

# Effects of the COVID-19 Pandemic on the Marine Mammal Tourism of Walvis Bay, Namibia: Through the Lens of Sustainable Tourism

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## ABSTRACT

The COVID-19 pandemic has had a major effect on various industries around the world, especially tourism. The Marine Mammal Tourism (MMT) industry is one of the sectors that has been affected by travel restrictions and health and safety protocols, and the consequences of these on the industry are unknown. This study examines the effect the pandemic has had on the marine mammal tourism industry in Walvis Bay, Namibia. The results of the key informant interviews (KII) and the focus group discussions (FGD) show that COVID-19 affects the industry in the following thematic areas: 1) tour operation; 2) income; 3) employment; 4) community involvement; 5) protocols and code of conduct; and 6) ecology. These thematic areas are discussed in the context of the goals of sustainable tourism. This paper also presents some policy recommendations for the sustainable development of the MMT industry of Walvis Bay.

Keywords: COVID-19, marine mammal tourism, sustainable tourism, Walvis Bay, Namibia

The tourism industry is identified as a major driver of economic growth, generating USD 1,481 billion in international tourism receipts in 2019 (WTO, 2021). The expansion and growth of the industry have a consequent impact on the environment and the well-being of the community of the local destination, thus, it has to be managed sustainably. A large part of tourism, especially nature-based tourism, is built on the experience-seeking behavior of the visitor to interact with attractive natural areas and pristine environments. This activity can exert pressure on the integrity of the area, which may consequently lead to environmental degradation and wildlife disruption (UNEP & WTO, 2005).

Marine mammal tourism (MMT) is one example of a tourism activity that is dependent on the environment and wildlife to provide an unforgettable experience for tourists. MMT is defined as a type of recreational activity that usually involves travel to a place that focuses on the marine environment (Orams, 2002). Marine mammal tourism is similar to wildlife watching, and activities focus on charismatic animals such as dolphins. This type of tourism may

be beneficial in raising the environmental awareness of the guests and may trigger their interest in protecting marine mammals and their habitats. The marine mammal tourism sector was estimated to have brought over 13 million people to see dolphins, whales, and other cetaceans in their natural habitat in 2009. It generated a revenue of about US\$2.1 billion and employed over 13,000 people in 119 countries (O'Connor et al, 2009). However, these activities may cause disturbance to the species being observed and may pose long-term negative consequences for these animals (Hoyt, 2008).

By creating an interest in marine mammals, tourism may serve as a platform for promoting the conservation of endangered and threatened marine animals. The long-term advantages of wildlife conservation include contributions to the economy, environment, culture, research, and education. The benefits derived from it are larger compared to harvesting wildlife (Amura, 2020). This highlights the need to ensure that tourism activities, such as the MMT, are sustainable to maximize the benefits from them.

The United Nations – World Tourism Organization (UNWTO, 2013) defined sustainable tourism as “tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities”. By this definition, sustainable tourism seeks to find a compromise between the economic, environmental, and social goals of a community and the tourism industry (Streimikiene & Svagzdiene, 2021). The World Tourism Organization defined sustainable tourism in three dimensions: 1) optimal use of environmental resources; 2) maintaining the socio-cultural authenticities of the host communities; and 3) ensuring viable and long-term economic benefits (UNEP and WTO, 2005). Based on these pillars, UNEP and WTO (2005) identified the 12 aims for an agenda of sustainable tourism, which include: 1) economic viability; 2) local prosperity; 3) employment quality; 4) social equity; 5) visitor fulfillment 6) local control; 7) community wellbeing; 8) cultural richness; 9) physical integrity; 10) biological diversity; 11) resource efficiency; and 12) environmental purity. This balance guarantees that the tourist business has a positive influence on the local community while also benefiting investors and stakeholders financially. UNWTO (2013) emphasized that tourism in developing countries, like Namibia, needs to be carefully planned and managed. Further, the development of the sector should be done sustainably to enhance the local socio-economic impact of tourism.

Tourism is one of the major industries in Namibia, contributing over USD 430 million to the country's gross domestic product annually, second only to mining in terms of contribution to the Namibian economy. Its value has increased by 8-10% per year over the past decade and contributes roughly 14% to the GDP (Mendelsohn et al., 2010). This growth in tourist-related income has resulted in a progressive increase in the number of tour operators starting new operations and expanding existing ones. In 2007, an estimated 422 000 tourists visited the coast, accounting for over half of all visitors to Namibia that year. In the same year, the tourist industry employed around 18% of the country's workforce (Barnes & Alberts, 2008). Tourism-related employment was expected to grow to almost 36 000 jobs by 2020, accounting for 20.7% of total employment in the country (Moseley et al., 2007). Despite a 28% reduction in 2019, the overall number of tourism-related employment increased to 81 000 by 2020 (SRD, 2022).

Unfortunately, the COVID-19 pandemic has led to a significant pause in anthropogenic activities. International tourism fell by 72% in the ten months between January and October 2020 due to the restrictions on travel and health protocols being imposed. This contributed to probably the “worst year” for tourism in history (UNWTO, 2020). Many countries closed their borders to tourists and required negative COVID tests to allow entry for returning residents. However, the positive effects of this on marine mammals have been the reduction in marine vessel traffic and the reduction of plastic and noise pollution (Bearzi, 2017). The extent of the impact of ocean vessel traffic on marine mammal well-being is still being investigated, but it certainly has detrimental effects. Marine animals are especially susceptible since they spend so much time on the ocean's surface, and their habitat overlaps with vessel activity. They are vulnerable to ship strikes, which can result in serious injury or even death (Dearden et al., 2020).

There have also been restrictions on local travel, which means that even domestic tourism has fallen. Once people started traveling again, they were still concerned about their health and avoided crowds or places that would require close contact with strangers. Since most marine mammal tourism is conducted from boats, this means that most people would avoid being on a 40-foot boat with 29 strangers, as this would most likely encourage the spread of the virus. So, the MMT industry has been badly affected by the pandemic. Those who are still set on going on an adventure and seeing marine wildlife up close would probably opt for private charters, but these are not cheap, and this would limit the availability of this option to most people.

The marine mammal tourism industry in Namibia is one of the areas that has been negatively affected. Namibia registered its first COVID-19 case on the 14<sup>th</sup> of March 2020, and borders were closed on the 17<sup>th</sup> of March, with a complete lockdown being initiated 11 days after that (UN, 2020). Eventually, the lockdown was lifted and local economic activities began. However, domestic tourism for the MMT industry is very limited since most of the tourists are from outside of the country. This has resulted in a major loss of income for the industry, while other industries are slowly recovering by leaning on their domestic clientele.

Because tourist businesses are continually expanding their operations to earn income, the

pandemic's effect on employment and revenue in this sector is likely to be significant. The loss of income for tour operators would have a severe impact and might result in job losses for their employees. The consequences of the pandemic, on the other hand, may have a positive effect on conservation efforts in Namibian maritime environments, particularly when it comes to dolphins and seals, by reducing interaction between commercial tourist vessels and marine species. Conservation is one of the Namibian communities' most fundamental principles, as evidenced by the fact that Namibia was the first African country to include environmental preservation and conservation in its Constitution. More than 43% of Namibia's land area is currently under conservation management in the form of community-run conservancies. (NTB, 2014).

