

# Whale Shark “Ecotourism” in the Philippines and Belize: Evaluating Conservation and Community Benefits

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by Angela Quiros, MEM 2005

## Introduction: Donsol and Placencia

Whale shark tourism all over the world is a highly lucrative industry based on an ecologically vulnerable species (Norman 2000). In the Philippines, Donsol is a popular destination for local whale shark tourism. In Belize, international divers visit Placencia to observe whale sharks in Gladden Spit Marine Reserve. Other sites of whale shark tourism are Ningaloo Reef in Australia, the Seychelles, and Isla Contoy in Mexico. Although these sites have different environmental, social, and economic contexts, all can benefit from adopting ecotourism best practices.<sup>1</sup>

The initiatives in Donsol and Placencia support literature on the variable role that ecotourism plays as a conservation development tool. In a study that tested enterprise strategies for community-based biodiversity conservation, Salafsky et al. (2001) found that an enterprise strategy will not lead to conservation at all sites. Rather, various conditions – including the nature and benefits of the enterprise and the identity of the stakeholders – influence the probability that a particular strategy will lead to conservation. To conserve whale sharks while improving residents’ socioeconomic status, community-based ecotourism was initiated in Donsol, Philippines and Placencia, Belize. In this article, I present qualitative results of

research conducted between January and August of 2004, where I studied and evaluated impacts of these projects on whale sharks and the communities involved.

## Context

In January 1998, whale sharks attracted to plankton blooms were discovered in aggregations off Donsol, a fishing village in the Philippines. This event attracted tourists, poachers, media and government agencies interested in obtaining a piece of the whale shark pie. In the wake of the discovery, poachers killed seven sharks; Donsol waters were subsequently declared a whale shark sanctuary, and related hunting and trading was banned throughout the Philippines. However, local fishermen were commissioned to take people on their boats to swim with the whale sharks, even though Donsol had no official tourism infrastructure (Yapinchay 1999). WWF-Philippines started the Whale Shark Research and Conservation Project to provide ways for Donsol to protect whale sharks through responsible tourism and fishing practices. In 1998, they worked with the local government and the Donsol Municipal Tourism Council to develop a community-based whale shark sanctuary and ecotourism program, to set regulations and fees, and to organize and train guides and boatmen (Yapinchay 1999). Registered tourism arrivals were up to 3,175 between December 2003 and May 2004, and in 2003, the Department of Tourism of the Philippines built a Tourism Office that coordinates all whale shark tours.<sup>2</sup>

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The author diving with a whale shark in Gladden Spit, Belize.  
*Photograph by Shayne Peché.*

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Whale sharks have congregated at Gladden Spit on the Belize Barrier Reef as long as the oldest fishermen can remember. Whale shark tourism, however, was not considered until 1997, when the community discovered that during the ten-day period around the full moon in April and May, whale sharks eat the eggs and sperm from spawning cubera snappers (FoN 2002). Whale shark tourism in Placencia, the nearest town to Gladden Spit, grew from one to 22 tour operators between 1997 and 2004, and the tourism market grew from 500 visitors in 2002 to 1,299 visitors in 2004. (Jones 2004). Official management did not start until 2004, when Friends of Nature, a Belizean conservation organization worked with The Nature Conservancy and the Placencia community to train and register whale shark guides, to establish and implement regulations, and to designate a Whale Shark Zone in Gladden Spit.

## Challenges

Challenges to successful ecotourism ventures in Donsol and Placencia originate from the unique biology of whale sharks, socio-economic concerns of communities, and tourism management. Adopting eco-tourism best practices would minimize effects of tourism on whale sharks and benefit local communities.

## Impacts to the whale sharks

Whale sharks' sensitive nature, aggregation at specific times of the year, slow maturation rate (30 years to reach sexual maturity) and migratory behavior all make them susceptible to anthropogenic impacts (IUCN 2004). The IUCN classifies whale sharks as vulnerable based on past records of declining catches and abundance (Norman 2000). This evidence supports the need for low-impact activities at whale shark sites to promote sustainability of the industry.

Observations of whale shark tourism in the Philippines and Belize indicate that whale shark behaviors include feeding, diving, and basking on the surface. Some behaviors are categorized as "avoidance behavior," such as diving away from swimmers, changing direction, and banking (Colman 1997). Since Gladden Spit and Donsol waters are both feeding grounds for whale sharks, disturbing them while they feed could reduce the sharks' survival by diverting their energy from feeding to avoidance behavior (Sorice, Shafer, and Scott 2003; Hammitt and Cole 1998). In Donsol, management practices and tourist behavior significantly increased the probability of whale sharks exhibiting avoidance behavior, such as directional changes and diving in response to humans. Significant predictors of a whale

BIO holding on to whale shark in Donsol, Philippines  
*Photograph by Cristina de León.*



shark's directional changes were path obstruction of the whale shark and proximity of a swimmer to the whale shark. Significant predictors of a dive response were first-time sighting and path obstruction of the whale shark.<sup>3</sup>

#### ***Social and cultural changes***

There are benefits and drawbacks to whale shark tourism. On one hand, commercial sectors are thriving, as evidenced by the proliferation of small stores and restaurants in Donsol, and resorts in Placencia. Both towns take pride in being known for whale sharks. The yearly Butanding Festival<sup>4</sup> held in Donsol every April is testament to that fact. On the other hand, tourism has brought little infrastructure development. Good roads are needed at both sites.

