

**Research Paper: The Dolphin Encountour Research Center.****Introduction**

The tourism industry has grown to become one of the most significant enterprises worldwide, mostly in developing countries where it is the primary income source.<sup>1</sup> The touristic sector relies on the natural and cultural attractions of a particular region, appealing to tourists when choosing their holiday destinations<sup>2</sup>. Tourism occurs when a few people find a wonderful place, either natural as a beach or a valley, or cultural as ancient ruins or temples<sup>3</sup>. In the beginning, they adapt to the environment surrounding them, but as the number of tourists grows, changes begin to occur.<sup>4</sup> Many visitors enjoy the wonders the site offers, but they do not want to renounce regular life commodities<sup>5</sup>. More often than not, tourism harms the environment, jeopardizing its primary interest and source of income.<sup>6</sup> This increase in tourism and amenities start to degrade and pollute the area until it is no longer a tourist attraction<sup>7</sup>. One of many examples of tourism degradation of the natural environment would be the southern coast of India Goa, where the excessive and

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<sup>1</sup>Jose-Roberto, Perez-Salom, *Sustainable Tourism:Emerging Global and Regional Regulation*, 13 Geo. Int'l Env'tl. L. Rev. 801 (2001) at 1

<sup>2</sup> Angela Williams, *Reconciling Tourism and the Environment: a Task for International Environmental Law?*, 9. Vt. J. Env'tl. L. 23 (2007) at 2

<sup>3</sup> Jose-Roberto, Perez-Salom, *Sustainable Tourism:Emerging Global and Regional Regulation*, 13 Geo. Int'l Env'tl. L. Rev. 801 (2001) at 1

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

uncontrolled tourism lead to a contaminated site in a country without the financial and technological resources to recover the damage or mitigate its effects.<sup>8</sup>

Ecotourism or Environmentally Sustainable Tourism presents itself as a solution to the conflict between commercial tourism and environmental protection.<sup>9</sup> What if Ecotourism can be more than that? The case study presented in this paper will show how Ecotourism can be a way to generate income for the country while protecting the environment and funding scientific research. This approach will reduce the gap between scientists and civilians, and, most importantly, it will encourage new regulatory and protectionism legal frameworks that will help ensure the conservation of biodiversity for future generations.

### **Case Study**

Ponta do Ouro is a renowned beach in Mozambique that relies mostly on tourism.<sup>10</sup> Its pristine beaches are vast home to wildlife, but the main attraction is the wild dolphins' encounters.<sup>11</sup> The Dolphin Encontours Research Center has a modest hub on the main road, further from the beach than its competitors. Little did I know at the time that my experience with them would become far more than just a trip to see dolphins.

The Dolphin Encontours Research Center was founded in 1996 by South African citizen scientist Angie Gullan and is the commercial arm of DolphinCare Africa that works in the conservation and research to benefit the marine environment in Ponta do Ouro<sup>12</sup>. The Center

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<sup>8</sup> Angela Williams, *Reconciling Tourism and the Environment: a Task for International Environmental Law?*, 9. Vt. J. Envtl. L. 23 (2007) at 1

<sup>9</sup> *Id.* at 3

<sup>10</sup> AFRICA TOURISM, <https://www.africatourism.info/ponta-do-ouro-mozambique.php>, (last visited Nov. 22, 2020)

<sup>11</sup> *Id.*

<sup>12</sup> DOLPHIN ENCONTOURS RESEARCH CENTER, <https://www.dolphinencountours.org/>, (last visited Nov. 22, 2020) [here in after Dolphin Encontours]

provides ethical and educational marine mammal tourism and an intimate experience with dolphins and whales in their environment that ensures marine mammals' protection.<sup>13</sup>

The Encontours sells touristic packages that allow travelers to join scientists as they embark on seeing dolphins in the wild while collecting scientific information.<sup>14</sup> This form of tourism enables them to gather the money to fund their research and activities while ensuring that the activity is done in a sustainable way.<sup>15</sup>