The industry has grown unregulated for the last 30 years, with no restrictions on the number of boats or operators. There are some common factors in regulations and policies in the marine mammal tourism industry around the world, such as a stipulated distance from the animals, and this is usually reflected in the code of conduct. However, there is a low compliance rate when tourists may insist or pay more for closer interaction with animals. The code of conduct governing the Namibian MMT industry was never completely implemented and is currently not being adhered to (Leeney, 2014). The lack of definitive research on the impacts of marine mammal tourism leaves policy makers unable to enforce regulations. In addition, no study has been conducted yet to document the COVID-19 related changes in the operation of the industry.

This paper will attempt to address this gap in information. Specifically, this paper will describe the pre-COVID state of the MMT industry of Walvis Bay, Namibia; examine the effects of the COVID-19 pandemic on the MMT industry; analyze how these effects relate to sustainable tourism; and recommend some policies for the sustainable management of the industry.

## METHOD

### Data gathering tools

This study used mixed methods in data gathering. Due to limitations in conducting face-to-face interviews, key informant interviews (KIIs) and focus group discussions (FGDs) were conducted through online platforms such as email correspondence and Zoom.

This study is mainly descriptive in nature because of the limitations in gathering extensive primary data due to the mobility restrictions of the pandemic (the primary author was based in the Philippines during the duration of the study) and connectivity issues of potential respondents in Namibia.

Secondary data were collected from reports on the MMT industry as well as published research articles from Namibia on the local species of dolphins and seals and their population and behavioral patterns. It also included research on MMT regulation and growth over the last two decades.

Key informant interviews were conducted with the Namibian dolphin project, tour operators in Namibia, ocean conservation organizations and members of the local community from December 2020 to March 2021. Key informants were chosen as to their willingness to participate in the study and their access to the internet connection. In compliance with the National Ethical Guidelines for Health and Health-Related Research (PHREB, 2017), prior informed consent was obtained before the conduct of the interview. The consent form was explained thoroughly to the respondents in English. The interview was conducted through email using a semi-structured interview schedule. A total of eight respondents out of a possible 10 tour operators, two representatives from environmental organizations in the area, and 22 community members with basic marine biology knowledge were interviewed for this purpose.

Key informant interview questionnaires for tour operators included questions on their operations and the effect of the COVID-19 pandemic on their operations. Key informants from the environmental organizations were asked about their activities in marine mammal conservation, perceptions about the governance of the MMT industry, and their observations on the possible effect of the pandemic on the industry and on the behavior of mammals. On the other hand, community members were asked of their level of involvement in the industry, as well as their general knowledge of the industry, and their perceived effect of the pandemic on the industry. A focus group discussion (FGD) to validate preliminary results of the secondary data and KII was conducted on the 1<sup>st</sup> of February 2021. It was attended by six participants, including a representative from the Namibian Tourism Board (NTB). The economic effects of the pandemic on the industry were discussed during the FGD, as were other issues related to the governance of the

MMT industry. From the responses of the participants of KIIs and FGD, a word cloud was generated using NVivo 12, a qualitative data analysis software, to identify common words and emerging themes.

Walvis Bay is Namibia's second largest city and it

Namibia is a hotspot for marine animal tourism in Southern Africa. The Benguela current's cool upwelling along the Namibian coast supports a strong fishing sector, which contributes significantly to the country's GDP (Lange, 2003). Researchers,



Figure 1. Study site (Source: Khaki Fever Safaris,n.d.)

is surrounded by the desert on all sides except where its coastline meets the Atlantic Ocean (Figure 1). As of 2011, the population of Walvis Bay is roughly 62 100 people (NADPS, 2011) and it has a mild cold desert climate characterized by frequent fog. An international airport, a railroad, and road networks connect the city to the rest of the country. Hotels and restaurants of international standards are also common. The bay is home to the country's largest port and this is where cruise ships dock and where most tour operators begin their tours and then move up along the coastline towards Swakopmund, Henties Bay and Cape Cross. The city is the base point for 11 tour operators who specialize in marine mammal tourism (Leeney, 2014). There are around 24 seal colonies along the Namibian coast, with a population of over 650 000 animals.

environmental organizations, and sports fishers are all drawn to the bountiful fishing industry. Large marine animals that eat smaller fish are attracted to the plentiful fish stocks, which in turn draw tourists to marine mammal tourism. The Namibian coast is home to five common marine animal species: cape fur seals, humpback and southern right whales, and Heaviside and bottlenose dolphins. In addition, leatherback turtles and the mola, commonly known as the sun fish, live in the region. Dolphins and seals are the most frequently sighted animals. There are multiple Cape fur seal colonies along Namibia's coast, the largest of which is in the Cape Cross Seal Reserve. The Heaviside dolphin is a Southern African endemic that may be seen on cruises and from land (Gopal et al., 2016). Cape Cross is home to around 80 000 to 100 000 seals (Siyabona, 2020). Bottlenose and Heaviside dolphins also often bow-ride vessels

along the coast. Over one million travelers arrive in Namibia each year. One third of those tourists are from Germany, South Africa, and the United Kingdom (Hartman, 2009).

## Profile of the Respondents

### Community members

The group of community members were selected based on the criteria of having some marine biology background and should have lived in Walvis Bay for at least 5 years to be able to be familiar with the industry. The group consisted of 22 respondents with marine biology or fisheries-related degrees, with an age range of 29-40 years. Nine respondents are currently employed in the Ministry of Fisheries and Marine Resources, and are knowledgeable of the subject matter.

### Environmental Non-Governmental Organizations (NGOs)

Two organizations work in the area and deal directly with the conservation and protection of the seal and dolphin populations of Walvis Bay. These organizations are the Namibia Dolphin Project (NDP) and the Ocean Conservation Namibia (OCN). These organizations have published several studies relevant to this field. Both NGOs were represented in the KII and FGD.

### Tour boat operators

The MMT industry has a total of 10 tour boat operators, and 8 of them were able to participate in the interview. The ownership of the tour companies comprises of foreign-born owners who have lived in Namibia for at least 10 years and some have attained Namibian citizenship (Table 1).

### Analytical framework

This study examined the effect of the COVID-19 pandemic on the MMT of Walvis Bay, Namibia. Based on the results of KII and FGD, six emerging themes were identified based on the most frequent keywords or subjects mentioned in the responses of the key informants and FGD participants. These themes include: 1) tour operation; 2) income; 3) employment; 4) protocols; 5) community involvement; and 6) ecology. Possible implications of these themes on the sustainability of the MMT were further examined using the aims of sustainable tourism.