Whale shark tourism comes to Placencia at a time when tourist visitation is low, providing an important off-season income. However, only a few licensed tour operators and dive guides in Placencia benefit from this highly lucrative industry, with dive tours reaching US\$200 a person. In Donsol, 26 active guides, or Butanding Interaction Officers (BIOs), and 60 members of the Boat Operator's Association (BOA) work on a rotational basis. A whale shark tour boat in the Philippines costs US\$50, which can hold up to seven people. The lower fees in Donsol and greater membership translate to

lower returns, as compared to Placencia.

Certified guides and tour operators in both locations aim to keep membership low to provide more income for those already involved. In Donsol, BIO training has not been conducted since 1998, and recent attempts by WWF-Philippines to organize training for new BIOs have been halted due to conflicts among stakeholders.<sup>5</sup> In Donsol, whale shark tourism is an alternative to fishing and farming, and efforts by the local government are underway to provide alternative means of tourist income, such as firefly watching and island hopping. However, these activities are not enough to provide full-time employment.

Tourism development has changed some underlying values in the community. Stakeholders chose to have a protected area in their own waters, but with the coming of tourism, attention has shifted from eco-tourism for whale shark protection to tourism for commercial gain. The race to maximize profits has resulted in crowded conditions at the whale shark aggregation sites. One tour operator in Placencia has stopped conducting whale shark tours because he thought that there were "too many people" in the water. Tour guides and operators are placed in the difficult position of juggling between conservation and lucrative tourism activities.

## Alternatives

If whale shark tourism management continues in its current state at these sites, increased impacts on the whale sharks may decrease sightings and increase conflicts that affect the experiential quality of the tour. In a tourist survey at Gladden Spit, visitors said that they would not return if crowded conditions did not improve (Lindberg 2004).

Whale shark ecotourism can work. In Ningaloo Reef, Australia, the industry has been prospering since the early 1990s due to proper monitoring (Colman 1997) and adequate financing for the management of resources. One alternative for creating a more sustainable product is to institutionalize ecotourism by changing rules and regulations, properly financing tourism management, and monitoring tourism impacts.

### *Changing rules and regulations*

Rules and regulations in Donsol and Gladden Spit were adopted from those in Ningaloo Reef (Colman 1997). However, site-specific characteristics make it impractical to have identical regulations. In Donsol, for example, visibility varies between three to six meters, while visibility in Ningaloo Reef reaches up to 20 meters (Kurtz 2004). Ningaloo's rules mandates that swimmers be at least three meters from the head and five meters from the tail – a rule that, if obeyed in Donsol, means visitors will not be able to see the whale shark! Thus, BIOs bring swimmers less than one meter away from the shark, breaking the regulations.

The same is seen for the “no touch” rule. Between March and June 2004, I observed 99 touch incidents from 776 interactions. BIOs touch whale sharks, and rarely reprimand visitors for breaking those rules, giving conflicting messages about the “no touch” rule. Visitors watch an orientation video that clearly lays out rules. When visitors enter the water, however, it is not uncommon for them to be encouraged to touch the whale shark by the BIO.

Two main themes of conflict in Donsol are boat approach and crowding. Interaction guidelines specify a maximum of one boat per whale shark, but when whale sharks are scarce, several boats “share” one individual, crowding around it and dropping their swimmers in the water immediately after the previous boat. This results in shouting exchanges between the BOAs and BIOs.

Whale shark tourism in Gladden Spit is concentrated during the 10-day period each month between March and June. In Gladden Spit, whale shark guides have reported up to 80 divers in the water. Whale shark tourism in Donsol, on the contrary, starts as early as January and runs until August each year, for every day of the month. Although crowding associated with very short seasons can be avoided in Donsol, weekends and holidays have the same crowding intensity as Gladden Spit. There is a 15-20 boat a day limit in Donsol, but during peak season, the only limiting factor is the number of boats and guides, available for trips. During Easter in 2005, ten uncertified guides led tours because BIOs were occupied on two or even three trips per day, and the Tourism Office recorded 76 boat trips in one day.

To address some of these crowding issues in Placencia, Friends of Nature (FoN) formed a working group in October 2004, composed of whale shark guides and tour operators, to change regulations at the Whale Shark Zone. Changed regulations involve instituting a formal rotation for whale shark dives with strict time slots to minimize crowding in the area. Applying changes in the 2005 season has the potential to improve the management of tourism at Gladden Spit.

