

RECOMMENDATIONS REGARDING POTENTIAL
TOURISM ON SABLE ISLAND

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1. Introduction

There is a great deal of public interest in Sable Island, and much desire by individuals to experience its fascinating ecological and cultural heritage. These desires must be weighed against the possibility that tourism could seriously damage Sable Island through erosion, pollution, disturbance of wildlife and a variety of other foreseen and unforeseen factors.

This research paper was created by a group of Dalhousie University Nature Conservation students and was commissioned by the Sable Island Preservation Trust in order to generate discussion about the prospect of allowing ecotourism on Sable Island. This paper outlines the activities likely to occur should ecotourism be allowed on the island. For each tourist activity, we have listed the opportunities and experiences that could benefit visitors, as well as the negative impacts these activities could have on the island. In consideration of the possible impacts, this paper suggests some approaches and strategies for tourist activities that are likely to have a minimal impact on Sable Island.

2. Areas for Discussion

2.1 TRANSPORTATION

Transportation to and from Sable Island is an important consideration to the possibility of tourism because of its possible effects on the Island. Transportation is a pertinent issue since Sable Island is approximately 300 kilometers offshore from the mainland.

By Air

Transportation by airplane or helicopter would be the fastest method to transport tourists to Sable Island, however, noise from these vehicles could potentially disturb or frighten the wildlife in the area. There is also a greater ecological footprint required on the island because of the need for landing space.

By Sea

Transportation by sea craft is a slower method of transport, but is more recommended than air travel because it produces less noise to disturb wildlife. It should be noted that sailboats and powerboats of various sizes *do* have the potential to disturb wildlife depending on their make, how they are driven, and how close they come to wildlife. Measures should be taken to ensure that such disturbance happens to a minimal degree. Strong currents around the island are also an issue for small craft.

Recommendations:

It is recommended that any sea vessel transporting tourists to Sable Island be moored far enough away from the island to ensure that wildlife is not disturbed. Smaller tenders ought to be used to transport tourists from vessels to the shore.

Non-polluting vehicles such as kayaks and rowboats would be ideal for overall transportation; however, considering the distance needed for travel, as well as strong tides and currents, safety is of paramount concern.

2.2 BUILDINGS AND FACILITIES

Opportunities:

Currently there are approximately 16 working buildings on Sable Island. These are owned and operated by Environment Canada, the Department of Fisheries and Oceans, the Province of Nova Scotia and Exxon. Included among these buildings are a sewage treatment facility, a generator house, an office and research facility, a meteorological station, a fuel storage unit, a food and material storage centre and several buildings used for a wind farm project. There are also three small, private buildings for long term accommodations of scientists and workers on the island that have both Internet and satellite television connections. Also, a lighthouses are located on the both east and west ends of the island.

Constraints:

All buildings are currently private and closed to the general public. Current sewage treatment facilities are in place for a small population and would need re-formatting to accommodate additional visitors.

There are no available shelters, eating facilities or accommodations available for tourists. Camping on sand is possible, with proper freestanding tents, although it is not encouraged.

In addition, constant shifting of sands has led to the burial and destruction of historic buildings on the island. Existing buildings require regular maintenance to prevent this from occurring.

Recommendations:

Sewage and garbage treatment is one of the biggest issues associated with additional visitors, a pack-in/pack-out policy would be ideal. That is, enforcing a policy that requires visitors to take all waste with them, possibly by carrying miniature toilet containers.

Visitors should plan to only visit the island on day trips. However it is recommended that emergency shelter tents and water should be kept in a storage facility.

The visitation of buildings would require a guide in order to explain meteorological equipment, seismic equipment and the history of buildings as well as the lighthouses. Signage could alternatively explain this.

2.3 FLORA AND FAUNA

Opportunities:

Sable Island has diverse flora. Due to its isolation, the vegetation has likely not changed substantially over the last 10 000 years. There are over 233 species of plants on Sable Island, and of these, 154 are native, and three are endemic to the island alone: *Epilobium nesophilum*, *Hieracium scabrum*, and *Oenothera cruciata*. In terms of fauna, Sable Island is home to many species of birds and other animals. Some species that call Sable Island home include the Ipswich Sparrow, Roseate Tern, wild horses, Gray and Harbor seals, as well as many insects.

