



Establishing a Sea Turtle Refuge in Akumal, Quintana Roo, Mexico

Threats to the local populations of endangered sea turtles are increasing as tourism development grows in the Riviera Maya. Akumal is characterized by its marine and coastal environments, representing a favorite habitat for sea turtle populations [*Caretta Caretta* (Loggerhead), *Chelonia mydas* (Green) and *Eretmochelys imbricata* (Hawksbill)]. They use the beaches, grasslands and reefs as nesting sites, feeding, breeding and growing areas. Akumal gets its name from these phenomena – “The Place of Turtles” in Maya.

Sustainable use of our natural resources is one of our main challenges in Akumal. We are working to increase environmental awareness in the community, of the importance of habitat and species protection, and wise use. Our main goal is the conservation of the coastal marine ecosystems and the species that inhabit them, especially the sea turtles.

Therefore, it is necessary to establish official protection on Akumal's marine environment. Centro Ecológico Akumal (CEA), with the Akumal Development Council, local hotels and businesses and marine tourism operators, the National Protected Areas Commission (CONANP) and the Port Captain, along with the support of the Mexican Center for Environmental Law (CEMDA), has worked over the past several years to develop a local management program for the bays, and has recently initiated a process with the Wildlife Agency of the Ministry of the Environment to establish a Sea Turtle Refuge in Akumal, co-managed with the community, through its local environmental organization - Centro Ecológico Akumal.

To be a success, this initiative will require improved public awareness-raising, coordination of local committees to manage each of the bays making up Akumal, as well as cooperation and participation from everyone. Through both the management program and an established sea turtle refuge, we will be much closer to ensuring the economic and environmental future of Akumal.

Background

In Mexico, the use and possession of sea turtles is prohibited by law, under the endangered species laws and there is no program that permits the extractive use of turtles on a regular basis. Any removal of the species must be justified and only with official permission. In 1994, sea turtles were placed under special protection status as a species at risk of extinction. For more than two decades, the protection measures have been focused on activities related to the turtles' reproductive cycle, particularly with nesting sites.

Sea Turtle Protection Program

In 1993, CEA began its conservation activities and operates its sea turtle protection program through permission from the Wildlife Agency, focusing on protecting the nesting populations of loggerhead and green turtle. This has included research on nesting and hatchling information. The average number of nests in Akumal, from seven years of data, is at least 180 per season, demonstrating the importance of this destination as a feeding, reproduction and breeding area.



Monitoring Juvenile Turtles

At the end of 2006, CEA began monitoring juvenile green turtles in Akumal Bay. This is a key area for them to feed on sea grasses. The local population in the bay fluctuates, with as many as 43 individual turtles at a time. The increase in numbers of juvenile Green turtles in Akumal has resulted in an increase in tourists coming to see them. However, research of the local populations and habitat has improved, thanks to regular visitors like Sheldon Aptekar, studies from the University of Texas, the Autonomous University of Mexico, research from Fernando Muñoz and Ana Negrete, with our Program Coordinator and our many volunteers, to understand the behavior and health of these species.

Intensity of Bay Use

Today, the main threats faced by both coral communities and turtle populations in particular are the high intensity of tourist use and over-densification of boats.

The main activities of the visitors to Akumal are beach activities; swimming, beach walking, snorkeling, diving and sport fishing. Snorkeling tours generate the greatest impact in the bay, with boating activities second. Akumal receives almost 20,000 visitors to the bay each year, with an average of 1600 people per month; handled by mostly outside tour operators.

These numbers do not include guests in Akumal's hotels or locals. Over 8,000 people visited the bay during the first quarter of 2008, averaging over 2,000 per month.

Local tour boat operators have also increased over the past ten years, with two dive shops maintaining 17 boats, along with 14 others owned by individuals. These originally offered tours outside the bay, for diving and sport fishing, but increasingly they offer snorkel and touring activities inside the bay, increasing sedimentation and direct impact with turtles and swimmers. Likewise, visiting tour boats have dramatically increased, coming from Puerto Aventuras, nearby all-inclusive hotels and other areas.

The number of visitors and tourist agencies has increased to a level that in the short term can cause a collapse in the system.

Sea Turtle Refuge and Community based Marine Management Program

In response to these threats, and in demonstration of the commitment of the local business and tourism community to protect their natural resources, a program was developed, with three broad objectives:

- 1) Control and manage the use of Akumal's natural resources;
- 2) Rescue, preserve and learn about marine ecosystems in the bays of Akumal;
- 3) Protect the sea turtle population.

The Refuge initiative proposes the creation of refuge area for the sea turtles, from Aventuras Akumal in the south, all the way to Yal Ku Lagoon in the north, encompassing all of what is known as Akumal. This proposal would allow each bay to be managed by a local committee, in coordination with CEA, responding to each bay's unique characteristics.



The Sea Turtle Refuge would help make sure that the nesting beaches provide the right conditions for successful nesting and hatchings each season and guarantee the conditions necessary for healthy juvenile sea turtles in all of Akumal's waters.

Likewise, this will help ensure a viable economy for our community. Akumal will be 50 years old next year, and one of the best ways to make sure the next 50 years will see a restored and vibrant coastal ecosystem is to have in place now, the legal tools necessary to leave our current path of habitat destruction.

With support from so many people, local resource users, and federal, state and municipal authorities, CEA is leading the Community-Based Marine Management Program and Sea Turtle Refuge. We ask you to join us in this effort.

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Akumal Sea Turtle Refuge