### *Financing*

One of the greatest challenges to a self-sufficient and functional protected area is having stable capital inflows to cover management, especially personnel costs, maintenance, and

FoN Rangers and  
Community Researcher  
on patrol in Gladden Spit  
Marine Reserve  
*Photograph by Angela  
Quiros.*



infrastructure. Gladden Spit Marine Reserve was one of the sites selected by The Nature Conservancy to participate in a program that utilizes tourism user fee mechanisms for protected areas. This initiative sought to put an economic value on services in protected areas through income generation mechanisms (TNC 2002). In March 2003, Friends of Nature (FoN) determined levels for the user fee system at a community consultation meeting as US\$15 per person. Donsol has a similar user fee system, in which locals pay US\$2 and foreigners pay US\$6.

Government, conservation organizations, and local institutions influence the appropriation and misappropriation of revenues from whale shark tourism. Stakeholders are involved in this decision-making process, although to varying degrees and to varying levels of continuity. The Local Government Unit (LGU) in Donsol manages and finances whale shark tourism in Donsol. Entrance fees were established in 1998 and are collected and held by the LGU and are not specifically used for tourism management. All funds collected in 2003 were collected by the LGU and re-allocated to the Butanding Festival in Donsol, a yearly celebration of the coming of whale sharks in April.<sup>6</sup> In Placencia, alternatively, whale shark tourism is

co-managed by Friends of Nature and the government of Belize. Funds used to manage Gladden Spit come from external grants awarded to FoN. In 2004, funds collected from whale shark tickets were handed over to the government of Belize. While the majority of revenues remained with the national government to support other protected areas in Belize, a portion of those funds were returned to FoN and used to purchase a new boat motor for patrolling and research activities along the reef.<sup>7</sup>

In Donsol and Placencia, revenues from entrance fees are not used specifically for managing whale shark tourism. Funds generated from entrance fees should stay within the site, and fees should be priced at a level that will help finance management. At both sites, however, revenues are insufficient to cover the cost of management, monitoring and improvements to the site, and, therefore, ongoing outside funds will be required.

#### ***Tourism impact monitoring***

Monitoring tourism impacts on wildlife, environment, and community are an important and neglected part of tourism management. Monitoring is not typically accounted for in tourism management plans and must be financed by external funding.

Anthropogenic effects on wildlife have been studied in the context of activities like swim-with-manatee tourism in Florida, USA (Sorice, Schafer, and Scott 2003), and swim-with-dolphin operations in New Zealand (Constantine 2001) and Australia (Scarpaci, Dayanthi, and Corkeron 2003). Whale sharks have been monitored around snorkelers in Australia (Colman 1997) and in 2004, I initiated a pilot monitoring project in Donsol, which is ongoing for the 2005 season. The crowded conditions in both Donsol and Gladden Spit necessitate monitoring and a strengthening of regulations.

In Gladden Spit during the 2004 season, whale shark sightings were down to one to two whale sharks per dive from a historical high of eight to nine whale sharks per dive (Jones 2004). The decreasing likelihood of whale shark sightings in Gladden Spit should make evident to stakeholders the need for impact monitoring. Whale sharks, a long-lived, K-selected species,<sup>8</sup> may be the type of animal that does not immediately exhibit negative effects of disturbance. Tourism at both sites is not older than ten years, while a whale shark can live up to eighty years (Norman 2000). Therefore, negative effects of tourism may not be seen until more years have passed. Given the lack of scientific knowledge about this species, employing the precautionary principle is a prudent long-term plan.

Integrating monitoring into the management plans of Gladden Spit and Donsol would improve the current band-aid approach to whale shark conservation at these sites, where management does not mitigate adverse impacts with adequate foresight. Monitoring would help the two sites move toward true ecotourism principles, by indicating which activities most adversely affect the whale sharks and informing managers to minimize those impacts.

## **Conclusion**

The community-based “eco-tourism” projects in Donsol and Placencia have the potential

to be model enterprise strategies that will lead to conservation. A successful long-term approach is contingent on several factors: impacts to the whale sharks and the environment must be properly managed, conflicts among stakeholders must be relieved through better management practices, benefits must be spread more equitably for all participants, and the two sites must continue to receive active NGO and government support. Institutionalizing ecotourism at both sites – through implementing strategies that respond and adjust to changes, properly financing tourism management, and monitoring tourism impacts – will move Donsol and Placencia closer to sustainability.

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### Endnotes

<sup>1</sup> Ecotourism is defined as a “low-impact, environmentally-sound and community-participatory tourism activity...that yields socio-economic benefits to the concerned community” (Libosada 1998).

<sup>2</sup> Personal communication with Maria Ravanilla, Department of Tourism, Philippines, Director of Bicol Region on March 22, 2005.

<sup>3</sup> Logistic regression analyses were used to model whale shark avoidance behavior.

<sup>4</sup> *Butanding* is whale shark in Bicolano.

<sup>5</sup> Personal communication with Tito Arevalo, former Tourism Officer of Donsol’s Tourism Office, May 2004.

<sup>6</sup> Personal communication with Karina Escudero, March 11, 2004.

<sup>7</sup> Personal communication with Will Jones, Development Director of Friends of Nature, October 1, 2004.

<sup>8</sup> K-selected species have more or less stable populations at or near carrying capacity in relatively stable habitats.

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