The first part of the tour consisted of a thirty-minute lecture about dolphins and the work done by DolphinCare. All this is part of the organizations Code of Conduct for Marine tourism (annex 1)<sup>16</sup>. DolphinCare discovered that the approach in the tours of the area was harming the dolphins and creating a hostile environment. To make a more sustainable tourism Angie Gullan with Dr. A. Guissamulo, S. West, D. Rocha, Dr. SLC Gullan, Dr. V. Cockroft, and the International Dolphin Watch, created the first draft of the Code of Conduct in 1998<sup>17</sup>. The DolphinCare Code of Conduct was promoted to limit traffic and educate swimmers before going to the sea.<sup>18</sup> The Code became common practice in the area and has been evolving ever since it was created, taking in other marine animals and expanding the territories on where it is being implemented.<sup>19</sup> It is the hope of the DolphinCare organization that the Code keeps evolving with time.

During the lecture, they showed us a typical photo, often used by aquariums, showing an apparently smiling dolphin. They then explained that like any other animal that is being disrupted in its environment, dolphins would literally show its teeth as a way of warning the person to stay

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<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> PAKAGES, <https://www.dolphincountours.org/packages> (last visited Nov. 22, 2020)

<sup>17</sup> THE DOPHIN TEAM, <https://www.dolphincountours.org/the-team-1-1>(last visited Nov. 22,2020)

<sup>18</sup> Dolphin Encontour (supra note 6)

<sup>19</sup> DOLPHINCARE AFRICA, <http://www.dolphincare.org/projects.html> (last visited Nov. 22, 2020)

away. It was shocking to find out that the image I thought to be of a friendly dolphin showed, actually, an animal in distress.

### **A. Ponta do Ouro-Kosi Bay Transfrontier Conservation Area**

Even though the work from DolphinCare Africa improved the interaction with the dolphins, they realized that changing the approach was not enough to protect them fully<sup>20</sup>. Their studies showed that illegal trollers and fishers were depriving the dolphins from their source of food and that was one of the main causes for their population not increasing<sup>21</sup>. Due to the reasons mentioned above, Mrs. Gulian and the crew started campaigning in 1996 for a marine protected area<sup>22</sup>. The team was very active in assisting with the proclamation of the reserve, often speaking with government officials and reporting illegal activities in the area<sup>23</sup>.

After years of actively proclaiming for a national marine reserve in June of 2000, the governments of Mozambique and South Africa created the Ponta do Ouro-Kosi Bay Marine and Coastal Transfrontier Conservation Area<sup>24</sup>. The Ponta do Ouro Partial Marine Reserve (PPMR) was proclaimed in July 2009 to conserve and protect coastal and marine species and their habitats<sup>25</sup>. The Management Plan for the PPMR was approved in October 2011 by the Minister of Coordination

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<sup>20</sup> Sustainable Jungle, Podcast #33, *Angie Gullan: For the love of Dolphins*. (Feb. 2019)

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> DNAC. 2012. *Ponta do Ouro Partial Marine Reserve Tourism Development Strategy*, First Edition, at 3.

<sup>25</sup> *Id.* At 1

and Environmental Affairs, establishing the framework for the development of a Tourism Development Strategy<sup>26</sup>.

Allowing the Minister of Coordination and Environmental Affairs to establish the framework shows Mozambique's commitment to protecting this important and diverse area. The declaration of the Marine Protected Area was a vital step in protecting the leatherback and loggerhead marine turtles that lay their eggs on the east African coastline<sup>27</sup>. Leatherbacks are the largest sea turtles in the world and are classified as critically endangered by the World Conservation Union (IUCN), while loggerhead turtles have been classified as endangered<sup>28</sup>.

