WHALE SHARK TOURISM

Siti Aqdawiya Pakaya

Geological Engineering, Universitas Negeri Gorontalo Sitiaqdawiya@gmail.com

A.Introduction

In February 2004, the Global UNESCO Network of Geoparks established in the UNESCO International Expert Group meeting in Paris. UNESCO Global Geopark is not a legislative appointment, but all the activities must comply with the international, regional, and national laws of the country where the geopark is established.

The development of wildlife tourism has been around for the last twenty years. The success of this sector has been marked by increasing public interest in using the marine environment as a recreational object, this causes wildlife tourism to have a high chance of experiencing growth in the tourism industry (Cater and Cater, 2007). The empowerment of wildlife tourism is seen as one way to divert the local economy where consumptive use of marine resources is shifted to non-consumptive uses whose use can be prolonged (Graham, 2004; Troëng and Drews, 2008).

An understanding of the human dimension of wildlife tourism is an important element of successful wildlife management in nature-based tourism areas. Traditionally, gathering information about tourist demand and experience has been the domain of the private sector and has been acquired for commercial gain. On contrary, studies of human-wildlife interactions for species management are generally conducted from a biological science perspective, which tends to focus on the negative impacts on the wildlife concerned and ignore the dimensions of human interactions.

In fact, natural resource management generally has the dual function of conserving wildlife while providing a quality recreational experience (Hammit and Cole, 1998; Manfredo, 2002). One of the Wildlife Tourism that is starting to be attracted by tourists is Whale Shark Tourism. By making whale sharks an important object, this tour becomes very interesting. It can be seen from the increase in visitors who are increasingly soaring. One of the efforts to preserve this tourism is to realize how vulnerable these animals are and what is their uniqueness.

B.Discussion

1. Whale Shark Uniqueness and Vulnerability

1.1 Whale Shark Uniqueness

Whale sharks are the largest of all fish and can reach a total length of more than 12 m (Stevens, 2007). The whale shark is the largest fish species in the world. It is characterized externally by a broad and flathead, with a huge and almost terminal mouth, very large gill slits, three prominent longitudinal projections on its upper side, a large first dorsal fin, a semi-crescent caudal fin, and a caudal fin. unique back, the pattern of checkered light spots and stripes on a dark background (Compagno, 1984; Last and Stevens, 1994). Although not much thing known about their habitat selection or migration patterns, the whale shark appears to be a highly mobile species. Whale sharks have been seen spending most of their time (often > 80%) at the surface (water depth < 20 m), with regular visits to depths of 300-500 m during the day while transiting the open ocean (Wilson et al., 2006; Brunnschweiler et al., 2009).

Whale sharks are also known to congregate near the shore in some locations. This behavior makes them the subject of a highly profitable ecotourism industry worldwide (Martin, 2007; Rowat & Engelhardt, 2007).

1.2 Whale Shark Vulnerability

Although this kind of behavior frequently causes whale sharks to become targets for illegal fishing. As whale sharks are considered a vulnerable species, Bradshaw et al (2008) emphasize the importance of understanding their behavior as well as the pathways of their migration as they can travel from protected areas to areas that are still threatened.

Norman (2005) states that whale sharks are among the species classified as threatened on the IUCN Red List. There has been a growing tourism industry that focuses on interacting with whale sharks in many locations around the world (Dearden, Topelko, and Ziegler, 2008). The vulnerability of this species and the increasing volume of tourists that emerge now become an indicator of ecological and economic problems for the development of whale shark tourism. Duffus and Dearden (1990) suggest that if there is an uncontrolled growth of a wildlife tourism site, the site may collapse due to two factors i.e. the loss of targeted species as the result of excessive environmental impacts, and decreased visitor numbers as a result of perceived adverse experiences. According to Manyoe, (2021) a tourism site must have a vulnerability value of 10%

Concerns have been raised according to the impact of these tourism opportunities on target species, in some studies suggesting the wildlife tourism is just another form of exploitation of dangerous marine resources (Ormas, 1999).