UNEP and WTO (2005) identified the 12 aims of sustainable tourism. These are economic viability, local prosperity, employment quality, social equity, visitor fulfillment, local control, community well-being, cultural richness, physical integrity, biological diversity, resource efficiency, and environmental purity. Economic viability aims to ensure that the tourism enterprise will continue to prosper and

**Table 1.** General profile of tour operators (TO) KII respondents

Profile	TO1	TO2	TO3*	TO4	TO5	TO6	TO7	TO8
No. of years involved in the business	27	24	20	23	24	16	19	11
No. of staff	12	10	9	5	10	9	10	8
No. of local staff hired	6	4	4	0	4	4	3	4
Type of boats	Catamarans	Catamarans	Catamarans	Kayaks	Deck boats	Catamarans	Deck boats	Catamarans
No. of boats	4	3	3	5	2	3	2	2
Passenger capacity of boats	30	30	30	2	20	30	20	20
Price of average adult ticket	US\$ 56	US\$ 56	US\$ 35	US\$ 50	US\$ 56	US\$ 56	US\$ 53	US\$53

\* The tour operator adjusted their ticket prices and income figures in their KII after initially submitting figures that were more consistent with the industry

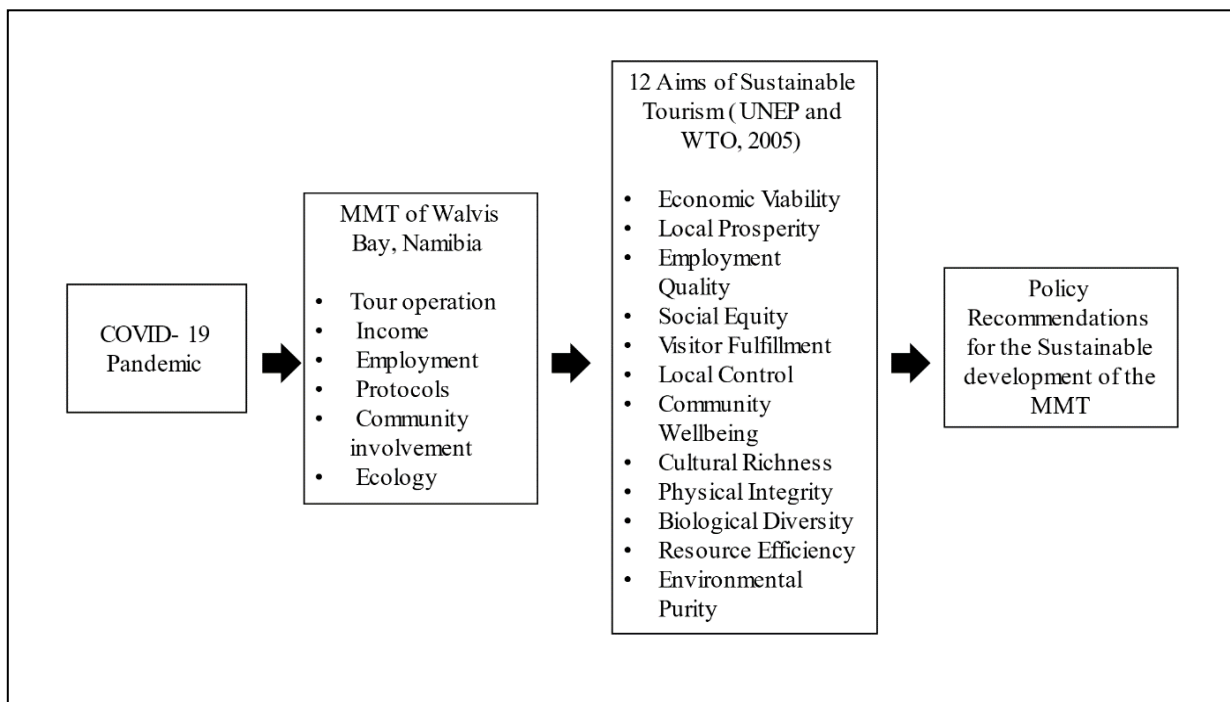
deliver its benefits. Local prosperity aims to maximize the benefits to the host community from tourism activity. Employment quality seeks to provide local employment opportunities, while social equity is for the widespread distribution of benefits from the tourism enterprise. On the other hand, the goal of visitor fulfillment is to provide a satisfying experience for visitors, while local control aims to engage communities in the enterprise. The goal of community well-being is to improve and strengthen the quality of life of the host community while respecting their cultural richness. Physical integrity seeks to avoid degradation of the environment; biological diversity is for conservation of the natural areas; resource efficiency aims to minimize the use of non-renewable resources in tourism activities. Lastly, environmental purity aims to minimize pollution in the environment (UNWTO, 2013).

Based on the results of the study, policy recommendations were drawn for the sustainable development of the MMT of Walvis Bay, Namibia.

## RESULTS

### The MMT industry prior to COVID-19

The study of Leeney (2014) states that there were eight companies in the MMT industry, and in 2010, these companies operated 25 boats that were used for marine mammal watching trips in Walvis Bay. All tour boat companies offered a range of activities, including charters and private fishing trips. The most popular activity was the mammal wildlife watching trips. These trips usually last for three to four hours and have a similar format across all the companies, focusing on specific features in Walvis Bay. Pelican Point is a popular spot for spotting Cape fur seals and Heaviside's dolphins. In 2010, these companies gained revenue of US \$2 992 815 through ticket sales alone. A code of conduct was developed in 2005 and adopted in principle, but it was never put into practice. In 2011, an updated code of conduct was suggested by one of the environmental organizations, the Namibia Dolphin Project, in collaboration with the ministry, but again, this was never implemented (NDP, 2011).



**Figure 2.** Analytical framework

There have been no recorded incidents of animosity between the locals and tourists. The visitors fill in satisfaction cards after each tour. Over the years, the satisfaction rating has consistently remained above 80%. According to the findings of the FGD, the industry has become increasingly unregulated over the last two decades. The Namibia Tourism Board's main focus is on ensuring that the vessels are seaworthy, that the boat drivers are licensed, and that the businesses are registered and paying their taxes. There was no policy that regulated the number of operating boats.

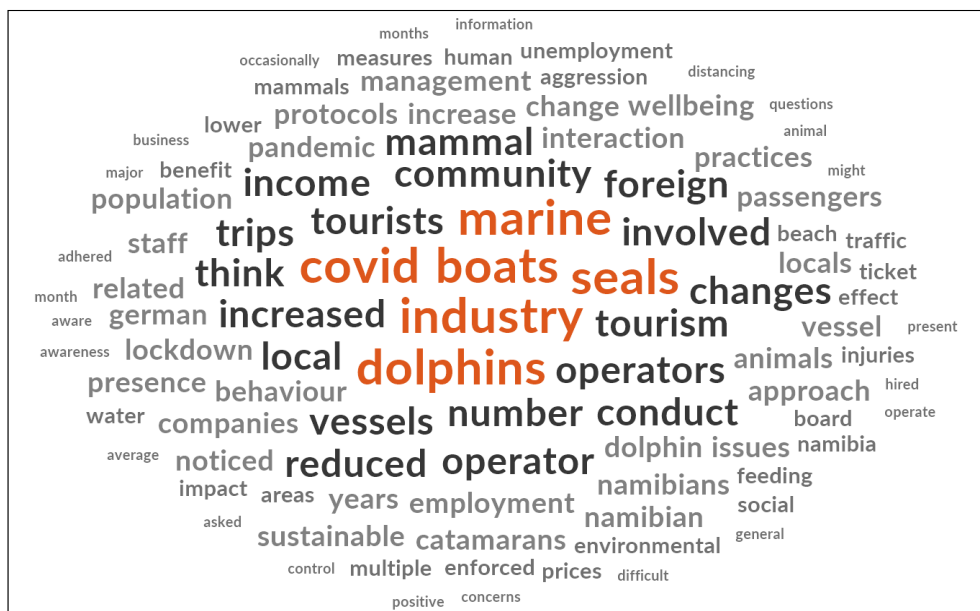
*Effect of COVID-19 on the MMT Industry*

