reed & F. A. Dipper (Eds). Elasmobranch Biodiversity, Conservation and Management. Proceedings of the International Seminar and Workshop, Sabah, Malaysia, July 1997, IUCN SSC Shark Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK.
Sadowsky, V. 1970. First record of a basking shark Cetorhinus maximus (Gunnerus, 1765) in the Brazilian Atlantic. Boletim do Instituto Oceanográfico, 22(1): 1-10.
Silva-Santos, R., U. L. Gomes & B. P. Ferreira. 1983. Um Cetorhinus no litoral do Rio de Janeiro. Resumos do X Congresso Brasileiro de Zoologia, Belo Horizonte: 209-210.
Skomal, G., S. Zeeman, J. H. Chishlom, E. L. Summers, H. J. Walsh, K. W. McHamon & S. R. Torrold. 2009. Transequatorial migrations by basking sharks in the western Atlantic Ocean. Current Biology, 19: 1-4.
Soto, J. M. R. 2000. Sobre a presença do tubarão-peregrino, Cetorhinus maximus (Gunnerus, 1765) (Lamniformes, Cetorhinidae), em águas brasileiras. Biotemas (UFSC), Florianópolis, 13(1): 73-88.
Soto, J. M. R. 2001. Annotated systematic checklist and bibliography of the coastal and oceanic fauna of Brazil. I. Sharks. Mare Magnum, 1(1): 51-120.
Soto, J. M. R., M. M. Mincarone & G. G. Colasso. 2007. Novas descobertas acerca da captura intencional do tubarão-peregrino Cetorhinus maximus (Gunnerus, 1765) (Lamniformes, Cetorhinidae) na costa de Santa Catarina. In: XII Congresso Latino-Americano de Ciências do Mar - COLACMAR, 2007, Florianópolis. Resumos do XII Congresso Latino-Americano de Ciências do Mar.
Tomás, A. R. G. & U. L. Gomes. 1989. Observações sobre a presença de Cetorhinus maximus (Gunnerus, 1765) (Elasmobranchii, Cetorhinidae) no Sudeste e Sul do Brasil. Boletim do Instituto de Pesca, 16(1): 111-116.

2a. Summarise information on population size (if known):
☑ unclear

› No population data available. In Brazil, only 11 specimens were recorded, probably adults and sub-adults in gillnet (and bottom trawl) fisheries of the southeast and south regions (Sadowsky, 1973; Gomes & Tomás, 1985; Soto, 2000).
Cetorhinus maximus is a cosmopolitan species that has been recorded along the Brazilian coastline. The species was considered seriously threatened, due to the evident decrease in number of sightings throughout its distribution area, as well as its disappearance, ever since the year of 1999, in the only place where there was a concentration of the species (south of the Santa Catarina island), which is evidence of the decrease in its occupation area. In that same area, the species was targeted by fishery, which probably caused the collapse. Therefore, it is suspected that the population decrease in a three-generation period was of at least 80%. Moreover, its intrinsic characteristics (preferred habitat in shallow water, low fertility and large size), make the species extremely vulnerable to the effects of fishing. Therefore, C. Maximus has been categorized as Seriously Endangered (CR), according to the A2CD criteria.
There is no population data available. So far, In Brazil, there were some occurrences of adult and sub-adult specimens caught by bottom trawl and long-line fishing in the South and South-East regions (Soto, 2000). In the south of Santa Catarina island, small clusters of this species were relatively frequent until the decade of 1960 (Soto, 2000). Targeted long-line fishing caused the species to disappear, suggesting a 100% decrease (J. M. Soto, com. pess., 2010).

2b. Summarise information on distribution (if known):
☑ unclear

› Most of the Brazilian records occurred in the southern and southeastern regions, including the states of Rio de Janeiro, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul (Lessa et al. 1999; Gadig 2001; Soto 2001; Soto et al., 2007; ICMBio 2016).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Education/awareness rising

› Comprehensive protection strategies, including the prohibition of any type of capture or harassment of this

species, accompanied by due supervision. Given the potential character of its occurrence, and due to its low occurrence-rate in Brazilian waters, an environmental education program for the fishermen, focusing on the species, is of paramount importance (Gadig & Rosa, 2009). It is recommended that biological data be obtained exclusively from accidentally captured or stranded specimens.
☑ Species protection

› In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Cetorhinus maximus (Portaria n ° 445, Ministry of the Environment).
☑ Control hunting / poaching

› Currently, national legislation provides for an R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
☑ Habitat protection

› Fernando de Noronha Marine National Park
Abrolhos Marine National Park
Atol Das Rocas Marine Biological Reserve
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Cetorhinus maximus whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Cetorhinus maximus is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
9. Raise public awareness about incidents of sharks with humans.

Species name: Manta birostris

1. Please provide published distribution reference:
› Bornatowski, H., V. Abilhoa & P. Charvet-Almeida. 2009. Elasmobranchs of the Paraná Coast, southern Brazil, south-western Atlantic. Marine Biodiversity Records, 2: 1-6 (published online).
Bressan, P. M., M. C. M. Kierulff & A. M. Sugieda (Coords). 2009. Fauna Ameaçada de Extinção no Estado de São Paulo: Vertebrados. Fundação Parque Zoológico de São Paulo, São Paulo, Secretaria do Meio Ambiente, 645p.
Clark, T. B. 2002. Population structure of Manta birostris from the Pacific Islands and Atlantic Oceans. Master's thesis, Texas A & M University.
Gomes, U. L., C. N. Signori, O. B. F. Gadig & H. R. S. Santos. 2010. Guia de Identificação de Tubarões e Raias do Rio de Janeiro. Technical Books Editora, Rio de Janeiro, 234p.
Jucá-Queiroz, B., J. Santander-Neto, R. S. Medeiros, F. C. P. Nascimento, M. A. A. Furtado-Neto, V. V. Faria & G. Rincón. 2008. Cartilaginous fishes (class Chondrichthyes) of Ceará State, Brazil, Western Equatorial Atlantic – an update. Arquivos de Ciências do Mar, 41: 73-81.
Kashiwagi, T., T. Ito & F. Sato. 2010. Occurrences of reef manta ray, Manta alfredi, and giant manta ray, M. birostris, in Japan, examined by photographic records. Report of Japanese Society for Elasmobranch Studies, 46: 20-27.
Lessa, R. & M. F. Nóbrega. 2000. Guia de Identificação de Peixes Marinhos da Região Nordeste. Programa REVIZEE / SCORE-NE. Departamento de Pesca, Laboratório de Dinâmica de Populações Marinhas – UFRPE, 138p.
Lessa, R. P., R. Souza & F. M. Santana. 1995. Descrição morfométrica de espécies de raias da Subordem Myliobatoidea capturadas no litoral do estado de Pernambuco. VII Reunião do Grupo de Trabalho sobre Pesca e Pesquisa de Tubarões e Raias no Brasil, Resumos, Rio Grande, RS, 48p.
Luiz Jr. O. J., A. P. Balboni, G. Kodja, M. Andrade & H. Marum. 2009. Seasonal occurrences of Manta birostris (Chondrichthyes: Mobulidae) in southeastern Brazil. Ichthyological Research, 56: 96-99.
Marshall, A. D., L. J. V. Compagno & M. B. Bennett. 2009. Redescription of the genus Manta with resurrection of Manta alfredi (Krefft, 1868) (Chondrichthyes; Myliobatoidei; Mobulidae). Zootaxa, 2301: 1–28.

Marshall, A., M. B. Bennett, G. Kodja, S. Hinojosa-Alvarez, F. Galvan-Magana, M. Harding, G. Stevens & T. Kashiwagi. 2011. Manta birostris. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. Avaliable from: http://www.iucnredlist.org Downloaded on 22 March 2012.
Mikich, S. B. & R. S. Bérnils. 2004. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Disponível em: http://www.pr.gov.br/iap . Acessado em: 19 de março de 2012.
SEMA – PA (Secretaria de Estado de Meio Ambiente do Governo do Pará). 2007. Resolução nº 054/2007 (Homologa a lista de espécies da flora e da fauna ameaçadas no Estado do Pará). Disponível em: http://www.sema.pa.gov.br/interna.php?idconteudocoluna=2283. Acessado em: 19 de março de 2012.
Soto, J. M. R. 1997. Tubarões e raias (Chondrichthyes) encontrados no Arquipélago de Fernando de Noronha durante as expedições Arfenor I e II. Alcance, Itajaí, 5(2): 71-80.
Soto, J. M. R. 2001. Peixes do arquipélago Fernando de Noronha. Mare Magnum, 1: 147-169.
Souza, J. H., R. P. Lessa & E. N. Britto. 2000. Ocorrência de Manta birostris (Donndorff) em Parnaíba (Estado do Piauí). Santos, SP, Resumos da II Reunião da Sociedade Brasileira para o Estudo de Elasmobrânquios - SBEEL, p. 70.
Yokota, L. & R. Lessa. 2006. A nursery area for sharks and rays in Northeastern Brazil. Environmental Biology of Fishes, 75: 349-360.

2a. Summarise information on population size (if known):
☑ decreasing

› In Brazil, interactions with fishing are recorded as by-catch, without directed fisheries. As there is no fish landing data, thus it is not possible to assess the size of the population as well as their fluctuations over time. However, the intrinsic vulnerability of the species to increasing catches requires urgent conservation measures. According to the Brazilian government's assessment, it is suspected that the increase in by-catch from fishing will lead to a population reduction of at least 30% over the next three generations.

2b. Summarise information on distribution (if known):
☑ unclear

› Recorded along several stretches of the Brazilian coast and oceanic islands, including Paraná (Bornatowski et al., 2009), São Paulo (Luiz Júnior et al., 2009); Rio de Janeiro (Gomes et al., 2010); Espírito Santo (Gadig, unpublished data); Rio Grande do Norte (Yokota & Lessa, 2006), Ceará (Jucá-Queiróz et al., 2008); Pernambuco (Lessa et al., 1995), Piauí (Souza et al., 2000); Fernando de Noronha (Soto, 1997). In the northern and northeastern states there is still a need for confirmation of the occurrence of the congener Manta alfredi (O. B. F. Gadig, pers).
There is no population data available in Brazil, but the seasonal presence of the species in the coastal area of the southeast coast, especially in the winter, indicates the occurrence of migratory movements (Luiz Jr. et al., 2009. O. B. F. Gadig com. pess., 2011).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Research

› Additional research is necessary to quantify this species capture rate throughout its distribution. Due to its large size, migratory behavior, extremely low fecundity and the large size necessary to achieve sexual maturity, this species is highly vulnerable to the pressure inflicted by fishing. However, historical information is limited, preventing an accurate assessment of the threat posed by fishing.
There is an extreme shortage of data on this species throughout its distribution. The information is limited and current studies indicate large local differences in the ecology and movement patterns of manta rays in different areas. Thus, further research on this species is necessary in order to determine historical parameters and specific fishing pressures threatening the populations. However, a reduction in the extraction of manta rays from its habitats is essential in all its distribution.
Due to the fact that Brazil does not present economic significance and, therefore, no negative economic impact can befall the productive chains, in addition to the species being important as an indicator of productive marine areas, the most appropriate action to be taken is the total prohibition of Mobulidae extraction.
INI MPa/MMA No 02 of 2013 prohibits targeted fishing, shipboard retention, transshipment, extraction, storage, transportation and commercialization of the Mobulidae species, its products and byproducts in Brazilian judicial waters and in national territory.
In some South American countries (Ecuador, for example), the extraction of all species in the Mobulidae family is prohibited. Therefore, a national and international joint effort, in order to ban capture and extraction, could ensure the necessary protection for these species.
Since 2013, “Mantas do Brasil” Project has received federal incentives for initiatives to preserve and research the giant manta ray (Manta birostris) in Brazilian waters (http://www.mantasdobrasil.org.br). The main goals of the project are:
• Expand the photographic collection and contribute to the world database through the Manta Matcher, a program developed to concentrate the photographic records of divers and the network of projects that study the species around the world;

• To estimate the population size of the manta ray in Brazil;
• Determine your migratory routes on the Brazilian coast;
• To raise awareness of the need for the preservation of manta rays and the sustainable use of our coastline as their habitat;
• Disclose and observe the compliance with the legislation of protection of the species in Brazil, sanctioned in March 2013.
☑ Education/awareness rising

› “Mantas do Brasil” Project - http://www.mantasdobrasil.org.br
☑ Species protection

› Interministerial Ordinance (MPA/MMA) n°2/2013 prohibited the capture, maintenance, trade and use of Mobulidae caught in the jurisdictional waters of Brazil.
In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Manta birostris (Ordinance MMA n° 445, Ministry of the Environment).
☑ Control hunting / poaching

› Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
☑ Habitat protection

› PRESENCE IN CONSERVATION UNITS
Tupinambás Ecological Station (R. S. Rosa, com. pess.)
Laje dos Santos Marine State Park (Luiz Jr. et al., 2009)
Superagui National Park (A. M. Medeiros, com. pess.)
Fernando de Noronha Marine National Park (Soto, 1997, 2001).
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Manta birostris whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Manta birostris is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
9. Raise public awareness about incidents of sharks with humans.

Species name: Pristis pristis

1. Please provide published distribution reference:
› Almeida, Z. S. 1999. Levantamento e ocorrência de elasmobrânquios capturados pela pesca artesanal no litoral do Maranhão. Boletim da SBEEL, 4: 10.
Amorim, C.; G. Nunan & M. Senna. 2002. Extinção das populações de peixes-serra (Chondrichthyes, Rajiformes) no estado do Rio de Janeiro, Brasil. Resumos XXIV Congresso Brasileiro de Zoologia. 342p.
Bergallo, H. G.; C. F. D. Rocha, M. A. S. Alves & M. Vansluys. (Org.). 2000. A fauna ameaçada de extinção do Estado do Rio de Janeiro. 1. ed. Rio de Janeiro: EdUERJ (Editora Universidade do Estado do Rio de Janeiro). v. 1. 166 p (Portaria SEMA nº 1 de 4 de junho de 1998).
Bressan, P. M.; M. C. M. Kierulff, & A. M. Sugieda (Coordenação Geral). 2009. Fauna Ameaçada do Estado de São Paulo: Vertebrados. São Paulo: Fundação Parque Zoológico de São Paulo: Secretaria do Meio Ambiente.
Carlson, J. & K. Smith. 2013. Pristis pristis (Western Atlantic subpopulation). The IUCN Red List of Threatened Species 2013: e.T43508845A43508869. http://dx.doi.org/10.2305/IUCN.UK.2013-1.RLTS.T43508845A43508869.en . Downloaded on 02 October 2015.
Charvet-Almeida, P. 1999. General information from Sawfishes in Pará State, north Brazil. Bol. SBEEL 4: 12.
Charvet-Almeida, P. 2002. Sawfish trade in the North of Brazil. Shark News 14: 9.
Charvet-Almeida, P. & V. V. Faria. 2008. Pristis perotteti. In: Machado, A.B.M; Drummond, G.M. & Paglia, A.P. (Orgs.). Livro Vermelho da Fauna Brasileira Ameaçada de Extinção. 1ed. Brasília / Belo Horizonte: Ministério do

Meio Ambiente / Fundação Biodiversitas, v. II, p. 33-34.
Decreto Estadual SP nº 60.133, de 07 de fevereiro de 2014. Publicado no DOE n.º 173, de 09 de setembro de 2014.
Kyne, P. M., J. Carlson & K. Smith. 2013. Pristis pristis. The IUCN Red List of Threatened Species 2013: e.T18584848A18620395.http://dx.doi.org/10.2305/IUCN.UK.2013-1. RLTS. T18584848A18620395.en. Downloaded on 02 October 2015.
Machado, A. B. M.; C. S. Martins & G. M. Drummond. 2005. Lista da fauna brasileira ameaçada de extinção: incluindo as espécies quase ameaçadas e deficientes em dados. Belo Horizonte, Fundação Biodiversitas, 160p.
Machado, A. B. M.; G. M. Drummond, A. P. Paglia. 2008. In: Atlas da fauna brasileira ameaçada de extinção em unidades de conservação federais, 2011. Organizadores: Jorge Luiz do Nascimento, Ivan Braga Campos. – Brasília : Instituto Chico Mendes de Conservação da Biodiversidade, ICMBIO, 276p.
Menni, R. C. & M. F. W. Stehmann. 2000. Distribution, environment and biology of batoid fishes off Argentina, Uruguay and Brazil, a review. Revista del Museo Argentino de Ciencias Naturales (Nueva Serie) 2(1): 69-109.
Mikich, S. B. & R. S. Bérnils 2004. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Disponível em: http://www.pr.gov.br/iap. Acessado em: 19 mar 2012
MMA – Ministério do Meio Ambiente. 2004. Lista nacional das espécies de invertebrados aquáticos e peixes ameaçadas de extinção. Instrução Normativa nº 5, de 21 de maio de 2004, Brasília.
SEMA – PA (Secretaria de Estado de Meio Ambiente do Governo do Pará). 2007. Resolução nº 054/2007 (Homologa a lista de espécies da flora e da fauna ameaçadas no Estado do Pará). Disponível em: http://www.sema.pa.gov.br/interna.php?idconteudocoluna=2283 Acesso em: 19 mar 2012.
Simpfendorfer, C. A. 2000. Predicting population recovery rates for endangered western Atlantic sawfishes using demographic analysis. Environmental Biology of Fishes 58: 371-377.
Thorson, T. B. 1974. Occurrence of the sawfish, Pristis perotteti, in the Amazon River, with notes on P. pectinatus. Copeia 1974(2): 560-564.
Vieira, F. & J. L. Gasparini. 2007. Os Peixes Ameaçados de Extinção no Estado do Espírito Santo. Pp. 87 – 104. In: Espécies da fauna ameaçadas de extinção no Estado do Espírito Santo/ Marcelo Passamani, Sérgio Lucena Mendes, org. - Vitória: Instituto de Pesquisas da Mata Atlântica, 2007. 140 p.

2a. Summarise information on population size (if known):

☑ decreasing

› Probably the largest or one of the last largest populations still exists in South America's northern region (p. Charvet-Almeida, obs. pess., 2010). The size of the species population in Brazil is still unknown. Its occurrence has continuously decreased over the past decades, and the species might currently be regarded as rare or even extinct in areas where it was formerly common.
In Brazil, it was extinguished from the southeastern coast of Brazil and is declining in other regions, as a result of artisanal and commercial fishing. In Pará, local fishermen mention a population decline during the 1980s and 1990s (Charvet-Almeida, 1999), a tendency that has been maintained in recent years. Considering that the species is no longer found in most of its historical distribution, and that artisanal and commercial landings are very limited and declining in regions may still occurs, a population reduction of at least 80% is estimated for the past decades (ICMBio, 2016).

2b. Summarise information on distribution (if known):

☑ decreasing

› Pristis pristis is a large-sized sawfish that occupies estuarine, marine and freshwater environments. It has historical distribution in tropical and subtropical waters around the world, occurring in the Western Atlantic, the Gulf of Mexico and in Brazil. On the Brazilian coastline, its original distribution went from the northern to the country's southeastern coast. It is currently is extinct in most of this area, being restricted to the north coast. The main threat is small-scale and industrial fishing. It has been greatly captured by incidental and targeted fishing, and is extremely susceptible to incidental catch in virtually all types of fishing, throughout its distribution in the tropical Atlantic. In Brazil, in spite of being protected by current legislation, the species is still captured, particularly in the States of Pará, Amapá and Maranhão. Small-scale extraction is currently decreasing in the regions where it still occurs. It is species with a long life span and with little capacity of recovery from depletion. In addition, habitat degradation, especially the destruction of mangroves, is also considered a threat. Considering that the species can no longer be found in most of its historical distribution in Brazil, and that small-scale and commercial extraction practices are fairly limited and are decreasing in regions where it still occurs, a population reduction of at least 80% in a three-generation period (about 52 years) is estimated. The threats will probably not cease, and similar decreases are suspected for the future. Therefore, based on the observed decreases, the P. pristis species was classified as Seriously Endangered according to the A2CD + 3CD + 4cd criteria. Outside Brazil, the Western Atlantic population, is in a similar situation, therefore regional categorization is not altered.
In Brazil, the occurrence of Pristis pristis (often recorded as P. perotteti according to Farias et al., 2013) has historically been described for a large coastal area from the north coast to the south of the country (Menni & Stehmann, 2000). There are records of occurrence of the species in the states of Amazonas, Amapá, Pará, Maranhão, Ceará, Rio Grande do Norte, Sergipe, Bahia, Espírito Santo, Rio de Janeiro and São Paulo (Charvet-

Almeida & Faria, 2008). Currently, it is extinct in most of this area, being restricted to the north coast (Menni & Stehmann 2000) and Amazon river, in the states of Amapá, Pará, Maranhão and Amazonas (Charvet-Almeida & Faria, 2008).

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Since 2004, the species was on the Brazilian red list (Ordinance MM n° 5/2004), so the commercial caught was prohibited.
In 2014, the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Pristis pristis (Portaria n ° 445, Ministry of the Environment).
☑ Control hunting / poaching

› Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
Even though the species was registered in Brazil's official list of threatened species (MMA, 2004-Annex I) and capture and trade have been prohibited, the enforcement of its protection has been a great challenge, and the species is still captured and commercialized. Fishing practices and the commercialization of products related to the species must be prohibited and duly supervised.
☑ Habitat protection

› Because it is a species that occurs in estuarine and marine environments on the Brazilian coastline, its presence in marine conservation units is probable, albeit possibly rare.
Confirmed Records:
Cabo Orange Parna AP (Machado et al.,2008).
Delta do Parnaíba MA/PI/CE APA (Machado et al., 2008).
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Pristis pristis whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Pristis pristis is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
9. Raise public awareness about incidents of sharks with humans.

Species name: Mobula japanica

1. Please provide published distribution reference:
› Compagno, L. J. V. & P. R. Last. 1999. Mobulidae. Pp. 1524-1529. In: Carpenter, K. E. & V. H. Niem. (Eds.). FAO species identification guide for fishery purposes. The living marine resources of the Western Central Pacific. Vol. 3. Batoid fishes, chimaeras and bony fishes part 1 (Elopidae to Linophrynidae). FAO, Rome.
Gadig, O. B. F. & C. L. S. Sampaio. 2002. Ocorrência de Mobula japanica no Atlântico ocidental e Mobula tarapacana em águas brasileiras, com comentários sobre a diversidade de raias-manta (Chondrichthyes: Mobulidae) no Brasil. Arquivos de Ciências do Mar, 35: 33-37.
Vaske Jr. T., R. P. Lessa, M. F. Nóbrega, S. Montealegre-Quijano, F. M. Santana & J. L. Bezerra Jr. 2005. A checklist of fishes from Saint Peter and Saint Paul Archipelago, Brazil. Journal of Applied Ichthyology, 21(1): 75-79.
White, W. T., T. B. Clark, W. D Smith & J. J. Bizzarro. 2006a. Mobula japanica. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. Avaliable from: http://www.iucnredlist.org (Date of acess: 27 April 2012).

2a. Summarise information on population size (if known):
☑ decreasing

› Although there is no population data and information on its biology is scarce, Mobula japanica is susceptible to fishing pressure and appears unable to tolerate high levels of catch due to its low reproductive potential. As there are no landings data from the commercial fisheries for the species (records are for the multispecies category "ray"), it is not possible to evaluate the effect of the catches on the population. However, the intrinsic vulnerability of the Mobulidae family to increasing catches requires conservation measures. It is suspected that the increase in by-catch will lead to a population reduction of at least 30% over the next three generations (ICMBio, 2016).

2b. Summarise information on distribution (if known):
☑ decreasing

› Probably throughout all Brazilian EEZ, with proven records in the archipelago of São Pedro and São Paulo, São Paulo, Rio de Janeiro and Bahia (Vaske et al., 2005; Gadig & Sampaio 2002).
Even though there is no population data and information on their biology is scarce, it can be asserted that M. japanica is susceptible to fishing pressure since the species frequents regions closer to the shore, and does not seem to be able to tolerate high levels of extraction due to its low reproductive potential. Since there is no small-scale fishing data concerning the species (the registers are made in the multi-specific category "ray"), it is not possible to assess the effects of extraction on the population. However, the intrinsic vulnerability of the Mobulidae family to the increasing extraction requires conservation measures, already existent in countries such as Ecuador. It is suspected that the increase in incidental extraction shall involve a population decrease of at least 30% over the next three generations. For these reasons, the species has been categorized as Vulnerable (VU) according to the A3BD criteria.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Interministerial Ordinance (MPA/MMA) n°2/2013 prohibited the capture, maintenance, trade and use of Mobulidae caught in the jurisdictional waters of Brazil.
In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Mobula japanica (Portaria n ° 445, Ministry of the Environment).
☑ Control hunting / poaching

› Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
INI MPa/MMA No 02 of 2013 prohibits targeted fishing, shipboard retention, transshipment, extraction, storage, transportation and commercialization of the Mobulidae species, its products and by products in Brazilian judicial waters and in national territory.
☑ Habitat protection

› Fernando de Noronha - Rocas - APA, São Pedro and São Paulo.
Fernando de Noronha Marine National Park
Atol Das Rocas Marine Biological Reserve
Abrolhos Marine National Park
Tupinambás Ecological Station
Laje dos Santos State Park
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Mobula japanica whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Mobula japanica is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
Raise public awareness about incidents of sharks with humans.

