

REDE BIOMAR GET ANSWERS



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WHAT IS BIOMAR NETWORK?

The Marine Biodiversity Conservation Network (Rede de Conservação da Biodiversidade Marinha), or Biomar Network, comprises five Projects sponsored by PETROBRAS, through the Petrobras Socioenvironmental Program (Programa Petrobras Socioambiental) with focus on the ocean: Albatroz, Baleia Jubarte, Coral Vivo, Golfinho Rotador and Meros do Brasil. The Projects converge knowledge and experience with the purpose of performing joint actions, enriched by decisions established in an Integrated Strategic Planning. They are engaged in the protection of Brazilian marine species and ecosystems occurring in areas where PETROBRAS operates. Together, in 10 years of operation, these Projects have involved over 9 million people in environmental awareness and education activities, produced more than 720 technical and scientific publications, supported the development and performance of six National Action Plans, participated in over 2,230 national and international forums, and generated more than 7,670 media articles that boost the importance of this work. BIOMAR Network is currently a reference in conservation actions throughout Brazil, and was conceived from the effort to optimize institutional initiatives in order to achieve excellence in marine biodiversity projects.





WHAT DOES BIOMAR NETWORK DO?

The Biomar Network Projects develop conservation, research, environmental education, social inclusion and communication actions. Several people are continuously involved in the Projects, especially fishing communities, the scientific and academic community, educators, and tourists, in addition to the general public, including children, adolescents and the youth. The social engagement resulting from the participation in the actions and activities proposed by the Projects also involves the press and civil society organizations. The activities carried out and the materials produced address relevant themes for ocean conservation, such as marine biodiversity, sea pollution and garbage, sustainable fishing, sustainable tourism, and others. In their individual paths, the Projects support and contribute to the drafting of national and international public policies, developing several tools with governmental agencies, such as National Action Plans for the Conservation of Endangered Species, handling and monitoring strategies, the creation of Conservation Units and standards for the sustainable use of environments and species. The Projects develop research and represent Brazil in several international forums, agreements, and commissions, where they present their scientific production and provide support to conservation strategies that are fundamental for the marine species survival around the planet.

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WHAT IS BIOMAR NETWORK'S AREA OF OPERATION?

Biomar Network Projects are present and act directly over the coast of 13 Brazilian States (Pará, Ceará, Rio Grande do Norte, Pernambuco, Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, and Rio Grande do Sul), including ocean areas and islands. In view of the integration of the Projects' actions, Biomar Network covers several marine species, in addition to coral reefs and environments, spread throughout the Brazilian coast. Together, the Projects reach coastal and marine regions, working on research and handling aimed at formal and informal environmental education and conservation.







HOW DOES ALBATROZ PROJECT WORK?

Since 1990, Albatroz Project has been working for the conservation of albatrosses and petrels, which are migratory seabirds present in Brazil. These birds spend most of their lives in the open ocean searching for food, and only stop to breed on some islands in certain remote regions, such as Antarctica. During their journey, they can reach 127 km per hour and travel up to 800 km a day. In order to be able to glide over wind currents and achieve that goal, one of the specimens has the largest wingspan among birds, reaching up to 3.5 m from end to end.

With the purpose of protecting these birds, Albatroz Project conducts research and develops mitigating measures to prevent them from being caught by industrial longline fishery. The Project, which has been sponsored by Petrobras since 2006, also works with marine environmental education actions with fishermen at ports and on vessels, and, with children in early childhood, adolescents, and the youth, through *'Programa Albatroz na Escola'*, 'Albatroz em Casa' and *'Coletivo Jovem Albatroz'*. In addition to its base in Santos (SP), Projeto Albatroz operates in the cities of Rio Grande (RS), Itajaí, Navegantes and Florianópolis (SC), Cabo Frio, Arraial do Cabo and Armação de Búzios (RJ), Vitória and region (ES) and Natal (RN).





WHY IS THE CONSERVATION OF ALBATROSSES IMPORTANT TO THE OCEAN?

There are several types of threats reaching albatrosses and petrels around the world, but the Brazilian species suffer from the accidental ingestion of plastic waste found in the sea, when they mistake it for food, and especially because they are caught by longline fishing boats.