2. Whale Shark Tourism in the World

Ningaloo Marine Park became the first place to provide whale shark tours, which was founded in 1989 which is located in Western Australia. Since then, Ningaloo's whale shark tourism industry has become increasingly recognized by the public. The Whale Shark has become a tourism icon not only for the region, but for the whole of Western Australia.

In 1993, the Department of Environment and Conservation (DEC) began to regulate the course of this industry due to its growing popularity (Coleman, 1997). According to the DEC, the demand for whale shark tourism permits is too high, therefore, restrictions are imposed on the issuance of license numbers due to the priority of conservation interests (Wilson, Mau, and Hughes, 2006). Whale shark habits that come seasonally are well known to tourists, from early March to late August. Therefore, the number of visitors will experience a spike up to two times compared to usual. However, the number represents a steady number since 2005 under current regulations, which allow for more than double the number of visitors in 1996.

Research in 1995 showed that there would be no significant reduction due to lack of participant satisfaction, this also led to the minimum separation distance of whale sharks and humans is increased. As a result, the regulations regarding the separation distance were changed by the management of tourist attractions. A follow-up survey in 1996 documented a reduced impression of crowding among tourists as well as a reduction in the incidence of tourists touching whale sharks, an act that is both prohibited and counterproductive.

All whale shark tourism organizers are certified by the Ecotourism and Nature Accreditation Program (NEAP), which defines ecotourism as ecologically sustainable tourism with a primary focus on natural area experiences that encourage environmental and cultural understanding, appreciation, and conservation. Several places in the world have become one of the best places with whale shark tourism, namely the East Coast of Africa, Honduras, Ningaloo Reef-Australia, Holbox Island, and Mujeres Island located in Mexico, Teluk Cendrawasih and Botubarani located in Indonesia.

Whale shark tourism fulfill five criteria according to the definition of ecotourism, as follows: 1) Whale shark tourism is based on activities in nature, 2) Whale shark tourism provides a kind of alternative to exploit this species, which makes this industry also committed to sustainably building a sustainable economy. ecological. Thus, it becomes a positive international force and leads to better change, 3) Whale Shark Tourism is also able to become an educational tool for the environment, characteristics, and habits of Whale Sharks, 4) The existence of this industry benefits the local community where it is located by providing fieldwork and attract tourists, 5) The existence of Whale Shark Tourism also benefits other tourism industries, especially accommodation and restaurant providers.

3. Whale Shark Tourism in Indonesia

Indonesia is one of the countries that have very high biodiversity, especially the marine diversity available in each region. With the wealth it has, Indonesia can build a wildlife tourism industry, one of them is Whale Shark Tourism.

We can find whale sharks in almost all water areas in Indonesia, such as in Sabang, Padang, Ujung Kulon, Thousand Islands, Probolinggo, East Kalimantan, Bali, Nusa Tenggara, Gorontalo, Central Sulawesi, Maluku, and Papua. The appearance of whale shark species in Indonesia is relatively seasonal, but not in Kwatisore, Cenderawasih Bay, Papua, and Saleh Bay, Sumbawa. In the sea area, whale sharks can be seen throughout the year (Tania, 2014). Whale shark species are fully protected and this decision was issued by the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number 18/KEPMEN-KP/2013 concerning the Determination of the Full Protection Status of Whale Sharks (Rhincodon typus).

4. Whale Shark Tourism in Gorontalo

We know that whale sharks have a preference for living or being active in waters with sea surface temperatures of 21°C and 25°C. The description of sea surface temperature conditions shows that whale sharks live quite comfortably in waters with a warm tropical climate, such as on the Botubarani beach, Gorontalo. Gorontalo is one of the areas in Indonesia which is a spot where whale sharks can be found. Specifically, the location is in the village of Botubarani, Bone Bolango district, Gorontalo Province. The development of Whale Shark Tourism will continue and is expected to be a trigger for the economic development of local communities. And this is also in line with the initiation of the Gorontalo Geopark development.