Species name: Mobula thurstoni

1. Please provide published distribution reference:
› Clark, T. B., W. D. Smith & J. J. Bizzarro. 2006. Mobula thurstoni. In: IUCN 2011. IUCN Red List of Threatened Species. Avaliable from: http://www.iucnredlist.org (Version 2011.2).
Compagno, L. J. V. & P. R. Last. 1999. Mobulidae. Pp. 1524-1529. In: K. E. Carpenter & V. H. Niem (Eds.). FAO species identification guide for fishery purposes. The living marine resources of the Western Central Pacific. vol. 3. Batoid fishes, chimaeras and bony fishes part 1 (Elopidae to Linophrynidae). FAO, Rome.
Gadig, O. B. F., R. C. Namora & F. D. S. Motta. 2003. Occurrence of the bentfin devil ray, Mobula thurstoni (Chondrichthyes: Mobulidae), in the western Atlantic. Journal of the Marine Biological Association of the United Kingdom, 83: 869-870.
Jucá-Queiroz, B., J. Santander-Neto, R. S., Medeiros, F. C. P. Nascimento, M. A. A. Furtado-Neto, V. V. Faria & G. Rincón. 2008. Cartilaginous fishes (class Chondrichthyes) off Ceará State, Brazil, Western Equatorial Atlantic - an update. Arquivos de Ciências do Mar, 41(2): 73-81.
Notarbatolo-di-Sciara, G. 1988. Natural history of the rays of the genus Mobula in the Gulf of California. Fishery Bulletin, 86(1): 45–66.
Vaske Jr. T., R. P. Lessa, M. F. Nóbrega, S. Montealegre-Quijano, F. M. Santana & J. L. Bezerra Jr. 2005. A checklist of fishes from Saint Peter and Saint Paul Archipelago, Brazil. Journal of Applied Ichthyology, 21(1): 75-79.

2a. Summarise information on population size (if known):
☑ not known

› There is no population information available for the Atlantic, however it is known that the species is caught in coastal and ocean fisheries (Compagno & Last, 1999; Gadig et al., 2003).

2b. Summarise information on distribution (if known):
☑ not known

› The occurrence records in Brazil are for the São Pedro and São Paulo Archipelago (Vaske Jr et al., 2005) and states of São Paulo (Gadig et al., 2003) and Ceará (Jucá-Queiróz et al., 2008). Unpublished records for Fernando de Noronha archipelago and Rio de Janeiro and Rio Grande do Sul states are also identified (Otto Gadig, pers. comm).
There is no population data and a few information is known about M. thurstoni's biology. The species is susceptible to fishing pressure and seems to not be able to tolerate high levels of extraction, due to its low reproductive potential. The increase in fishing pressure, resulting in incidental capture, constitutes the main threat for the species. There is no extraction data concerning small-scale fishing, even though it occurs. The registers are made in the multi-specific category "ray", so it is not possible to assess the effects of extraction on the population. However, the Mobulidae family species intrinsic vulnerability to the increasing extractions demands urgent international efforts to be made for the articulate adoption of conservation measures. Due to the fact that Brazil does not present economic significance and, therefore, no negative economic impact can befall the productive chains, in addition to the species being important as an indicator of productive marine areas, the most appropriate action to be taken is the total prohibition of the Mobulidae family's extraction. Diving tourism involving Mobulidae has been developing in several localities around the world, which demonstrates that the species is of greater value alive, not dead. It is suspected that the increase in incidental extraction by fishing will result in a population decrease of at least 30% over the next three generations, qualifying the species as Vulnerable – VU according to the A3BD criteria.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Interministerial Ordinance (MPA/MMA) n°2/2013 prohibited the capture, maintenance, trade and use of Mobulidae caught in the jurisdictional waters of Brazil.
In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Mobula thurstoni (Portaria n ° 445, Ministry of the Environment).
Due to its large size, migratory behavior, low fertility and large-scale maturity, this species is likely to be highly vulnerable to fishing pressure. However, the information available on population and historic aspects is limited and more research is necessary for a more precise assessment of the threat posed by fishing. Due to the fact that Brazil does not present economic significance and, therefore, no negative economic impact can befall the productive chains, in addition to the species being important as an indicator of productive marine areas, the most appropriate action to be taken is the total prohibition of the Mobulidae family's extraction.
In some South American countries (Ecuador, for example), the extraction of all species in the Mobulidae family is prohibited. Therefore, a national and international joint effort, in order to ban capture and extraction, could ensure the necessary protection for these species. This family's species have great appeal to sub-aquatic tourism ventures, and that sort of activity has already been registered in several locations in Brazil, for example in Laje dos Santos, São Paulo.
☑ Control hunting / poaching

› Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
INI MPa/MMA No 02 of 2013 prohibits targeted fishing, shipboard retention, transshipment, extraction, storage, transportation and commercialization of the Mobulidae species, its products and by products in Brazilian judicial waters and in national territory.
☑ Habitat protection

› Fernando de Noronha Marine National Park - PE
Atol Das Rocas Marine Biological Reserve - RN
Fernando de Noronha - Rocas - APA, São Pedro and São Paulo. PE/RN
Abrolhos Marine National Park - BA
Tupinambás Ecological Station - SP
Laje dos Santos State Park - SP
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Mobula thurstoni whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Mobula thurstoni is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
Raise public awareness about incidents of sharks with humans.

Species name: Mobula tarapacana

1. Please provide published distribution reference:
› Clark, T. B., W. D. Smith & J. J. Bizzarro. 2006. Mobula tarapacana. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. .
Compagno, L. J. V. & P. R. Last. 1999. Mobulidae. In: K.E. Carpenter and V.H. Niem (eds) FAO species identification guide for fishery purposes. The living marine resources of the Western Central Pacific. Volume 3. Batoid fishes, chimaeras and bony fishes part 1 (Elopidae to Linophrynidae). FAO, Rome. p. 1524-1529.
Gadig, O. B. F. & C. L. S. Sampaio. 2002. Ocorrência de Mobula japonica no Atlântico ocidental e Mobula tarapacana em águas brasileiras, com comentários sobre a diversidade de raias-manta (Chondrichthyes: Mobulidae) no Brasil. Arq. Cien. Mar. 35: 33-37.
Gomes, U.L. & O.F.B. Gadig. 2003. Família Mobulidae. In: N.A. Menezes, P.A. Buckup, J.L. Figueiredo & R. L. Moura (eds.). Catálogo das espécies de peixes marinhos do Brasil. Museu de Zoologia da Universidade de São Paulo, São Paulo.
Lessa R. P. & T. Vaske Jr. 2009. A ictiofauna com ênfase aos peixes voadores (Exocoetidae). In: Viana, D. L.; F. H. V. Hazin, M. A. S. Carvalho (Org.). Dez anos de Estação Científica do Arquipélago de São Pedro e São Paulo. 1 ed. Brasília: SECIRM, v. 1, p. 219-224.
Mendonça, S. 2011. Ecologia das raias manta Mobula tarapacana no entorno do Arquipélago de São Pedro e São Paulo. Dissertação de mestrado. Universidade Federal de Pernambuco, Recife-PE. 59 p.
Vaske Jr., T.; R. P. Lessa, M. F. Nóbrega, S. Montealegre-Quijano, F. M. Santana, J. L. Bezerra Jr. 2005. A checklist of fishes from Saint Peter and Saint Paul Archipelago, Brazil. Journal of Applied Ichthyology, 21 (1): 75-79.

2a. Summarise information on population size (if known):
☑ decreasing

› Although there is no population data and scarce information on its biology, Mobula tarapacana is susceptible to fishing pressure and does not tolerate high levels of capture due to its low reproductive potential. The existence of intensive tuna and tuna fishing in the vicinity of the São Pedro and São Paulo Archipelagos, Fernando de Noronha and Abrolhos, can significantly affect the sub-populations of this species. As there is no landing data from the artisanal fishery for the species (records are for the multi-category "ray" category), it is not possible to assess the effect of the catches on the subpopulation. However, due to the intrinsic

vulnerability of the Mobulidae family to increasing catches, it is suspected that the increase in bycatch by fishing will lead to a population reduction of at least 30% over the next three generations.

2b. Summarise information on distribution (if known):
☑ decreasing

› The records of occurrence in Brazil are: São Pedro and São Paulo Archipelago (Gadig & Sampaio, 2002; Vaske Jr et al., 2005), Laje de Santos, Fernando de Noronha and close to the Abrolhos Archipelago (Gadig & Sampaio, 2002).
Even though there is no population data and little information on their biology, it can be asserted that M. taracapana is susceptible to fishing pressure since the species frequents regions closer to the shore, and does not seem to be able to tolerate high levels of extraction due to its low reproductive potential. The intensive fishing of tunas and suchlike species in the vicinity of São Pedro and São Paulo Archipelagos, Fernando de Noronha and Abrolhos can significantly affect this species subpopulations. Since there is no small-scale fishing data concerning the species (the registers are made in the multi-specific category "ray"), it is not possible to assess the effects of extraction on the subpopulation. However, due to the Mobulidae family's intrinsic vulnerability to the recent extraction rates, it is suspected that the increase in incidental extraction by fishing will result in a population decrease of at least 30% over the next three generations, qualifying the species as Vulnerable – VU according to the A3BD criteria.
In one of the species occurrence points in Brazil, the São Pedro and São Paulo Archipelago, it was identified that the abundance of the species was greater between February and June (Mendonça, 2011), which coincided with the spawning of Cypselurus cyanopterus (flying fish; peaking between November and March), which is a prey for large pelagics, the species was on the foundation of the Archipelago's entire production, a large production area for Thunnus albacares (Yellowfin tuna). Such a fact might make this species more susceptible to being captured by fishing (Lessa & Vaske Jr., 2009). The long-line fishing increase in the Archipelago's surrounding area represents an imminent threat to species (R. R. P. Barreto, com. pess., 2011). The species has been shown as a species of secondary interest in the Gulf of California and in Brazil, but is regularly captured in Indonesia. Its pelagic occurrence and apparent piscivorous diet are worrisome in regards to its long-line capture, therefore such a fact requires investigation. The long-term usage of drift nets in high seas and the long-line fishing effects for this species are unknown, but the negative impacts of fishing practices on the populations of other large elasmobranchs is well known.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Interministerial Ordinance (MPA/MMA) n°2/2013 prohibited the capture, maintenance, trade and use of Mobulidae caught in the jurisdictional waters of Brazil.
In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Mobula tarapacana (Portaria n ° 445, Ministry of the Environment).
Due to the fact that Brazil does not present economic significance and, therefore, no negative economic impact can befall the productive chains, in addition to the species being important as an indicator of productive marine areas, the most appropriate action to be taken is the total prohibition of Mobulidae extraction (O. B. F. Gadig, com. pess., 2011).
In other South American countries (Ecuador, for example), the extraction of all of the Mobulidae family species is forbidden. Therefore, a national and international joint effort, in order to ban capture and extraction, could ensure the necessary protection for these species.
Vessel monitoring systems are necessary to measure the extraction rates of the species in the fishing practices that affect it. Good practices regarding the release of live animals to sea, must also be stimulated through campaigns or awareness-raising programs aimed at fishermen, masters and fishing shipowners.
This family's species have great appeal to sub-aquatic tourism ventures, and that sort of activity has already been registered in several locations in Brazil, for example in Laje dos Santos, São Paulo.
☑ Control hunting / poaching

› INI MPa/MMA No 02 of 2013 prohibits targeted fishing, shipboard retention, transshipment, extraction, storage, transportation and commercialization of the Mobulidae species, its products and byproducts in Brazilian judicial waters and in national territory.
Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
☑ Habitat protection

› Because it is an oceanic species, which occasionally occurs in coastal waters along the Brazilian coastline, its presence in marine conservation units is probable.
Confirmed Records:
Fernando de Noronha – Rocas – São Pedro and São Paulo (PE/RN) Environmental Protection Area - (Paulo Guilherme Vasconcelos de Oliveira – SISBio)
Fernando de Noronha Marine National Park (PE) -(Paulo Guilherme Vasconcelos de Oliveira-SISBio)

Abrolhos Marine National Park (BA)
Laje dos Santos Marine State Park (SP)-(O. B. F. Gadig – Unesp, São Vicente – SP)
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Mobula tarapacana whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Mobula tarapacana is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
9. Raise public awareness about incidents of sharks with humans.

Species name: Mobula hypostoma

1. Please provide published distribution reference:
› Almeida, Z. S. de. 1998. Dinâmica populacional de Elasmobrânquios na costa do Maranhão REVIZEE/NORTE. Relatório Final. 97 p. Universidade Federal do Maranhão.
Amorim, A. F., C. A. Arfelli & L. Fagundes. 1998. Pelagic elasmobranchs caught by longliners off southern Brazil during 1974-97: an overview. Marine and Freshwater Research 49: 621-632.
Bizzarro, J., Smith, W., Baum, J., Domingo, A. & R. Menni. 2009. Mobula hypostoma. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. . Downloaded on 22 March 2012.
Bornatowski, H.; V. Abilhoa, P. Charvet-Almeida. 2009. Elasmobranchs of the Paraná Coast,southern Brazil, south-western Atlantic. Marine Biodiversity Records. 2: 1-6. Published online.
Bressan, P. M.; M. C. M.Kierulff, A. M. Sugieda (Coordenação Geral). 2009. Fauna Ameaçada do Estado de São Paulo: Vertebrados. São Paulo: Fundação Parque Zoológico de São Paulo: Secretaria do Meio Ambiente.
Decreto Estadual SP nº 60.133, de 07 de fevereiro de 2014. Publicado no DOE n.º 173, de 09 de setembro de 2014.
Gadig, O. B. F. 1998. Peixes cartilaginosos da costa do estado de São Paulo. Ceciliana, 8(9): 41-51.
Gadig, O. B. F., F. S. Motta, R. C. Namora. 2001. Projeto Cação: a study of sharks caught by artisanal fisheries in Sao Paulo, Southern Brazil. Shark News, v. 14, p. 11.
Gadig, O. B. F. & C. L. S. Sampaio. 2002. Ocorrência de Mobula japanica (Müller & Henle, 1841) no Atlântico ocidental e Mobula tarapacana (Philippi, 1892) em águas brasileiras, com comentários sobre a diversidade de raias-manta do Brasil (Chondrichthyes, Mobulidae). Arquivos de Ciências do Mar, Fortaleza - CE, v. 35, p. 33-37.
Gomes, U. L., C. Signori, O. B. F. Gadig & H. Santos. 2010. Tubarões e Raias do Rio de Janeiro. Technical Books Editora, Rio de Janeiro.
Lessa, R. P. 1986. Levantamento Faunístico dos Elasmobrânquios (Pisces, Chondrichthyes) das Reentrâncias Maranhenses. Boletim do Laboratório de Hidrobiologia, São Luis, v. 7, p. 27-41.
Lessa, R. P.; R. Souza, F. H. Hazin, P. Travassos, T. Vaske Jr. 1995. Estudo preliminar da distribuição e abundância das raias no litoral do estado de pernambuco. Livro de Resumos do IX Congresso Brasileiro de Engenharia de Pesca, 1995. v. único, 94 p.
Marín, Y. H; F. Brum, L. C. Barea, J. F. Chocca. 1998. Incidental catch associated with swordfish longline fisheries in the south-west Atlantic Ocean. Mar. Freswater Res. 49: 633-639.
Menni, R.C. & M. F. W. Stehmann. 2000. Distribution, environment and biology of batoid fishes off Argentina, Uruguay and Brazil. A review. Rev. Mus. Arg. Cienc. Nat. n.s. 21(1): 69-109.
Menní, R.C. & R.P.T. Lessa. 1998. The chondrichthyan community off Maranhão (northeastern Brazil) II. Biology of Species. Acta Zoológica lilloana. 44(1):69-89.
Mikich, S.B. & R.S. Bérnils. 2004. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Disponível em: http://www.pr.gov.br/iap Acessado em: 19 mar 2012
Rangel, C. E. 1998. Novo registro de ocorrência de tubarão baleia, Rhincodon typus (Orectolobiformes: Rhiniodontidae), no Arquipélago de São Pedro e São Paulo. Bol. da SBEEL. Nº 3, mar. pg.3.
Rincón, G.; C. M. Vooren, M. Stehmann. 1997. List of species of skates and rays off Brazil. An update based on captures and Bibliography. I Reunião da Sociedade Brasileira para estudo dos elasmobrânquios. Resumos. Ilhéus, BA. p. 135.

Soto, J. M. R. 1997. Tubarões e raias (Chondrichthyes) encontrados no Arquipélago de Fernando de Noronha durante as expedições Arfenor I e II. Alcance. Itajaí. 5(2): 71-80.

2a. Summarise information on population size (if known):
☑ not known

› Although there is no population data and scarce information on its biology, Mobula hypostuma is susceptible to fishing pressure and does not tolerate high levels of capture due to its low reproductive potential. As there is no landing data from the fisheries and problems to identify correctly the species (records are for the multi-category "ray"), it is not possible to assess the effect of the catches on the subpopulation. However, due to the intrinsic vulnerability of the Mobulidae family to increasing catches, it is suspected that the increase in bycatch by fishing will lead to a population reduction of at least 30% over the next three generations.
Little information is available regarding population size and trends for this species throughout its occurrence area. Currently, the distribution information available regarding this species covers only the south and north extensions, and there is a lack of information concerning all of the rest of its occurrence area. Most of the information published about this species in Brazil is regarding occurrence (Lessa, 1986; Lessa et al., 1995; Menni & Stehmann, 2000.
Jorge E. Kotas (com. pess., 2011) reports that in the months of January and September of 1997 there have been registers of extraction of 96 Mobula cf. hypostoma specimens between the latitudes of 24 ° 11 'S and 25 ° 47 'S and longitudes of 44 ° 48 ' W and 45 ° 36 ' W, by two surface drift net vessels based in the municipality of Ubatuba/Sp. The catch per unit of fishing effort (CPUE) (individuals/km) ranged between 0.2 and 8.1 individuals/km (average 3.3). In turn the CPUE (individuals/km ²) ranged between 13.2 and 643 individuals/km² (average 263).
In the southern extent of its occurrence, in Uruguay, the species is captured by long-line fishing. Data from the Uruguayan national observation program indicates that an average of 4.4 individuals per year were captured over a period of 10 years, of which 80% were released, suggesting that this fishing practices are not a threat to the species (a. Domingos, obs. pess., 2008).

2b. Summarise information on distribution (if known):
☑ not known

› In Brazil, there are records of Mobula hypostoma on oceanic islands (Soto, 1997, Marín et al., 1998; Rangel, 1998), however, they are identification errors and probably deal with larger pelagic species such as M. japanica, M.tarapacana and M. thurstoni. Gadig (p.m.) examined photographs of Mobula collected in these areas and identified these three species and none of M. cf. Hypostoma or M. rochebrunei. Other records in coastal waters include Maranhão and Pará (Menni & Lessa, 1998; Almeida, 1998); Rio de Janeiro (Gomes et al., 2010), Rio Grande do Sul and Santa Catarina (Rincón et al., 1997); São Paulo (Gadig, 1998); Paraná (Bornatowski et al., 2009). Also in the coastal area several records of this species actually treated Mobula thurstoni (Gadig et al., 2001).
Due to the fact that Brazil does not present economic significance and, therefore, no negative economic impact can befall the productive chains, in addition to the species being important as an indicator of productive marine areas, the most appropriate action to be taken is the protection of the entire family, including the total prohibition of Mobulidae capture and extraction (O. Diving tourism involving Mobulidae has been developing in several localities around the world, which demonstrates that the species is of greater value alive, not dead. It is suspected that the increase in incidental extraction by fishing will result in a population decrease of at least 30% over the next three generations, qualifying the species as Vulnerable – VU according to the A3BD criteria.
. Some researchers believe that the M. Hypostoma's records for the Brazilian coast are questionable. However, there is a species that, so far, has been identified as M. Hypostoma, which has to have its taxonomic status verified, since M. Hypostoma is supposedly a species that occurs solely in the North Atlantic. In this evaluation the name M. Hypostoma was kept only to combine the data available from the species in Brazil that is under that name.
Paraná: Insufficient data - DD (Mikich & Bérnils, 2004)
São Paulo: Threatened by Over-exploitation - AS (Basheer et al., 2009); Species that require the implementing of management and fishing guidelines for its conservation - Annex II (Dec. No. 60.133/2014)

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Interministerial Ordinance (MPA/MMA) n°2/2013 prohibited the capture, maintenance, trade and use of Mobulidae caught in the jurisdictional waters of Brazil.
In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Mobula hypostuma (Portaria n ° 445, Ministry of the Environment).
Due to the fact that Brazil does not present economic significance and, therefore, no negative economic impact can befall the productive chains, in addition to the species being important as an indicator of productive marine areas, the most appropriate action to be taken is the total prohibition of Mobulidae extraction (O. B. F. Gadig, com. pess., 2011).

In other South American countries (Ecuador, for example), the extraction of all of the Mobulidae family species is forbidden. Therefore, a national and international joint effort, in order to ban capture and extraction, could ensure the necessary protection for these species.
Vessel monitoring systems are necessary to measure the extraction rates of the species in the fishing practices that affect it. Good practices regarding the release of live animals to sea, must also be stimulated through campaigns or awareness-raising programs aimed at fishermen, masters and fishing shipowners.
There is a need for a study aimed at settling the taxonomic matter and at determining the actual distribution of the species in Brazil.
This family's species have great appeal to sub-aquatic touristic ventures, and that sort of activity has already been registered in several locations in Brazil.
☑ Control hunting / poaching

› INI MPa/MMA No 02 of 2013 prohibits targeted fishing, shipboard retention, transshipment, extraction, storage, transportation and commercialization of the Mobulidae species, its products and byproducts in Brazilian judicial waters and in national territory.
Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
☑ Habitat protection

› Because it is a pelagic species, which occurs in coastal waters along the Brazilian coastline, its presence in marine conservation units is very likely.
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Mobula hypostuma whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Mobula hypostuma is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
Raise public awareness about incidents of sharks with humans.

Species name: Mobula rochebrunei

1. Please provide published distribution reference:
› Barletta, M., M. F. M. Corrêa, P. S. Sunyé. 1989. First record of ocurrence of a female of Mobula rochebrunei (Vaillant, 1879) in western Atlantic Ocean, Paraná State, Brazil. Pp. 2. In: IV Reunião do Grupo de Trabalho Sobre Pesca e Pesquisa de Tubarões e raias no Brasil. UFR, Anais. Resumo. Pernambuco, Tamandaré.
Gomes, U. L. & O. F. B. Gadig. 2003. Família Mobulidae. Pp. 160. In: Menezes, N. A., P. A. Buckup, J. L. Figueiredo, R. L. Moura (Eds.). Catálogo das espécies de peixes marinhos do Brasil, Museu de Zoologia da Universidade de São Paulo, São Paulo.
Mikich, S. B. & R. S. Bérnils. 2004. Livro Vermelho da Fauna Ameaçada no Estado do Paraná. Disponível em: http://www.pr.gov.br/iap. Acessado em: 19 de março de 2012.
Valenti, S.V. & P. M. Kyne. 2009. Mobula rochebrunei. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2. Avaliable from: http://www.iucnredlist.org. Downloaded 22 March 2012.

2a. Summarise information on population size (if known):
☑ not known

› There are no specific data available on the population or trends for this species. Probably a rare species in the western Atlantic (Gadig, pers. comm.).

2b. Summarise information on distribution (if known):
☑ not known

› In Brazil, only two records are known, both in Paraná state (Barletta et al, 1989; Gomes & Gadig, 2003). The

first specimen was captured in the coastal waters of Paranaguá Bay (Barletta et al., 1989) and the second was in Superagui, near the border with São Paulo (Gomes & Gadig, 2003).
Mobula rochebrunei is an epipelagic species that occurs in coastal regions. Its distribution is restricted to the Atlantic. In Brazil, its occurrence records are rare, and the species has only been sighted in southern region (Paraná). Even though there is no population data and biological information is scarce, it can be asserted that M. rochebrunei is susceptible to fishing pressure and may not be able to tolerate high levels of capture. Since there is no small-scale fishing data concerning the species (the registers are made in the multi-specific category "ray"), it is not possible to assess the effects of extraction on the population. However, the intrinsic vulnerability of the Mobulidae family to its increasing extraction requires conservation measures, already existent in countries such as Ecuador. It is suspected that the increase in incidental extraction shall involve a population decrease of at least 30% over the next three generations. For these reasons, the species has been categorized as Vulnerable (VU) according to the A3BD criteria.

3. Indicate and briefly describe any activities that have been carried out in favour of this species in the reporting period. (Please provide the title of the project and contact details, where available):
☑ Species protection

› Interministerial Ordinance (MPA/MMA) n°2/2013 prohibited the capture, maintenance, trade and use of Mobulidae caught in the jurisdictional waters of Brazil.
In 2014 the government instituted a decree prohibiting the capture, maintenance, trade and use of threatened fish in Brazil, including Mobula rochebrunei (Portaria n ° 445, Ministry of the Environment).
These animals are important as indicators of productive marine areas, therefore, the most appropriate action to be taken in Brazil is the total prohibition of Mobulidae capture.
In Ecuador, for example, the extraction of all species in the Mobulidae family is forbidden. Therefore, a national and international joint effort, in order to ban capture and extraction, could ensure the necessary protection for these species. This family's species have great appeal to sub-aquatic touristic ventures, and that sort of activity has already been registered in several locations in Brazil.
☑ Control hunting / poaching

› INI MPa/MMA No 02 of 2013 prohibits targeted fishing, shipboard retention, transshipment, extraction, storage, transportation and commercialization of the Mobulidae species, its products and byproducts in Brazilian judicial waters and in national territory.
Currently, national legislation provides for a R$ 5,000 fine for fisherman or fishing company (approximately US$ 1,600) if catches of threatened species are identified. If the capture occurs within protected area the value is doubled.
☑ Habitat protection

› Superagui National Park (Barletta et al., 1989; Valenti et al., 2009).
☑ Other

› In 2015 Brazil implemented the national action plan, whose main objective is to reverse the conservation situation of the group (especially Mobula rochebrunei whichis among the priority species), through nine specific objectives (totalizing 67 actions) expected to happen within next five years (by 2020).