Longline fishing is an industrial technique performed far from the coast, targeting large fish, such as tuna. In order to catch them, the fishermen use squids and sardines – the same food eaten by albatrosses – as baits. While searching for their food, the birds may be accidentally caught and killed by drowning.

Nine out of ten albatross species present in Brazil are endangered. The cost of the disappearance of these birds is incalculable, but the fact is that the oceans become poorer, and we get fewer resources. As they glide over the oceans, albatrosses and petrels spread nutrients that feed small aquatic organisms, and thus ensure the marine life cycle. Visit www.projetoalbatroz.org.br.





HOW DOES BALEIA JUBARTE PROJECT WORK?

Baleia Jubarte Project was created in 1988 to protect humpback whales at *Banco dos Abrolhos*, which is the main nursery of this species throughout the Southwestern Atlantic Sea. It has been sponsored by Petrobras since 1996. The project is currently systematically active in the States of Bahia and Espírito Santo, and works from time to time at other points along the coast, through expeditions and campaigns. This Project develops activities related to scientific research, responsible tourism, environmental information and education, as well as conservation activities that have been contributing to the successful recovery of the humpback whale population in the South Atlantic Sea. The knowledge obtained from research contributes to national and international public policies aimed at the conservation of whales and the oceans where they live. Baleia Jubarte Project is carried out by *Instituto Baleia Jubarte* from its headquarters located in Caravelas and Praia do Forte, State of Bahia, and Vitória, State of Espírito Santo.



WHY PROTECT WHALES?

Over the past three decades in operation, the Baleia Jubarte Project has already overcome many challenges, and the main one was the considerable increase in this species population, which in 2014 was removed from the List of Endangered Species of Brazilian Fauna. Today, we aim at integrating the scientific knowledge about whales and their environment with conservation and development actions, as well as revenue and employment generation, as, for example, with the Whale Watching Tourism, which moves the economy of several communities in the area where whales appear. With a view to providing support to tourism and education activities, the Project has two interpretative centers, *Espaços Baleia Jubarte*, in Praia do Forte and Vitória. The humpback whales protected in Brazil also play a fundamental role in the marine ecosystem, nutrient cycling and carbon storage, contributing to the fight against climate change. Visit www.baleiajubarte.org.br.





HOW DOES CORAL VIVO PROJECT WORK?

Coral Vivo Project, sponsored by Petrobras since 2006, was created in 2003, by the professors of the National Museum/URFJ (the Federal University of Rio de Janeiro), who had already been researching coral reefs and environments for 20 years. The focus of the Project is on conservation and sustainable use of such ecosystems, which shelters the greatest biodiversity in the sea. Its activities cover education, public policies, communication and social awareness. It has a Research Network, with 14 institutions involved, and a research and visitation Base in Porto Seguro, State of Bahia, in addition to focal points in the Abrolhos Region and in the States of Pernambuco, Rio de Janeiro and São Paulo. Coral Vivo also has collaborators that act in almost all the Brazilian coralline areas, from the State of Maranhão to Santa Catarina. It collaborates and articulates the National Plan for Conservation of Coralian Environments (PAN Corais), with ICMBio, which encompasses 18 areas from North to South of Brazil, and 52 endangered species (fish and invertebrates). In educational actions, we highlight the continuing education of teachers, the tourism sector, young leaders and university students from throughout the country, in addition to partnerships with public schools.



WHY ARE REEFS SO IMPORTANT AND HOW CAN WE PRESERVE THEM?

Coral reefs bring us many benefits. In Brazil, more than 18 million people depend on them whether directly or indirectly. They protect the coast against the waves; they are shelters for some food sources (fish, octopuses and lobsters); they are a source of income and leisure; and they contain substances used to produce medications. Global, local and regional actions are essential to reduce climate change effects and to contribute to the conservation of these environments. Everyone can pull their own weight by saving water, energy, fuel, and separating waste for recycling, as environments with less stress have a better chance of adapting to the effects of global changes. Participating in conservationist movements and social networks related to this theme helps mobilize society towards its conservation. Visit www.coralvivo.org.br.