Figure 3 shows the word cloud generated from the responses of the participants of KIIs and FGD using qualitative data analysis software (NVivo 12) to identify common words and emerging themes. The most frequently mentioned words include the terms COVID, marine, boats, seals, dolphins, and industry. These are followed by the terms mammal, community, foreign, involved, changes, tourism, operators, conduct, number, vessels, reduced, local, trips, and income. Based on these, general themes

**Table 2.** Pre-COVID profile of the MMT industry

Profile	2008	2010	2019
Full-time or equivalent jobs	54	80	91
Number of companies	8	8	10
Number of boats	25	27	29
Average Ticket price	US \$41	US \$45	US \$52
Number of passengers for one year	51 980	66 507	142 465
Number of trips per year	n/a	4412	5460
Estimated total revenue for 1 year	US \$2,189,540	US \$2,992,815	US \$7,408,180

Source: 2008 and 2010 data from Leeney (2014); 2019 figures KIIs



**Figure 3.** Word cloud visualization of the responses of KII and FGD participants

were identified.

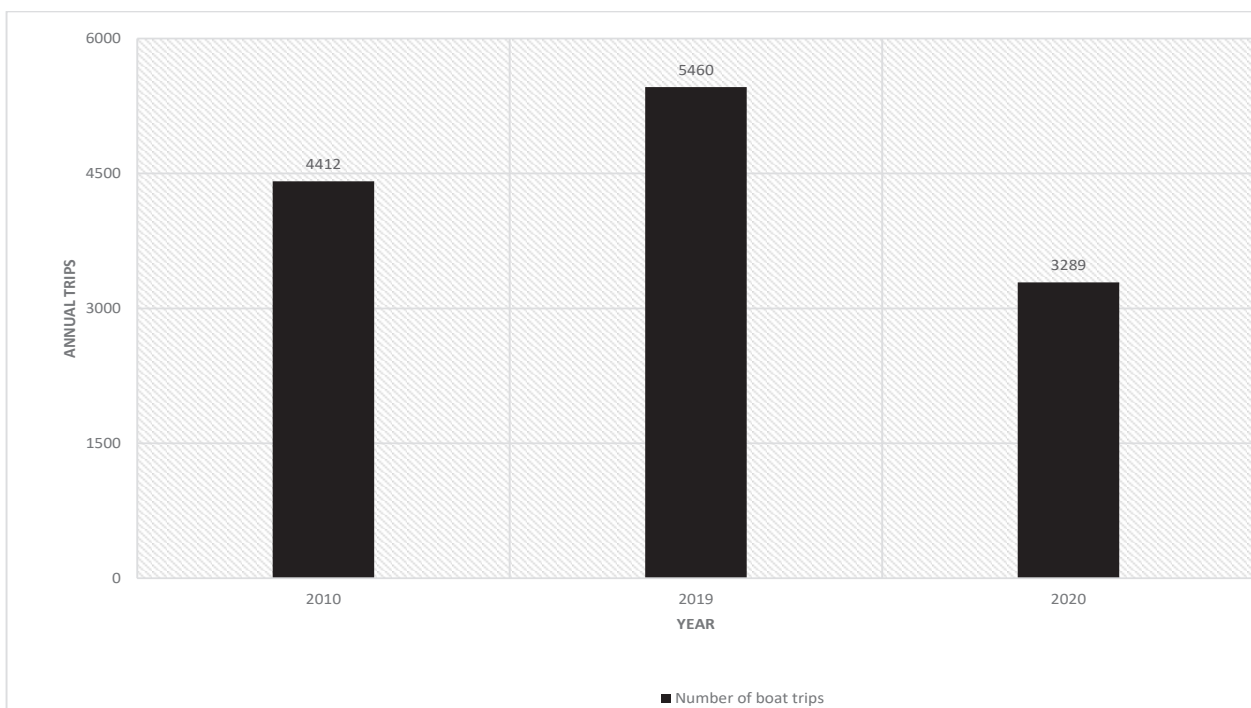
In this paper, the effects of the pandemic on the MMT industry of Namibia are largely categorized into the following themes: 1) tour operation; 2) income; 3) employment; 4) community involvement; 5) protocols and code of conduct; and 6) ecology. Each of these themes is discussed below.

#### *Tour operation*

Results from a 2010 study discovered that a total of 4412 boat trips were carried out by the various tour operators. Assuming the tour operators worked for 364 days a year, it would translate to an average of 12 trips every day (Leeney, 2014). The number of boat trips increased in 2019, from 5460 trips a year to an average of 15 trips a day for the entire industry. Most tour operators provided information on the number of boat trips per week, and this was consistent among all the eight operators interviewed. This data was converted into an annual number of boat trips for each tour operator by multiplying the number of weeks in a year by the number of trips per week. Averages were then used to estimate the number of trips for the companies that were not interviewed.

In 2020, the number of trips dropped to 3289, showing a 40% drop in the frequency of trips (Figure 4). Results showed that there was a significant COVID-19-related reduction in marine traffic worldwide (Stephens, 2020). This is consistent with the situation in Namibia, as the number of trips was severely affected by the local lockdown that lasted for months.

To adapt to the new normal of their tour operation, boat operators made some adjustments and are now required to sanitize their equipment and vessels thoroughly after every trip. This practice increased their turnaround time and decreased the number of trips possible per day. The social distancing requirement of maintaining 6 feet between people also had a huge impact, as it limits the number of guests that can be taken on every trip. Operators with smaller boats with a capacity of 10 passengers could only take 5 or 6 passengers, and this greatly affected their income. Operators with different sizes of boats in their fleet only use the larger boats and try to fit as many people as possible while still adhering to the regulations.