5. Describe any future activities that are planned for this species:
› Approximately 90% of the National Action Plan goals, in which Mobula rochebrunei is a priority species, are expected to be reached by 2020 (ICMBio 2016). Main goals:
1. Improvement of the fishery management process;
2. Enhancement of the legal framework aiming its applicability;
3. Extension of the representativeness of marine protected areas (MPAs), in number and extent, and their implementation in environments critical to the life cycle of species;
4. Reduction of bycatch and post-harvest mortality (various fishing modalities);
5. Raise public awareness about the importance of elasmobranchs and their conservation for the integrity of marine ecosystems;
6. Proposition of norms and regulations in the processes of environmental licensing (i.e for exploration of oil and gas on the EEZ);
7. Enhancement of monitoring and bycatch control initiatives;
8. Expansion and integration of knowledge about populations, their environments and their ecological processes;
9. Raise public awareness about incidents of sharks with humans.

III. Appendix II Species

1. INFORMATION ON APPENDIX II SPECIES

Information pertaining to the conservation of Appendix II species that are the object of CMS Agreements will have been provided in periodic Party reports to those instruments. It will suffice therefore to reference (below), and preferably append, a copy of the latest report that has been submitted to the Secretariat of each of the Agreement/MoUs to which your country is a Party.

ACAP (2001)

Date of last report:
› February/2016

You have attached the following documents to this answer.

Report_ACAP.pdf - Advisory Committee Annual Report - AC-9 (2016)

Period covered:
› Febraury 2015- Febuary 2016

2. QUESTIONS ON CMS AGREEMENTS

Questions on the development of new CMS Agreements relating to Bird Species

1. In the current reporting period, has your country **initiated** the development of any CMS Agreements, including Memoranda of Understanding, to address the needs of Appendix II Bird Species ?
☑ No

2. In the current reporting period, has your country **participated** in the development of any new CMS Agreements, including Memoranda of Understanding, which address the conservation needs of Appendix II Bird Species ?
☑ No

4. Is the development of any CMS Agreement for Bird Species, including Memoranda of Understanding, planned by your country in the foreseeable future?
☑ No

Questions on the development of new CMS Agreements relating to Marine Mammal Species

1. In the current reporting period, has your country **initiated** the development of any CMS Agreements, including Memoranda of Understanding, to address the needs of Appendix II Marine Mammal Species ?
☑ No

2. In the current reporting period, has your country **participated** in the development of any new CMS Agreements, including Memoranda of Understanding, which address the conservation needs of Appendix II Marine Mammal Species ?
☑ No

4. Is the development of any CMS Agreement for Marine Mammal Species, including Memoranda of Understanding, planned by your country in the foreseeable future?
☑ Yes

Questions on the development of new CMS Agreements relating to Marine Turtle Species

1. In the current reporting period, has your country **initiated** the development of any CMS Agreements, including Memoranda of Understanding, to address the needs of Appendix II Marine Turtle Species ?
☑ No

2. In the current reporting period, has your country **participated** in the development of any new CMS Agreements, including Memoranda of Understanding, which address the conservation needs of Appendix II Marine Turtle Species ?
☑ No

4. Is the development of any CMS Agreement for Marine Turtle Species, including Memoranda of

Understanding, planned by your country in the foreseeable future?
☑ No

Questions on the development of new CMS Agreements relating to Terrestrial Mammal (other than bats) Species

1. In the current reporting period, has your country **initiated** the development of any CMS Agreements, including Memoranda of Understanding, to address the needs of Appendix II Terrestrial Mammal (other than bats) Species ?
☑ No

2. In the current reporting period, has your country **participated** in the development of any new CMS Agreements, including Memoranda of Understanding, which address the conservation needs of Appendix II Terrestrial Mammal (other than bats) Species ?
☑ No

4. Is the development of any CMS Agreement for Terrestrial Mammal (other than bats) Species, including Memoranda of Understanding, planned by your country in the foreseeable future?
☑ No

Questions on the development of new CMS Agreements relating to Bat Species

1. In the current reporting period, has your country **initiated** the development of any CMS Agreements, including Memoranda of Understanding, to address the needs of Appendix II Bat Species ?
☑ No

2. In the current reporting period, has your country **participated** in the development of any new CMS Agreements, including Memoranda of Understanding, which address the conservation needs of Appendix II Bat Species ?
☑ No

4. Is the development of any CMS Agreement for Bat Species, including Memoranda of Understanding, planned by your country in the foreseeable future?
☑ No

Questions on the development of new CMS Agreements relating to Fish

1. In the current reporting period, has your country **initiated** the development of any CMS Agreements, including Memoranda of Understanding, to address the needs of Appendix II Fish ?
☑ No

2. In the current reporting period, has your country **participated** in the development of any new CMS Agreements, including Memoranda of Understanding, which address the conservation needs of Appendix II Fish ?
☑ No

4. Is the development of any CMS Agreement for Fish, including Memoranda of Understanding, planned by your country in the foreseeable future?
☑ Yes

4.1. If Yes, please provide details:
› On March 1st, 2017, Brazil received an invitation to take part in the "Memorandum of Understanding on the Conservation of Migratory Sharks – Sharks MOU". An analysis of the MOU documentation forwarded for probable signature is being made.

IV. National and Regional Priorities

1. What priority does your country assign to the conservation and, where applicable, sustainable use of migratory species in comparison to other biodiversity-related issues
☑ Low

2. Are migratory species and their habitats addressed by your country's national biodiversity strategy or action plan?
☑ Yes

2.1. If Yes, please indicate and briefly describe the extent to which it addresses the following issues:
☑ Conservation, sustainable use and/or restoration of migratory species

› Action Plans for Conservation - PANS
The evaluations carried out in the elaboration of the lists of endangered species, subsides the development of National Action Plans for the Recovery and Conservation of Endangered Species - PANs, and act as one of the tools of ProSpecies Program. The PANs define, through a participatory process, strategies to improve the conservation status of endangered species, by establishing agreements for implementation with various societal players. The implementation of the ProSpecies program also includes a component to evaluate the conservation status of other species currently not classified as endangered, in order to identify and implement preventive actions to reduce pressures that could threaten their populations. When the action plans began to be prepared in 2004, each plan was directed only to one of the species, such as the maned wolf (Chrysocyon brachyurus), the Brazilian Merganser (Mergus octosetaceus) and the porpoise (Pontoporia blainvillei), among other endangered species. Although the individual action plan model has proven to be effective, it was observed in general, threats were common to groups of species, sometimes even for species from different taxonomic groups and therefore, if there was an effective conservation action for a particular case, it could also be effective for the others. Thus, whenever possible, the action plans are sought to be prepared with a territorial approach and broader taxonomic scope. An advantage of the territorial approach is that it allows for the preparation of spatial analyses with data cross-linking in areas that affected by the PAN, which then enables the categorizing of the locations considered to have a higher level of priority for conservation along with the most urgent actions that must be carried out in each place. In addition, species that are still unknown but that may exist in the same territory will also benefit from this model. This new method has already been incorporated with endangered flora species and has since then demonstrated many advantages. However, it also has proven to be very challenging because of the need to take into account the particularities of each region and each taxon. Moreover, even with a territorial approach, it is still necessary to define where the listed actions will bring the greatest benefit to the conservation of species. In other words, this approach requires the definition of sensitive areas for the actions to be implemented later. The methodology chosen to tackle this challenge establishes firstly: the definition of sensitive areas (taking into account the opportunities and pressures), as well as factors such as the number of endemic and endangered species, and the number of protected areas. This methodology has proven to be a tool that helps decision makers to achieve maximum efficiency in the conservation of species as well as assist them in public policy development and in defining the direction for resources and investments. Up until 2015, 58 action plans were developed that cover individual species, groups of species (taxonomic approach) or specific territories (watershed, ecosystem or region), and in total approach 27% of endangered species. In 2015, in addition to the NAPs, the Ministry of the Environment promoted, along with the former Ministry of Fisheries and Aquaculture the creation of nine permanent committees to manage the sustainable use of fishery resources. For 2016, the priorities were: the production and implementation of Recovery Plans aimed at endangered species impacted by fishing, along with the elaboration of a national strategy for the implementation of the ProSpecies Program, as provided in Ordinance MMA No. 162 from May 11, 2016.
☑ Conservation, sustainable use and/or restoration of the habitats of migratory species, including protected areas
☑ Actions to prevent, reduce or control factors that are endangering or are likely to further endanger migratory species (e.g. alien invasive species or by-catch)
☑ Minimizing or eliminating barriers or obstacles to migration
☑ Research and monitoring of migratory species
☑ Transboundary co-operation

3. Does the conservation of migratory species currently feature in any other national or regional policies/plans (apart from CMS Agreements)
☑ Yes

3.1. If Yes, please provide details:
› National Action Plans for the Recovery and Conservation of Endangered Species – PANs
National Strategy for Conservation of Threatened Species (PROSPECIES)

3a. Do these policies/plans cover the following areas?

Exploitation of natural resources (e.g. fisheries, hunting, etc.)
☑ Yes

Economic development
☑ No

Land-use planning
☑ No

Pollution control
☑ No

Designation and development of protected areas
☑ Yes

Development of ecological networks
☑ Yes

Planning of fences
☑ No

Planning of dams
☑ No

V. Protected Areas

1. Are migratory species taken into account in the selection, establishment and management of protected areas in your country?
☑ Yes

If Yes, please provide details:
› See item X- Implementation of COP Resolutions and Recommendations
“Ecological Networks (Res. 10.3 / Res. 11.25)”

1a. Please identify the most important national sites for migratory species and their protection status:
› See item X- Implementation of COP Resolutions and Recommendations
“Ecological Networks (Res. 10.3 / Res. 11.25)”

1b. Do these protected areas cover the following areas?

Terrestrial
☑ Yes

Aquatic
☑ Yes

Marine
☑ Yes

1c. Identify the agency, department or organization responsible for leading on this action in your country:
› Ministry of the Environment
Protected Areas Department - DAP

VI. Policies on Satellite Telemetry

1. In the current reporting period, has your country undertaken conservation/research projects that use satellite telemetry?
☑ Yes

If yes what is the state of those projects
☑ on-going

Please provide details
› Since 2001 TAMAR has been studying the movement of sea turtles through satellite telemetry. The goal is identify the migratory routes and understand the life cycle and behavior of these animals. The results confirm that the turtles of the Brazilian coast migrate between the coasts of Africa and the Americas, demonstrating that turtles require international cooperation efforts for their protection. Unraveling the migratory behavior of hatchlings sea turtles is the goal of one of the ongoing investigations at Tamar.

2. Are any future conservation/research projects planned that will use satellite telemetry?
☑ Yes

If Yes, please provide details (including the expected timeframe for these projects):
› The plans are to continue the current studies, particularly with the hatchlings sea turtles

3. Results - please describe the positive outcomes of any actions taken
› The migratory routes of sea turtles that nesting on the Brazilian coast are better understood. The "lost years" of young sea turtles are beginning to be elucidated.

VII. Membership

1. Have actions been taken by your country to encourage non- Parties to join CMS and its related Agreements?
☑ No

VIII. Global and National Importance of CMS

1. Have actions been taken by your country to increase national, regional and/or global awareness of the relevance of CMS and its global importance in the context of biodiversity conservation?
☑ Yes

If Yes, please provide details:
› Tamar Project
TAMAR has a number of projects on environmental education, social inclusion and interaction with local communities that deal with awareness about sea turtles.
National Biodiversity Award
In order to stimulate actions, research and the development of biodiversity conservation projects, the Ministry of the Environment instituted, by means of Decree No. 188, of May 22nd 2014, the National Biodiversity Award. The proposal aims to recognize the merit of initiatives, activities and projects carried out by non-governmental organizations, companies, civil society, academia, public organs, press and citizens, who stand out for seeking to improve or maintain the conservation status of Brazilian biodiversity species, contributing to the implementation of national biodiversity targets. The National Biodiversity Award was conceived as a communication strategy between society and environmental agencies, and also as a milestone for the Federal Government's compliance with the Biodiversity National Targets 2011-2020 (Goals 01 and 12 in particular). The Award seeks to identify and recognize initiatives and activities that contributed to the improvement of the Brazilian biodiversity species conservation status; Stimulate the implementation of innovative projects, which assist in improving the Brazilian biodiversity species conservation status; Share information that might serve as inspiration or reference; and encourage and reward representatives of the public and private sectors, as well as social organizations and professionals who have a commitment to improving the Brazilian biodiversity species conservation status.
World Migratory Bird Day
In 2016, the Worldwide Migratory Bird Day (May 10th) was included in the event calendar of the Department of Species of the Ministry of the Environment. An article was published about the date and the importance of conserving migratory birds. The "Avistar 2016", a Congress and Birdwatching Fair that took place at Instituto Butantan, in São Paulo, was also announced. The event was attended by a partner of the Ministry of the Environment in the theme and the Brazilian Society for Bird Conservation - SAVE Brazil, which gave the lecture "Migratory Shorebirds".

2. Identify the agency, department or organization responsible for leading on this action in your country:
› Ministry of the Environemt, ICMBio/TAMAR

3. Results - please describe the positive outcomes of any actions taken
› Tamar Project
National awareness about sea turtles and the needing of their protection; Changes in the positions of fishermen and people on the coast in relation to sea turtles; Adaptations on the fishing gears to avoid the accidental capture of sea turtles.
All the other iniciatives are important for mainstreaming biodiversity.

IX. Mobilization of Resources

1. Has your country made financial resources available for conservation activities having direct benefits for migratory species in your country?
☑ Yes

If Yes, please provide details (Indicate the migratory species that have benefited from these activities):
› Resources are being mobilized for the implementation of the National Action Plans for Endangered Species Conservation - PANs, as well as for the National Action Plan for Albatrosses and Petrels Conservation – PLANACAP, the Sharks PAN, the Great Cetaceans PAN, the National Action Plan for the Conservation of Endangered Southern Fields Passerine. Migratory species are also benefited by the implementation of national conservation units.
Further information on the mobilization of resources has been cited in Brazil's NBSAP.

2. Has your country made voluntary contributions to the CMS Trust Fund to support requests from developing countries and countries with economies in transition?
☑ No

3. Has your country made other voluntary financial contributions to support conservation activities having direct benefits for migratory species in other countries (particularly developing countries)?
☑ No

4. Has your country provided technical and/or scientific assistance to developing countries to facilitate initiatives for the benefit of migratory species?
☑ No

5. Has your country received financial assistance/support from the CMS Trust Fund, via the CMS Secretariat, for national conservation activities having direct benefits for migratory species in your country?
☑ No

6. Has your country received financial assistance/support from sources other than the CMS Secretariat for conservation activities having direct benefit for migratory species in your country?
☑ Yes

If Yes, please provide details (Indicate the migratory species that have benefited from these activities):
› The "National Biodiversity Mainstreaming and Institutional Consolidation Project - PROBIO II" GEF project has promoted advances in the species conservation programs. Before 2009, only 14 threatened species were contemplated by PANs. That number was increased to 901 species after the PROBIO II project. Other two GEF projects the "Sustainable Cerrado Initiative" and the Effective Conservation and Sustainable Use of Mangrove Ecosystems in Brazil" have also contributed to the elaboration, monitoring and implementation of the actions involving the biomes described in the PANs. Migratory species included in the Action Plans – PANs were benefited by the GEF projects.
The financing of projects with funds from the Global Environmental Fund (GEF) is also part of the federal government's strategy to comply with the obligations established by the Convention on Biological Diversity (CBD). Several GEF projects in the area of biodiversity have helped the country both in the implementation of legislative issues on biodiversity and in the evolution of the legal framework, as well as in the structuring of an institutional framework focused on the implementation of biodiversity policies.
For the implementation of conservation measures and sustainable use of biodiversity, in addition to GEF resources, SBio also benefits from bilateral cooperation, especially with the government of Germany and the United States.

X. Implementation of COP Resolutions and Recommendations

Please provide information about measures undertaken by your country relating to recent Resolutions and Recommendations since the last Report. For your convenience please refer to the list of COP Resolutions and Recommendations listed below:

Strategic and Institutional Matters

Capacity Building Strategy (Res. 9.12 / Res. 10.6)
› Decree 4.339/2002 establishes guidelines for the formation and fixation of human resources, the promotion of training programs, the updating and fixation of human resources, including the qualification of indigenous peoples and other local communities, for the expansion of knowledge and technologies necessary to managing biodiversity. This decree also identifies the need for knowledge exchange in areas defined as a priority areas for biodiversity management.

Strategic Plan for Migratory Species 2015-2023 (Res. 11.2)
› After the Aichi Biodiversity Targets were defined at COP-10 (Nagoya, 2010), seeking to improve the national results obtained in the previous period, a broad consultation process has begun construct the revised National Strategy and the 2020 National Biodiversity Targets. This process resulted in the definition of a concise set of 20 National Targets. The National Biodiversity Strategy is made up of the National Biodiversity Targets for 2020 (CONABIO Resolution nº 06/2013, from September 3, 2013) .
Foi também, realizado um processo para a construção de indicadores para as Metas Nacionais de Biodiversidade, como consta também no NBSAP nacional.
The implementation of the Strategic Plan for Migratory Species will be initiated in 2018, supported by the Pro-Species project. However, Brazil has already presented in its National Biodiversity Strategy and Action Plans (NBSAP), its National Biodiversity Goals, which are closely related to the targets presented in the "Strategic Plan for Migratory Species 2015-2023". See attached file.
CONABIO Resolution No . 06 of September 3, 2013. Available at:
http://www.mma.gov.br/images/arquivo/80049/Conabio/Documentos/Resolucao_06_03set2013.pdf

You have attached the following documents to this answer.

Correspondence_between_the_Strategic_Plan_for_Migratory_Species_2015-2023_(SPMS)_and_the_National_Biodiversity_Targets..pdf - Correspondence between the Strategic Plan for Migratory Species 2015-2023 (SPMS) and the National Biodiversity Targets.

You have attached the following Web links/URLs to this answer.

National Biodiversity Strategy and Action Plan - National Biodiversity Strategy and Action Plan

Relationship between the CMS Family and the Civil Society (Res. 11.11)
› The implementation of the Biodiversity Conservation National Action Plans - PANs constitutes an important tool in linking CMS and civil society, mainly in the implementation of the National Action Plan for Albatrosses and Petrels Conservation – PLANACAP, the Southern Fields PAN, the Sharks PAN, and the Great Cetaceans PAN.
In Brasil, the Conabio, a commission created by Decree No. 4703 from May 21, 2003, is made up of representatives from government agencies and civil society organizations and plays an important role in the discussion and implementation of policies on biodiversity in the country. The choice of this forum as a mechanism to follow up, discuss, and improve the NBSAP ensures the integration of information between the federal government, academia, states and businesses, and provides the participation of experts to share information and participate in the proceedings. CONABIO is a multi-sector instance that supports the coordination of the implementation of national commitments to CBD and its structure is used in the process of mainstreaming and transparency for the efficient implementation of NBSAP.
As an approach to the conservation of aquatic biodiversity, in 2015, the Ministry of Fisheries and Aquaculture and the Ministry of the Environment created the Permanent Committees for the Management and Sustainable Use of Fishery Resources (CPGs), as part of the process to improve the structure and management of fisheries across the country. The objective of this committee is to encourage the debate and agreements between the local fishing sector, the federal government and civil society on management measures recommended by experts. In total, 9 CPGs were created (six marine and three continental) that make up the Shared Management System for Sustainable Use of Fishery Resources (SGC).

World Migratory Bird Day (Res. 11.9)
› In 2016 and in 2017, the Worldwide Migratory Bird Day (May 10th) was included in the event calendar of the Department of Conservation and Management of Species of the Ministry of the Environment. Articles about the date and the importance of conserving migratory birds were published:
- http://www.mma.gov.br/index.php/comunicacao/agencia-informma?view=blog&id=1589;
- http://www.mma.gov.br/index.php/comunicacao/agencia-informma?view=blog&id=2318.
The "Avistar" (http://www.avistarbrasil.com.br), a Congress and Birdwatching Fair that took place at Instituto Butantan, in São Paulo, was also announced. The events were attended by a partner of the Ministry of the

Environment in the theme, the Brazilian Society for Bird Conservation - SAVE Brazil.

Development of CMS Agreements (Res. 11.12)

› Brazil is already part of the International Agreement on the Conservation of Albatrosses and Petrels (ACAP) and part of the Memorandum of Understanding for Migratory Species Conservation from South American Prairies and their Habitats. In March 2017.
On March 1st, 2017, Brazil received an invitation to take part in the "Memorandum of Understanding on the Conservation of Migratory Sharks – Sharks MOU". An analysis of the MOU documentation forwarded for probable signature is being conducted.

Synergies and Partnerships / Cooperation with other Conventions (Res. 11.10)

› The Secretariat for Biodiversity of the Ministry of the Environment is the focal point for various conventions on biodiversity: CBD, CMS, cites, Ramsar, which facilitates integration. The Department of Species Handling and Conservation works directly with the Convention on Biological Diversity – CBD and the Convention on International Trade of Endangered Wildlife Species and Flora – CITIES, however, there is a need to always increase cooperation and synergy between the conventions, and this is a continuous process that should always be improved.

Avian Species and Issues

Electrocution of Migratory Birds (Res. 7.04 / Res. 10.11)

› Contemplated in the Migratory Shorebirds PAN "Preventing and reducing impacts resulting from the implementation of infrastructure and activities of natural resources exploitation for commercial and livelihood purposes" without specific action will be in planning until to 2018.
07.05 Resolution – WIND TURBINES AND MIGRATORY SPECIES
- Action planed in the related Migratory Shorebirds PAN
Contemplated in the specific goal 1 of the Migratory Shorebirds PAN "Preventing and reducing impacts resulting from the implementation of infrastructure and activities of natural resources exploitation for commercial and livelihood purposes" without specific action will be in planning until to 2018.
- Fulfillment (June/2016)
CEMAVE annually elaborates the Migratory Birds Routes and Concentration Areas in Brazil Report, to fulfill resolution No. 462/2014 CONAMA, which deals with the licensing of wind power generation enterprises.
Action related to the enforcement of the resolution planned in the Southern fields PAN
Finalizing and implementing wind farms zoning in Rio Grande do Sul and elaborating specific zoning for the states of Santa Catarina and Paraná.
Degree of priority/importance according to CEMAVE
Subject of great importance due to the intensification of projects for the installation of new wind farms in the species area of occurrence, for which information regarding the impact on the threatened migratory birds of the Southern and Espinilho fields is fairly sparse.
Compliance with the resolution until June 2016
In November 2012, a company contract was signed to terminate the zoning in Rio Grande do Sul for the implantation of wind farms. This zoning is complete, but not yet fully implemented. However, it does contemplate the PAN species and its habitats.
The annual Migratory Birds Routes and Concentration Areas in Brazil Report, elaborated by CEMAVE, compiles all available information on the migration of these birds from the southern regions, which are also part of the CMS and its attachments. Knowledge gaps are clear in the document and should be filled over the next few years.
-Action related to the implementation of the resolution planned in PLANACAP
To plead with the licensing process of the air generators that a generation plan compatible with the conservation of the birds on Trindade Island be fostered.
Degree of priority/importance according to CEMAVE
Wind turbines may result in the extinction of at least three taxa of threatened marine birds (including Pterodroma arminjoniana – PLANACAP) in the oceanic island of Trindade and Martin Vaz, in addition to potentially affecting other species contemplated by the ACAP. Matter of importance to the CEMAVE.
Compliance with the resolution until June 2016
The licensing process was instructed by the PLANACAP's position, aiming to avoid the installation of wind turbines in the archipelago. Action deemed complete.
Licensing projects for offshore wind turbines that could affect ACAP species in Brazil are currently unknown.

Southern Hemisphere Albatross Conservation (Res. 6.3)

› This resolution is completed applied in Brazil.
Brazil reviewed the population status and trends of all species of albratrosses that occurs in its national waters.
The result of this assessment is presented in the Official National List of Endangered (2014). Of all 7 species of albatrosses that occurs in Brazil 5 are listed as endangered (Diomedea exulans CR, Diomedea dabbenena CR, Diomedea epomophora VU, Diomedea sanfordi EN, Thalassarche chlororhynchos EN).

None of albatrosses' species that occurs in Brazil have breeding sites in national jurisdiction. And only 2 species of petrels have breeding site in Brazil´s island. The main threats to albatrosses and petrels population face are the interactions with fishery operations, specially longline- and trawl-fishing operations.
The Brazilian government launched in 2014 a new longline fisheries regulation to reduce the seabird bycatch to a minimum level. The measures are a combination of weighted branch lines, bird scaring lines and night setting that should be applied simultaneously by authorized vessels to fish the target species in the area of territorial sea, Exclusive Economic Zone (EEZ) and south international waters 20º S. The mitigation measures have been established in two stages: the transient and the permanent. From November 2014 to April 2015, the transitional mitigation measures were in force. Since May 2015 the fishermen must comply with all mitigation measures in a permanent way. The former regulation launched in 2011 established the mandatory use of only bird scaring line and weight branch line. The Brazilian recent regulation is based on the National Plan of Action that aims to contribute to the long term conservation of albatrosses and petrels interacting with fisheries in the Brazilian territory and also meets the ACAP´s best practice mitigation measures.

You have attached the following documents to this answer.