HOW DOES GOLFINHO ROTADOR PROJECT WORK?

Golfinho Rotador Project, which has been sponsored by Petrobras since 2001, develops researches and environmental education, as well as community involvement and sustainability with residents and visitors of Fernando de Noronha. The researches seek to understand the behavior and distribution of spinner dolphins and how tominimize the impact of human activities on them. The environmental education activities raise the awareness of islanders from 2 to 60 years old. It is also active in cultural and sports initiatives, in addition toto encourage the political representation of the islanders. The distance between Noronha and the continent has caused genetic differentiation in the dolphins that live in the archipelago, to the point ofbe referred to as "Noronha rotators". They play a fundamental role in the region's ocean ecosystem: serve as food for sharks and their food waste recycle nutrients for fish. Because they are charismatic and discharged visibility, this is a flagship species for marine conservation. Being the focus of fauna observation tourism, the dolphins have great relevance to the island's economy.





HOW CAN I HELP THE DOLPHINS?

First of all, by respecting the legislation that protects the dolphins and Fernando de Noronha, provided by ICMBio and Golfinho Rotador Project. Likewise, it is important to know and respect the environmental legislation of your city! Our Planet is only one. You can also help by spreading our messages towards the conservation of the oceans, or by becoming a Contributing Member of the NGO *Centro Golfinho Rotador*, responsible for raising funds for Noronha's main socioenvironmental actions. Dive into the world of dolphins through our website or our social media, and you will find out how you can help by learning even more about dolphins, Noronha, marine conservation and sustainability. Visit www.golfinhorotador.org.br.







HOW DOES MEROS DO BRASIL PROJECT WORK?

In nearly two decades of work, Meros do Brasil Project has offered the main subsidies for the recovery of this species in the Brazilian coast. Groupers (*Epinephelus itajara*) are the largest grouper species in the Atlantic Ocean and the first species of marine fish to be fully protected in the country. Conservation and population biology studies, marine pollution, genetics, environmental valuation and aquaculture have contributed to the creation of public policies aimed at marine-coastal environments and groupers.

Meros do Brasil Project is present in nine States where it carries out communication and environmental education actions, as well as scientific research. The activities are aligned with The Decade of Ocean Science for Sustainable Development and its Sustainable Development Goals (SDGs), seeking to involve the entire society. The Project is sponsored by Petrobras since 2006.





WHY ARE ATLANTIC GOLIATH GROUPERS PROTECTED UNDER THE LAW?

The Atlantic Goliath Grouper population faced a significant decline of more than 80% in the last 65 years, and are critically endangered and under the risk of disappearing. The Atlantic Goliath Groupers that die outnumber those who are born, which is due to pollution, degradation of marine/coastal environments and illegal fishing. The Atlantic Goliath Groupers can live for more than 40 years. They do not breed until they are around seven years old, when they reach one meter long. Protecting one generation of Atlantic Goliath Groupers requires over two decades taking care of this species! The Atlantic Goliath Groupers rarely form shoals, but they get together yearly for breeding and this phenomenon is known as breeding clusters. Visit www.merosdobrasil.org.





CONTACT

Projeto Albatroz contato@projetoalbatroz.org.br @projetoalbatroz

Projeto Baleia Jubarte ea.praiadoforte@baleiajubarte.org.br @projetobaleiajubarte

Projeto Coral Vivo contato@coralvivo.org.br @projetocoralvivo

Projeto Golfinho Rotador contato@golfinhorotador.org.br @golfinhorotador

Projeto Meros do Brasil contato@merosdobrasil.org @merosdobrasil

PHOTOGRAPHS

Acervo dos Projetos Rede Biomar: Projeto Albatroz (capa, p.3, 5, 8, 9 e 11); Projeto Baleia Jubarte: (capa, p.3, 5, 12, 13 e 15); Projeto Coral Vivo (capa, p.3, 5, 16, 17 e 19); Projeto Golfinho Rotador (capa, p.3, 5, 20, 21 e 23); Projeto Meros do Brasil (capa, p.3, 5,24, 25 e 27).

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