Some of the fauna on Sable are endangered, rare, or protected species, and are therefore special and carry a certain mystique. The wildlife on Sable Island presents an opportunity for tourists to observe rare and isolated animals, as well as unique vegetation and landscape.

Eco tourism could be useful in promoting knowledge of the flora of Sable Island, which can only lead to the island's increased profile. Furthermore, since there are many inconsistencies in knowledge about the total vegetative cover and the identification of the species that reside on Sable Island, increased scientific presence and ongoing monitoring of the flora could end these uncertainties.

Sable Island presents an opportunity to raise money for conservation and increase awareness of unique natural areas. The revenue generated through tourism would never reach a level that it could support all activities on the island without also having an adverse effect on the flora.

Constraints:

Increased traffic on Sable Island has the potential to disturb all forms of wildlife. Nature is interconnected, and therefore, various life forms could be disturbed or damaged indirectly by disrupting only one or a few species. Erosion is also an important consideration, and will be examined in the geology section. Threats to life on Sable Island include human foot and vehicle traffic, the accidental or intentional introduction of foreign species to the island and wastes including garbage and fecal matter.

Recommendations:

Environmental damage must be avoided. There should be no introduction of invasive species to the island. New species to the island should be under regulation, and only native species should be planted. Eco-tourists should take required precautions with their garbage disposal and to wipe off the soles of their shoes before coming onto the island.

Vegetation should not be removed from the island without permission. Travel around the island should be minimal impact, using the roads if possible. Experts would be needed to identify the nesting sites for the Terns and other birds. The times of year that the birds would be most at risk would be determined. These as well as other important information would be needed to determine when and where the birds are at the most risk. This information would enable restrictions and rules to be made on when and where any visitors would be able to travel while on the island. These may vary seasonally and would have to be monitored.

Similar guidelines should be created for mammals. Most importantly, mammals should not be approached, especially when young are present. They will protect the young and may become aggressive while doing this. Horses should not be fed. Their diet of different grasses is very particular and has been developed over many years. Any change to this diet could do great harm to the horses and possibly put their existence at risk.

As some of the people on the island will be scientists, studying a variety of features of the island, they would not be able to follow all necessary regulations. Special applications would be needed for these circumstances. Should someone have a reason to enter a restricted area that would endanger themselves or any of the animals on the island, they would have to be granted permission by a designated group who knows and understands the habits of the wildlife.

Ecotourism can be incorporated into the activities on Sable Island as long as nature is left alone to the largest extent possible. Plans would be made to allow people to explore the island in certain areas while preventing access to those more critical. Rules and regulations would be necessary to prevent anyone from approaching any animal on the island. Due to long-term studies, no part of any animal, dead or alive, would be permitted to be removed from the island. Visitors would be made aware of whom they should contact should they come across any animals in trouble or that have recently died. If all regulations are met and followed, then it would be possible to accompany those that want to visit the island.

2.4 GEOLOGY AND LANDSCAPE

Opportunities:

The sand dunes and geology of Sable Island are a unique phenomenon in Canada. The island provided beautiful barren landscapes and is a gem for photographers and relaxing walks. The large sand dunes offer a rare backdrop to the beach.

Constraints:

In order to predict the possibility of environmentally benign tourism on Sable Island, it is useful to look at islands and areas with similar features. Any history of environmental decay in these areas may demonstrate the potential for environmental problems to occur on Sable Island with the advent of tourism there. The islands examined include Galveston and Padre Islands near Texas, USA, Ninety Mile Beach in Victoria, Australia, Miami Beach in Florida, Ocean City in Maryland, Zingst peninsula in Germany, Cheung Chau near Hong Kong, Chesil Beach in the U.K., and Prince Edward Island.

In each of these areas, erosion is a substantial environmental problem; in a few cases it is cited as the worst environmental problem. In all of these areas erosion is cited as being caused by ocean waves hitting the coastline, with sea level rises also noted as a problem. Other causes include wind erosion (especially storms), developments such as the construction and presence of large buildings in the area, river runs, and foot traffic.