**Figure 4.** Annual boat trips for the years of 2010, 2019, and 2020.

[Source for 2010 data (Leeney, 2014), Source for 2019 and 2020: KII data]



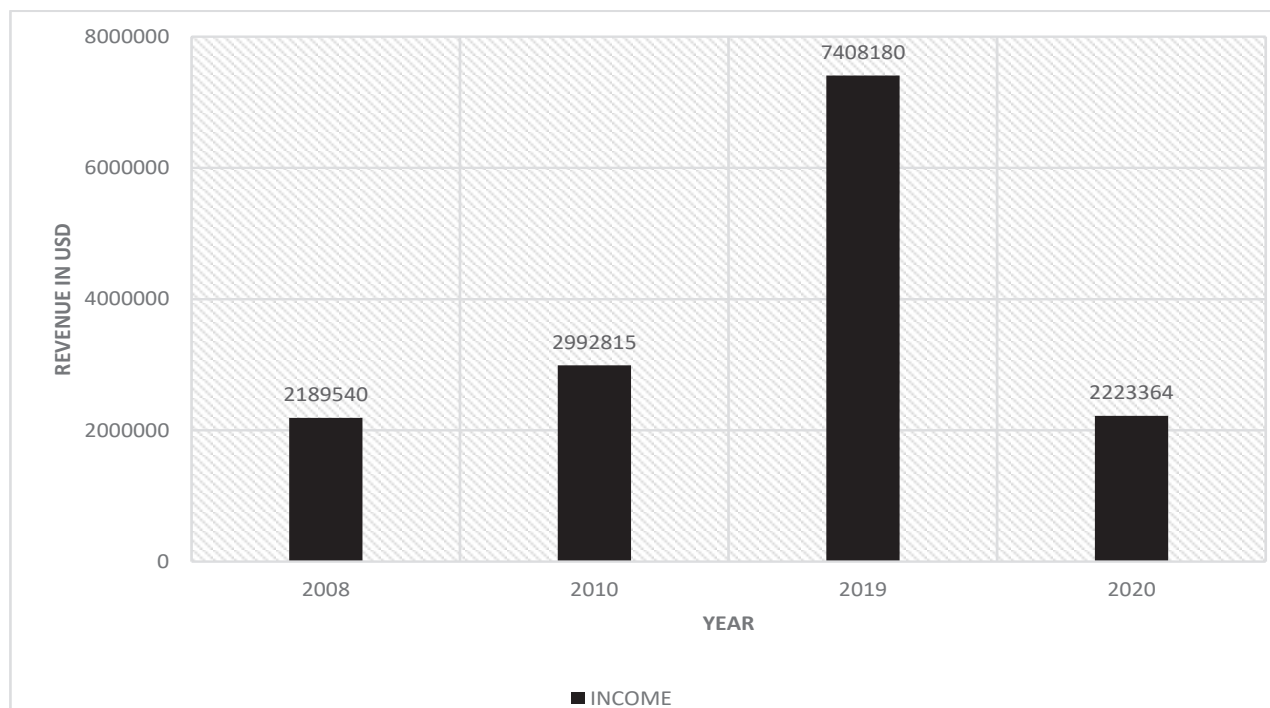
### Income

Figure 5 shows that the MMT industry suffered a massive decrease in income attributed to the pandemic. However, interviews with the tour operators showed that the reduced income was still sufficient to maintain and run their vessels while still making a livable profit. This demonstrates how profitable the MMT industry is to the economy of Walvis Bay. Research in other parts of the world estimated that tourism-dependent companies felt the negative effects of the pandemic for much longer than other economies. This was mainly because tourism can often be contact-intensive, and these services continued to struggle until people felt safe to travel in large groups and in close contact again (Behsudi, 2020). In the case of Walvis Bay, ticket prices remained the same at an average of US \$52, but boat trips were affected by a 40% decrease in operations, resulting in a 70% decrease in income. The revenue for each tour operator was calculated by multiplying the number of passengers by the ticket price. This figure was then multiplied by the number of days in operation for that year.

The option to diversify their source of income is restricted due to the Namibian tourism board's regulations that require a separate license and authorization to pursue any other activity that is not directly related to marine mammal excursions. Each tour operator's license states that a separate license must be applied for and authorized for each regulated company (NTB, 2014). This limited the options of the tour operators when it came to increasing their income in times of low operation.

### Employment

Figure 6 shows how employment fell from 91 full-time employees to 60 employees, which is equivalent to a 34% decrease. The number of local staff in 2019 was 35, and 31 of them were retrenched. From interviews with members of the community, it was confirmed that local staff members were the ones who lost their jobs due to the pandemic. The rate of unemployment negatively affected the community and resulted in a decrease in community wellbeing. The main reason for the retrenchment of local staff is presumed to be a result of their being hired in menial labor roles within the MMT industry. None

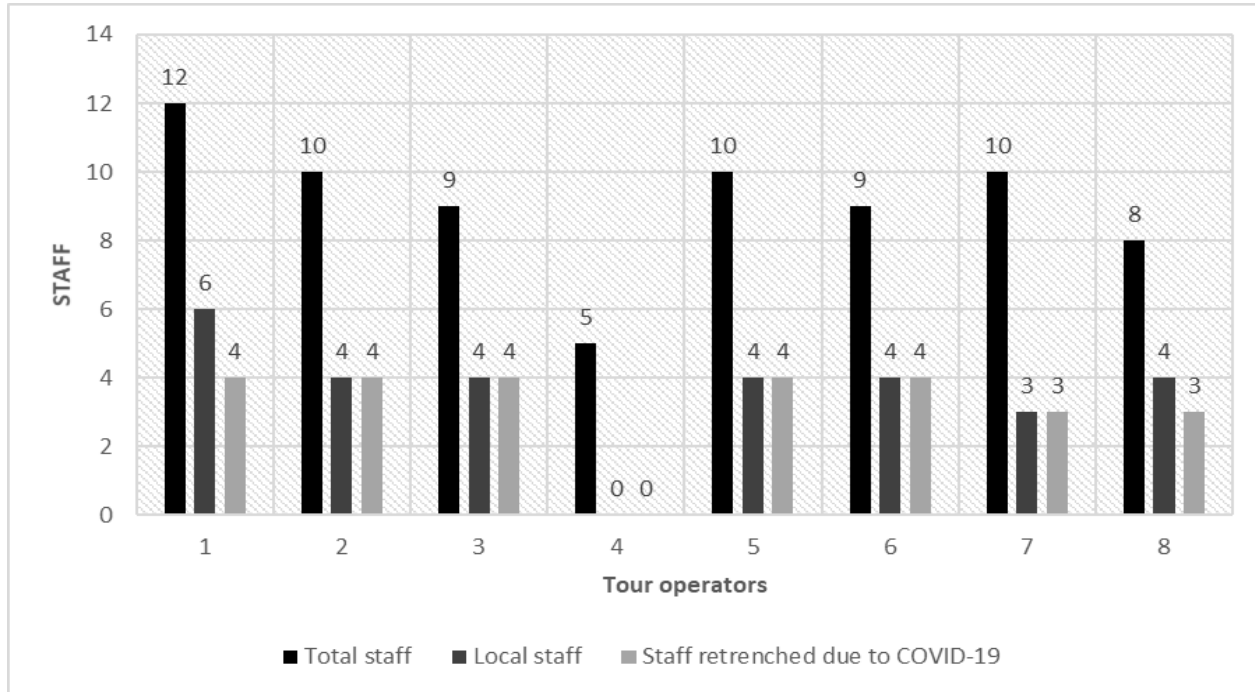


**Figure 5.** Annual Income for MMT for 2008, 2010, 2019, and 2020

[Source for 2008 and 2010: (Leeney, 2014); Data for 2019 and 2020 from KII; Annual revenue was calculated by multiplying each company's annual passenger number by the price of the ticket]

of the foreign workers are employed in menial jobs. The average salary of a local staff who did menial work was N\$3000 (\$200 USD). This made them dispensable in times of reduced income, such as during the COVID-19 pandemic.