7_sumario_ingles_albatrozes_petreis.pdf - National Action Plan for the Conservation of Albatrosses and Petrels (PLANACAP)

Global Flyway Conservation (Res. 10.10 / Res. 11.14)

› Migratory Species and its Routes in the Americas

Thanks to the marking and recapture studies conducted over decades, and, more recently, to the studies conducted with geolocators, the main routes used by neartic migratory birds in the Americas are currently known. In general, the birds migrating from the east coast of Canada and the United States are crossing the Atlantic either in uninterrupted flights, or stopping by the Caribbean islands, to South America. Those birds that migrate through the interior of Canada and the United States are crossing Central American countries (either the Atlantic or the Pacific coast). In Brazil there are five main routes, which are used specially by migratory neartic birds. The same species can vary its routes, whether in its arrival to Brazil and in its departure or in just one of those instances. The main routes are: (1) the Atlantic Route – that follows along the entire Brazilian coastline, from Amapá to Rio Grande do Sul; (2) the Northeast Route – which consists of a divide in the Atlantic Route, starting in São Marcos Bay (MA) and Delta of Parnaíba (MA/PI border), passing through the interior of the Northeast region to the coast of Bahia; (3) the Central Brazil Route – Another divide in the Atlantic Route at the point of the Amazon River's estuary and Marajó Archipelago, then following the Tocantins and Araguaia rivers, passing through central Brazil and reaching the Vale do Paraná River in São Paulo; (4) the Central Amazon/Pantanal Route – the main arrivals are through the Negro, Branco and Trombetas rivers passing through the Manaus and Santarém region, then following the Madeira and Tapajós rivers to the Pantanal; and (5) the Western Amazon Route – also known as the Cisandina route, penetrating Brazil through the valleys of the rivers Japurá, Içá, Purus, Juruá and Guaporé, entering the Pantanal from there (Figure 2 of the Annex). Northern migratory birds migrating to South America use the low-rise areas of the American East to reach the Gulf of Mexico, crossing the Antilles islands, reaching the South American continent on the coast of Colombia, Venezuela and Guyanas, and from there using the various routes within Brazil. The largest number of information available on northern migrants falls on some species of the charadriiformes order and their migratory routes in the coastal region of the country. Most Brazilian shorebirds constitute global populations that have their breeding areas in the Arctic, and, every year, once the autumn approaches, about thirty of those species migrate to South America, reaching the Brazilian coast. These birds concentrate on a small number of locations, especially in the north of Brazil, the coast of Amapá, the Salgado Maranhense and the Lençóis of Maranhão. In the Northeast region, the Icapuí coast, in Ceará, the Galinhos and Areia Branca regions, in Rio Grande do Norte, the Coroa do Avião Island, in Pernambuco, the Piaçabuçu Environmental Protection Area, in Alagoas, and the Mangue Seco and Cacha-Prego regions, in Bahia can be highlighted. In the south of the country, the Lagoa do Peixe National Park might be evidenced, in the state of Rio Grande do Sul. In general, these species remain in Brazil from September to May and depend on important habitats for rest, change of feathers and feeding, so that they are able to replenish the energies spent in the migration and prepare for the return flights. However, part of the shorebird species do not migrate through the coast, going through the interior of the continent instead. They enter the Brazilian Amazon following the path of the great rivers, pass through central Brazil, and fly to the south of the country or even to Terra do Fogo. With regard to the birds migrating from the Antarctic continent and the southern end of South America to Brazil during the winter, little is known about their migratory routes. Among regional migratory routes, the Central Depression Route in Rio Grande do Sul might be highlighted - it goes along the coast from the atlantic coast of Uruguay to the south of Santa Catarina. In order to reach Argentina the birds use the natural rivers corridor, small lagoons and areas bathed by the state's Central Depression, between the Serra Sudeste and the Serra Geral, as it was noted for the Netta peposaca, and the Dendrocygna bicolor (Antas 1983, 1987, Lara-Rezende 1983, Myers et al. 1985, Castro and Myers 1987, Nascimento et al. 2000, Nascimento et al. 2003, Azevedo-Júnior & Antas 1990). The routes of some migratory species from Argentina are not fully know yet. For example the Plegadis Chihi, which carries out movements in cuneiform formations and long lines (Sick 2001), and can be observed very often in Rio Grande do Sul.
CEMAVE has updated the national migratory bird list and improved the criteria for defining important areas for migratory birds in Brazil. The areas have been defined according to three criteria:
1. High concentration of migratory species;

2. High concentration of individuals;
3. Areas of special interest for the reproduction of migratory birds, especially breeding areas for some sensible species.
The report counts with state maps, study recommendations, actions and mitigating measures for migratory bird areas of importance.
- Action planed in the related Migratory ShorebirdsPAN
The Migratory Shorebird Conservation National Action Plan was designed to reduce the impacts for birds and their habitats along the Atlantic coast (Atlantic Flyway) and the Central Brazil migratory route used by neartic and neotropical birds.
- Degree of priority/importance
CEMAVE/ICMBio coordinates The Migratory Shorebird Conservation PAN. Some of the main stopping points in Brazil for global neartic birds migratory routes are conservation units – some of them are federal and administered by ICMBio, and some of them are State units, administered by OEMAS. In theory, that would allow for the formation of an articulated network or rosary of strategic points along the migratory routes for the conservation of birds. Greater articulation should be implemented between CEMAVE and the conservation units. In addition, some areas considered important along the migratory route still lack effective protection.
- Fulfillment (June/2016)
The Brazilian PAN is aligned with international plans for neartic species and flight routes.
CEMAVE, in the form of the Migratory Shorebird Conservation PAN coordinator, participated in the 5th and 6th Western Hemisphere Shorebirds Group meeting, presenting Brazilian plans as well as participating in group discussions about the Atlantic Flyway Shorebird strategy and the elaboration of Business Plan projects (2015). It also participated in the Executive Committee meeting for the Atlantic Shorebird Flyway Initiative - ASF.
CEMAVE/ICMBio supported the submission of two projects approved in the statute for the Neotropical Migratory Bird Conservation Act (NMBCA/USFWS), becoming a partner in the execution of projects such as "Consolidating a hemispheric plan for the Atlantic Flyway"-Manomet Center for Conservation Sciences proponent, and "Shorebird Conservation in Brazil and Delaware Bay"- Nature Conserve Wildlife and New Jersey Audubon Society proponent. The first project allowed for supporting the cost of the monitoring meeting and Migratory Shorebirds PAN intermediate evaluation carried out by Acadebio (ICMBio), in Iperó/SP, in September 2015, and made the participation of international guests at the event possible for the presentation of the Atlantic Shorebird Flyway Initiative to the PAN Advisory Group. The second project, lasting up to 2017, has been able to accomplish the project for monitoring and conservation of migratory shorebirds developed by CEMAVE in partnership with NCW and Audubon in the states of Maranhão, Pará and Ceará.
- Action related to the enforcement of the resolution planned in the Southern fields PAN
-Perform and/or detail studies on habitat selection, demography, reproductive biology, population structure and bird migration in the Southern Fields.
-Promoting the integration of studies and initiatives to monitor the movement of bird species in the temperate fields of South America.
- Ensure the existence of suitable habitat for target species within productive systems and in protected or public domain areas.
- Decrease the native fields conversion rate in the occurrence areas of target species.
- Proposing and fostering public policies and non-governmental incentive mechanisms for the conservation and connectivity restoration between the remainings of the Espinilho Park formation throughout its original occurrence area.
Degree of priority/importance according to CEMAVE
Despite its high importance, the migratory routes and places of greater aggregation for southern fields migratory-species are not fully known. The lack of a precise diagnosis of which global flights routes are used, caused the actions for the first cycle of this PAN (2011-2016) focused on migration to be rather simplistic. Emphasis was given to the priority of knowing these routes and locations for the different species in order to be able to formulate threat mitigation strategies. However, the theme is of high importance for this PAN and for the group of migratory passarine encompassed in it.
Compliance with the resolution until June 2016
Márcio Repenning's PhD project contemplates demographic and migration aspects for Caboclinhos (Sporophila) groups and checks for genetic structures possibly shared among different Brazilian populations. This project's completion deadline is 2017.
Representatives from all countries that are party to the Memorandum of Understanding on the Conservation of Southern South American Migratory Grassland Bird Species and Their Habitats- CMS have been invited to the Southern Fields PAN elaboration meeting in September 2011. Argentina, Paraguay and Uruguay were present. This exchange of experiences optimizes the obtaining of information about species that use several countries. One of the products obtained through this action was the publication of the "Adrian B" article. Azpiroz, Juan Pablo Isacch, Rafael A. Dias, Adrian S. Di Giacomo, Carla Suertegaray Fontana, and Cristina Morales Palarea. Ecology and conservation of grassland birds in southeastern South America: a review. J. Field Ornithol. 83(3):217–246, 2012.
The general actions provided for in Specific Goals 1.3 and 9 are directed to the macro-scale habitat and contemplate the conservation of native fields throughout the area of occurrence of migratory species covered by the CMS (Memorandum) Southern Fields PAN. However, environment use patterns still need to be fully known so that it is possible to focus more specific actions targeting threats on a more refined spatial scale,

thereby guaranteeing greater conservation effectiveness.
One of the actions aimed at meeting this Resolution and the Southern Fields PAN Conservation Goals that had great implementation success was the establishment of a state CU – Banhado do Maçarico Rebio , where the largest Sporophila palustrisreproductive population occurs (species contemplated by the CMS MoU and the Southern Fields PAN).
-Action related to the implementation of the resolution planned in PLANACAP
-Revise and periodically update the legislation related to the implementation of mitigating measures.
-Creating and regulating tools that enable effective surveillance of the use of mitigating measures in ports and in the sea.
-Inspect the adoption of regulated mitigating measures in ports and in the sea.
-Implementing the use of mitigation measures for the incidental catch in horizontal long-line fishing of surface that aims to capture albacore and swordfish.
-Verifying the level of negative interaction between albatrosses and petrels and the rod and live bait fishing.
-Verifying the level of negative interaction between albatrosses and petrels and trawl fishing in the Southeast and South regions.
-Verifying the level of negative interaction between albatrosses and petrels and long-line fishing in the Southeast and South region.
- Verifying the level of negative interaction between albatrosses and petrels and trawl fishing in the Southeast and South regions.
-Verifying the level of negative interaction between albatrosses and petrels and fleet fishing of the "Itaipava" variety.
Verifying the level of negative interaction between albatrosses and petrels in associated schools of fish in the Southeast and South regions
-Monitoring incidental albatross and petrel capture by horizontal and surface long-line fishing for albacore and swordfish.
-Analyzing and improving the existing mitigation measures for horizontal long-line tuna fishing.
-Developing at least one new mitigating measure for long-line horizontal surface fishing.
-Developing, analyzing and improving mitigation measures for fishing practices in which mortality and or capture of albatrosses and petrels is observed.
-Assessing the implementation and level of compliance with the usage standards of the mitigating measures.
Degree of priority/importance according to CEMAVE
In this resolution there is the specific mention of Seabird Flyways. Therein it is recommended that countries support the ACAP (Agreement on the Conservation of Albatross and Petrels) implementation, which Brazil (Icmbio/CEMAVE) does intensively, including by aligning its National Action Plan (PLANACAP) in its 2012 revision/re-planning, so that it is one of the main tools for ACAP implementation in Brazil.
Furthermore, this Resolution recommends the implementation of mitigation measures to monitor the incidental capture of these birds by industrial fishing. It is emphasized that incidental capture is the threat that causes greater mortality of albatrosses and petrels in the country. Therefore, the PLANACAP provides for several actions to deal with this theme.
The resolution also mentions the need for countries to contribute through actions that promote the Antarctic seabirds conservation (including the Antarctic Treaty). All of great relevance to the CEMAVE and to Brazil (ICMBio/MMA).
Compliance with the resolution until June 2016
Brazil has implemented some important actions/political and legal arrangements for mitigating the incidental capture of albatrosses and petrels in the country. Great effort has been devoted by the PLANACAP implementation Group for participatory elaboration alongside the productive sector, including through the publication of norms on the theme (INI 07/2014), which may be regarded as one of the most modern set of norms in the world – regulating the obligation to use three simultaneous mitigating measures (devices that scare birds away or toriline, night use only and appropriate weight for pelagic long-line).
The implementation of the mentioned PLANACAP actions is in progress, and is more advanced with regards to the pelagic long-line issue – including the test of new and improved mitigating measures (Safe Lead/ Lumo Lead / HokPod).
There is still a lot to be done in the country to ensure that the newly regulated mitigating measures are complied with. The improvement of the measures monitoring and supervision is urgent. The PROBORDO program, which included On Board Observers for the Long-Line Industrial Fleet has been suspended since 2012 and this activity is now limited to just a few shipments with Scientific Observers only.
The GEF project, counting with Brazil's participation, aims to test the electronic monitoring of vessels of the long-line pelagic fleet in the country, and may be an alternative to monitoring incidental capture.
As for Antarctic seabirds conservation, Brazil counts with the PROANTAR program that promotes and finances research with birds in Antarctica aiming to broaden the knowledge about those populations (Monitoring of ACAP species – especially Macronectes) and thus maintain its conservation. For several years, the CEMAVE has been assembling reports to PROANTAR in order to analyze the proposals involving birds and ensure that the projects do not cause impacts that may contradict Antarctic Treaty recommendations.
Migratory Charadriiformes Neartic and Neotropical Birds
The migratory birds of the Charadriiformes order are comprised by maçaricos, narcejas and batuíras of the Charadriidae and Scolopacidae families, which although essentially terrestrial, are generally associated with

aquatic environments throughout their life cycle. They are fantastic migrants, able to cross thousands of kilometers annually from the Arctic to the Terra do Fogo in the Americas. They are classified as Neartic and Neotropical. The neartic birds reproduce in the northern hemisphere, most in the Arctic, and move to the southern hemisphere during the winter periods, following main paths or migratory routes along the Atlantic coast, from the Pacific and Central Coast in the Amazonian Forest and Brazil, and stop at landing and wintering sites for rest, energy recovery and moulting 6, 7, 8, 9, 10, 11 (see Figure 1 in the Annex). Netropical birds of the Charadriiformes order reproduce in the south of Brazil and migrate towards the north during their non-reproductive period 11, 12, 13, 14.
Brazil, with its extensive territory, covers much of the important routes, such as the Atlantic Migratory route and its variants and the Central Brazil Route, along which there are wetlands that sustain much of the bird populations during winter periods. They constitute stopping, foraging and resting points along the route. In addition to being fundamental for individuals who are migrating because they enable energy recovery and moulting, these areas are also frequented by non-migrant individuals (juvenile and old) that may remain in them throughout the year.
It is estimated that up to 20% of the Brazilian territory is characterized by humid areas, such as the Amazon, the Pantanal and the coastal environments existing in the 8,000 km of Atlantic coast. The importance of the humid areas as well as their relationship with aquatic and migratory birds is internationally recognized and has justified agreements such as the Convention on Wetlands of International Importance - Ramsar Convention, ratified by Brazil, and which emerged with the aim of protecting important aquatic habitats for the conservation of migratory birds. The goal subsequently expanded to promoting the conservation and sustainable use of wetlands as well as the welfare of the human populations who depend on them.
Situation of migratory species and habitats in Brazil
Migratory birds are vulnerable to various threats encountered along the migratory route and life cycle. The combination of bio-ecological factors such as their nesting habitats preference (coastal and Arctic environments), strategies and historical information (low reproductive rates, long-distance migrations) and species demographics (small populations) combined with the habitat threats subjected to almost all migratory shorebirds species has lead to large population decreases over the last decades 16, 17, 18. During migration, birds face challenges ranging from finding sufficient and quality food sources, avoiding predators and storms, competing for limited habitats, adapting to climatic variations and even surviving sport and subsistence hunting. The main anthropogenic threats that cause the greatest migratory birds mortality rates on routes passing through Brazil are: Loss and alteration of habitat, human disturbance, hunting and predation. Moreover, the potential impact of climate change on migratory shorebirds is great since they are very dependent on coastal zones 5, 3.11, 3.14.
In 2012, ICMBio/MMA, accordingly to the 3.5 Pro-Species program, promoted a workshop for assessing the conservation status of the birds of the Charadriiformes order in Brazil. Group experts were gathered and evaluated 43 taxa. Of these, 28 were included in The Migratory Shorebird Conservation National Action Plan, 23 of them being neartic migratory birds, 03 neotropical migratory birds and 02 species that reproduce in Brazil, as can bee seen in the attached file (Target species of the Brazilian National Action Plan for Shorebird Conservation, Conservation status and related Plan/Convention).
The migratory bird areas of concentration are mostly highly productive humid areas that are rich in natural resources and that exist along migratory routes. These are the migratory shorebirds preferred environments, where they find the conditions necessary to complete their life cycles. The Lagoa National Park, a site of international importance located in Rio Grande do Sul and the Reentrancias Maranhenses, a site of hemispherical importance located in Maranhão's coastline are both Brazilian wintering sites currently recognized by the Western Hemisphere Shorebirds Reserves Network WHSRN 3.10. The Cajuais Bank, in Icapuí, CE, is currently being recognized by WHSRN as a regionally important site. The Ramsar 3.2 Convention recognized sites in Brazil are currently sixteen.
The WHSRN sites recognition is defined by the total number of migrant individuals frequenting the site or by the percentage of the biogeographical population of a certain species that frequents the site. Therefore, robust estimates and studies on birds are necessary in order to indicate the site's recognition. However, this sort of information is not always available. The criteria for Ramsar site recognition includes the area already being recognized as a conservation unit.
The protection situation of stopping and wintering sites on the Amazonian and Central Brazil routes is not yet clear since there are still difficulties in identifying all migratory birds critical habitats within Brazil. In general, water bodies, river margins and reservoirs are used, but there are fewer studies and monitoring of birds in the countryside. Wetlands in the Amazon have a good federal conservation units coverage; Also, some CUs protect a good part of the Pantanal of Mato Grosso, but few protected areas exist on the Central Brazil route. These are emblematic areas such as the Tanquâ and Embumirim lowlands and the Tietê River lowlands in the interior of São Paulo, recognized migratory birds conservation areas that are isolated and under strong and constant occupation pressure by economic ventures.
Because they are humid and coastal areas rich in natural resources and landscapes, the migratory shorebirds habitats in Brazil are also subject to strong pressures for occupation by farming and mariculture, as well as energy production, tourist and real estate endeavors. The Migratory Shorebird Conservation National Action Plan has identified the alteration and decrease in habitat as the main threats to shorebirds in Brazil.
Conservation efforts:
In Brazil, CEMAVE was created by IBAMA/MMA in 1977 as the Center for Bird Migration Studies, fostered by the

Brazilian commitment to meet the Convention for the Flora, Fauna and Natural Landscapes of the Americas Protection 3.1. The Convention aims to protect and preserve in its natural environment exemplars of all species and genera of indigenous flora and fauna, including migratory birds in sufficient numbers and extensive places, in order to avoid, by all possible means, their extinction. It foresees, among other measures, the creation of protected areas and the adoption of measures for the protection of migratory birds of economic value or aesthetic interest, or to prevent extinction. At that time the Center implemented the National Ringing System and began studies such as the marking of migratory birds in important sites in Brazil (some of which became Conservation Units for the Migratory Birds Protection, as was the case of the Lagoa National Park in 1986). CEMAVE had its scope subsequently expanded and was renamed to National Center for Wildlife Conservation and Research. Although it has reduced the focus on monitoring migratory birds, CEMAVE maintains the SNA, which distributes the rings and manages the database of all rings conducted in the studies. For that reason it is recognized as a model in South America. Ever since the year of 2015 it has assumed the distribution of codes and systematization of the marking protocol flags database for the PASP Panamerican Shorebird Program 3.13 in Brazil and Paraguay. Ever since the the elaboration of national action plans for the conservation of threatened and migratory species was adopted by MMA, the CEMAVE started to coordinate the work carried out in the Brazilian bird PANs.
The Migratory Shorebird Conservation National Action Plan (ICMBio Decree No. 77 of July 27th, 2016) was elaborated in December of 2012 and contemplates actions related to the general goal of broadening and ensuring the protection of critical habitats for 28 species of migratory shorebirds in Brazil up to 2018. It includes the related species in Table 1, of which 5 bird taxa are considered to be threatened with extinction in the National List (MMA Decree No. 444/2014): 2 in the CR category (Critically Endangered) – Calidris canutus and Limnodromus griseus; 1 (one) in the EM category (Endangered) – Calidris pusilla; 2 (two) in the VU category (Vulnerable) – Charadrius Wilsona and Calidris subruficollis; In addition to 23 other taxa categorized as NT, DD and LC, neartic and neotropical migratory birds. In 2017 this plan will complete five years. The planning matrix with the PAN's specific goals and related actions can be found on ICMBio website.
Ever since 2014 the CEMAVE/ICMBIO has been participating in the elaboration and implementation of the Atlantic Shorebird Flyway Initiative 3.11 as a part of the Initiative's Executive Committee. AFSI has a business plan aimed at mobilizing the countries that are part of the Atlantic Migratory Route's resources and efforts for habitat protection, predation minimization, human disturbance reduction, hunting reduction and the increasing of knowledge on migratory shorebirds. Although recent, the resumption of the Brazilian sites identification work by the WHSRN as well as the development of researches in partnership projects financed by specific USFW notices can be considered as achievements accomplished by those articulations (U.S. Fish and Wildlife Service) for the initiative covering the mapping of habitats on the coast of Maranhão and Pará and studying the connectivity of these Brazilian sites with sites in the northern hemisphere through geolocators and marking. Other PAN partners such as SAVE Brazil have initiated specific projects to support the study and conservation of migratory shorebirds in Brazil, enabling the application of external resources and acting in capacity building and multiplication of standardized census methodologies and ISS population estimates (International Shorebird Survey), adopted by several countries including Brazil along the migratory route.
National Council of the Environment (CONAMA)'s Resolution No. 462, of July 24th 2014, established procedures for the environmental licensing of wind source based power generation enterprises in terrestrial surfaces. As a consequence, it has been decided, in regards to the enterprises framework (chapter II – of the general Procedures for Environmental Licensing), in its 3rd article, § 3rd that "wind farms that are located (...." Item V) in regular route areas as well as resting, feeding and reproduction areas for migratory birds that appear in the Annual Migratory Birds Routes and Concentration Areas in Brazil Report to be issued by the Chico Mendes Institute of Biodiversity Conservation (Chico Mendes Institute) will not be considered low impact, requiring the presentation of an Environmental Impact Assessment and of an Environmental Impact Report (EIA/RIMA), as well as public hearings, in agreement with current legislation. From the year of 2014 onwards, annual routes and concentration areas for migratory birds reports were elaborated and disseminated. The reports involve not only migratory shorebirds, but also cover other groups of migratory birds and habitats that are not humid areas. Provoked by this demand, CEMAVE has initiated, in the year of 2016, an internal task force and experts consultation effort, in order to elaborate the Brazilian migratory species list.
DIBIO/ICMBio has began, as of the year of 2015, investing GEF Mar program resources in activities related to the Migratory Shorebirds PAN. Those funds were initially directed at enabling PAN meetings, and, in 2016, research planning and Institute monitoring were also funded using GEF Mar resources. Should the funds be authorized, the investment will enable an historical database analysis for the CEMAVE/Lagoa do Peixe and the National Ringing System concerning migratory and marine shorebirds monitoring. In addition, the funds will also be invested in implementing proper monitoring in the Federal Conservation Units.

You have attached the following documents to this answer.

Target_species_of_the_Brazilian_National_Action_Plan_for_Shorebird_Conservation.pdf - Target species of the Brazilian National Action Plan for Shorebird Conservation, Conservation status and related PlanConvention

10_JField_Ornithol.2012.pdf - Ecology and conservation of grassland birds in southeastern South America: a review

8_e_11anexo_NT_01_2017.pdf - Flyways of the Americas

You have attached the following Web links/URLs to this answer.

Illegal Killing, Taking and Trade of Migratory Birds (Res. 11.16)

› Considering Brazil's biodiversity, which possesses some of the richest biomes on the planet and the most diverse flora in the world, the country's government has elaborated quite a comprehensive environmental legislation. In 1967, The Wildlife Protection Act (No. 5,197, of January 3rd 1967), which criminalises the hunting and illegal trade of wild animals, was instituted. This legal milestone was approved by the 1988 Constitution, which prohibits, in its 225 article, practices that submit animals to cruelty or cause the extinction of species.

With Legislative Decree No. 54 of June 24th 1975, Brazil became a signatory to the Convention on International Trade in Endangered Species of Wild Fauna and Flora -CITIES, promulgated by Decree No. 76,623 of November 17th 1975, amended by Legislative Decree No. 35, of December 5th 1985, and promulgated by Decree No. 92,446 March 7th, 1986. In this decade, Law No. 6,938, of August 31th 1981, was also set forth, providing for the Environment National Policy, its goals and formulation and enforcement mechanisms. The 1988 Constitution has consolidated the legal environmental protection process through art. 225, which stipulates that the State and society shall guarantee an ecologically balanced environment, seeing as the environment is an asset for common use by the people, which must be preserved and maintained for present and future generations.

In 1992, Brazil hosted the 2nd United Nations Conference on Environment and Development, which resulted, among other accords, in the Convention on Biological Diversity (CBD), ratified by Legislative Decree No. 2, of 1994, and promulgated by Decree No. 2,519, of 1998, in which the country has assumed a series of commitments before the international community. In that same year the Environmental Crimes Law was promulgated, Law No. 9,605 of February 12th 1998 (also known as the Life Law), provides for penal and administrative sanctions that may befall individuals and organizations that display behaviors and or carry out activities that negatively affect the environment. This law is currently regulated by Decree No. 6,514, of 2008.

