

Environmental Awareness: Endangered Marine Animals in Australia

Jeffrey Clayton

George Mason University

GCH 360-002 – Health and Environment

Due: December 3, 2014

Environmental Awareness: Endangered Marine Animals in Australia

An animal that faces the risk of extinction, or an endangered species, should concern the minds of all. Currently, the world suffers an increase in these endangered species. From sea turtles to polar bears or even rhinos, most of these species that once used to thrive are declining due to human activity. Habitat destruction, overuse of natural resources and human induced climate change are factors that are contributing the near extinction of Earth's beloved species. Although some people are aware that species endangerment is becoming far more common, most do not understand the importance of the conservation of these species. Species can provide us with ecological, economical and social benefits. They can serve as indicators for environmental quality such as the decline of bald eagles warning us about the DDT dangers (Mazzotti, 2002). They can also filter our waters, or even like sea turtles, help maintain the health of sea grass beds and coral reefs that benefit commercially valuable species such as shrimp, lobster and tuna ("Sea turtle", 2014). I specifically mention turtles and water to introduce my focus, which is endangered marine animals in Australia. I plan on presenting 2 case studies on the conservation efforts of certain marine species in Australia and to further discuss the importance of conserving these species. The goal of this paper is to better understand why it's happening and how we can make efforts to change the decline in these species just as Australia is doing.

History/Severity of Issue

Nothing is more priceless and more worthy of preservation than the rich array of animal life with which our country has been blessed-Nixon" (Endangered Species Act, 2014). Attempting to protect endangered species is not a new phenomenon. Efforts have been put into place since 1966, the plight of the whooping crane, to preserve one of the Earth's beloved

species. It was during this time when the Endangered Species Preservation Act was put into place, until 1973 when Nixon had a completely new act written declaring the difference between threatened and endangered. The newer act also made it illegal to kill or take a listed species (The History, 1998). Although acts and rules have been set into place certain marine species populations have declined over the past few years.

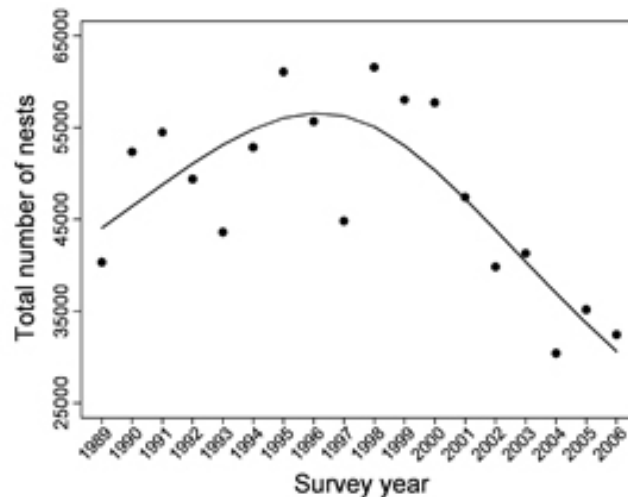


Figure 1: Nesting of Loggerhead Sea Turtles (*Recovery of Gulf of Mexico Ecosystems Tough to Measure*)

Human interference has affected the migrating patterns and living routines that species have followed for years. For instance the number of loggerhead sea turtle nesting sites along Florida beaches have taken a decline since 1998 (*Refer to figure 1*). No matter if it's attributed to oil spills, habitat destruction or global warming humans have altered their normal patterns of living. There are about 122 endangered marine species under the jurisdiction of The National Oceanic and Atmospheric Administration (Endangered Species Act, 2014). People fail to understand why this is of importance to the world. Every marine animal, just as any animal in any other ecosystem depends on one another for survival. It's part of the food chain. If one animal were to disappear from the food chain there would be an overabundance of another causing imbalances

all around. For example if a fish population were to decline all of the way towards extinction, other fish populations could rise that feed on the popular fish of the fishing industry. In simpler terms, fishing industries could take a hit because of the disappearance of a certain aquatic species. This same care for the fishing industry should be felt when it comes to endangered species. We still have a chance to change the declining sea populations around the world.

Australia harbors a colossal amount of biodiversity in its surrounding waters. They are at the forefront of some of the most successful conservation projects. In the next few sections, we will look at Australia and how we can use some of their examples to help endangered marine animals across the globe.