Further, the government also tracks the number of non-nationals employed in tourism as a percentage of overall employment and employment trends. This is to guarantee that the number of non-nationals employed decreases over time, providing an opportunity for



**Figure 6.** Employment in the MMT Industry as of 2020. (Source: KII data)

Local staff were generally hired for ticket sales, the preparation of refreshments, and to maintain and clean the vessels. These are all jobs that the owners and more skilled staff members could do in the event that these staff members are not present. It appears that the hiring criteria for this industry are biased. Staff are required to interact with international tourists, so the required skills usually include being a polyglot, with languages like German being the most desired. This eliminated local staff as most do not speak German. The owners of these tour companies have lived in Namibia for a long time, with an average of 15 years. Some have gained Namibian citizenship in the process, but when it comes to hiring, the results of the interview showed that they were still more likely to hire people from their country of origin than local Namibians.

In the national policy for tourism in Namibia, it is provided that skills shortages should be addressed by increasing training and skills transfer programs between local Namibians and non-nationals entering or already part of the tourism industry (MET, 2008).

locals to be hired. When a tour operator applies for a company license and registration, these employee documents are necessary. However, the employment data of a company may vary after it is established, and the Namibia tourist board does not keep track of such data once they are already registered.

#### *Community involvement*

On the aspect of community involvement, it was evident in the results of the interviews that the local community was not involved in the management and control of the industry. None of the 22 community members were involved in any capacity. This is largely due to the lack of consultation and communication between the MMT industry and the local community. Eighty percent of the interviewed community members perceived that they were intentionally excluded from the industry, even as domestic tourists, and they did not have a sense of ownership when it came to the industry. Most of the key informants signified their interest in being included in the governance process and having the opportunity to participate.

The tour operators were encouraged to train local staff as tour guides, booking agents, and other tour operations staff at managerial levels of specialized tourism operations within the industry. The government has also encouraged tour operators to engage and work with community stakeholders to create community-based tourism operations (MET, 2008). However, as seen in the employment category, this capacity building was not taking place. Most Namibians speak English or Afrikaans in some capacity, but most were still more comfortable in their mother tongue. Another option was to have the educational presentations in the local vernacular language. Having the behavior of seals and dolphins explained in their local dialect would probably be of value to them. This would also create an opportunity for local staff to be hired as tour guides and not just as general laborers.

The side-lining of the local community was also evident in the environmental volunteerism of the area. Some environmental organizations such as Sea Search Research and Conservation (SSRC), require their volunteers to pay a monthly fee of \$860 USD per calendar month with a minimum commitment of 2 months, while their interns are required to pay a monthly fee of \$1490 USD (SSRC, 2019). Many community members who were interested in volunteering were not even capable of funding their accommodation in a different city. This completely excluded the regular Namibian students who often relied on government grants to pay tuition. The government then recognized that there was a need for facilitation of knowledge transfer. It also encouraged partnerships between the private sector, local communities, and individuals from disadvantaged sections of society (MET, 2008). This meant that local Namibians would be given preference for these volunteer positions.

#### *Protocols and Code of Conduct*

Previously, there was only a single set of protocols that were associated with the MMT industry, and these concerned visitor arrivals, fulfillment and hygiene of the vessels, and refreshments that were served. Due to the pandemic, there was a need for the development of a second set of protocols, especially for the COVID-19 pandemic. These protocols ensured that tourism could continue in Walvis Bay, albeit in a limited capacity, while still making sure that both tourists and tour operators are protected. The protocols in the industry also included the governance of the industry and how it was regulated.

#### *COVID-19 related Protocols*

Namibia took every precaution necessary to ensure the safety of tourists and Namibians alike. The Namibia Tourism Board published a toolkit with the protocol and Standard Operating Procedures (SOPs) for COVID-19 safety measures for the Namibian tourism industry, which included marine mammal tourism (Namibia Tourism Board, 2020). Booking offices, accommodation facilities, and other related support-services adhered to the newly implemented standards. Most tour operators were eager, or at the very least, comfortable with maintaining basic COVID-19 visitor protocols in a post-pandemic industry. The COVID-19 related protocols included social distancing on all vessels, which resulted in vessels that previously had a capacity of 30 passengers carrying between 15-20 passengers only. The SOPs also required the wearing of masks by both the tour guides and tourists throughout the entire tour and the availability of hand sanitizers at the ticketing site and on board. The vessels also had to be cleaned thoroughly with alcohol-based disinfectants between each trip to prevent the spread of the virus. The inconveniences were considered negligible as the changes in protocol were for the safety of both the tourists and the tour operators.

#### *Code of Conduct*

While there was strict adherence to the COVID-19 protocols, this was not the case for the Code of Conduct for tourists who were interacting with the animals. Tour operators enticed seals onto their vessels and encouraged tourists, including young children, to touch and feed seals. This was a clear violation of the code (Leeney, 2014). These improper practices have not changed even before the pandemic, and this is likely because the code was never formally adopted or enforced. Without government intervention, these practices may continue in the foreseeable future or until someone is seriously injured by a seal. The code of conduct was fully supported by the environmental organizations in Walvis Bay, but they did not have the power to enforce it. Currently, the governance of the marine mammal industry is under the control of the Namibian Tourism Board. The Namibian Tourism Board reports to the Ministry of Environment, Forestry and Tourism. According to the Ministry's tourism policy, Namibia does not want, nor can it afford, to allow any kind of tourism that produces only short-term profits while causing devastation, demotivation, or disruption to the lives of the local people (MET,

2008).

It is the responsibility of the Namibian tourism board to ensure that any tourism developments adhere to the provisions of the Environmental Management Act of 2007 and the Marine Resources Act of 2000. However, these acts in relation to the MMT industry dealt mainly with pollution and the capture of rare and endangered marine animals for the aquarium personal trade (NCE, 2016). The Namibian Tourism Board was primarily concerned with the regulation of tour activities by ensuring that vessels were seaworthy, adequately insured, and operated by licensed individuals (NTB, 2014). The Tourism Board also kept accurate records of income, taxes, and the demographics of employees during company registration. It was also their responsibility to ensure that tourists received tour packages that were value for money. There was no specific legislation dealing with the provisioning or interaction of humans with mammals in the marine mammal tourism industry. A proper legislative framework, policies, and institutional arrangements that include all the stakeholders would go a long way towards the strengthening of governance of the marine mammal tourism industry of Walvis Bay, Namibia.