Within the scope of the Pro-Species program, the ICMBio and the JBRJ, counting with the assistance of more than 1,500 experts, have assessed all vertebrates, selected groups of invertebrates and seed plants, covering more than 16,000 species. At the end of 2014, MMA published the Official National Lists for Threatened Endangered Species: MMA Decrees 443/2014, 444/2014 and 445/2014. This represented a 200% increase if compared to the previous Brazilian Red List, which stresses the necessity for actions to be taken in order to reduce the risk of species extinction.

The PANS have been successfully developed in the recent decades. Its construction is an important prioritization exercise for the establishment of medium and short-term actions. In this process, a broad set of tasks is determined and formalized through a Decree by the competent environmental organ, covering local activities such as environmental education and national initiatives, as well as proposals for updating regulations, with the purpose of reversing or minimizing the negative impact of the factors responsible for species population decreases or environment degradation.

Surveillance and monitoring of wildlife

Accountability for environmental offenses in Brazil occurs in the administrative, criminal, and occasionally in the civilian spheres. Prior to the complementary Law No. 140/2011 IBAMA was responsible for administrative accountability. After the complementary law, in addition to IBAMA, the State organs also started to act in the fining of environmental offenders. As collateral damage, the previous offender records (that were only federal before) are now dispersed throughout the 27 states, and the federal records become increasingly obsolete if compared to the new offenders and the offenses committed. Based on its system, which unified all environmental infraction penalties up until 2011, IBAMA has elaborated a database on the most notorious traffickers on a nationwide scale. This intelligence analysis becomes increasingly outdated and impossible to be accomplished without the existence of a unified national system. As a consequence it is also increasingly difficult to identify the criminal records in environmental offenses unless they have been committed in the same federative unit and booked by the same environmental organ.

Migratory Species and Highly Pathogenic Avian Influenza (Res. 8.27 / Res. 9.8 / Res. 10.22)

› - Action planed in the related Migratory Shorebirds PAN

Collecting biological material, sediments and water from environments used by shorebirds in order to identify contaminants, in particular produced by the agribusiness, shrimp farming, oil industry, zoonoses and causes of mortality in cases of epizootic disease.

Fulfillment (June/2016)

CEMAVE has been developing, ever since 2015, and in partnership with other research institutions, migratory birds monitoring expeditions and the collection of biological specimens (SISBIO authorisations No.42,418, MCT Decree 162/2016) for nutritional and contamination evaluations of the birds. Partner institutions and researchers as well as sometimes co-partners in the expeditions (such as USP, UFPB and UNISINOS) tend to develop independent researches for the evaluation of zoonoses in migratory shorebirds.

-Action related to the implementation of the resolution planned in PLANACAP

-Evaluation and health monitoring of albatross and petrel populations occurring in Brazil.

Degree of priority/importance according to CEMAVE

Diseases have been pointed out as the main threats causing population decrease in some extremely

threatened (Critically Endangered -CR) albatross populations, such as the Amsterdam Albatross (Diomedea amsterdamensis), which had its population decreased to 100 mature individuals because of avian cholera (a disease caused by the Pasteurella bacteria), which has been affecting the population for a decade. For this reason and because of the ACAP recommendations and the CMS Resolution, the CEMAVE considers this a matter of great importance to the albatrosses and petrels in the country and has collaborated with activities through PLANACAP and ACAP in order to meet this demand. Avian influenza is tested in MAPA's reference laboratories whenever outbreaks are officially reported (notified) in the case of bird mass mortality. In addition to compulsory notification, this disease's impact (Highly Pathogenic Influenza) would be extremely relevant to Brazilian biodiversity due to the potential to cause the death of several taxa that were never exposed to these viruses. For these reasons, CEMAVE considers the matter of great importance.
Compliance with the resolution until June 2016
Outbreaks and events involving mass albatross morbidity and mortality have often been communicated to the PLANACAP and have been addressed by the team of Articulators and Collaborators for this Action Plan, including the CEMAVE. The Parna Lagoa do Peixe Team (ICMBio) has registered a new mass grounding in May 2015, this time of the Black-browed Albatross species Thalassarche melanophris, 203 animals were affected - both alive and dead - the cause is still unknown, however health surveillance has ruled out pathogens of aviary interest. Laboratory analysis for avian influenza and other diseases of importance for public health and animal health (animal production) were conducted.
Partnerships are being made in order to organize albatrosses and petrels biological materials in a sample bank in order to optimize and foster the development of conservation-focused research (Albatross Network).
PLANACAP has promoted, in 2015, a training course in partnership and partially funded by ACAP, with the goal of training teams to optimize the analysis and health diagnosis possibilities for samples collected via incidental capture.
The Albatross Network within PLANACAP's framework has already received demands for researching zoonotic diseases that shall use the specimen bank's biological material.
In the period from August to November of 2015, PLANACAP's coordinator was trained in biological specimens analysis techniques for albatrosses and petrels focused on investigating pathogens of importance for conservation, the training was conducted in partnership with the British Antarctic Survey and the University of Exeter. In this period, the CEMAVE employee extracted DNA and conducted the analysis of samples from stray albatrosses (Diomedea exulans – critically Endangered -CR) as well as from three other ACAP species. The training was founded with resources obtained from an ACAP Secondment, after the project submitted by Brazil in 2014 was approved (CEMAVE/icmbio).
There are independent surveys conducted by Brazilian researchers and research institutions (such as USP and UNISINOS, among others) investigating the presence of avian influenza in albatrosses and petrels, as well as in other aquatic and migratory birds. However, those tend to conduct a epidemiological prevalence diagnosis. CEMAVE has participated in these surveys in previous years (two articles published concerning aquatic and migratory birds).
NATIONAL PLAN FOR AVIAN INFLUENZA PREVENTION AND PREVENTION AND CONTROL FOR NEWCASTLE DISEASE
The Ministry of Agriculture has published the Normative instruction No. 17 of April 7th 2006, which approves, under the National Bird Sanitation Program, the National Plan for Avian Influenza Prevention and Control and Prevention for Newcastle Disease, throughout the national territory.

You have attached the following documents to this answer.

13_2014_PlosOne_Canelas_Paper_Influenza_Jansen.pdf - Avian Influenza Virus (H11N9) in Migratory Shorebirds Wintering in the Amazon Region, Brazil

12_2013_West_Nile_virus_surveillance_2008-2010.pdf - West Nile virus surveillance, Brazil, 2008–2010

Poisoning Migratory Birds (Res. 11.15)

› Action planed in the related Migratory Shorebirds PAN
1.3 - Elaborating and ensuring the use of standardized guidelines in the Terms of Reference for environmental licensing in humid zones of shorebird occurrence.
1.6 - Establishing a national protocol for the rehabilitation of shorebirds and habitat recovery in cases of oil spills
1.7 - Elaborating and implementing a pilot program for the management of solid contaminants in critical habitats, especially in the region of the Lençóis Island and Resex de Cururupu – MA and in the Piaçabuçu-AL APA region.
1.8 - Elaborating and implementing a program to raise awareness to the proper use of pesticides in properties that receive expressive numbers of migratory birds in the surroundings of Rio Grande do Sul coastal plain conservation units.
5.2 - Collecting biological material, sediments and water from environments used by shorebirds in order to identify contaminants, in particular produced by the agribusiness, shrimp farming, oil industry, zoonoses and causes of mortality in cases of epizootic disease.
Degree of priority/importance
Part of the critical migratory shorebirds birds habitats in Brazil are agricultural areas or are under the influence of water bodies affected by the agricultural use of neighboring lands, with emphasis on the RS state rice

crops. Thus, although there are few studies on the theme, the poisoning of birds by the agribussiness is highly likely. Another major activity potentially capable of causing contamination to migratory birds is shrimp farming (shrimp farms) carried out in coastal areas, using antibiotics, fertilizers and other chemicals during the productive process, as well as mining companies (gold and other noble metals) mainly on the north and northeast coast, which contaminate water courses in the areas occupied by migratory birds.
Due to the current oil exploitation activities being carried out in some of Brazil's marine areas, the risk of oil poisoning is large, and is especially worrisome in the coastal area between the states of the north and the northeast, where there are extensive mangrove areas and where the largest concentrations of migratory shorebirds are located. The PAN Advisory Group considers it necessary to determine priority habitats, areas of exclusion and carry out studies to obtain knowledge about the current parameters for habitats and bird health, so they may be able to act in case of accidents and leaks, minimizing impacts. There is also a need for protocols to be adopted and for the funding of infrastructural improvements in order to minimize damages in the event of accidents.
Fulfillment (June/2016)
- CEMAVE is a New Jersey Audubon Society partner in the contaminants surveying project regarding migratory shorebird areas in the north and northeast of Brazil, working from feather and blood samples collected in important northern and northeastern Brazilian habitats.
-There are independent surveys being conducted by Brazilian researchers and research institutions (such as USP, UFPB, UFSE) on the contamination of migratory shorebirds, but those are more focused on the diagnosis of the contamination situation.
- Action related to the enforcement of the resolution planned in the Southern fields PAN
Suggesting the inclusion of the "Farming practices compatible with the conservation of birds and their environments" theme in training programs targeted at rural state extension agencies technicians.
Degree of priority/importance according to CEMAVE
Part of the environments used by the six Southern Fields PAN species contemplated by the CMS and the MoU for America's Southern Field Birds (Alectrurus tricolor, Spoophila Cinnamomea, S. Hypochroma, S. palustris, Xanthopsar flavus and Polystictus pectoralis) are agricultural areas or are under the influence of water bodies affected by the agricultural use of neighboring lands. Thus, although studies on the theme are practically inexistent, the poisoning of birds by the agribussiness is highly likely.
-Action related to the implementation of the resolution planned in PLANACAP
2.4- Establishing and managing an alert group that monitors, communicates and assists on emergencies involving albatrosses and petrels affected by oil and its derivatives.
2.5 - Consolidating and disseminating specific guidelines and protocols related to the rehabilitation of albatrosses and petrels affected by oil and its derivatives.
2.17 - Elaborating and collaborating for the implementation of emergency contingency plans for oil spills on islands that are habitats for Puffinus lherminieri andPterodroma arminjoniana as well as critical areas for other species life cycles.
2.19 - Articulating, in partnership with the Brazilian Navy, measures for the mitigation of impacts caused by the generation and disposal of waste and sewage in Trindade Island.
3.16 - Mapping albatross and petrel diversity in Brazil's ZEE and adjacent international waters, aiming to determine priority areas, correlating with oceanographic characteristics, prey distribution and threats.
3.18 - Conduct researches for the determination of albatrosses and petrels as monitors/bioindicators for environmental conditions.
Degree of priority/importance according to CEMAVE
This resolution's degree of priority for CEMAVE and the ACAP is high, considering that the albatrosses and petrels, due to being animals that are on the top of the food chain, can be affected by various ecosystem contaminants, which may bioaccumulate or biomagnify along the trophic chain. For this reason, contamination by heavy metals, plastics and its derivatives, as well as hydrocarbons and its derivatives, among others, is considered to be of great importance, since Brazil is an important feeding area for many species contemplated by the ACAP. Additionally, these birds have great mobility, serving as samplers of larger areas of the environment and responding rapidly to impacts by changing behavior or changing the areas used for feeding and reproduction.
Activities related to offshore oil extraction and contamination by hydrocarbons and its derivatives are potential threats that should be prevented for this group. In addition, because they tend to move to possibly impacted areas around the Doce River estuary, they can be impacted by contaminants from a serious environmental accident that occurred recently. In that sense, it is of paramount importance to understand and monitor the marine area affected, so that mitigating actions can be implemented in case threats to the species are detected.
In May 2016, the CEMAVE environmental analyst and PLANACAP coordinator was indicated and approved as co-convenor of the ACAP Population and Trends Working Group and is responsible for, among other demands, elaborating protocols for monitoring diseases and contaminants, especially ones deriving from plastics and its derivatives, in albatrosses and petrels (working with other colleagues in the Working Group).
The CEMAVE team works directly in the elaboration and consolidation of protocols for rehabilitating poisoned (intoxicated) or sick albatrosses and petrels.
Compliance with the resolution until June 2016
Action 2.4 – A project sponsored by Petrobras for monitoring Albatrosses and Petrels is currently ongoing (eg.

Beach Monitoring Project -PMP) in all influence licensed oil poles. A plan with the goal of mitigating eventual impacts in case of oil leaks is also underway.
Action 2.17 – During the implementation of this action, it was identified that diesel oil supplies in the Fernando de Noronha and Trindade e Martin Vaz archipelagos must also be mapped and an oriented contingency plan formed, considering the transportation route and the energy production supply for the Island. Leaks derived from intercontinental transportation were also considered a threat. In Espírito Santo, there are surrounding blocks that might possibly leak (Trinidade e Martin Vaz). It is predicted that regional characterization will be finalized in 2017 providing the basis for contingency plans.
3.16 Action – The mapping of the albatross and petrel diversity in the Brazilian ZEE and adjacent international waters has been carried out by PLANACAP articulators and collaborators with the goal of determining priority areas and considering the presence of threats. The mapping provides an important base for the analysis of potential threats, for example, ones related to environmental accidents (e.g. The impact caused by Samarco's accident at the Doce River estuary and adjacent areas).
Action 3.18 – There is a project being carried out by PLANACAP for the analysis of metals in petrel fabrics. In addition, in order to subsidize this action, there is a strand database of 250 km excerpts, between Chuí and Lagoa do Peixe being prepared since July of 2013: In two years, 3,071 birds were registered – End of Course Work elaborated in 2015.
-There are independent surveys being conducted by Brazilian researchers and research institutions (such as USP, FURG, among others) on the contamination of albatrosses and petrels. However, those are more focused on the diagnosis of the contamination situation.
Action 2.5 - Document made available on the CEMAVE website. Protocols Book currently being elaborated.
Action 2.19 - The internal norm establishing procedures to handle conflict was elaborated by the Brazilian Navy. Item 5.9 of the "PROTRINDADE Norms", (Environmental Conduct) lays down behavior rules for researchers and military who frequent the Island, all of whom must be subject to lectures addressing these and other environmental preservation matters. In order to improve these standards, the PLANACAP members spoke out by inserting guidelines on the theme (intoxication, possibility of contact with hydrocarbons) in their revision process, in 2014.

Aquatic Species and Issues

Migratory Marine Species (Res. 9.9 / Res. 10.15)
› Brazil is committed with the conservation of cetaceans not only in the national policies as the adoption of National Action Plan of large cetaceans, National Action Plan for Conservation of Small Cetaceans and National Action Plan for Conservation of Fransciscanas but also with the International Whaling Commission Conservation Management Plans.
Currently Brazil is coordinating the CMP for southern right whale, southwest population in cooperation with Argentina and Uruguay and also is party of the CMP for Fransciscanas.
Brazil is also leading the proposal of the South Atlantic Whale Sancutary in the International Whaling Commission with Argentina, Uruguay, Gabon and South Africa as co-sponsors. The proposal of the South Atlantic Whale Sanctuary (SAWS) aims to maintain or increase current whale stock levels in the region by mitigating identified threats to whale stocks, as well as to identify and quantify other potential threats. The SAWS also intend to stimulate coordinated non-lethal and non-extractive research in the region, especially by developing countries, and through international cooperation with the active participation of the IWC. One of its objectives is to develop the sustainable, non-extractive and non-lethal economic use of whales for the benefit of coastal communities in the region (e.g. whale watching and educational activities), and to integrate national research, management efforts and conservation strategies in a cooperative framework, maximizing the effectiveness of management actions. All this will be done taking into full account the rights and responsibilities of coastal States under the UN Convention of the Law of the Sea, and by providing an overall framework for the development of localized measures, in order to maximize the conservation benefits at an ocean basin level. SAWS proposal is the first IWC Sanctuary proposal to provide a management plan.
The last version of SAWS proposal and its Management Plan was reviwed by the Scientific and Conservation Committes of IWC. The SC reviewed the scientific and technical aspects of the proposal and the Conservation Committee analysed if the SAWS is consistent with other measures to protect whales from anthropogenic and other environmental factors.
In both IWC committes the SAWS proposal had a positive feedback about the positives outcomes of its approval. The IWC Scientific Committe agreeded that a Sanctuary such as the SAWS has, in principle, the potential to encourage collaboration and to facilitate development of coordinated scientific research and monitoring programs relevant to meet IWC management and conservation goals.
In the last IWC Consevation Committee in 2016 meeting the SAWS proposal was supported by Australia, Belgium, Chile, the Dominican Republic, France, Germany, Monaco, New Zealand, Sweden, the UK and the USA, and observers from the European Union, the Centro de Conservacion Cetacea and the Instituto de Conservacion de Ballenas. Governments noted that it was the first proposal to be accompanied by a management plan and commended its inclusive and collaborative nature.

You have attached the following documents to this answer.

15-_IWC_66_08_Proposal_SAWS_plan_final_14-10-1.pdf - Proposal - THE SOUTH ATLANTIC: A SANCTUARY FOR WHALES

14_-_livro_toninhas-ingles-web.pdf - THE ACTION PLAN FOR THE CONSERVATION OF THE TONINHA/FRANCISCANA SMALL CETACEAN TONINHA Pontoporia blainvillei

Conservation of Migratory Sharks and Rays (Res. 11.20)

› Ordinance No. 445/2014

Brazilian List of Endangered Fish and Aquatic Invertebrate

The species included in the List, in accordance with Annex I of this Ordinance, classified in the categories Extinct in Nature (EW), Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) are fully protected, including, among other measures, the prohibition of capture, transportation, storage, custody, handling, processing and marketing.

MPA/MMA NORMATIVE INSTRUCTION NO. 10, JUNE 10th, 2011

Approves general norms and the elaboration of a fishing vessels licensing system for access and sustainable use of fishing resources, with the definition of fishing modalities, species to be captured and permitted areas of operation.

MPA/MMA INTERMINISTERIAL NORMATIVE INSTRUCTION NO. 11, JULY 5th, 2012.

Prohibits the use and transportation of surface trawl nets/gillnets, popularly known as "Malhão"

Sharks PAN

The National Action Plan for the Conservation of Threatened Marine Sharks and Rays aims to mitigate the impacts on Brazil's endangered marine elasmobranchs and their environments for short-term conservation purposes. It consists of nine (9) specific goals, with its respective actions. Its implementation is predicted within five years, with supervision and annual monitoring of the implementation process.

In Brazil at least 169 species of cartilaginous fish (being 84 sharks, 79 rays and 6 chimeras) are known. Among them, the elasmobranch (sharks and rays) are the largest group and are widely distributed in marine and estuarine environments. Elasmobranchs are captured, either as a target species or as bycatch in fishing practices directed at other species with higher commercial value.

Considering the current scenario of population decrease in the elasmobranch species and its fundamental importance in maintaining various ecological processes in the most diverse marine ecosystems, the Chico Mendes Institute of Biodiversity Conservation (ICMBio), having as legal support for the MMA Decree No. 43/2014, which institutes the Endangered Species National Conservation Program (Pró-Espécies), the National Action Plan for the Conservation of Endangered Marine Elasmobranchs.

PAN focus species

The Sharks PAN focuses on 12 threatened species (IN MMA No. 05/2004), which are distributed along the Brazilian coastline up to the outermost boundary of its Exclusive Economic Zone (ZEE). The actions provided for in the Sharks PAN also benefit eight over-exploited or threatened species (IN MMA No. 05/2004 and IN MMA No. 52/2005), as well as other 35 species that had its conservation status validated as threatened in the assessment workshops for Brazilian fauna species conservation promoted by ICMBio.

ICMBio strategies for Sharks and Rays Conservation

In 2014, four planning workshops were held (three regional and one national) in order to consolidate the Sharks PAN. 67 actions were agreed on with the objective of "mitigating the impacts on endangered marine elasmobranchs and its environments in Brazil, for short-term conservation purposes". The plan was a ICMBio strategy for the conservation of sharks and rays and was approved through ICMBio Decree No.125 of December 201, with validity until July 2019, and will be monitored annually with support from the Technical Advisory Group (GAT) approved by ICMBio No. 575, December 2014. In addition to being a national strategy for the Conservation of endangered marine elasmobranch species, the Sharks PAN will follow the molds pre-established by the International Plan of Action for Conservation and Management of Sharks (IPOA) of the Food and Agriculture Organization for the United Nations (FAO), thus representing Brazil's commitment before the international community. The plan should place Brazil in a new plateau when it comes to conservation of marine biodiversity.

The Sharks PAN covers 12 threatened species (IN MMA 05/2004) distributed along the Brazilian coastline up to the outermost boundary of its Special Economic Zone (SEZ) they are: the Isogomphodon oxyrhynchus, the Squatina occulta, the Rhinobatos horkelii, the Cetorhinus maximus, the Mustelus schmitti, the Squatina guggenheim, the Galeorhinus galeus, the Ginglymostoma cirratum, the Negaprion brevirostris, the Pristis pectinata, the Pristis perotteti and the Rhincodon typus.

The actions planned in the Sharks PAN will also benefit eight (8) over-exploited or threatened species (IN MMA 05/2004 and IN MMA 52/2005): Carcharhinus longimanus, Carcharhinus porosus, Carcharhinus signatus, Sphyrna lewini, Sphyrna tiburo, Sphyrna zygaena, Carcharias taurus and Prionace glauca.

Additionally, other 35 species that have had their conservation status validated among threatened categories in the conservation state assessment workshops promoted by ICMBio will also be contemplated in the actions provided for in the Sharks PAN, being them: Alopias superciliosus, Alopias vulpinus, Atlantoraja castelnaui, Carcharhinus galapagensis, Carcharhinus obscures, Carcharhinus perezi, Carcharhinus plumbeus, Carcharodon carcharias, Dasyatis centroura, Dasyatis colarensis, Gymnura altavela, Manta birostris, Mobula cf. hypostoma, Mobula japanica, Mobula rochebrunei, Mobula tarapacana, Mobula thurstoni, Mustelus canis, Mustelus fasciatus, Myliobatis freminvillii, Myliobatis goodei, Myliobatis ridens, Notorynchus cepedianus, Rhinobatos lentiginosus, Rhinoptera brasiliensis, Rioraja agassizii, Sphyrna media, Sphyrna mokarran, Sphyrna tudes, Squalus acanthias, Squatina argentina, Sympterygia acuta, Sympterygia bonapartii, Torpedo puelcha and Zapteryx brevirostris.

Implemented CITES recomendations
Brazil was a co-proponent of four amendments proposals to the CITES appendices, which were all approved during the CITES Conference of the Parties-CoP17, held in Johannesburg, South Africa, from September 24th to October 5th, 2016:
- Carcharhinus falciformes, a shark species, has been added to Appendix II;
-The Alopias genus sharks were added to Appendix II: A. superciliosus; A. vulpinus; A. pelagicus;
-The Mobula genus rays were added to Appendix II: M. tarapacana; M. japanica; M. mobular; M. thurstoni; M. eregoodootenkee; M. kuhlii; M. hypostoma; M. rochebrunei; M. munkiana
Additionally, Brazil was author of a document proposing the search for recovery funding for species included in appendix I that have a higher risk of extinction and for which no project or funding is underway. The document was also approved. In the document presented by Brazil, the existence of 975 species listed in Appendix I may be highlighted, of which 623 (= 64%) are classified in some category of threat according to the IUCN international criteria, and of which 429 species (= 44%) present population decrease. Therefore, actions and greater effective participation from the Parties and the Convention are necessary in order to prevent the decrease and extinction of these species.
International Plan of Action for Conservation and Management of Sharks
In progress at the Sharks PAN
The objective of the IPOA-SHARKS is to ensure the conservation and management of sharks and their long-term sustainable use. The term “sharks” is taken to include all species of sharks, skates, rays and chimaeras (Class Chondrichthyes). The IPOA-SHARKS applies to States in the waters of which sharks are caught by their own or foreign vessels and to States the vessels of which catch sharks on the high seas.
Marine and Coastal Protected Areas Project – GEF-Mar – is a Federal Government project, created and implemented in partnership with private institutions and the civil society to promote the conservation of marine and coastal biodiversity. The project seeks to support the creation and implementation of a Marine and Coastal Protected Areas (MCPAs) System in Brazil in order to reduce the loss of marine and coastal biodiversity. This system integrates different conservation unit (CU) categories and other protected areas under different management strategies.
The project's general goal is to support the expansion of a globally significant, representative and effective Marine and Coastal Protected Areas (MCPAs) system in Brazil, and to identify mechanisms for their financial sustainability.
To achieve these goals, the project counts with the following specific objectives:
a. To increase the MCPAs to 5% of Brazil's marine and coastal area (equivalent to 175,000 km2);
b. To increase biodiversity protection in at least 9,300 km2 new or existing marine and coastal conservation units;
c. Identifying, drawing up and preparing for implementation at least two financial mechanisms capable of contributing to the sustainability of the long-term coastal and marine protected areas.
SHARKS MoU
In March 2017, Brazil was invited by CMS to participate in the Sharks MoU, this proposal is currently being analyzed for possible signature.

You have attached the following documents to this answer.

17_Proposta_Mobula.pdf - CITES - CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II A. Proposal

16_Proposta_Carchahirnus.pdf - CITES - CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II A. Proposal

15_Proposta_Alopias.pdf - CITES - CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II A. Proposal

You have attached the following Web links/URLs to this answer.

Sumário Executivo do Plano de Ação Nacional para a conservação dos Tubarões e Raias Marinhos Ameaçados de Extinção - Sumário Executivo do Plano de Ação Nacional para a conservação dos Tubarões e Raias Marinhos Ameaçados de Extinção

Live capture of Cetacean from the Wild (Res. 11.22)

› Federal Law No. 7,643/1987 prohibits fishing for cetaceans in the Brazilian judicial waters.
The MMA Decree No. 98, of April 14th 2000, prohibits:
I- The use of Brazil's aquatic mammals or exotic wildlife, for the purpose of serving as pets;
II - The formation of aquatic mammals or exotic wildlife breeders for commercial breeding in Brazil, as well as their respective certification;
III - The use of Brazil's aquatic mammals or exotic wildlife in circus spectacles or any other artistic production, whether in fixed or itinerant installations, with the exception of presentations for educational purposes accompanied by appropriate interpretation and with IBAMA's prior approval of the corresponding work plan.