Prince Edward Island experiences a large amount of foot traffic and extreme weather each year. Tourism is the principle industry on Prince Edward Island, as immense numbers of people are drawn to its beaches during the summer season. Research into the effects of human activity in the area finds that sand dune and land erosion are accelerated by pedestrian and vehicular traffic because of continuous trampling of fragile marram grass that supports the dune system. This, in combination with strong winds, severe wave action and high tides under storm conditions contributes to the island losing approximately one meter of cliff base at the shore level every year.

This research suggests that human presence, in addition to environmental factors, contributes to erosion on islands of a similar geography to Sable Island.

Recommendations:

Any planning of tourism projects on Sable Island must be extremely mindful of sandy landscapes that can be eroded due to the construction of buildings and the increased occurrence of pedestrian and vehicle traffic on the island.

2.5 SHIPWRECKS AND DIVING

Opportunities:

Sable Island is a massive sand bar and many ships have beached and sunk in the vicinity of the island. Approximately 350 ships have been recorded as having sunk in the area of Sable Island in the last 400 years. This has led to vast underwater graveyards full of artifacts and history, which is attractive to scuba divers.

Constraints:

The waters surrounding Sable Island have very strong currents making it very dangerous for divers. Constant water currents and unconsolidated sands mean that wrecks are constantly being covered and uncovered, and so there are no useful maps of wrecks for divers to follow. Though some scientific diving has taken place, it was not without losses; diving there is very difficult and unsafe.

If diving, the collection of artifacts from shipwrecks is illegal without special permits. Under the Nova Scotia Special Places Protection Act, it is required that divers obtain a permit from the Nova Scotia Museum before disturbing any place with historic artifacts. The Canadian Shipping Act and the Nova Scotia Treasure Trove Acts under the Department of Natural Resources would also be applicable.

Recommendations:

Scuba diving off the island should be highly discouraged and the wrecks should be left as resting places for those who perished.

2.6 ISLAND HISTORY

Opportunities:

The natural and anthropogenic history of Sable Island is long and interesting and could be a drawing factor for visitors. There are numerous ghost stories, and attempts of establishment on the Island, which would be of interest to historians and the general public.

Constraints:

There are numerous renditions of Sable Island's history, leading to some contradictions in literature as well as gaps in the history timeline. There is currently no "expert" on the topic nor is research being done on the history of the island to clear up discrepancies.

Recommendations:

One or both of the following two proposals is recommended in order to expose visitors to the history of the island.

1. A person educated in the history of Sable Island should be present on the island with visitors, and provide a form of guided tour of specific locations on the island such as the lighthouses, possible grave sites and other places of interest.
2. Append signs explaining historic facts to buildings in areas where they are the least likely to be destroyed by erosion. These would require a minimum of annual upkeep.

2.7 INDUSTRY AND ECONOMIC ACTIVITY

While the various economic activities occurring near Sable Island are likely not of interest to tourists, they are noted in this paper because their impact on the ecology of Sable Island could be of interest to tourists, and because there are rules and regulations associated with their operations that must be understood by visitors to Sable Island.

The exploitation of natural gas off the island has become a large-scale operation of numerous energy companies collectively known as the Sable Offshore Energy Project (SOEP). The venture consists of 6 natural gas fields that lie 201 km off the coast of Nova Scotia and within a few kilometers of Sable Island.

In the 1960s searching within the region for natural gas began due to its similarity with the petroleum rich Gulf Coast of the United States. Seismic surveys led to the discovery of natural gas in sandstone reserves, and were later confirmed with the drilling of test wells. A total of 125 test wells have been drilled off the Nova Scotian coast, 121 of which are in the Scotian Basin.

Offshore problems leading to possible environmental degradations include the contamination of surface, bottom and coastal waters as well as contamination of sediments. These are most likely to result from hydrostatic testing, drill cutting and leakages from wells, pipelines or blowouts. Underwater noises from blasting and drilling have also been addressed as concerns. Review of valued ecosystems components (VECs) has shown that the sea scallop is most likely to be impacted. VECs are elements of the local environment which are valued due to an ecological, scientific, cultural, socio-economic or aesthetic significance.

It is presumed that the 5 to 10 percent of oil based mud that remains after washing has the potential of tainting the flesh of fish. This potential contamination could affect the seabed habitat as well, but is not currently addressed as having a severe impact on the environment. The greatest ecological concern is that tainted scallops could destroy the local industry causing consumers to switch markets; however, this is assumed to be avoided because the scallops at the greatest risk are those within the 500m-safety zone, which will not be fished. The overall loss of 4.7 km² of fishing areas is considered insignificant due to the large fishing area available in total.