The PPMR Management Plan set up certain Tourism Development Principles: a) Tourism development will be underpinned by sustainable environmental practices and maintenance of the ecological integrity of the Partial Marine Reserve; b) Transparent procurement processes; c) Affected communities will be involved in the management of the resource as well as the business side through Community Legal Entities; d) Efficiency of Government authorization and service.<sup>29</sup>

The plan requires all commercial activities in the area to obtain a permit from the National Maritime Institute.<sup>30</sup> All other private and non-commercial activities in nature are allowed to work without the permit. The need for a permit reduces the number of ships in the ocean and limits the amount of companies from each activity.

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<sup>26</sup> *Id.*

<sup>27</sup> Peace Park Foundation, *Ponta do Ouro Partial Marine reserve*, <https://www.peaceparks.org/parks/ponta-do-ouro-partial-marine-reserve/>, (last visited Nov.22, 2020)

<sup>28</sup> *Id.*

<sup>29</sup> DNAC. 2012. *Ponta do Ouro Partial Marine Reserve Tourism Development Strategy*, First Edition, at 10

<sup>30</sup> *Id.* at 11

By reducing the amounts of vessels and the disturbance in the ocean, the DolphinCare team saw a growth in the permanent population as well as an increase of what they call “visitors”, that are dolphins that come to the area for a period of time and they return to the high seas.<sup>31</sup>

### **B. Closing the Gap Between Scientists and the Civil Population**

We used to believe in everything the scientific world had to say, but that belief stopped somewhere down the line. People begin to be more reluctant about scientific research, especially with climate change issues. Some relate the problem with the difficulty of ordinary people to understand scientific research data and technical language.<sup>32</sup> If we add interpretational problems with the enormous amount of conflicting data, it is not absurd to comprehend why some people have distrust in science.

Furthermore, with the increasing paths for communication, fake news has become a significant problem for scientists<sup>33</sup>. There is a lot of unchecked data flying over social media, and if people do not understand the science behind the result, it is easier to get confused.

Funding is also an essential issue in the scientific community<sup>34</sup>. Public grants have been systematically reduced, and in many cases, the scientists need to reach out to the private sector for the money they need to continue their research.<sup>35</sup> The need to ask for funding in the private sector

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<sup>31</sup> Sustainable Jungle, Podcast #33, *Angie Gullan: For the love of Dolphins*. (Feb. 2019)

<sup>32</sup> Jonathan W. Moore, Et Al, *Towards linking environmental law and science*, FACETS 3: 375–391 (2018)

<sup>33</sup> *Id.* At 383

<sup>34</sup> Mary Jane Angelo, *Harnessing the Power of Science in Environmental Law: Why we should, Why we don't, and How we can*, 86 Tex. L. Rev. 1527 (2008) at 3

<sup>35</sup> *Id.*

adds to the general disbelief as corporations are known for having agendas that may influence the research result.<sup>36</sup>

The case study shows several ways to reduce the gap between scientists and the civil population. The Dolphin Encountour Research Center is a self-funded organization that allows visitors to join scientists in the field. It will enable civilians to understand how they work and what they look for while interactively gathering information. They educate about dolphins and the marine other animals you may encounter while swimming in the open sea and teach about how humans activities alter their environment and what individuals can do to reduce the damage. So, instead of reading fake news or trying to understand complicated graphics, tourists get to experience and see first hand what the scientific community is declaring.

In my particular case, it was the first time I felt part of a scientific mission in the wild; even though my job was to enjoy being near such amazing animals, I still felt like I was helping in some way. The education provided also made me more aware of what I could change to help ensure the survival of those magical creatures.

From a more legal perspective, the idea of scientists creating regulation that was later adopted makes me wonder why we always wait for an issue to arise to call the specialist and not rely on them for prevention.

DolphinCare Africa is not only a self-sustained organization, but it also educates tourists while generating information and pushing for the formation of new regulations to help protect the natural world that surrounds them. The PPMR not only protects the marine animals; it is also a way to preserve terrestrial animals such as Elephants and Giraffes that live in the surrounding lands, as well as the endangered turtles that inhabit the area.