### *Ecology*

Based on the perceptions and personal observations of the respondents, some significant effects of the tourism activities can be seen in the ecology of Walvis Bay. Tour operators had noted that it was becoming harder to spot dolphins, even the Heaviside dolphins that are endemic to the Namibian coast (Carslake et al., 2011). This could be a result

of a reduction in the population or a migration of the species to less vessel-congested areas. This was likely a survival tactic, especially for female dolphins with young who could not effectively communicate or find prey because of the underwater vessel noise. In recent years, there has been a noted increase in dolphin strandings in Walvis Bay, particularly in the lagoon of the same name. Historically, there have been occasional strandings when dolphins pursue prey in the lagoon where it is easier to catch. The recent increase in stranding was attributed to the dolphins' use of the lagoon as a refuge from the unregulated boat-based tourism industry (McGovern et al., 2019).

An interview with the representative from the Namibian dolphin project confirmed that there had been a significant reduction in dolphin strandings since the COVID-19 pandemic began, and vessel traffic has been reduced. Dolphins were also more visible in the water and could be observed from shore, which was not the case before. In 2019, the Namibian dolphin project recorded 26 dolphin strandings, but there were only six strandings recorded in 2020. A respondent from an environmental organization attributed this to the decrease in the number of commercial vessels.

However, there was also a noted increase in seal aggression, possibly caused by the interaction with humans prior to the pandemic (Table 3). The results of the interview with the respondent from Ocean Conservation Namibia, revealed that they had observed a few seals in the harbor looking very emaciated and aggressive as they were used to being fed by tour boats.

**Table 3.** Significant changes on animal activities based on the observations of KII participants from environmental organizations

<b>Animal activity</b>	<b>Pre-COVID-19</b>	<b>2020</b>
Seal aggression	Few incidents of aggression	Regular and more notable incidents
Seal health	Appear healthy	Emaciated
Dolphin strandings	26 strandings in 2019	6 strandings
Dolphin sightings	Infrequent even during research excursions	Very frequent even from land

## DISCUSSION

The effects of the COVID-19 pandemic on the MMT of Walvis Bay, Namibia was evident in six thematic areas. Some of the issues raised by key informants and FGD participants may not be a direct effect of the pandemic and possibly may have already existed (e.g., lack of community participation, lack of a code of conduct), but became more evident during the pandemic period. Most of these issues have not been formally documented before since there is a dearth of related research studies conducted in the area.

Table 4 shows the thematic areas attributed to the effect of the pandemic and the specific aims of sustainable tourism that it is associated with or may have implications for, based on the context of Walvis Bay. This section will analyze the results of this study through the lens of sustainable tourism.

The six thematic areas cut across various aims of sustainable tourism, with community involvement cutting across all of the 12 aims. In the same manner, the community well-being goal also cuts across all of the themes, signifying that the community is an indispensable element of sustainable tourism. Furthermore, since MMT is a form of nature-based tourism, the sustainability of the industry largely depends on the ecology of the area and the well-being of the mammals as the main attraction in the tourism activity. Ecology, as a theme in this paper, also cuts across all of the identified goals for sustainable tourism. Sustainable tourism is being promoted in Africa by the United Nations Environment Program (UNEP, 2020). The MMT in Walvis Bay, Namibia needs to be aligned with the said goal. According to UNEP and WTO (2005), for tourism to be sustainable, there is a need to ensure the economic contribution of tourism to the prosperity of the host community by reducing

**Table 4.** Relationship of the identified thematic areas with the aims of sustainable tourism (UNEP and WTO, 2005)

Aims of Sustainable Tourism	Thematic Areas					
	Tour operation	Income	Employment	Protocols	Community involvement	Ecology
Economic Viability	x	x	x		x	x
Local Prosperity	x	x	x		x	x
Employment Quality	x	x	x		x	x
Social Equity	x	x	x		x	x
Visitor Fulfillment	x	x		x	x	x
Local Control	x	x	x		x	x
Community Wellbeing	x	x	x	x	x	x
Cultural Richness			x		x	x
Physical Integrity				x	x	x
Biological Diversity				x	x	x
Resource Efficiency	x			x	x	x
Environmental Purity				x	x	x

leakage, supporting locally owned businesses, and providing opportunities for local employment with the best possible wages and conditions of work. Local employees should not be discriminated against; instead, they should be trained and capacitated. Article 5 of the Global Code of Ethics for Tourism (UN & WTO, 2001) provides that tourism should be a beneficial activity to the host community by sharing in the economic benefits gained from it. In the context of sustainability, the MMT industry did not adequately contribute to the economic viability, local prosperity, employment quality, social equity, and community well-being of the Walvis Bay community. The locals do not have the same access to jobs and resources within the industry. Requirements for languages that are not commonly spoken in Namibia mean there is no chance of locals being hired for higher paying jobs. Because of this practice, economic benefit is not retained in the host community and “leaks out”. In addition, most local employees were hired for menial jobs only and received low salaries. A similar study on Boracay Island, Philippines, has highlighted the possibility of an uneven distribution of wealth in the development of coastal tourism sites (Takashi et al., 2011). The island’s coastal tourism is generating considerable economic benefit, but the wages of the local workers are at the lowest level.

For the issues of employment and mass retrenchment of locals, there is a need for a dedicated system of capacity building for Namibian employees. This ensures that when a foreign employee is hired, they must train a certain number of local employees to perform the same tasks. Cross-training of employees should also be a priority for tour operators so that in the event of a skeleton staff, operations are not hindered because staff members have only mastered one aspect. It would also give them additional skills should they wish to pursue another career.

The issue of social equity has significant implications within the industry. One of the aims of sustainable tourism is local control, and it requires engaging and empowering the local communities in the management and development of the tourism activity in their area (UNEP & WTO, 2005). Providing opportunities for the community to participate in the MMT governance of Walvis Bay will ensure the sustainability of the tourism industry. There will be a fair distribution of economic and social benefits, which will consequently lead to local prosperity, social equity, and community well-being. A similar study on the park neighbor principle concluded that the

perceived separation of local communities from the benefit sharing of natural resources requires a more transparent approach (Strickland-Munro et al, 2010). Involving the community would give them a sense of ownership over the industry, which would hopefully lead to more active participation in its management and control.

Local prosperity, community wellbeing, and cultural richness require community involvement. In this industry, there is no community participation. There is no involvement in governance and no inclusion through the establishment of a domestic tourism sector. This was highlighted by the outbreak of the COVID-19 pandemic. Since 2008, the government has been encouraging tourism operators to introduce flexible seasonal and nationality-based pricing to stimulate domestic tourism and generate the benefits it brings to the local community. The direct beneficiaries of marine mammal tourism, including the private sector, municipalities, and non-governmental organizations, were encouraged to promote domestic tourism (MET, 2008). The common suggestion of the community members on how the industry could better accommodate them is to have a well-structured domestic tourism sector. This would also provide cheaper tickets for locals to allow them to enjoy the activities as well. In most countries, the locals pay a lower rate for tourist activities than international visitors. Regional tourists also often pay a different rate. To be able to encourage local or domestic tourism, it was suggested that Namibians would pay price A, visitors from countries within the Southern African Development Community (SADC) region would pay price B, and international visitors would pay price C. Coastal and marine tourism may close entirely in some areas where there are no alternative economic funds or resources, or where there is no stable domestic tourism sector, and this can be prevented.