Australia

Australia is unique multiple ways. It harbors one of the seven natural wonders of the world, The Great Barrier Reef. This marine park stretches over 1800 miles and is home to over 1500 species (What is Australia’s Great Barrier Reef). 80% of the marine species here are not

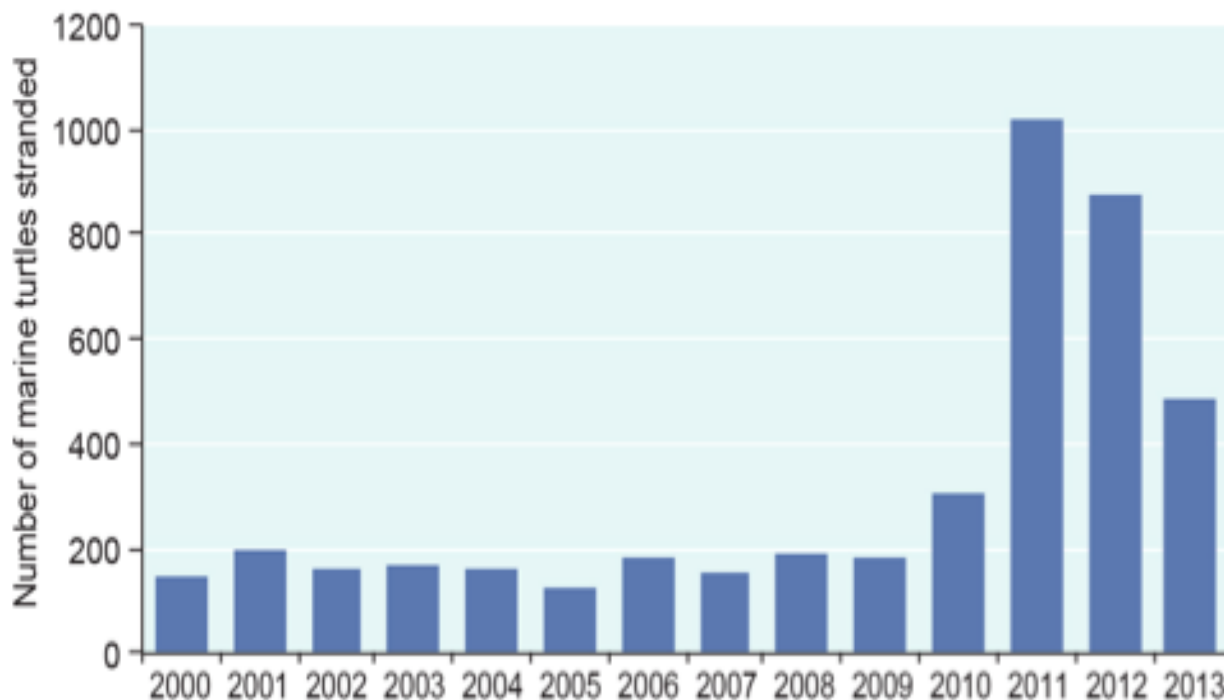


Figure 2: Marine Turtle Stranding, 2000-2013

found anywhere else on Earth. This goes to show the importance of maintaining the species that inhabit the waters here. “Australians love our whales, seals and sea turtles, but we might not all realize how close we came as a nation to losing them forever” (Threatened Species). Over the years, some of Australia’s species have lost the homes that were once abundant across the reef (*Refer to Figure 2*). More species are becoming stranded due to the reduction in sea grass along the reef. This reduction is partly due to climate change, which is a slightly more unmanageable problem. But, different acts and provisions have been put into place to ensure the protection of these reefs from controllable factors such as trawling, long lining etc. Shark fishing has even been banned due to the decline in sharks that play a vital population control role in the marine ecosystem. The point here is that many animals whether sea turtles, whales, sea lions or even Bluefin tuna are being carefully monitored and programs have been developed to protect these species here.

Sea Net Program

One program that has had a lasting success on Australia’s ability to maintain most of their species is the famous SeaNet Program. SetNet was put in place all the way back in 1999. It is almost along the lines of a unique collaboration with conservation experts and the fishing industries. “SeaNet provides information and advice on reducing environmental impacts and works directly with industry, managers and researchers to develop and implement improved fishing gear, technology and methods. It aims to minimize the catch of non-target species (by-catch) and encourage environmental best practice for industry” (Australia’s Biodiversity Conservation Strategy). Reductions in accidental captures of seals and sea-lions, seasnakes, seabirds, dugongs, marine turtles, whales, dolphins and sharks are only a few of the successes of the SeaNet program since it began. Fishing industries are still able to remain competitive with

assistance of OceanWatch, the creators of SeaNet, while remaining environmentally conscious (Australia's Biodiversity Conservation Strategy). This is only one of the many programs Australia has put into place to reduce the decline of marine species. They are aware of the benefit of these creatures to society whether that is economical, ecological or social.