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<sup>36</sup> *Id.*

### **Environmental Impacts of Tourism**

The most common environmental risk of tourism involves ecosystems, soil, vegetation, water, air, and wildlife. Eco or Sustainable tourism can help reduce the ecological impact of touristic activities, but the most effective mechanism is creating Protected Natural Areas. The Protected Natural Areas can prevent degradation from tourism while generating other potential benefits.<sup>37</sup>

The DolphinCare research center was able to reproduce the same benefits as Protected Natural Areas before the area was proclaimed as such. The direct effects of the DolphinCare activities are:

1) Increasing jobs for local residents; 2) Stimulates new tourism enterprises, and stimulates and diversifies the local economy; 3) encourage local manufacture of goods; 4) Increases funding for protected areas and local communities; 5) Conserves biodiversity; 6) Supports environmental education for visitors and locals; 7) Enables employees to learn new skills; 8) Increases the education level of local people; 9) Encourages local people to value their culture and environment.

On the other hand, the indirect effects are: 1) Protect ecological processes and watersheds; 2) Protects, conserves, and values cultural and built heritage resources; 3) promotes aesthetic, spiritual, and other values related to well-being; Improves intercultural understanding; 5) Encourages people to learn the languages and cultures of foreign tourist.<sup>38</sup>

Ecotourism done correctly can produce identical results as Protected Areas without the need to engage in politics and long negotiations.

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<sup>37</sup> Paul F.J. Eagles, Et Al, *Sustainable Tourism in Protected Areas: Guidelines for Planning and Management*. IUCN Publication Services Unit (2002)

<sup>38</sup> Eagles, Paul F.J., McCool, Stephen F. and Haynes, Christopher D.A. (2002). *Sustainable Tourism in Protected Areas: Guidelines for Planning and Management*. IUCN Gland, Switzerland and Cambridge, UK. xv + 183pp



## **Conclusion**

There is a phrase from Angie Gullan that still resonates in my head "We want to have amazing encounters with wild dolphins, we don't want to go to captive facilities, we want to create environments in the wild where it is safe for them to come and encounter us because THEY want to." This idea of humans as a part of the animal kingdom and not as the owner of the world was long due to tourism. Tourist usually believe that the natural and cultural wonders they visits are there for their entertainment and disposal, but that could not be further away from the truth, those wonders are there for us to contemplate and respect.

The world is experiencing its sixth mass extinction, and human activity is accelerating its process. An organization such as the DolphinCare Africa is fighting biodiversity loss with both research and education. They established an Ethical Marine Mammal Tourism, and their Code of Conduct has instituted a standard of practice by researchers world-wide. This conservationist approach helps both Mozambique and South Africa protect the marine life that inhabits the ocean while increasing the countries' incomes on touristic activities.

The type of tourism fomented by DolphinCare Africa can solve the issues that arise from mixing tourism with nature. If we can replicate the Code of Conduct used for the interaction with wild marine mammals to all sorts of wildlife, we would be creating a protectionist framework that would allow us to interact with nature sustainably, ensuring present and future generations can enjoy a healthy and diverse environment.

As it happened in Ponta do Ouro, this may not be enough to protect the environment fully, but it is a way to create awareness. Tourists that visit natural environments, more often than not, fall in love with the place, especially when they can experience something as amazing as interacting with animals in their own environment. The idea of awareness can be the trigger not only to protect individual habits but also protect the area from harmful policies; and force governments to

implement Protected Areas. Politicians rely on votes to keep their jobs; if enough people are fighting for the protection of the environment, there will come a time where they can ignore it anymore, as we could experience in the case study. It took Angie Gullan, the DolphinCare team, and all the advocates they could gather through the years thirteen years to see Ponta do Ouro become a Marine Protected Area. They were able to see how the creation of PPMR fully protected the dolphins and other marine and land animals, but for environmental defenders their job is not done, as they currently organize beach clean-ups and other activities to keep Ponta beautiful and protected.