Currently, this is not practiced within this industry in Namibia and the local community feels side-lined as the tickets for these tours are often too expensive for middle-class locals. There should be a well-defined domestic tourism sector within the MMT of Walvis Bay. Tour and activity operators should repackage their marketing strategies to accommodate local tourism (Marek, 2020). If the domestic tourist market segment is tapped, the industry will continue to thrive even if there are travel restrictions like what happened during the pandemic. Boat operators have learned to adapt to the new normal by practicing health protocols, and

these have been a huge factor in visitor fulfillment as tourists feel safe.

As for protocols, there is already a toolkit on Standard Operating Procedures (SOPs) for COVID-19 published by the Namibia Tourism Board (TBN, 2020). Although these procedures are new within the industry, they have been well received and are positively contributing to visitor fulfillment and environmental purity. The enforcement of a code of conduct would go a long way towards the protection and conservation of seals, dolphins, and other marine mammals in the area that are negatively affected by the commercial vessels of the tour operators. The International Whaling Commission has repeatedly recommended that codes of conduct be implemented by the most appropriate legal regulations in each country (IWC, 2009). This is equally important in the case of Walvis Bay.

There is a need to enforce the Code of Conduct to influence the visitor's practices, especially when they are interacting with the animals, to minimize stress on the mammals. In a similar case in Oslob, Cebu, Philippines, results of a study by Legaspi et al. (2020) revealed that whale sharks modified their behavior because of hand feeding and interaction with tourists. This was as a result of high tourism pressure in the area and the non-compliance with the code of conduct of the local government as provided in their Municipal Ordinance No. 091 of 2012. The results of the said study further revealed that 93% of tourists do not adhere to the minimum distance prescribed in the ordinance.

The Code of Conduct is considered one of the voluntary instruments for sustainable tourism (UNEP and WTO, 2005). This code of conduct would ensure biological diversity, environmental purity, and resource efficiency. It can also be an essential policy in raising awareness to minimize the physical impact of tourism activity on the environment and avoid wildlife disturbance. Traditional ecological conservation techniques that encourage human-animal and human-environment interaction with the natural environment are insufficient for the long-term protection of wildlife and the maritime ecosystem (Boyes, 2016). This requires more detailed information on animal behavior and the species that are endemic and unique to the Namibian coast, such as the Heaviside dolphin. This suggestion is founded on the premise that a meaningful experience with wildlife may transform a tourist's belief and that improved

conservation can be accomplished as a result of the interaction. (Orams, 2002). Information could be presented through information, education, and communication (IEC) campaigns involving the locals. Education and information campaigns on marine animals can be included as part of visitor satisfaction programs. Research on whale and dolphin watching tours in New Zealand revealed that including educational interpretation on the tours can effectively work as a conservation catalyst. The research further showed that there is a significant demand for this type of education (Luck, 2003).

On the aspect of ecology, some studies have documented changes in the behavior of wildlife in response to provisioning. The study by Foroughirad & Mann (2013) showed that humans would often provision wild animals with food to entice closer interaction. The effects of human provisioning on wild animals such as seals and dolphins can be difficult to understand and determine. There can even be residual effects on the offspring of provisioned mammals. A study conducted in the Galapagos Islands showed that people have noted a significant increase in whale and dolphin sightings that can be observed practically swimming on the beach during the pandemic. This has been observed in other species as well, including manta rays and turtles. The main plausible reason for this is the decrease in the noise level (Ormaza & Castro, 2020).

An effective management strategy could be the establishment of a marine protected area (MPA) or a no-entry zone. MPAs protect biodiversity while enhancing resilience and fisheries. They also serve as a safety net in the event that other forms of fisheries management strategies fail. In addition, they work to protect and restore endangered species and habitats (Cooney et al., 2019). MPAs protect the breeding and feeding grounds for dolphins and will significantly reduce the number of dolphin strandings. However, without government support, this would not be feasible as the tour operators highlighted that, in some cases, the dolphins are the ones that approach their vessels. The most viable recommendation would be to clearly demarcate an MPA and enforce it effectively until it becomes a safe zone for dolphins. It is also essential that the local community become active stakeholders in the marine mammal tourism industry so they can actively advocate for the protection, conservation, and sustainable management of the marine environment. Their active participation in the management process is very important since they will

be the ones left to deal with the consequences once the Heaviside dolphins are endangered or extinct and there are multiple cases of seal aggression.

Marine mammals are considered the 'main attraction' in the tourism industry of Walvis Bay. This highlights the need to protect and conserve them for the industry to be sustainable. Article 3 of the Global Code of Ethics for Tourism (UN and WTO, 2001) provides that tourism activities should be done in such a way that ecosystems and biodiversity are protected. In the case of the MMT, physical integrity, biological diversity, and environmental purity should be prioritized. When the marine resources are protected, there will be visitor satisfaction, which will eventually pave the way for economic viability and community wellbeing.

### CONCLUSION AND RECOMMENDATIONS

The effects of COVID-19 induced a pause in anthropogenic activities, and this has been felt all over the world, with a drastic effect on many sectors. The temporary closure and subsequent reduction in tour operations due to the pandemic has possibly defined the appropriate carrying capacity of the industry within Walvis Bay. Sustainability should always be a major priority in every industry, but especially in the marine mammal industry. The susceptibility of this industry to unregulated over-exploitation is evident in how the Walvis Bay industry has been negatively affected. The ecological effect of the pandemic was also highly significant, and this aspect requires further research and observation. The provisioning of the cape fur seals will have lasting effects on the population. The pandemic also highlighted the weak governance structure of the industry, which consequently negatively affected the protection and conservation of marine mammals. The implementation of adequate regulation and the inclusion of the local community as stakeholders would go a long way towards ensuring the sustainability of this industry. The implementation of a code of conduct in the industry should be an integral part of governance. There will be lasting changes within the industry post-pandemic due to the eagerness of stakeholders to make COVID-19 SOPs part of their daily activities. This was a positive aspect and would likely make a huge difference if there should ever be another outbreak of a similar case.

In the context of sustainable tourism, the MMT industry of Walvis Bay did not adequately contribute to the attainment of the identified aims of sustainable

tourism, specifically on economic viability, local prosperity, employment quality, social equity, and the well-being of the Walvis Bay community. There is still a lot of work to be done in the MMT industry for it to be truly sustainable. As building blocks for achieving sustainable tourism goals, the following strategies are proposed:

- a. Capacity-building of local employees and provision of opportunities for employment in the MMT industry;
- b. Educating the tourists/guests and the adoption and implementation of the Code of Conduct to protect the wellbeing of marine mammals;
- c. Promoting participatory governance by actively engaging the community in the management of the MMT industry;
- d. Development of local tourism and making available the recreational and educational benefits brought by tourism activity without any discrimination; and

Establishment of a marine protected area (MPA) to protect and conserve marine mammals.

- e. The pandemic has highlighted the needs of the MMT industry of Walvis Bay, Namibia. It has shown great potential for development as long as it is being managed sustainably, taking into account the balance between the environmental, social, and economic components of tourism for the greater benefit of the community in the area.

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