Surface water contamination poses the greatest threat to fish eggs and larvae, Sable Island marine birds, shorebirds and coastal waterfowl. The species deemed at greatest risk are Alcids, Seharwaters and Terns. To identify these dangers and offer prevention the Sable Island Code of Practice will be used to uniqueness and integrity of Sable Island's fragile ecosystem (SOEP).

The Canadian Coast Guard is responsible for the regulation of activities and access to Sable Island in order to prevent environmental degradation and alteration

resulting from human use. Use of the island must be approved by the Canadian Coast Guard, and can be granted for approved environmental programs, maintenance of emergency facilities and agreed trips. All visitors to the island must abide by the 2005 Sable Island Visitors manual. The Canadian Coast Guard also maintains that vessels are not permitted within 2 km of the island without permission, nor are drilling and seismic activities within 2 km of the island allowed.

2.8 REGULATIONS TO CONSIDER

It should be noted that governmental regulations are currently in place to protect Sable Island from human disturbance, and that any changes to these regulations need to be made through the District Marine Agent of the Department of Transport at Dartmouth Nova Scotia, as well as the Department of Culture and Heritage, and the Nova Scotia Provincial Tourism Office.

Regulations stating, “No person shall go onto the Island without having first obtained written permission from the Agent” would best remain the same, yet taking into account the extension the Agent (as mentioned above). The introduction of eco-tourism would not imply open access, but simply an increase in accessibility. Thus, visitors would obtain written permission from the Agent or its constituencies with whom they share island duties with; For example, the Tourism Office could administer permission if it was in association with perhaps a guided tour of the island. The exceptions to this regulation would require no changes.

Construction regulations need not be altered as they specifically lay out the basic concerns surrounding physical manipulation of the island. In the event of the rapid growth of eco-tourism on the island, a policy within the departments of the Agents should be created to limit the amount of development on the island.

In the event of eco-tourism on Sable Island, an annual policy and regulations review committee should be established in order to regularly evaluate the state of the ecosystem of the island and assess areas that may require increased attention.

All regulations, particularly those regarding violation penalties, should also require a high level of enforcement accompanied by a strong awareness and education program to ensure that these regulations, which are meant to maintain the ecological integrity of the island, function properly.

2.9 RECOMMENDATIONS FOR FEDERAL AND PROVINCIAL PROTECTION

1. Federal level

I recommend a National Wildlife Area directly coupled with a Marine Wildlife Area under the Canada Wildlife Act. Sable Island is currently a National Wildlife Area; I proposed that this same level of protection be extended into the surrounding water to some extent as defined by a conventional depth contour. 10 metres is a possibility if the mapping has been done adequately. The justification is that the NWA designation is to protect wildlife, and some of the wildlife is vulnerable in the shallow waters around the island. The Canadian Wildlife Service branch of Environment Canada is responsible for the Canada Wildlife Act.

2. Provincial level

Designate most parts of the island as a "Special Place" under the Nova Scotia Special Places Act (which is currently under revision and will in the future become the Nature Reserves Act). David MacKinnon is the official in the Department of Environment & Labour who is responsible for examining these designations. The area around the weather station should be excluded from the Special Place designation, but all of the ponds and most of the dunes should be included. Special Places can also be designated below the ocean surface, but I am doubtful that this is appropriate for Sable Island, which is why I recommend a Marine Wildlife Area in the surrounding ocean.

The above recommendations were made by:

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3. Conclusion

Eco tourism is not recommended on Sable Island due to the high fragility of the unique ecosystem there. The costs outweigh the benefits in a number of areas and the ecology of the island would be at a considerable risk.

In the possible event of introducing eco tourism, there should be strict policy and regulations that include continual enforcement and compliance. In any situation, the wellbeing of the flora and fauna on the island should be given first priority over any human desire. The impact of an increased number of humans on the island should be minimal if not obsolete.

Furthermore, sustainable practices should be adopted in every realm of management and coordination of activities on the island to ensure optimal environmental, economic and social benefits.

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