This same process of environmental defenders defying the Government's actions is placed all over the world. For example, Argentina is known for its whale sighting spots. Argentina signed international treaties not to hunt whales, but in order to find oil on the ocean the country is using sonic bombs. The use of these bombs is directly affecting whales, and in recent years many have washed up to shore dead. Many NGOs reported the incidents, and tourists that were able to enjoy the sightseeing of these magical giants are fighting to find a way to protect them. Many people signed the proposal to create a marine protected area that covers the path the whales use in their migration. The law is currently in the Senate, and people are waiting for it to be voted. Would this law make a difference? Yes, it would prevent whales from being harmed during migration. Would it be enough? The truth is that probably not; if other countries along the whale migration path still use the sonic bombs technique or pollute the ocean in any way, we will continue to see a reduction in the whale population. As the Peace Park Foundation stated when declaring the Ponta do Ouro- Kosi Bay Transfrontier Conservation Area, *"The man-made borders of Africa divide unified landscapes, animal populations and human societies. These geo-political boundaries minimize the areas where animals traditionally roamed and restrict access to the natural resources historically used by man and fauna to survive. The borders have no ecological functional, but rather complicate biodiversity and ecosystem conservation by fragmenting ownership, governance, and management."*

If there is one good thing COVID-19 has left us is the chance to reconnect with nature. Many people left the city to move to the countryside to enjoy the surrounding environment, the sounds of trees and of the animals that may appear. "And so when we find the cure, and were allow to go outside, we all preferred the world we found to the one we left behind. Old habits became extinct, and they made way for the new. And every simple act of kindness was now given its due."<sup>39</sup>

We should take advantage of the opportunity created and change the way we used to travel. Adopting this form of tourism will protect our environment and foment independent scientific research while generating job opportunities and economic growth in the countries that rely on tourism as their primary form of income. Ecotourism can also lead to the creation of new and improved protected areas that along with multilateral international treaties, can be a way to protect biodiversity fully.


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<sup>39</sup> Tomfoolery, *The great realisation*, <https://www.youtube.com/watch?v=Nw5KQMXDiM4> (Apr. 29, 2020)

## Annex I

### DOLPHINCARE IN-WATER CODE OF CONDUCT

1 boat, no queue | 1 drop | 20 min viewing | no swimming with newborns



Quietly enter water  
Follow guide  
Stay in a group

*dolphins dive*

**FRIENDLY**

Float calmly  
Move & BE quiet  
Arms by side  
Respect their space

*dolphins swim through*

**UNFRIENDLY**



Chasing  
Shouting  
Touching  
Diving down

Fin slapping  
Erratic movements  
Flash photography  
Long selfie sticks

*dolphins engage*

**TIPS**


Look in the water & Listen  
Give each other space  
Keep an eye on your guide

**SIGNALS**  I'm OK  Help!

1996-2019 A. Gullan, Dr S. Gullan, Dr A. Guissamulo, Dr Vic Cockroft, D. Rocha, S.West

### MARINE MAMMAL CODE OF CONDUCT

The Reserve is home to a number of resident & transient marine mammals who can be encountered at sea. Please take a moment to familiarise yourself with what to do when you encounter dolphins & whales in the Reserve. Human encounters can be detrimental.



**300M NO APPROACH  
NO SWIMMING ALLOWED  
AVOID DRIVING IN THE SURF**

**DOLPHINCARE.ORG**  
be aware & take care

**DID YOU KNOW** The coastal shallows are home to some 50 resident bottlenose dolphins! This special population has been monitored for the past two decades. This is *their* home, please take care.

**FISHERMAN** are asked to be aware & take care! Being dolphin friendly includes pulling in your lines when dolphin/whales are present & never trawling through a pod. Do not discard your tackle at sea & use non-stainless steel fishing hooks.