Great Barrier Reef Marine Park Authority

The main organization that manages The Great Barrier Reef is the Great Barrier Reef Marine Park Authority (GBRMPA). They are the overseers for anything reef related as far as tourism, conservation or fishing related goes. The GBRMPA creates a zoning plan that shows where particular activities are allowed along the reef. 33% of the marine park doesn't allow for fishing or collecting (How the Reef is Managed). There is also a list of protected species for the Great Barrier Reef Marine Park. It is illegal for anyone to intentionally take one of these species unless given permission from the GBRMPA and they work hand in hand with the state/federal government to conduct appropriate actions to threats against these species. (How the Reef is Managed). This organization is responsible for all of the legislative aspects that come along with preserving the reef and they work hard to strategize for the long-term preservation of the reef. All of the work they do to protect and preserve the reef isn't just for the benefit of tourism or economic value of the reef but simply because they recognize the importance of biodiversity. The whales, dolphins, sea turtles, sharks and even plankton that inhabit this reef function dependently on each other. Without one species, another one in the reef will suffer as well. The GBRMPA works to protect species on the endangered list and keep biodiversity at a high. "Imagine the Reef with fewer species, with no variety, it would be a vastly different place, unable to sustain all that it does today" (How the Reef is Managed).

Analysis

The first section here listed information about Australia and their unique role in biodiversity in the regards to marine species. The focus of Australia's Environmental Sector is to protect one of the seven natural wonders of the world, which is The Great Barrier Reef. This reef and waters around it provide the home to over thousands of species. They work so hard to protect it not only because of the economical value of the reef, but also because of the role it plays in maintaining the balance of the ecosystem. Laws that prohibit shark fishing and programs that help the fishing industry compete without hurting these species are key in maintaining everyone's happiness.

The next section goes on to talk about a specific program called SeaNet. SeaNet is a program that successfully allowed for the cooperation of the fishing industries with conservation experts to allow sustainable fishing practices. This program was actually able to reduce some of the accidental catches of some endangered species since its introduction in 1999.

And lastly, I begin to talk about the efforts of the Great Barrier Reef Marine Park Authority (GBRMPA). The GBRMPA help ensures the one of the greatest marine parks in all ways possible. They are responsible for tourism, conservation efforts and control of the fishing industry. The work on ways to maintain the biodiversity of the reef as well as develop long-term assessment plans and better ways to manage the reef's ecosystem.

Conclusion

Species endangerment has been taken into the consideration before the 21st century. Sometimes it's the way of life for animals to come and go in large numbers. But when you live in an age where the actions of humans are directly affecting their lives it's time to take action. Only some environmental organizations and groups see the long-term effect of unsustainable

practices affecting our marine life. Australia's efforts to maintain one of the most biological diverse bodies of water none to man should be taken note of when it comes to respecting our local waters. As you can see there are 122 endangered marine species under the jurisdiction of NOAA. These names weren't just thrown on a list because they should be noticed but because their actual population is declining. With the introduction of more programs worldwide and ways to live more sustainably without polluting our Earth's waters, we can make a change.

References

Australia's Biodiversity Conservation Strategy - Case studies. (n.d.). Retrieved December 2, 2014, from <http://www.environment.gov.au/biodiversity/conservation/strategy/case-studies#arid>

How the Reef is Managed. (n.d.). Retrieved December 7, 2014, from <http://www.gbrmpa.gov.au/managing-the-reef/how-the-reefs-managed>

Endangered Species Act (ESA). (2014, October 10). Retrieved December 1, 2014, from <http://www.nmfs.noaa.gov/pr/laws/esa/>

Mazzotti, F. (2002, September 1). The Value of Endangered Species: The Importance of Conserving Biological Diversity¹. Retrieved November 16, 2014, from <http://edis.ifas.ufl.edu/uw064>

Nas-Sites. (2013, February 26). *Recovery of Gulf of Mexico Ecosystems Tough to Measure*. [Photography] Retrieved from <http://nas-sites.org/insights/2013/02/26/recovery-of-gulf-of-mexico-ecosystems-tough-to-measure/>

Pasick, A. (2014, August 14). *Six charts to show that the Great Barrier Reef is in deep trouble*. [Photograph] Retrieved from <http://qz.com/249442/six-charts-to-show-that-the-great-barrier-reef-is-in-deep-trouble/>

Sea turtle. (2014, January 1). Retrieved December 1, 2014, from <http://www.worldwildlife.org/species/sea-turtle>

The History of the Endangered Species Act. (1998, January 1). Retrieved December 1, 2014, from <http://www.ti.org/ESAHistory.html>

Threatened Species. (n.d.). Retrieved December 1, 2014, from

<http://www.marineconservation.org.au/pages/threatened-species.html>

What is Australia's Great Barrier Reef? (n.d.). Retrieved December 1, 2014, from

<http://www.greatbarrierreef.org/about.php>