The use of whale sharks as a tourist attraction has been running both at home and abroad. This fish was previously the target of illegal fishing due to the high price of fish fins. However, over time whale sharks can be used for non-extractive fishing activities or in other words as a tourist attraction, and their safety has been regulated by applicable law.

Gorontalo Whale Shark Tourism is one of the best in Indonesia since its appearance has attracted local and foreign tourists. With the total number of whale sharks recorded at 40 individuals and all of them male, so that Gorontalo become the fourth region in Indonesia with the most whale sharks. Conservation of this tourism continues to be carried out and developed, one of that has done by installing an acoustic marker which is carried out by BPSPL Makassar.

C. Conclusion

The tourism sector has often been a pillar of the economy in a region, the promising prospects make this sector very attractive to various countries in the world. Indonesia is no exception, with its natural beauty spread throughout the existing regions, making Indonesia prioritize the tourism sector as a means of developing the country's economy. In Indonesia, one of the marine tourism that is experiencing development is whale shark tourism. This tour is also regulated in the law so that its continuity is more maintained. Gorontalo is one of the areas with high prospects for developing this tourism. By continuing to prioritize the development in every line of tourism, it is expected to support the local economy.

Acknowledgment

The author would like to express the deepest gratitude to DITJEN BELMAWA, Ministry of Education, Culture, Research and Technology, Republic of Indonesia, which has funded the 2021 Village Empowerment Development Program (P3D) Geological Engineering Student Association, Universitas Negeri Gorontalo. This program also received support from The Research Institute for Humanity and Nature (RIHN: a constituent member of NIHU) Project Number 14200102.

References

- 1. Bradshaw, C, J, A., Fitzpatrick, B, M., Steinberg, C, C., Brook, B, W. Meekan, M, G. (2008) Decline in whale shark size and abundance at Ningaloo Reef over the past decade: the world's largest fish is getting smaller. Biological Conservation, 141, 1894–1905.
- 2. Brunnschweiler, J, M., Baensch, H., Pierce, S, J. and Sims, D, W. (2009) Deep-diving behaviour of a whale shark Rhincodon typus during long-distance movement in the western Indian Ocean. Journal of Fish Biology, 74, 706–714.
- 3. Cater, C., and Cater, E. (2007). Marine ecotourism: Between the devil and the deep blue sea. Cambridge, MA: CAB International.
- 4. Coleman, J, G. (1997). A review of the biology and ecology of the whale shark. Journal of Fish Biology, 51(6), 1219–1234.
- 5. Compagno, L, J, V. (1984). FAO Species Catalogue. Vol. 4, Sharks of the world. An annotated and illustrated catalogue of shark species known to date. Part 1—Hexanchiformes to Lamniformes. FAO Fisheries Synopsis 125, 209–211.
- 6. Dearden, P., Topelko, K., and Ziegler, J. (2008). Tourist interactions with sharks. In J. Higham, & M. Lück (Eds.), Marine Wildlife and Tourism Management (pp. 66e90). Cambridge, MA: CAB International.
- 7. Duffus, D., and Dearden, P. (1990). Non-consumptive wildlife oriented recreation: a conceptual framework. Biological Conservation, 53(3), 213e231.
- 8. Graham, R, T. (2004). Global whale shark tourism: a "golden goose" of sustainable and lucrative income. Shark News, 16, 8e9.
- 9. Hammit, W, E., and Cole, D. N. (1998). Wildland recreation: Ecology and management. New York: John Wiley & Sons.
- 10. Last, P, R. and Stevens, J, D. (1994). Sharks and Rays of Australia. Melbourne: CSIRO.
- 11. Manfredo, M, J. (2002). Planning and managing for wildlife-viewing recreation. In M. J. Manfredo (Ed.), Wildlife viewing: A management handbook (pp. 1–8). Oregon, United States of America: Oregon State University Press.
- 12. Manyoe, I. N., Arifin, Y. I., Napu, S. S. S., & Suma, M. D. (2021, July). Assessment of the values of science, education, tourism and the risk degradation of Pentadio geothermal areas to developing geotourism in the Limboto Lake Plain, Gorontalo. In Journal of Physics: Conference Series (Vol. 1968, No. 1, p. 012047). IOP Publishing.