**KEEP IT CLEAN** Do not discard rubbish at sea or leave on the beach. Thousands of marine mammals, birds & other sea life die annually from plastic ingestion & entanglement.

**VESSELS** Maintain a slow, steady speed & keep a look out. Refrain from altering course to approach. Move off if signs of distress are seen; change of direction, fast erratic swimming & tail slapping.

**OPERATORS** adhere to a one boat policy, approach gently from the side, follow a 20 minute viewing time & have experienced guides in water. A two drop, no touch, chase & dive down policy should be respected. Approach calmly & slowly. Swimming with newborns not permitted. Avoid in-water encounters with whales. The use of flash photography & underwater scooters are not permitted. The same applies to whale-sharks and manta rays.


**CITIZEN SCIENTISTS** Visitors & operators are encouraged to support the DolphinCare Monitoring Project. If you have good id/behaviour images of dolphins, whales, turtles in the Reserve please submit to site.

Permitted Operators  
Dolphin Encounters Research Center  
Semente Aqua Dolphin Centre  
Malongane Dive Centre  
White Pearl Resorts

**TO REPORT AN INFRINGEMENT OR MARINE MAMMAL IN DISTRESS**  
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FACEBOOK.COM/PPMRMOZAMBIQUE | RESEARCHRDOLPHINCARE.ORG  
FACEBOOK.COM/DOLPHINCARESEARCHCENTERMOZ  
VISUALLY INSPIRED BY MMF, DRAWN BY RITSUKO & CREATED BY DOLPHINCARE-AFRICA

### REGULAMENTOS MAMÍFERO MARINHO | MARINE MAMMAL REGULATIONS

- É proibido perseguir, reunir, capturar, matar, assediar, alimentar e perturbar os mamíferos marinhos. Mantenha uma velocidade lenta e constante, sem alterações de rumo. Se os mamíferos marinhos se aproximarem do seu barco para deslizarem na onda de proa, não altere o rumo para se aproximar deles. Aproxime-se sempre de lado, nunca directamente por trás ou pela frente. Faça o mínimo de barulho possível mantendo uma velocidade lenta e constante. Não se aproxime de golfinhos e baleias com motos de água.
- Os mamíferos marinhos têm prioridade.
- Excepto mediante autorização, não se aproxime de mamíferos marinhos a menos de 300m.
- Abstenha-se de interferir se forem aparentes sinais de perturbação (mudança de direcção, fuga, rápida ou mergulhos mais demorados, vinda à superfície erráticas).
- Evite grupos de mãe e filho. Não entre na água se houver recém-nascidos ou juvenis.
- Entre na água apenas com pessoas qualificadas e autorizadas
- Faça o mínimo de barulho possível. Não grite nem assobie alto
- O tempo de observação é de 20 minutos. Se os mamíferos marinhos se afastarem antes desse tempo, devem ser deixados em paz
- Os golfinhos não podem ser perseguidos para captura nem deve tentar apanhá-los.
- No person will chase, herd, catch, kill, harass, feed or disturb marine mammals at any time. Keep a slow, steady speed without changing course. If your vessel is approached by marine mammals to bow ride, refrain from altering course to approach them. Always approach from the side, never from directly behind or from front. Minimise noise disturbance by maintaining a slow, steady speed. Do not approach dolphins/whales with small power craft i.e. jet skis. Marine mammals have right of way.
- Unless authorised, vessels are not to approach marine mammals within 300m.
- Refrain from interference if signs of disturbance are apparent (change of directional swimming, fast escape swimming or extended dive times, erratic directional surfacing)
- Avoid mother and calf units. Do not enter into the water with newborns/calves.
- Only enter into the water with qualified and authorised personnel.
- Keep noise levels to a minimum. No shouting or loud whistling.
- A 20-minute viewing time is to be followed. If marine mammals move off within this time, they must be left alone.
- Dolphins may not be pursued for capture or attempted to be caught.



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