Adverse Anthropogenic Impacts on Cetaceans and other Biota (Res. 9.19 / Res. 10.24)

› This resolution is addressed in the following instruments:
-IBAMA/ICMBio Normative Ruling No. 2 of 2011 -establishes permanent restriction areas and periodic

restriction areas for the acquisition of petroleum and gas exploration seismic data in priority areas for the conservation of aquatic mammals on the Brazilian coast.
-The small cetaceans PAN has the goal of: evaluating and reducing the impact of pollution on small cetaceans in Brazil in the next five years.
-Aquatic Mammals PAN

Improving the Conservation Status of the Leatherback Turtle (Dermochelys coriacea) (Rec. 7.6)

› In Brazil, the Tamar Project, which is linked to ICMBio, has been responsible for the research and conservation of sea turtles in the country since 1980. Out of all the species that occur in Brazil, this is the rarest. This species does not have a significant population in Brazil. Only about 120 nests are recorded annually in Brazil (about 30 to 40 breeding females), mostly concentrated in Espírito Santo, that number represents about 0.25% of the world's population. The threats that befall the species in Brazil are the same as in the rest of the world. Especially the poaching of eggs, incidental fishing and night lights. In addition, protecting the nests and seeking alternatives for fishing gear that reduce the incidental capture of turtles, The TAMAR project also offers environmental education for local communities. In the nearly 40 years of the project, it has created a generation that not only respects the turtles but also sees them as a source for ecological tourism. In 2001 TAMAR Project initiated the remote sensing of the turtles. This allowed for the gathering of knowledge concerning the main routes traveled by the turtles throughout their lifetime. In the case of the leatherback sea turtle, this mapping demonstrated that adults of this species travel a route between Brazil and Equatorial Africa, which indicates a potential for cooperation between Brazil and African countries in the protection of the species. More recently, a remote sensing project was initiated for the hatchlings, which shall provide more relevant data for the protection of the species in the most fragile stage of its life-cycle. In November 2015, the dam rupture in Bento Rodrigues (Mariana) and the subsequent contamination of the Doce River, which flows into the spawning region for the species, led the TAMAR project to intensively monitor the turtles spawning, behavior and ecology in the region. However, preliminary data released in December 2016 indicated that the accident did not affect the species local population.

Migratory Freshwater Fish (Res. 10.12)

› CEPTA, the ICMBio specialized center for actions focused on the conservation of aquatic biodiversity, has been seeking to improve various tools related to their goals in order to improve knowledge, and thus contribute to the conservation of Brazilian biodiversity. Currently the center's main actions aim to elaborate, coordinate and monitor various national action plans that strive for the conservation of threatened species, in addition to systematically evaluating the conservation status (threat level) of more than 1,700 species of continental fishes that occur in the Brazilian territory.
These actions are unprecedented in Brazil and were initiated a few years ago. The information gathered and made available has served as a parameter for demonstrating what are and where are located the most threatened species in our country. Based on the aforementioned research activities, new action plans are created for the conservation of these species, plans which involve diverse institutions and partner organizations as well as the civil society, and seek to decrease the threat level or even reverse threat processes, ensuring the preservation and conservation of our biodiversity.
Throughout the process, such work highlights the great necessity for improvement in scientific knowledge involving the species. The scientific research conducted and encouraged by CEPTA seeks to ensure the necessary conditions for increasing the knowledge we have concerning our own biodiversity.
The results of research projects conducted or supported by CEPTA are widely disseminated in high profile national and international scientific journals, often contributing information that was unprecedented before their publication. As a result, the CEPTA institution has made a name for itself and is well known and respected both by the scientific and the general community. Moreover, Brazil is the only country currently assessing the risk of extinction for all fish.
The National Action Plans for the Conservation of Endangered Species or Speleological Heritage (PAN) are public policies, agreed on with society, which identify and guide priority actions aimed at combating threats that may endanger species populations and natural environments. The conservation of continental fish PANs are:
-Conservation of Threatened Aquatic Species from the Mogi/Pardo/Sapucaí-Mirim/Grande Ecosystem;
-National Action Plan for the Conservation of Iguaçu Basin's Aquatic and Semi-aquatic Fauna
-Lower Iguaçu PAN;
-National Action Plan for the Conservation of Paraíba do Sul River's Basin Aquatic Species;
- National Action Plan for the Conservation of São Francisco River's Endangered Aquatic Species

Cross-cutting Issues

Marine Debris (Res. 10.4 / Res. 11.30)

› Currently, MMA's main effective strategy related to the minimization of sea waste pollution focuses on the implementation of the National Solid Wastes Policy, Law No. 12.305/10. Considering that the main sources of sea waste can be found in the continent, studies point out that land-based sources contribute to approximately 70% of the residues found in the seas.
When it comes to sea-based sources of waste, residues produced in vessels may be highlighted, this type of

waste presents potential risks to some marine species, in particular risks related to the so-called "ghost nets", i.e., fishing nets discarded at sea, which present a potential risk of unintentionally capturing some migratory species. In that sense, the MARPOL (International Convention for the Prevention of Pollution from Ships, 1973) is highlighted in Annex 5. The convention was ratified by Brazil in 1996.
Brazil is part of the United Nations Convention for the Law of the Sea, which was ratified in Brazil in 1987 (DLG No. 5, 09/11/1987, published in 12/11/1987) and promulgated through Decree No. 1,530, of June 22, 1995. The Convention aims to establish a new comprehensive legal regime for the seas and oceans and, with regard to environmental issues, presents practical rules on environmental standards, such as compliance with devices that regulate pollution in the marine environment. In article 207 recommendations for reducing pollution from the continent are presented, which reflects the relevance of this source of waste in the marine environment's pollution(UNITED NATIONS, 1982).
Still within the framework of the United Nations (UN), it is worth pointing out that since 1995, Brazil, through the Ministry of the Environment, is involved with the Global Programme of Action on the Protection of the Marine Environment from Land-based Activities – GPA, which is aimed at facilitating the fulfillment of the State's obligations when it comes to preserving and protecting the marine environment and has been designed to support the States actions. It is the only global initiative that focuses directly on connectivity between terrestrial, coastal and marine environments. However, the country does not possess an updated and implemented Action Plan. Currently, the GPA has three action lines: Sea Waste; Nutrients and Effluents.
The theme's importance as well as the society's recognition of the subject's relevance emerged during RIO+ 20, where "sea pollution" was the most voted theme on the Dialogs for Sustainable Development On-line Platform under the Oceans tag, with 60,000 votes. The Conference also ratified the problem's internationally recognized complexity, through the Oceans and Seas passage, item 163, of the Conference's final Document "The Future We Want". In this item, the concern with marine pollution, especially from plastics, persistent organic pollutants, heavy metals and nitrogen was reinforced. In addition, a commitment was made to act to reduce these pollutants incidence and impact in the marine ecosystem.
It should also emphasized that, as an unfolding of the IV National Environment Conference (CNMA), held in 2013, the following action was forwarded as the 15th proposal of the 2nd Axis (reduction of environmental impacts): "Providing a transparent dialog with the civil society organized by the federal government and by ocean users aiming to raise awareness and educate the population about the marine waste issue, and also creating guidelines for partnerships between the government and major stakeholders, with the goal of concentrating efforts in order to combat marine waste, as well as establishing fiscal, financial and credit incentives to the municipalities and to organized institutions as a form of promoting pollution reduction".

Bycatch (incl. Recommendation) (Res. 6.2 / Rec. 7.2 / Res. 8.14 / Res. 9.18 / Res. 10.14)

› Resolution 6.2

Applied for seabirds

The Brazilian government launched in 2014 a new longline fisheries regulation to reduce the seabird bycatch to a minimum level. The measures are a combination of weighted branch lines, bird scaring lines and night setting that should be applied simultaneously by authorized vessels to fish the target species in the area of territorial sea, Exclusive Economic Zone (EEZ) and south international waters 20º S. The mitigation measures have been established in two stages: the transient and the permanent. From November 2014 to April 2015, the transitional mitigation measures were in force. Since May 2015 the fishermen must comply with all mitigation measures in a permanent way. The former regulation launched in 2011 established the mandatory use of only bird scaring line and weight branch line. The Brazilian recent regulation is based on the National Plan of Action that aims to contribute to the long term conservation of albatrosses and petrels interacting with fisheries in the Brazilian territory and also meets the ACAP´s best practice mitigation measures.

Resolution 7.2 - Not applied

Resolution 8.14

Applied for seabirds.

Brazil implemented the FAO’s ‘International Plan Of Actions (IPOA) for reducing the impacts of longline fishing on Seabirds’ and developed and implement national plans of action as required by those IPOAs. The Brazilian IPOA for seabirds is called Planacap and was the first national action plan for conservation of species.

Resolution 9.18

Brazil reports by-catch information and data to ACAP (CMS daughter Agreements) and also implemented the United Nations Food and Agriculture Organization’s International Plan of Action (FAO IPOA) for Reducing the Impacts of Longline Fisheries on Seabirds, IPOA for the Conservation and Management of Sharks and developmented and implemented the national action plan for conservation of seaturtles.

TAMAR Project

The TAMAR project initiated, in 1980, the protection of sea turtles on land. From the 90's onwards, the project began working with incidental fishing in sea turtle feeding grounds. It has also been executing, ever since 2001, the Sea Turtles and Fishing Interaction Program with the goal of tackling the greatest current threat to sea turtle populations: mortality caused by different types of fishing. The program includes several actions concerning long-line surface fishing. For example, at the Itajaí Port (SC), the Tamar technicians monitor, using inflatable boats and through weekly inspections, every extension of the Itajai-Açú River, where the vessels practicing this variety of fishing are counted and approached.
Tamar also carries out scientific observers outings for monitoring and implementing mitigating measures

(circle hook, dehooking and line cutter) in order to reduce the sea turtles capture and mortality. Interviews are constantly conducted with leaders of those outings for the characterization of the fishing practices. The results of 18/0 10º offset circle hook testing are disseminated via videos, lectures and informal conversations. The Tamar team installs satellite transmitters on some incidentally captured turtles, aiming to accompany their displacement and evaluate these animals' survival rate after release. It is expected that more long-line fishing boats will adopt the circle hook and the mitigatory tools.
Through this program, Tamar monitors South/Southeast (Itaipava/ES; Santos and Ubatuba/SP; Itajaí, Navegantes and Porto Belo/SC; and Rio Grande/RS) and North/northeast (Recife/PE; Cabedelo/PB; Natal/RN and Belém/PA) ports.
More Brazilian legislation concerning bycatch:
On September 5th 2002 Decree No. 4361 was published promulgating the Implementation Agreement on the United Nations Convention Provisions about the Law of the Sea, December 10th 1982, on the Conservation and Ordering of Straddling and Highly Migratory Fish Populations.
Decree No. 4,810 of August 19th 2003, lays down rules for the operation of fishing vessels in Brazilian fishing areas, high seas and through international agreements, and provides other arrangements.

Wildlife Crime (Res. 11.31)

› Surveillance and monitoring of wildlife
Accountability for environmental crimes in Brazil occurs in the administrative, criminal, and occasionally in the civilian spheres. Prior to the complementary Law No. 140/2011 IBAMA was responsible for administrative accountability. After the complementary law, in addition to IBAMA, the State organs also started to act in the fining of environmental offenders. As collateral damage, the previous offender records (that were only federal before) are now dispersed throughout the 27 states, and the federal records become increasingly obsolete if compared to the new offenders and the offenses committed. Based on its system, which unified all environmental infraction penalties up until 2011, IBAMA has elaborated a database on the most notorious traffickers on a nationwide scale. This intelligence analysis becomes increasingly outdated and impossible to be accomplished without the existence of a unified national system. As a consequence, it is also increasingly difficult to identify the criminal records in environmental offenses unless they have been committed in the same federative unit and booked by the same environmental organ.
In order to coordinate this effort, MMA established, in 2014, a task force integrating the control institutions that have identified priority performance areas.
Estimates indicate that wild animal trafficking is yearly responsible for the extraction of about 38 million specimens from their natural habitats in Brazil. The number of extraction is much larger than the commercialized number, due losses that occur throughout the capture and marketing processes. It is estimated that, for each animal product commercialized, at least three specimens are killed. For live animals trade that number is even greater, out of 10 trafficked animals only one survives. Wildlife monitoring demands specific knowledge that extrapolates operational or state laws regulating the subject. There are specific regulatory ordinances and regulations governing the penal norm, which are crucial in identifying illicit trades. The specimens identification should not rely solely on forensic analysis, it is important for the monitoring or police officer to be able to distinguish between native, exotic or domestic wild species, in addition to recognizing the most trafficked species. Without such knowledge they may incur in abuse of authority by considering an offense something that is not, or in omission by choosing not to inspect or punish due to the offense's uncertainty.
Laws and regulations are essential for the control and repression of hunting and illegal trafficking; however, it is also essential to develop educational and awareness-raising activities.
Relevant legislation:
-Law 5,197/1967- Makes provisions for fauna protection and provides other arrangements.
-Law 9,605/1998- Provides for penal and administrative sanctions derived from behaviors and activities affecting the environment, and makes other provisions.
-Decree No. 4,339/2002- Institutes principles and guidelines for the implementation of the national biodiversity policy.
(Decree 4,339 – Annex I – 13.2.13) ensures the efficiency of the illegal hunting and illegal trade combat
-Decree 3,607/2000- Provides for the implementation of the Convention on International Trade in Endangered Species - CITIES, and makes other provisions.
(Art. 20) -The living specimens belonging to exotic wildlife, which have entered the country, or whose entrance has been attempted, without a CITES license, should be returned to the exporting country

Ecological Networks (Res. 10.3 / Res. 11.25)

› Ramsar sites
The Ramsar Convention was fully incorporated into Brazil's legal framework in 1996, by the promulgation of Decree No. 1,905/96. The decree represents the country's legal commitment in avoiding the deterioration of wetlands and promoting its conservation, recognizing its fundamental ecological functions and its economic, cultural, scientific and recreational value. The Ramsar Sites are the main instrument adopted by the Convention to implement their goals, and correspond to internationally recognized areas due to the importance of their humid ecosystems, which often shelter part of the migratory species life cycle.
Brazil currently counts with 16 designated sites and 07 sites going through the designation process.

Therefore, in case they all are approved, we will soon have 23 CUs with the "Ramsar site" stamp. The efforts being made in increasing the number of sites aim to meet the goal set in the CNZU Recommendation No. 5/2012, which provides for the creation of at least 10 more sites until 2017. Currently, the SBio/MMA's main effort is in implementing, in partnership with ICMBio, state, Ramsar site and CNZU (National Wetlands Committee) members management organs, a strategy for the Ramsar sites implementation, that is, CUs that count with a management that is focused on the sustainable use and conservation of their wetlands.

EBSAS

EBSAS (ecologically or biologically significant marine areas) are marine areas that meet the scientific criteria of ecological and biological importance presented in decision IX/20 of the Convention on Biological Diversity (CBD). Brazilian experts suggested the inclusion of EBSAS in the information repository at the CBD website (https://www.cbd.int/ebsa/). The website also contains a vast bibliography related to the characterization of these areas, including migratory species characterization.

One of the criteria used for defining EBSAS is the representation of “Special importance for life-history stages of species" areas. Examples include: "Area containing: (i) breeding grounds, spawning areas, nursery areas, juvenile habitat or other areas important for life history stages of species; or (ii) habitats of migratory species (feeding, wintering or resting areas, breeding, moulting, migratory routes)".

Information on migratory species present in EBSAS and suggested by Brazilian experts:

Brazilian Ramsar sites:

Atol das Rocas Biological Reserve

Atol das Rocas Biological Reserve is an oceanic island ecosystem which includes the only atoll in the South Atlantic, formed predominantly by coralline algae rather than corals. Located 267 km north-east of the coastal city of Natal, it is also part of the “Brazilian Atlantic Islands: Fernando de Noronha and Atol das Rocas Reserves” World Heritage site. Atol das Rocas hosts a great variety of endemic and migratory species, of which some are endangered and many of economic interest. It is an important reproductive site for green turtle (Chelonia mydas), and also hosts Hawksbill turtle (Eretmochelys imbricata) and loggerhead turtle (Caretta caretta), all categorized as endangered or critically endangered on the IUCN Red List.

Reentrancias Maranhenses environmental protection area

A complex estuarine system of extensive islands, bays, coves, and rugged coastline covered mainly by mangrove forest. The site is of great importance for numerous species of fish, shellfish and migratory birds.

Lagoa do Peixe National Park

Extensive lowland area of saltmarshes, coastal sand dunes, lagoons, lakes and associated marshes, providing important staging sites for numerous migrant species. Lagoa do Peixe is a large brackish to saline lagoon, supporting large concentrations of invertebrates. The area is very important for a wide variety of waterfowl, and the lagoon is an important wintering and staging area for migrant species.

Criado em 1986, santuário de aves migratórias, o Parque Nacional da Lagoa do Peixe é uma área de grande importância devido à concentração de muitas espécies, como Anas georgica (Nascimento 1995), Pluvialis dominica (concentra mais de 1% da população global dessa espécie, chegando a reunir entre 5.000 e 10.000 indivíduos) (Morrison et al. 2006) e Tringa flavipes (quase 2.500 indivíduos) (Gonçalves 2009). Também é importante ponto de parada para Limosa haemastica, chegando a concentrar mais de 1.000 indivíduos (Harrington et al. 1986, Belton 1994). Calidris subruficollis tem nos campos úmidos ao redor da Lagoa do Peixe um de seus principais sítios de invernada em escala mundial (Lanctot et al. 2002). Outras espécies que aparecem regularmente em grandes números: Calidris alba (mais de 5.000 indivíduos), Calidris fuscicollis (mais de 6.000 indivíduos) e o ameaçado Calidris canutus (mais de 11.000 indivíduos) (Harrington et al. 1986). A área é também utilizada por grandes grupos de Sterna hirundo, chegando a formar concentrações de 12.000 a 14.000 indivíduos (Bencke et al.2006).

Abrolhos Marine National Park

The Park is divided into two distinct areas: a) Timbebas reefs and b) Abrolhos Archipelago and Parcel dos Abrolhos. They include a mosaic of marine and coastal environments such as coral reefs, algae bottoms, mangroves, beaches and sandbanks. The site sustains IUCN-Red List critically endangered species such as Leatherback Sea turtle – migratory species - (Dermochelys coriacea) and Hawkbill turtle (Eretmochelys imbricata), as well as other endangered and vulnerable species, including Loggerhead Sea turtle (Caretta caretta), Green turtle (Chelonia mydas), Humpback Whale (Megaptera novaeangliae), and many threatened fish species such as the Groupers and the coral (Milleporanitida).

Fazenda Rio Negro RPPN

A well-preserved example of the Pantanal of Nhecolândia, a subregion of the Brazilian Pantanal that is characterized by the abundant presence of freshwater or alkaline lakes (baías' and salinas', respectively), as well as permanent and intermittent rivers. The site hosts more than 400 species of plants, 350 of birds and 70 of mammals. Among them stand out threatened species, such as the Giant Otter (Pteronura brasiliensis), Marsh deer (Blastocerus dichotomus), and Hyacinth Macaw (Anodorhynchus hyacinthinus). Migratory bird species are also present in the site, e.g. Tringa melanoleuca, Himantopus melanurus, Tachybaptus dominicus, Dendrocygna viduata and Coscoroba coscoroba.

Araguaia National park

Extensive flood plain system of the Araguaia River with navigable medium to high flow rivers, seasonal lagoons, marshes and numerous islands. Ilha do Bananal is the largest fluvial island in the world. A diverse flora and fauna representing the transition zone between humid tropical forest of the Amazon Basin and woody savannas with gallery forest are present. The site is an extremely rich area for waterbirds, with a wide

variety of resident breeding species and many Nearctic shorebirds occurring on migration.
Parcel Manoel Luís Marine State Park
Three coral banks off the northern coast of Maranhão, at the northern distribution limit of several fish species endemic to the Brazilian coast. The area is very important for fishery production and of extremely high scientific value. Coral reefs are closed ecosystems if considered only from its productivity point of view (retained in the symbiosis between zooxanthellae and corals, gorgonians and other coelenterates they inhabit). However, observing the consumer aspect, they are open systems, since the amount of fish and invertebrates involved in the migration movements between reefs and other ecosystems is large
Baixada Maranhense Environmental Protection Area
Extensive low, seasonally flooded coastal lands characterized by fields, gallery forests, mangrove swamps, and lacustrine basins along the northeast coast of Brazil. The Maranhense coast concentrates large fluvial and fluvial-marine plains and flat lowlands, crossed by canals of brackish water, relatively unaffected by human activity due to a population density of only 26 inhabitants per square km. At certain times, seawater is able to reach far up the rivers, and the area is different from other seasonally flooded parts of the Amazon or perennially flooded areas of the Pantanal because of this marine influence and saline intrusion. A significant number of resident and migratory waterbirds use the wetlands of the Baixada in different seasons of the year as habitat or for feeding, resting and breeding.
SESC Pantanal RPPN
The reserve provides essential ecological refuges that, in addition, are well protected, for critical moment of the life of several species of resident and migratory birds and fishes. It is especially key for species of fishes that occur in the Cuiabá and São Lourenço Rivers. The reserve is also essential for large populations of migrants of the species Rynchopsniger, Phetusa simplex, Sterna superciliaris, among other. The reserve contains one of the largest and healthiest nesting area of wood stork in the entire Pantanal.
Pantanal Matogrossense National Park
Part of the largest, permanent freshwater wetland in the Western Hemisphere. It is situated in a large depression functioning as an inland delta. The area consists of a vast region of seasonally flooded savannas, islands of xerophytic scrub, and humid deciduous forest. The site includes some of the largest and most spectacular concentrations of wildlife in the Neotropics and is probably the most important wetland in South America for waterfowl.
The region is an important migratory stop for birds, it is used by birds of the three great migratory routes: one that come from the north latitudes to the north, from the Pampa Argentina to the south and passerine birds from the Andes to the west. This results in the most diverse bird communities on the planet.
The following species of migratory birds have been detected in the Pantanal Matogrosense:
• Coming from the Northern Hemisphere: Pandion haliaetus, Actitis macularia and Triga solitaria.
• Pantanal-south of Brazil / Argentina: Mycteria americana, Platalea ajaja, Podager nacunda, Pyrocephallus rubinus, Turdus amaurochalinus.
• Andes / Pantanal Mountain Range: Serpophaga munda.
• Other migratory systems: Aramus guarauna, Dendrocygna viduata, Dendrocygna autumnalis, Pitangus sulphuratus, Tachycineta leucorrhoa, Psarocolius decumanus, Sporophila hypoxantha, Sporophila caerulescens and Sicalis flaveola.
The Pantanal Matogrosense National Park is the largest floodplain on the planet with habitats for feeding and growing migratory fish, preserved in a high degree of preservation, without direct human interference.
Cabo Orange National Park
An extensive site characterized by periodically and permanently flooded grasslands, unique in the Amazon region, as well as by its mangroves, which act as “fish nurseries” and are vital for the maintenance of some of Brazil´s most important fisheries. The site is rich in biodiversity and supports globally threatened species such as the Black Bearded Saki (Chiropotes satanas), the Great Billed Seed Finch (Sporophila maximiliani), the yellow spotted River Turtle (Podocnemi sunifilis) and the Black Caiman (Melanosuchus niger) among others. To date, 358 species of birds, 19 species of plants, 54 species of mammals have been identified in the park.
Rio Doce State Park
The Rio Doce State Park is the largest vegetation fragment of the Atlantic Rain Forest in Minas Gerais State, which is worldwide known because of its biodiversity. Besides, the Rio Doce lake system is considered the third biggest system of this kind in Brazil with nearly 150 lakes. This river can be divided in 3 different regions: high, middle and low. Several studies on freshwater fishes indicate the Middle Rio Doce lakes as a priority region for biodiversity conservation of the Rain Forest Ecosystem (Latini, 2001). Though, the Rio Doce State Park, with its 42 natural lakes or 6,0% of the protected area’s surface (approximately 2,100 ha) have strategic conservation importance. There are migratory bird species that often use the park.
Mamirauá sustainable development reserve
White water “várzea” (flood plain), with several lakes, joined seasonally by natural drainage canals: Mamirauá constitutes the largest Brazilian protected area (1,124,000 ha) and one of the largest in the world encompassing flooded forests (várzeas). Várzeas are present along white-water rivers in the Amazon and correspond to approximately 4% of its total area. Mamirauá presents a high degree of biodiversity and undergoes an annual water level variation between 10 and 12 meters.
A várzea da RDSM também é importante para várias aves aquáticas e aves migratórias, que já são raras em outras áreas, como Anhima cornuta (anhuma ou alencorne), Neochen jubata (pato-corredor) e diversos Charadriiformes (maçaricos, gaivotas e trinta-réis). Além disso, as praias protegidas da RDSM são uns dos

únicos pontos onde aves migratórias, como Sternula superciliaris (trinta-réis-anão) Phaetusa simplex (trinta-réis-grande) e Rynchops niger (talha-mar) conseguem se reproduzir. Um estudo recente mostrou que algumas destas aves retornam para a mesma praia onde nasceram ou se reproduziram.