novateurpublication.com

- 13. Martin, R.A. (2007) A review of behavioural ecology of whale sharks (Rhincodon typus). Fisheries Research, 84, 10–16.
- 14. Norman, B. (2005). Rhincodon typus. IUCN 2011, IUCN red list of threatened species, version 2011.1. http://www.iucnredlist.org (2011) Accessed 15.06.11
- 15. Orams, M. (1999). Marine tourism: Development, impacts and management. London: Routledge
- Rowat, D. and Engelhardt, U. (2007) Seychelles: a case study of community involvement in the development of whale shark ecotourism and its socio-economic impact. Fisheries Research, 84, 109–113
- 17. Stevens, J.D. (2007) Whale shark (Rhincodon typus) biology and ecology: a review of the primary literature. Fisheries Research, 84, 4–9
- Tambunan, J.M., Anggoro, S. dan Purnaweni, H. 2013. Kajian Kualitas Lingkungan dan Kesesuaian Wisata. Prosiding Seminar Nasional Pengelolaan Sumberdaya Alam danLingkungan 2013: 356-362
- 19. Tania, C. (2014). Pemantauan dan Studi Hiu Paus di Taman Nasional Teluk Cendrawasih-Laporan Pemantauan Tahun 2013-2014. Wasior: TNTC & WWF Indonesia. http://awsassets.wwf.or.id/downloads/bmp hiu paus pdf e_document.pdf
- 20. Troëng, S., and Drews, C. (2008). Money talks: a global economic valuation of marine turtles. NOAA Technical Memorandum NMFS SEFSC, no. 567, pp. 57, January, 2008.
- 21. Wilson, S, G., Polovina, J.J., Stewart, B, S. and Meekan, M, G. (2006) Movements of whale sharks (Rhincodon typus) tagged at Ningaloo Reef, Western Australia. Marine Biology, 148, 1157–1166.
- 22. Wilson, E., Mau, R., and Hughes, M. (2006). Whale shark interaction management: Progress repor 2006. Perth, Western Australia: Department of Environment and Conservation

Glosarium

External:	the outside of the body
Ecology:	interactions that occur between living things with each other and also
	interactions between creatures with the environment.
Conservation:	is the preservation or protection of a certain area or animal
Acomodation:	something can be in the form of objects or services provided to facilitate needs
	or facilitate needs.

Biography

Siti Aqdawiya Pakaya



Siti Aqdawiya Pakaya was born in Gorontalo, May 08, 2021. She is a student of Geological Engineering at Gorontalo State University, who is currently in the 5th semester. In 2020, Aqdawiya won the 2nd place in the Drama Writing competition of University Student Art Week (PEKSIMITAS) Faculty of Mathematics and Natural Sciences level. In 2021, Aqdawiya also participated in the MIPA Qur'anic Olympiad with her two teammates and got 2nd place in the Fahmil Qur'an of MIPA Qur'anic Olympiad 2021. She is active in organization activities by joining Geological Engineering Student Association (HMTG J.A.K UNG) as Scientific Intellectual Division member

and secretary of Student Section- Indonesian Geological Experts Association (SM-IAGI UNG). Aqdawiya is also active in the world of writing. In 2018, Aqdawiya has published a short story with the title "Laa Tahzan" and included in High School short stories collection. Moreover, from 2020 to 2021, she publish five solo novels and one anthology novel using her pen name, Naila Attaya.