



Biosphere Foundation Projects

The Anambas Sea Turtle Protection Program

- In 2008, a multi-faceted and collaborative sea turtle conservation program was initiated in the Anambas Islands, Indonesia, an archipelago of approximately 240 islands in the South China Sea, which is the hub for nearby oil drilling companies such as Conoco Phillips, Star Energy and Premier Oil.
- The project is located on Durai Island where thousands of green and hawksbill turtles nest and is considered the most populated sea turtle beach in the region.
- For at least 40 years, 100% of eggs were collected and sold for human consumption and sea turtle nesting declined approximately 75%.
- In 2009, a novel conservation program to protect the beach of Durai was initiated By BF and Premier Oil to establish a long-term agreement with the island's non-resident owners and resident caretaker, Pak Lahanie.
- On January 1, 2010, Pak Lahanie was no longer hired to collect the eggs – instead he was hired to protect the nests.
- Hundreds of thousands of hatchlings have since returned to the sea for the first time in decades.
- The project is of great interest to the fisherman of Anambas since this act results in an increase of fish around Durai due to the influx of baby sea turtles as food, thus beginning the process of restoring a healthy food web with keystone predators.
- Surrounding Durai is a luxuriant, biodiverse reef, but like all reefs in the region, it is threatened by destructive fishing, over-fishing, anchor damage, oil and mercury contamination from oil drilling and climate change.
- In 2011, Biosphere Foundation met with the local government and successfully implemented a 2 km circumference Marine Protected Area (MPA) around Durai and its neighboring island Pahat.
- Future work will focus on engaging the community in protecting and implementing a No-Take area within the MPA while learning that this will restore depleted fisheries and sea turtle populations, bring back the health of reefs, and create healthy ecosystems that are robust and more able to withstand change.
- The project includes the publication of the first coral reef educational book in Bahasa, Indonesia.
- UC Santa Barbara Doctoral Student, Katharine Currier, is developing a spatial decision support system to assist the people of Anambas with coastal marine planning. This framework will take into consideration parameters such as the existing utilization of resources by international oil companies, an increasing local population, the expansion of tourism development and climate change affects, such as rising levels of sea water and sea surface temperatures.



The Menjangan Island Reef Conservation Project



Menjangan Island

- Menjangan Island lies off Bali's northwest shore and is sacred with four Hindu temples and a statue of Ganesha, the god of new beginnings. People come from all over Bali on holy days to make offerings and prayers at the temples.
- Its fringing coral reef is unusual, almost a diversity anomaly for the region, with a wealth of hard corals, sea fans and soft corals.
- On paper, the reefs are protected since they lie within the Bali Barat National Park, a nature reserve controlled by the national government in Jakarta. In actuality, they are suffering from an array of negative impacts, such as dynamite fishing, badly managed tourism, plastics pollution, anchor damage, disease and bleaching events caused by global warming.
- In 2010 and 2011, BF collaborated with scientists from the Wildlife Conservation Society, to make the first baseline study about the overall health of the reef. This data will be used to track change as well as provide necessary information to the National Park authorities as to how best designate No-Take areas to protect these reefs.
- In 2011, BF and its local partner, Yayasan Dwi Asih Sejahtera, initiated "Friends of Menjangan;" a community-based conservation program to protect and preserve Menjangan Island. In support of this long-term program, BF engaged two Balinese as its coordinators: one is an adjunct professor at Udayana University and the other is a lawyer and nature guide for Bali Barat National Park.
- In 2011, BF implemented a weekend long field trip for 18 high school students to learn about NW Bali's sustainable development and conservation challenges. The program was held at the Scientific Education and Research Center (SERC) located within Bali Barat National Park.
- BF has been and will continue to advise SERC about land-based programs to encourage a reduction in fishing through an increase in agricultural diversity and sustainable use of the monsoonal forest.
- BF will return in 2012 to support all the above programs initiate a recycling program for NW Bali and establish an alternative energy demonstration project at SERC.



The Indian Ocean Marine Mammal Sanctuary



(Photo by Duncan Murrell)

- All of the great whales were brought to near extinction by commercial whaling over the past century and are now included in the IUCN Red List of threatened or endangered species. Yet, despite a moratorium on whaling declared by the International Whaling Commission (IWC) in 1986, Japan, Norway and Iceland continue commercial whaling today.
- Additionally, these dwindling populations are under threat from toxic pollution (mercury, PCB's and heavy metals), noise pollution, gill net fishing that entangles marine mammals, small gene pools, collision by increasing commercial shipping traffic, starvation due to ingestion of plastic and other garbage, and shifting feeding and migratory patterns due to global warming.
- In 1979 the International Whaling Commission declared the Indian Ocean (north of 55° S latitude) a *Marine Mammal Sanctuary* and encouraged international cooperation to protect the populations of great whales in the area.
- Sri Lanka lies within the sanctuary and is a feeding area for blue, sperm, humpback and Brydes whales as well as numerous smaller cetaceans.
- Biosphere Foundation has been invited to return to Sri Lanka to help re-instate the Indian Ocean Marine Mammal Sanctuary. Over the next five years, our efforts will focus on the protection of the great whales as well as the implementation of new laws to replace the use of synthetic nets to stop the excessive take of smaller cetaceans.
- In 2012, BF will start with a baseline study about the *Abundance and Distribution of Cetaceans off the Coast of Sri Lanka*. Mir will be used to conduct acoustic surveys along the coast as well as catalogue the whale tails
- BF will train one or more Sri Lankan students in the study to establish continuity in the future. Additionally, we will create educational programs that highlight the environmental challenges facing marine mammals today and the need for everyone to take responsibility of their actions to make a difference.
- Our objective in 2013 is to initiate the making of a film (ideally a 3D film) about sperm whales that portray their beauty and intelligence, as well as the threats impacting their survival. Such a film will be riveting and provide a venue to bring awareness that we live in one ocean planet inhabited by great beings that are on the verge of vanishing forever.