Anavilhanas National Park

The bird species found on the islands of the Anavilhanas Archipelago are quite distinct from those that reside in dry land areas (Cintra et al. 2007), stressing the importance of diversity of these environments for the bird species. A number of Nearctic migratory birds inhabit open wetlands, such as rivers, lakes and beaches. The yellow-billed tern (Sternula superciliaris), the large-billed tern (Phaetusa simplex) and the black skimmer (Rynchopsniger) use the beaches of the Anavilhanas Archipelago during reproductive periods (Zarza et al., 2013).

Viruá National Park

The Viruá National Park is located in the south-central region of the State of Roraima, in the Municipality of Caracaraí. The access is via the federal highway BR-174, 200 km far from the capital Boa Vista, or 600 km from Manaus. The State of Roraima and the City of Caracaraí have 450,000 and 18,000 inhabitants, respectively (IBGE Census 2010). Located on the northern edge of the Northern “Pantanal”, the Viruá NP provides facilities for research and ecotourism activities on these unique wetland ecosystems in the Brazilian Amazon.

The seasonal flooding of forests and Campinaranas provide habitats and resources needed for feeding and reproduction of a large number of species, including 500 species of fish, nine species of aquatic turtles, five species of aquatic mammals, dozens of species of aquatic migratory birds, among others, ensuring the continuity of the life cycles of animals and plants in this wetland system (ICMBio, 2014).

In relation to birds, the group comprises representatives from different biogeographic regions, in particular from the Guiana Shield, Campinaranas of the Negro River (see endemism in Criterion 2) and also from the Solimões-Amazonas system. Orders with the largest number of species are Passeriformes (283 spp.), Falconiformes (37 spp.), Piciformes (36 spp.), Apodiformes (27 spp.), Ciconiiformes (24 spp.), Psittaciformes (22 spp.), Charadriiformes (17 spp.) and Gruiformes (15 spp.) (Cohnhaft et al. 2009, ICMBIO, 2014) (Appendix 3). At least 37 species of migratory birds seek shelter and food resources in Viruá during part of the year, 12 of them depend on aquatic environments. During ebb (October-March), 22 migratory species from the north (boreal), especially Sandpipers (Scolopacidae Family, 8 species), “Mariquitas” (Parulidae, 5 species) and Swallows (Hirundinidae, 2 species) are sighted in the region. Southern migratory species (7 spp.) and from other regions of the Amazon (8 spp.) make use of the protected area during the rainy season (April-August) or other times.

ESEC Taim

It is known that without the reeds of the marshes, migratory birds like the Cygnus melancoryphus, and Coscoroba coscoraba, among many others that nest only in these ecosystems may have their future compromised. However, the wetlands of ESEC Taim still are preserved and serve as shelters for resting, breeding and feeding of various migratory birds. According to Nascimento et al. (2006), one of the places with the highest concentration of Anas georgica species in coastal areas was in the Taim Ecological Station, considered among the most representative areas. In a study by Nascimento et al. (2005) one of the places with the highest concentration of Anas flavirostris was in Taim (n = 561). According Calabuig and colleagues (2010) records of nests, chicks and juveniles of species Coscoroba coscoroba in the area of ESEC Taim during the years 2005-2008 confirms the data reported by other researchers (Belton 1994, Dias & Fontana 2001) and allow us to state that the area’s surrounding and within the ESEC Taim would be the most important breeding ground for population belonging to Argentina, Uruguay and Brazil (Seijas, 2001). Miño & Del Lama (2007) investigated a large breeding colony of Platalea ajaja. According to Serrano (2010) ESEC Taim is one of the critical areas for biodiversity, for the species of migratory aquatic birds of the Northern Hemisphere. Being extremely important for the species: Pluvialis dominica, Tringa solitaria, Bartramia longicauda, Calidris canutus, Calidris alba, Limosa haemastica and Tryngites subruficollis. Moreover, according to the same author by applying the criteria of the Ramsar Convention, 69 Critical Areas for Conservation of Charadridea and Escolopacidea were identified, being one of these areas the Taim Ecological Station, in Rio Grande do Sul.

Conservation Units - New Ramsar Sites

Currently, Brazil has 07 processes for designating new Ramsar sites in progress:

Guaraqueçaba Ecological Station

The Guaraqueçaba Ecological Station consists of scattered areas of mangrove in the Pinheiros Bay, Laranjeiras Bay and Guaraqueçabas Bay and Benito’s Inlet, and Bananas’ and Galheta’s island, which were later incorporated into this Protected Area. A great diversity of birds uses the mangroves to feed, including 13 birds regional migratory species and four others that migrate from the Northern Hemisphere

Fernando de Noronha Archipelago (PARNA Marinho de Fernando de Noronha e APA de Fernando de Noronha, Rocas, São Pedro e São Paulo)

The archipelago of Fernando de Noronha consists of 21 islands, islets and rocks of volcanic origin, with 26 km2. The main island has an area of 18.4 km2, the major axis has around 10 km, with a maximum width of 3.5 km and a perimeter of 60 km. The main island, that has the same name as the archipelago, constitutes 91% of the total area, and has patches of the Atlantic rainforest with the only known oceanic mangrove in the South Atlantic; areas with high productivity and biological diversity, become areas of great importance for the maintenance of local communities, as well as being one of the locations of greatest relevance in the South Atlantic for resting, breeding, and feeding for migratory species, as both the Nearctic (North America) and the

Palaearctic species (Europe, Asia, and North Africa).
It is known that this region represents a landing, feeding and reproduction site for many species of migratory birds, such as Charadriiformes and Ciconiiformes. The archipelago is home to "the best seabird colonies among oceanic islands in the tropical Atlantic." This fact is due to its location, relatively far from the coast, but inserted in an important migration route, of both Palaearctic and Nearctic species, which makes it a strategic point to rest and feed.
Peter Lund Karst (APA Carste Lagoa Santa)
The region is located in central-southern Minas Gerais at the intersection between two biodiversity hotspots, the Cerrado (Brazilian savannah) and Atlantic Forest. In terms of carbonatic karstic landscape, it is one of the most important Brazilian regions and is considered to be extremely important for biodiversity conservation (Drummond et al., 2005). The surface relief evolved as a result of the configuration of the groundwater networks and intense dynamics at the rock-soil interface. The combination of these factors favoured the appearance of multiple surface water catchment areas, such as the dolines and uvalas, which are large, lowered plains that are seasonally flooded, forming a system of temporary lakes.
The lakes attract gallinules, wood storks, cormorants, snail kites, ducks, sandpipers, stilts, jacanas, ibis, spoonbills, and kingfishers, among others. Several of these birds are migratory and probably migrate to other wetland areas of Minas Gerais, or even other Brazilian states, where there are seasonal concentrations of waterbirds, such as Rio Paraná valley (Paraná) and the Pantanal (Mato Grosso do Sul and Mato Grosso). The largest karst lakes have large littoral and limnetic zones, and can reach several meters in depth. Their beds and banks can possess a mixture of terrestrial and aquatic vegetation, resulting from the retraction and advancement of the water. Larger lakes also possess a great range of food resources, including fruits, fish, frogs, molluscs, other benthic invertebrates and the macrophytes themselves, with their leaves, seeds and stalks, as well as the terrestrial and aquatic invertebrates that feed and shelter on them. When different lakes are compared at the same time, the larger will have the greater richness of species and larger populations of waterbirds. The lakes also receive migratory birds fleeing the winter of the Northern Hemisphere, such as the Osprey and the Greater-yellow Legs, which winter in South America, and errant migrants which are sporadically observed, such as the Gull-billed Tern, and the Semipalmated Plover.
Ilha Grande National Park
The Ilha Grande National Park is composed of approximately 180 islands, being four the largest ones (Grande, Bandeirantes, Peruzzi and Pavão). In these islands vegetation adapted to flooding predominates, especially in the interior of the larger islands, as well as vegetation with woody aspects in the higher portions of the land, as on the edges of the islands. There is also a mainland portion on the left bank of the Paraná River, consisting of a plain environment subjected to periodic flooding. In both of the larger islands, as on the mainland, natural ponds can be observed (some isolated, without access to the Paraná River) which, besides the scenic beauty, are important breeding and feeding places for several species of fish and other animal groups. Periodically, many shoals are observed along the Parana River, the stretch of the park, are stopping points for migratory birds. In the Park, there are records of several species of endangered wildlife, including the “cervo do pantanal” (Blastocerus dichotomus), symbol of the National Park.
Guaporé Biological Reserve
Marginal lakes and ponds of the Guapore river are particularly favorable sites for sheltering and providing food resources to the populations of alligators Melanosuchus niger, during the dry season. The numerous sandbars and beaches formed during the dry season in the Guapore Biological Reserve play a critically important role for species of migratory aquatic birds and turtles. Regarding birds, for example, the “águia-pescadora” Pandion haliaetus is observed in the Reserve during the reproductive rest of the species, for example, when it is winter in the northern hemisphere and individuals perform migrations to the southern hemisphere. The same is true for species of sandpipers of the genus Calidris spp. that migrate during the Arctic winter to the south, and the Guapore Biological Reserve is one of these sites which shelters groups of species during such periods. As for turtles, during the river floods, the species Podocnemis expansa and P. unifilis occupy different wetlands of the reserve, such as bays, lakes, flooded forests and rivers. However, each year, from the month of June, during the early breeding season, males and females of both species begin migrating out of these environments looking for beaches, especially along the Guapore river, to spawn collectively.
The rivers and floodplain forests environments of the Guapore Biological Reserve have fundamental importance for the threatened species Colossoma macropomum ('Threatened overexploitation': Brazil, 2004). This species undertakes upward migration through the water channels of the reserve, especially the Guapore river during the ebb and dry (May to October), and occupies the flooded forests of river banks and lakes, where there is greater availability of food during the flood (November to April).
Guaratuba State Protection Area
The area has high biological importance, being inserted in the “mosaic of conservation units”, which includes several conservation units and its buffer zones from the southern coast of the state of São Paulo to the southernmost of the coast of the state of Paraná. The area includes about 24,000he of well conserved wetlands, of which about 5,000he represent the aquatic area of Guaratuba bay. It includes mangroves, periodically flooded forests, marshes, and a high variation of transitional phytophysiognomies between these, determined basically by the different degree of mixture of water with marine or fluvial sediments. The area was considered of maximum priority to conservation by the workshops conducted by Brazilian Ministry of Environment about conservation of Coastal Zone and Atlantic Forest. The Site is also entirely in an Important Bird Area (IBA).

Unpublished data from Carlos O.A. Gussoni, Marcos R. Bornschein, and Ricardo Belmonte-Lopes indicates the occurrence of 390 species and 68 families of birds in the region proposed as Ramsar Site (Appendix VII), of which about 30% are endemic to the Atlantic Forest, and about 2.8% (11 species) are considered threatened of extinction. The region is the largest area of continuous distribution of the marsh-dwelling Paraná Antwren (Stymphalornis acutirostris), and also the largest area of continuous distribution of the Kaempfer'sTody Tyrant (Hemitriccus kaempferi), which is most common in alluvial forests (M.R. Bornschein and R. Belmonte-Lopes, unpublished data). The Guaratuba site is also the range limit for some species as the Kaempfer's Tody Tyrant (Hemitriccus kaempferi) (northern limit, M.R. Bornschein and R. Belmonte-Lopes, unpublished data), the Red-tailed Amazon (Amazona brasiliensis) and the Fork-tailed Palm Swift (Tachornis squamata) (southern limit of both), and as stopover or wintering ground for migratory birds as the Solitary Sandpipper (Tringa solitaria), the Lesser Yellowlegs (Tringa flavipes), the Barn Swallow (Hirundo rustica), the White-tuffed Grebe (Rollandia rolland), the Osprey (Pandion haliaetus), among others.

Environmental Protection Area of Cananéia-Iguape-Peruíbe

The region has a highly diverse landscape, an important lagoon channel system and rivers, which connect the estuarine-lagoon area with the ocean. These areas are called the bars of Icapara, Cananéia and Ararapira, which are located in the north, center and southern coastal systems.

The CIP EPA is an area for shelter, feeding and breeding for several endemic and migratory species, and species considered endangered. For example, in the CIP EPA Ramsar Site region, groups of more than 100 individuals of Guiana dolphin (Sotalia guianensis) use the area to rest, breed and feed (Santos, 2010) (Figure 4). According to Borges et al. (2014), in the region of Iguape the mangrove crab (Ucidescordatus) performs a 'walk' between November and February when it is most activeand reproducing. This ‘walk’ occurs during the full and newmoons.

Of the 413 species recorded in the CIP EPA region, 126 are migrants and 70 are endemic (Table 2) (Barbieri 2007; 2008; 2010; Barbieri & Beth, 2013; Barbieri &Collaço, 2013; Barbieri &Gonçalves, 2009; Barbieri & Mendonça , 2005; Barbieri & Pinna, 2007; Barbieri et al, 2010a;. 2010b; 2013; Numão& Barbieri, 2011; Zanin et al 2008). The red-tailed parrot (Amazona brasiliensis), endemic to the São Paulo south coast and Paraná coast, is considered endangered at the São Paulo State. Thus, the protection of wintering areas and regular stop alongsouth coast of São Paulo, such as beaches, lagoons, intertidal flats (sand banks) and flooded areas, become relevant for the conservation of various birds species passing the region, whether they are resident, northern, southern or regional migrants (Barbieri et al., 2013).

EBSAS

Southern Brazilian Sea

At least 35 cetacean species also utilize the area as a feeding and breeding ground or as a migratory corridor for baleen whales from their wintering habitat in Brazil to foraging grounds in subantarctic and antarctic waters (Zerbini et al. 1996, 1997, Bastida et al. 2007, Ott et al. 2009) This area comprises migratory and foraging habitats for adult leatherbacks (Dermochelys coriacea) (Almeida et al. 2011) and also as foraging for both small and large immature loggerhead turtles (Caretta caretta) as well as juvenile green turtles (Bugoni et al. 2003, Barros 2010, Barros et al. 2010, Barceló 2011). The shelf waters of southern Brazil also are essential habitat for 26 elasmobranchs species, of which, 21 utilize the coastal waters as reproductive and nursery grounds (Vooren & Klippel 2005).

Abrolhos Bank and Vitória-Trindade Chain

The Abrolhos Archipelago is also an important nesting site for marine birds, including the red-billed tropicbird (Phaethon aethereus), the boobies Sula dactylatra and Sula leucogaster, the magnificient frigatebird (Fregata magnificens) and the migratory brown noddy (Anous stolidus), as well as three IUCN Red List marine turtle species: the Endangered green (Chelonia mydas) and loggerhead (Caretta caretta) turtles, and the Critically Endangered hawksbill turtle (Eretmochelys imbricata).

Northeastern Brazil Shelf-Edge Zone

The shelf-edge harbours critical habitats for the life cycle of many sea turtles, whales, sharks and reef fish species, including migratory corridors and fish spawning aggregation sites that are extremely vulnerable to human pressures, such as intensive commercial and recreational fishing, shipping and offshore oil and gas exploitation, all activities currently expanding off the Brazilian coast. The area covers part of the most important seabird migration corridor in the Atlantic, a site which qualifies as a Birdlife Important Bird Area (IBA) for both threatened species and congregations. This region corresponds to a portion of the breeding ground of humpback whales (Megaptera novaeangliae) off the north-eastern coast of Brazil. It also corresponds to an important habitat of various relatively low-density cetacean populations, including Bryde’s whales (Balaenoptera cf. edeni), dwarf minke whales (B. acutorostrata), and bottlenose dolphins (Tursiops truncatus).

Atlantic Equatorial Fracture Zone and high productivity system

Comprehensive descriptions of seafloor features and major oceanographic and productivity patterns are available in the literature and derive from large-scale oceanographic programmes and satellite imagery analysis (e.g., Ocean Drilling Program, InterRidge, IOC – GOOS, UK Atlantic Meridional Transect - AMT and others). Some of these programmes also include general data on diversity, distribution and abundance of zooplankton, pelagic fish and cephalopods that cover the Equatorial as well as adjacent tropical and subtropical areas of the North and South Atlantic (e.g. Gibbons, 1997; Rosa et al., 2008; Kobilianski et al., 2011). Particular data sets also derive from a long-standing research programme on the coastal areas and pelagic system in the vicinity of the Saint Peter and Saint Paul Archipelago (ProArquipelago - Vianna et al.,

2009 and Vaske Jr. 2010) and from pelagic fishing for large predators (tunas, billfishes, sharks) concentrated at the International Commission for the Conservation of Atlantic Tunas (ICCAT, www.iccat.org). Other data sets on seabird and sea turtle distribution and migrations complement our understanding of the biological relevance of the Equatorial Atlantic for nekton communities (e.g. Witt et al., 2011). Finally, data on bathy- and benthopelagic as well as benthic fauna are less comprehensive.

Banks Chain of Northern Brazil and Fernando de Noronha

The area is a feeding site for breeding seabirds at Fernando de Noronha and covers part of the most important seabird migration corridor in the Atlantic; both sites qualify as BirdLife Important Bird Areas (IBAs) for both threatened species and congregations. Some birds, elasmobranchs and turtles species, which are listed on the IUCN red list as threatened, occur in the area. Sharks, reef fishes and lobsters are targets for fisheries carried out in the region.

Amazonian-Orinoco Influence Zone

This area contains endemic species, important areas for the life-history stages of fish and crustaceans (nursery, feeding and breeding), including threatened species and is also a migratory route for various species of fish and birds. This area has one of highest values of chlorophyll biomass and primary productivity in the world, which leads to high biological secondary and fisheries production, in particular if demersal species are considered (fishes and shrimp). Within this region, around 20 species of elasmobranchs and four species of mammals are threatened. Massive presence of declining and overexploited species, due to high fishery pressure is also reported. The area serves as a connection between the south-western Atlantic and the Caribbean zoogeographical provinces.

Climate Change Impacts on Migratory Species (Res. 7.5 / Res. 11.26)

› National Plan of Climate Change

In order to combat and adapt to these changes, Brazil develops a series of actions at national level.

The main one is the National Climate Change National Policy (PNMC), established by Law No. 12,187, of 2009. In the legislation, the Ministry of Environment (MMA) defines strategies and proposes policies related to monitoring and implementing sectoral plans for mitigation and adaptation. MMA also promotes technical and scientific cooperation with theme-related entities so that the country reaches its voluntary commitment to reduce greenhouse gas emission.

MMA is active in the fight against deforestation in the Amazon and other biomes and in the elimination of Ozone-depleting substances, which protects the earth from ultraviolet rays. In addition, MMA, together with other government agencies, articulates agreements with the international community, as well as supports and develops studies and projects related to the preservation of the environment.

In December 2015, the Paris Agreement was signed, combining the signatory nations efforts to adopt a low-carbon economy until the end of this century. Brazil has committed itself to reducing greenhouse gas emissions by 37% up to 2025 and has also presented the reduction indicative of 43% for 2030. Both compared to the 2005 levels. Among other measures, the Paris Agreement aims to maintain the global average temperature rise below 2 °C (pre-industrial levels) and ensure efforts in order to limit the increase in temperature to 1.5 °C.

National Adaptation Plan

The National Plan for Adaptation to Climate Change (PNA), established on May 10th, 2016 through Decree No. 150, is an instrument elaborated by the federal government in collaboration with the civil society, the private sector and state governments, which aims to promote the reduction of national vulnerability to climate change and carry out a risk management approach associated with this phenomenon.

An adaptation strategy involves identifying the country's exposure to current and future impacts based on climate projections, identifying and analyzing the vulnerability to these possible impacts and defining actions and guidelines that promote each sector's adaptation.

In the PNA's preparation, 11 sectors were considered, each represented by the competent government agencies. The sectors addressed were: Agriculture, Water Resources, Food and Nutritional Security, Biodiversity and Ecosystems, Cities, Disaster Risk Management, Industry and mining, Infrastructure, Vulnerable Populations, Health and Coastal Zones.

The purpose of the Brazilian Federal Government’s National Adaptation Plan, hereinafter referred to as the National Adaptation Plan (NAP) is to guide initiatives for management and reduction of long-term climate risks, as established in Ministry of Enviroment (MMA) Order 150 of 10th of May 2016, published in the Official Gazette (DOU) of 11th May 2016. The Plan was drawn up by the Executive Group of the Inter-ministerial Committee on Climate Change (GEx-CIM) between 2013 and 2016, as provided for in the National Policy for Climate Change (PNMC - Law 12.187/09) and its enabling decree (Decree 7.390/10). The NAP was drawn up in consonance with the National Plan for Climate Change, with sectoral mitigation and adaptation plans, and with decisions on adaptation undertaken by Brazil within the framework of the Conference of the Parties (COP) on Climate Change.

Strategy for Biodiversity and Ecosystems

The Secretariat for Biodiversity (SBio) and the Secretariat for Climate Change and Environmental Quality (SMCQ) of the Ministry of Environment coordinated the drafting of the biodiversity strategy of the National Adaptation Plan and are the focal points for coordination of actions under this sectoral strategy. Specialists and researchers of the Bio-climate Network (Rede Bioclima) also collaborated and provided support during drafting and review of this Strategy. The objectives of the strategy for biodiversity and ecosystems are: to

analyse the impacts of climate change on biodiversity in Brazil and assess potential adaptation measures for reducing vulnerabilities; to assess the role of biodiversity and ecosystems in reducing socio-economic vulnerabilities through provision of ecosystem services
2.3 Analysis of the vulnerability of biodiversity to climate change
2.3.1. Exposure, sensitivity and potential impacts on biodiversity and ecosystems This topic examines the vulnerability of biodiversity on three levels, as defined in the CDB: a. Ecosystems (terrestrial and aquatic) b. Species/populations c. Genetic diversity within species/ populations The approach to vulnerability discussed in this Chapter is in line with the methodology of the 3rd and 4th IPCC Assessment Reports (IPCC AR3, 2001 and AR4, 2007). AR3 (IPCC, 2001) presents vulnerability resulting from factors of exposure, sensitivity and adaptation capacity of natural and human systems.

You have attached the following documents to this answer.

19_executive_summary_pnmc.pdf - EXECUTIVE SUMMARY - NATIONAL PLAN ON CLIMATE CHANGE

You have attached the following Web links/URLs to this answer.

National Adaptation Plan to Climate Change Volume II: Sectoral and Thematic Strategies - National Adaptation Plan to Climate Change Volume II: Sectoral and Thematic Strategies

Marine Wildlife Watching (Res. 11.29)

› In Brazil, several projects to research and monitor impacts caused in cetaceans' behavior by touristic activities have generated important subsidies for the development of legal protection instruments. Several species have been the focus of these projects, such as Right Whales in Santa Catarina (Palazzo et al., 1999, Groch et al. 2003), Humpback Whales, in Bahia (Engel, 2003), Bryde's Whales in São Paulo (Augustowski & Palazzo, 2003), Spinner Dolphins, Fernando de Noronha (Silva-Jr., 1996, Silva, F.J. L & Silva-Jr., 2002). Some of the legal instruments developed for the regulation of observation tourism are: IBAMA Ordinance No. 117, of 1/26/1996, regulating Law No. 7,643, of 18/12/1987, which prohibits any form of cetacean haressment in Brazilian judicial waters; IBAMA Decree No 5, of 01/25/1995, wich lays down standards for spinner dolphins, Stenella longirostris, protection in the Fernando de Noronha archipelago; Decree No. 528, of 05/20/1992, which creates the Anhatomirim, SC, APA; Decree W/No., of 14/09/2000, which creates the Right Whale APA, also in Santa Catarina. However, more effective measures have to be employed in order to ensure that the legislation is complied with, such as the proper supervision of conservation units and the periodic revision of legal instruments (aiming to improve them). It is worth pointing out that a new legal instrument for the ordination of cetacean observation tourism is currently underway by ICMBio, with knowledge contributions from several scientific community researchers and the third sector. The search for closer contact with aquatic mammals has become increasingly common, however, the proximity necessary for their observation in diving activities might cross the limit of mere observation and become harmful interference.
Information about cetacean observation is also included in the Species Action Plans.

Oil Pollution and Migratory Species (Res. 7.3)

› National Contingency Plan for Oil Pollution Incidents in Waters Under National Jurisdiction (PNC)
The National Contingency Plan for Oil Pollution Incidents in Waters Under National Jurisdiction (PNC) fixes responsibilities, establishes an organizational structure and defines guidelines, procedures and actions aimed at enabling the coordinated performance of public administration organs and public and private entities in order to extend the responsiveness in oil pollution incidents that may affect waters under national jurisdiction, and minimize damages to the environment and to public health.
The PNC should be activated in the event of accidents of greater proportion, in which the individualized action of the directly involved agents (polluters) proves to be insufficient for solving the problem. Safeguards against environmental disasters of major proportions caused by oil spill in the territorial sea and the Brazilian rivers are broadened, considering the plan foresees actions involving 17 ministries and aimed at reducing the response time in the event of relevant environmental impacts. The plan primarily affects the oil industry and its derivatives.
Instances are established in its structure enabling the articulation with public organs. The main executive figure is the operational coordinator, responsible for the immediate actions after the accident, which should preferably be coordinated by the Navy, for incidents in maritime waters, by IBAMA, for incidents in inland waters and the National Petroleum Agency (ANP) in cases involving underwater structures for drilling and oil production.
In addition to the Operational Coordinator, the framework establishes the figure of the National Authority, which coordinates all national plan activities and is exercised by the Ministry of the Environment, the Executive Committee who will be responsible for the proposition of the guidelines for implementing the plan and consists of the Ministries of the Environment, Mining and Energy and Transport, the Presidency's Ports Secretariat, the Navy, Ibama, the ANP and the National Secretariat for Civil Defense, the Ministry of National Integration and the Monitoring and Evaluation Group (GAA), responsible for the monitoring all accidents - regardless of the size - and which is composed by the Navy, Ibama and ANP.
Ibama's legal basis and attributions
The PNC was established by Decree No. 8,127 of October 22nd, 2013.
Ibama composes, together with other organs and institutions, the Executive Committee, the Monitoring and Evaluation Group and the Supporting Committee, which are part of the PNC's organizational structure. Among

its responsibilities is to orient and support its units in structuring actions related to prevention and response for oil pollution incidents and to develop, implement and operate the "Sisnóleo", a system that is currently being developed.
Ibama has also developed the National Emergency Action Plan for Oil-impacted Fauna (Fauna PAE) aimed at minimizing the impact on Brazilian fauna in oil spill cases.
Ibama/ICMBio Joint Normative Instruction No. 01 of May 27th 2011 establishes periodically restricted areas for oil and gas exploitation and production activities, including seismic data surveys, petroleum well drilling, installation or launching of oil ducts, gas and water production, installation of oil re-pumping units and marine geotechnical surveys, in priority areas for sea turtle conservation on the Brazilian coast.
Ibama/ICMBio Joint Normative Instruction No. 02 of November 21rst 2011 establishes permanently restricted areas and periodically restricted areas for the acquisition of seismic data for petroleum and gas exploitation in priority aquatic mammal conservation areas on the Brazilian Coast, considering the species: Megaptera novaeangliae, Eubalaena australis, Pontoporia blainville and Trichechus manatus.
CONAMA Resolution 398/2008 provides for the Individual Emergency Plan's minimum content for oil pollution incidents in waters under national jurisdiction originated in organized ports, port facilities, terminals, ducts, terrestrial probes, platforms and its support facilities, refineries, shipyards, marinas, nautical clubs and similar installations, and guides their elaboration. In its Annex I (3.5.13), at the "Procedures for the Protection of the Fauna" section, it cites the mapping of the region's fauna, as well as migratory fauna mapping and details the measures to be adopted for the relief and protection of the individuals affected.

Invasive Alien Species and Migratory Species (Res. 11.28)

› Species listed in the Appendix of ACAP.
The ACAP guideline for invasive species in breeding sites is not applied for Brazil because all species listed in the Appendix of ACAP don’t have breeding sites in the country, only feeding sites.
Measures adopted by Brazil on the subject of Invasive alien species and their relation to migratory species
In the period covered by the report, Brazil sought to work on two lines of action to deal with the subject of invasive alien species, one aimed at preventing new invasions and the other at controlling and mitigating the impacts caused by invasive alien species already established in the country.
Continental Water Invasive Alien Species
MMA published in 2016, the Continental Water Invasive Alien Species in Brazil" book, available at: http://www.mma.gov.br/publicacoes/biodiversidade/category/56-especies-exoticas-invasoras. The book presents information about 163 alien species of invader potential detected in the country's continental waters, of which 39 were classified as invaders. Included in the list are fish species, aquatic macrophytes, reptiles, amphibians, invertebrates and micro-organisms.
National Plans for Preventing, Controlling and Monitoring Invasive Alien Species
Considering the need for developing instruments for the implementation of control and mitigation activities concerning invasive alien species already established in the country, the MMA, in conjunction with Ibama and ICMBio, decided to elaborate and implement three National Plans for Preventing, Controlling and Monitoring Invasive Alien Species. The priority species defined were: the feral pig (Sus scrofa), the sun coral (Tubastraea spp.) and the golden mussel (Limnoperna fortunei).
The Invasive alien species Plans followed the model and methodology of the National Action Plans for Endangered Species Conservation - PANs, as provided for in MMA Decree No. 43, of January 31st, 2014. The plans constitute participatory management instruments aimed at coordinating and integrating actions and initiatives.
The first elaborated plan was the "National Plan for the Prevention, Control and Monitoring of Feral Pig (Sus scrofa) – Feral Pigs Plan", which aims to establish the necessary actions in order to contain the territorial and demographic expansion of feral pigs in Brazil and reduce its impacts, especially in priority areas of environmental, social and economical interest, looking to reduce the impacts caused by feral pigs in order to also meet society's demand in relation to the control of their free-living populations, including feral pigs and wild boars. Among the main environmental impacts caused by feral pigs are predation of the native fauna and the triggering of erosion processes. Considering that there is overlap between the distribution of feral pigs and the distribution of migratory birds listed in the CMS, it is expected that the implementation of the plan will reduce the threat to these species. The Feral Pigs Plan was elaborated in 2016 and its implementation was initiated in January/2017, and should last five years.
The "National Plan for the prevention, control and monitoring of the Sun Coral (Tubastraea spp)" is in its elaboration phase. It is expected that the plan will help protect reef environments important for migratory species (especially elasmobranchs).
Alien Invasive species
In relation to alien invasive species that affect biodiversity, the CBD recommends a regulatory framework for countries, in which information providing activities, as well as risk analysis and early detection and training tools should be developed in order to elaborate and implement measures to ensure prevention against alien species with invader potential .
Aiming to attain the goals internationally assumed by Brazil, the MMA - through the GEF "PROBIO-National Biodiversity Project" - conducted the first national survey for invasive alien species in the country. ICMBIO also invested in pilot projects that allowed for the development and implementation of control plans for invasive alien species in some protected areas. IBAMA, in turn, regulated the management and control of the Feral Pig

(Sus scrofa) and established an inter-institutional commission to assess the effectiveness of that management. IBAMA is also responsible for analyzing and authorizing imports and the introduction of alien species that may affect biodiversity.
Brazil has a normative ballast water management regulation, NORMAN-20/DPC18, established by the Maritime Norm Authority, concerning non-intentional introductions. Nevertheless, other maritime structures work as vectors for species introduction. The Sun Coral (Tubastrea spp.), for example, was introduced to several points of the Brazilian coast through incrustation on petroleum platforms, and currently threatens the survival of native corals and invertebrates in rocks and coral reefs.
Although foreseen in the National Strategy for Invasive Alien Species , published in 2009, protocols for risk assessment of biological invasions are not yet available. Moreover, Brazil lacks an official list of invasive alien species as well as a regulation of use for species employed in productive systems, in order to help minimize biological invasion. Currently, only three Brazilian states have published official lists and complementary regulations (PR, SC and RS). A consolidated national list is essential to orient these species future rule of use for diverse purposes, and according to specific productive sectors.
The already detected invasive alien species regulation facilitates prevention and early detection in new areas or regions. In order to foster any actions related to invasive alien species such information is essential: a) occurrence records; b) Risk of introduction/invasion; c) History of invasion in other countries; D) The likelihood of introduction and; e) Analysis of routes and vectors of introduction for alien species, considering voluntary and involuntary introduction. An organized database, incorporated to an existing website and to previously existent federal government systems, would foster risk analysis for invasive alien species and would ensure the structuring and development of an early detection system.
Protocols for plants, terrestrial vertebrates and fish risk analysis have already been adapted for use in Brazil and Latin America by the Horus Institute for Environmental Development and Conservation and its partners. More than 300 risk analyses were carried out in this adjustment process. Such protocols consider voluntary introductions of species in distinct biological groups (eg. insects for biological control, invertebrates for pets or for cultivation, as well as involuntary and illegal introductions (e. g. marine invertebrates in ballast water, ornamental plant seeds without entry authorization, wild animals originating from trafficking). In the latter case, the analysis is based on the identification of vectors and dispersal routes. Such an analysis is crucial in order to optimize the containment of invasive species and to establish preventative measures upon their arrival in areas of relevance for biodiversity conservation and at a national level.
The introduction of a large number of alien species in Brazil over centuries creates the potential for the establishment and invasion of species not yet recognized as invasive, this may happen due to the extent of their adaptation, evolution and opportunities generated by anthropic disturbances and the effects of climate change. Unlike those species already included in databases, these species are not predictable and need to be considered as they are detected.
Invasive Alien Species Alert and Control system – SAI
Up until 2020, Brazil shall develop, within the Pro-species project, a system for early detection and rapid response to invasive alien species, which will include route and dispersion vectors (pathways) analysis considering the introduction of species into the country, the states, in protected areas, and in other areas of importance for the conservation of biological diversity.
Early detection and rapid response systems are effective in minimizing the impacts of invasive alien species on biodiversity and on the economy. This strategy's success depends on surveillance and monitoring, and may be accomplished by sampling or through the involvement of a wide network of collaborators that will help cover the territories that should be verified and protected. Detection may be derived from passive observation, when conducted in the midst of other activities, or active observation, when intentional searches are carried out in an area or in a predefined species. Once an occurrence has been reported, the first measure is to identify the species by consulting the materials prepared for that purpose: the databases, the support network taxonomists or the invasive species specialist group linked to the IUCN
Early detection is a system that aims to find and confirm the identity of invasive alien species as soon as possible, while there are few individuals or small populations and there is an opportunity of at least local eradication. Prioritizing manegement of small populations or isolated individuals tends to generate more results when it comes to contention and dispersion control of a species than starting with large invasion areas where species have been established for longer. The system may be focused on areas where there is a higher risk of species introduction or in sensitive ecosystems where the impacts of biological invasion tend to be stronger, where the invasion tends to be swift, or when there is direct risk to endangered species. It is the case of areas defined as priority areas for the conservation of biological diversity, including conservation units, which may establish specific protection networks.
Rapid response refers to the systematic effort to eradicate, contain or control invasive alien species while the invasion area is still being located. It may be executed in response to the introduction of new species or the observation of new invasion outbreaks by pre-established or common species in the surrounding areas. It is based on a previously provided structure that enables the execution of rapid and effective actions, including a support network for the detection itself, taxonomic identification and response actions.
These actions success depends on the active participation of all the entities involved, for that reason, the establishment of a support network formed by citizens, researchers, conservation unit employees, research centers, Ibama decentralized units, environmental licensing organs, state and municipal environment agencies and civil society organizations is crucial to enable the system. Materials and campaigns should be

elaborated, aiming to disseminate the system so that it can receive contributions from the public, whose participation is of extreme relevance.

Renewable Energy and Migratory Species (Res. 7.5 / Res. 11.27)

› The National Environment Council – CONAMA, published the normative nº 462, on july 24th 2014, which establishes the proceedings for environmental licensing of Eolic energy enterprises in Brazil. That normative states that the environmental agency must demand environmental impact studies and reports and promote public audiences when the enterprise is located within flyways or areas of concentration of migratory birds, indicated by CEMAVE/ICMBio. The elaboration of the present document demanded a great effort to collect and systematize the knowledge available in the literature, from the evaluation of the Brazilian avifauna conservation status, in the National Action Plans and in the records of the National Banding System, Sistema Nacional de Anilhamento (SNA.Net). This data compilation indicated, in each Brazilian state, important areas for the conservation of migratory birds, defined by breeding areas and sites where congregate species and individuals of migratory birds. Those areas were confronted with the location of current and expected Eolic enterprises, based on data from the Brazilian Electricity Regulatory Agency, Agência Nacional de Energia Elétrica (ANEEL) and currently, the overlapping of Eolic enterprises (installed or expected) and relevant areas for migratory bird conservation is of particular concern in the Northeast and South of Brazil. The proper monitoring of the negative impacts caused by wind parks in Brazil (a least one year long studies before installation and during the first five years after operation starts) will provide important learning for future licensing processes. To minimize negative impacts, we recommend the adoption of preventive measures already tested in other countries, such as: the use of intermittent lights and tubular structures on the towers, radars coupled to devices that switch off the turbines when flocks approach, removal of carcasses from the proximity of the turbines to avoid attracting other birds, daily monitoring of the area on critical migratory periods, among others. This work is in accordance with a responsible development model, showing that it is necessary to allow economic and social growth without neglecting biodiversity conservation.

Annex: Updating Data on Appendix II Species

1. The drop-down lists below contain the list of all species listed in Appendix II. Parties which did not submit a National Report in 2014 are requested to complete the entire form. Parties that did submit a report in 2014 are requested to review and update the data (e.g. new published distribution references and details concerning species added to Appendix II at COP11).

Chiroptera

Eidolon helvum (African populations)

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Miniopterus schreibersii (African populations)

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Vespertilionidae spp (European populations)

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Otomops martiensseni (African populations)

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Tadarida teniotis

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Rhinolophidae spp (European populations)

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from

http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Miniopterus majori

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Miniopterus natalensis (African populations)

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Otomops madagascariensis

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Tadarida insignis

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Tadarida latouchei

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Acipenser gueldenstaedtii

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Cetacea

Inia geoffrensis

Please choose the one that applies.
☑ Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Pontoporia blainvillei

Please choose the one that applies.
☑ Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Berardius bairdii

Please choose the one that applies.
☑ Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Hyperoodon ampullatus

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Don E. Wilson & DeeAnn M. Reeder (eds.) (2005). Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Delphinapterus leucas

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
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Monodon monoceros

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Cephalorhynchus heavisidii

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Delphinus delphis (North and Baltic Sea populations)

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Globicephala melas (North and Baltic Sea populations)

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Lagenodelphis hosei (south-east Asian populations)

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Lagenorhynchus acutus (North and Baltic Sea populations)

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Lagenorhynchus albirostris (North and Baltic Sea populations)

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Lagenorhynchus australis

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Lagenorhynchus obscurus

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Orcaella brevirostris

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Orcinus orca

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Sotalia fluviatilis

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Sotalia guianensis

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Sousa chinensis

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Sousa teuszii

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Stenella attenuata (eastern tropical Pacific population)

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Geographic Reference (3rd ed). Johns Hopkins University Press, Lewisburg, Pennsylvania, U.S. (retrieved from http://www.departments.bucknell.edu/biology/resources/msw3/ on (23/01/2017).

Stenella clymene (West African population)

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Stenella coeruleoalba (eastern tropical Pacific population)

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Stenella longirostris (eastern tropical Pacific populations)

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Tursiops aduncus (Arafurur/Timor Sea)

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Tursiops truncatus (Mediterranean population)

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Neophocaena phocaenoides

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Phocoena dioptrica

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Phocoena phocoena (NW African population)

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Phocoena spinipinnis

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Phocoenoides dalli

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Balaenoptera bonaerensis

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Balaenoptera borealis

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Balaenoptera edeni

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Balaenoptera omurai

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Balaenoptera physalus

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Caperea marginata

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Physter macrocephalus

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Platanista gangetica gangetica

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Phocoena phocoena (North and Baltic Sea populations)

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Phocoena phocoena (western North Atlantic population)

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Phocoena phocoena (Black Sea population)

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Neophocaena asiaeorientalis

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Grampus griseus (North and Baltic Sea populations)

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Grampus griseus (Mediterranean population)

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Tursiops truncatus (North and Baltic Sea populations)

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Tursiops truncatus (Black Sea population)

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Stenella attenuata (south-east Asian populations)

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Stenella longirostris (south-east Asian populations)

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Stenella coeruleoalba (Mediterranean population)

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Delphinus delphis (Mediterranean population)

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Delphinus delphis (Black Sea population)

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Delphinus delphis (eastern tropical Pacific population)

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Orcaella heinsohni

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Cephaloryhnchus eutropia

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Cephalorhynchus commersonii (South American population)

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Carnivora

Lycaon pictus

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Arctocephalus australis

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Halichoerus grypus (Baltic Sea populations)

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Monachus monachus

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Phoca vitulina (Baltic and Wadden Sea populations)

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Otaria flavescens

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Ursus maritimus

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Proboscidea

Loxodonta africana

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Loxodonta cyclotis

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Sirenia

Dugong dugon

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Trichechus inunguis

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Trichechus manatus (Panama and Honduras)

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Trichechus senegalensis

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Perissodactyla

Equus hemionus (includes E. onager)

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Equus kiang

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Artiodactyla

Vicugna vicugna

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Cervus elaphus yarkandensis (Populations of Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, Uzbekistan and Afghanistan)

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
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Ammotragus lervia

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Gazella subgutturosa

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Oryx dammah

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Procapra gutturosa

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Saiga borealis

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Saiga tatarica

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Ovis ammon

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Gazella gazella (Asian populations)

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Kobus kob leucotis

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Sphenisciformes

Spheniscus demersus

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Gaviiformes

Gavia adamsii (W. Palaearctic)

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Gavia arctica arctica

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Gavia arctica suschkini

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Gavia immer immer (NW Europe)

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Gavia stellata (W. Palaearctic)

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Podicipediformes

Podiceps auritus (W. Palaearctic)

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Podiceps grisegena grisegena

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Procellariiformes

Diomedea chrysostoma

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Diomedea epomophora

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Diomedea exulans

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Diomedea irrorata

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Phoebetria fusca

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Phoebetria palpebrata

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Macronectes giganteus

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Macronectes halli

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Procellaria aequinoctialis

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Procellaria cinerea

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Procellaria parkinsoni

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Procellaria westlandica

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Diomedea dabbenena

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Diomedea antipodensis

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Diomedea sanfordi

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Phoebastria nigripes

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Phoebastria immutabilis

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Thalassarche melanophris

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Thalassarche impavida

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Thalassarche bulleri

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Thalassarche cauta

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Thalassarche steadi

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Thalassarche salvini

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Thalassarche eremita

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Thalassarche chlororhynchos

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Thalassarche carteri

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Procellaria conspicillata

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☑ Range State

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World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Pelecaniformes

Pelecanus crispus

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Pelecanus onocrotalus (W. Palaearctic)

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Phalacrocorax nigrogularis

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Phalacrocorax pygmeus

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Ciconiiformes

Ardea purpurea purpurea (Populations breeding in the W Palaearctic)

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Ardeola idae

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Ardeola rufiventris

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Botaurus stellaris stellaris (W. Palaearctic)

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Casmerodius albus albus (W. Palaearctic)

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Egretta vinaceigula

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Ixobrychus minutus minutus (W. Palaearctic)

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Ixobrychus sturmii

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Ciconia ciconia

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Ciconia episcopus microscelis

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Ciconia nigra

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Mycteria ibis

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Geronticus eremita

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Platalea alba (excluding Malagasy population)

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Platalea leucorodia

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Plegadis falcinellus

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Threskiornis aethiopicus aethiopicus

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Anseriformes

Anatidae spp

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Falconiformes

Pandion haliaetus

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Cathartidae. spp

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Accipitridae spp

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Falconidae spp

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Galliformes

Coturnix coturnix coturnix

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Gruiformes

Aenigmatolimnas marginalis

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Published distribution reference
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Crex crex

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World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Fulica atra atra (Mediterranean and Black Sea populations)

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Porzana parva parva

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Porzana porzana (Populations breeding in the W Palaearctic)

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Porzana pusilla intermedia

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Sarothrura ayresi

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Sarothrura boehmi

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Chlamydotis undulata (Asian populations)

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Otis tarda

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Grus spp

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Charadriiformes

Dromas ardeola

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Burhinus oedicnemus

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Glareola nordmanni

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Glareola nuchalis

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Glareola pratincola

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Chlidonias leucopterus (West Eurasian and African populations)

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Chlidonias niger niger

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Larus armenicus

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Larus audouinii

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Larus genei

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Larus hemprichii

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Larus ichthyaetus (West Eurasian and African population)

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Larus leucophthalmus

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Larus melanocephalus

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Sterna albifrons

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Sterna balaenarum

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Sterna bengalensis (African and Southwest Asian populations)

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Sterna bergii (African and Southwest Asian populations)

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Sterna caspia (West Eurasian and African populations)

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Sterna dougallii (Atlantic population)

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Sterna hirundo hirundo (Populations breeding in the W Palaearctic)

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Sterna nilotica nilotica (West Eurasian and African populations)

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Sterna paradisaea (Atlantic population)

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Sterna repressa

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Sterna sandvicensis sandvicensis

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Sterna saundersi

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Rynchops flavirostris

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Recurvirostridae spp

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Charadriidae spp

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Scolopacidae spp

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Sterna maxima albidorsalis

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Columbiformes

Streptopelia turtur turtur

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Psittaciformes

Amazona tucumana

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Coraciiformes

Merops apiaster

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Coracias garrulus

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Passeriformes

Alectrurus risora

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Alectrurus tricolor

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Polystictus pectoralis pectoralis

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Pseudocolopteryx dinellianus

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Hirundo atrocaerulea

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Sporophila cinnamomea

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Sporophila hypochroma

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Sporophila palustris

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Sporophila ruficollis

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Sporophila zelichi

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Agelaius flavus

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Dolichonyx oryzivorus

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Muscicapidae (s.l.) spp.

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Cardellina canadensis

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Testudinata

Podocnemis expansa

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Published distribution reference
› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

Cheloniidae spp

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› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

Dermochelyidae spp

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› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

Crocodylia

Crocodylus porosus

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Orectolobiformes

Rhincodon typus

Please choose the one that applies.
☑ Range State

Published distribution reference
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Lamniformes

Carcharodon carcharias

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Isurus oxyrinchus

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Isurus paucus

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Lamna nasus

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Cetorhinus maximus

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Alopias superciliosus

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Alopias vulpinus

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Alopias pelagicus

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Acipenseriformes

Acipenser baerii baicalensis

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Acipenser fulvescens

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Acipenser medirostris

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Acipenser mikadoi

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Acipenser naccarii

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Acipenser nudiventris

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Acipenser persicus

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Acipenser ruthenus (Danube population)

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Acipenser schrenckii

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☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Acipenser sinensis

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Acipenser stellatus

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Acipenser sturio

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Huso dauricus

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Huso huso

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pseudoscaphirhynchus fedtschenkoi

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pseudoscaphirhynchus hermanni

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pseudoscaphirhynchus kaufmanni

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Psephurus gladius

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Lepidoptera

Danaus plexippus

Please choose the one that applies.
☑ Range State

Published distribution reference
› Jepsen, Sarina, et al. Conservation Status and Ecology of the Monarch Butterfly in the United States. NatureServe et The Xerces Society for Invertebrate Conservation. 2015.

Squaliformes

Squalus acanthias (Northern hemisphere populations)

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Phoenicopteriformes

Phoenicopteridae spp

Please choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Rajiformes

Manta birostris

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Carcharhiniformes

Carcharhinus falciformis

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Sphyrna mokarran

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Sphyrna lewini

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pristiformes

Anoxypristis cuspidata

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pristis clavata

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pristis pectinata

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pristis zijsron

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Pristis pristis

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Myliobatiformes

Manta alfredi

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula mobular

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula japanica

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula thurstoni

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula tarapacana

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula eregoodootenkee

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula kuhlii

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula hypostoma

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula rochebrunei

Please choose the one that applies.
☑ Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Mobula munkiana

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

Anguilliformes

Anguilla anguilla

Please choose the one that applies.
☑ Not a Range State

Published distribution reference
› Froese, R. and D. Pauly (eds.) (2017). FishBase. (retrieved from www.fishbase.org on (23/01/2017).

2. All species of each of the Families below are listed in Appendix II. If your country is a Range State for any of the species in these Families, please indicate whether your country is a Range State or the species is extinct and, where appropriate, please provide published distribution references.

Order FALCONIFORMES, Family CATHARTIDAE

Cathartes aura

Choose the one that applies.

☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Coragyps atratus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Sarcoramphus papa

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Cathartes burrovianus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Cathartes melambrotus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order FALCONIFORMES, Family ACCIPITRIDAE

Accipiter striatus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Buteo albonotatus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Buteo platypterus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Buteo swainsoni

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Elanoides forficatus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Ictinia mississippiensis

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Ictinia plumbea

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Milvus migrans

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order FALCONIFORMES, Family FALCONIDAE

Falco columbarius

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Falco peregrinus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the

World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Falco sparverius

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Falco tinnunculus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order PASSERIFORMES, Family MUSCICAPIDAE

Catharus fuscescens

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Catharus minimus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Catharus ustulatus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Turdus amaurochalinus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Turdus iliacus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order ANSERIFORMES, Family ANATIDAE

Amazonetta brasiliensis

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Anas flavirostris

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Chloephaga picta

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Netta erythrophthalma

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Oxyura vittata

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order CHARADRIIFORMES, Family RECURVIROSTRIDAE

Himantopus himantopus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order CHARADRIIFORMES, Family CHARADRIIDAE

Charadrius falklandicus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the

World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Charadrius modestus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Oreopholus ruficollis

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Pluvialis dominica

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Pluvialis squatarola

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Vanellus chilensis

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order CHARADRIIFORMES, Family SCOLOPACIDAE

Arenaria interpres

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Bartramia longicauda

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris alba

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris bairdii

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris canutus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris fuscicollis

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris himantopus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris melanotos

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris minutilla

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Calidris pusilla

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Gallinago paraguaiae

Choose the one that applies.
☑ Range State

Published distribution reference
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Limnodromus griseus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Limosa haemastica

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Limosa lapponica

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Numenius phaeopus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Phalaropus fulicaria

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Phalaropus fulicarius

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Phalaropus lobatus

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Steganopus tricolor

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Tringa flavipes

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Tringa melanoleuca

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Tringa solitaria

Choose the one that applies.
☑ Range State

Published distribution reference
› del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) (2017). Handbook of the Birds of the World Alive. Lynx Edicions, Barcelona. (retrieved from http://www.hbw.com/ on (23/01/2017).

Order TESTUDINATA, Family CHELONIIDAE

Caretta caretta

Choose the one that applies.
☑ Range State

Published distribution reference
› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

Chelonia mydas

Choose the one that applies.
☑ Range State

Published distribution reference
› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

Eretmochelys imbricata

Choose the one that applies.
☑ Range State

Published distribution reference
› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

Lepidochelys olivacea

Choose the one that applies.
☑ Range State

Published distribution reference
› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

Order TESTUDINATA, Family DERMOCHELYIDAE

Dermochelys coriacea

Choose the one that applies.
☑ Range State

Published distribution reference
› Uetz, P., Freed, P. & Jirí Hošek (eds.) (2017). The Reptile Database. (retrieved from http://www.reptile-database.org on (23/01/2017).

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