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Tourist Ecodestruction

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Tourism Ecosystem Destruction: A Literature Review

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Table of Contents

Introduction..... 4

Over Tourism 5

Destruction..... 6

Research Methodology 9

Review of Literature 9

Limitations 12

Analysis of Findings 13

Conclusion 14

References..... 15

Abstract

Many decades of over-tourism have laid the groundwork for the vast destruction of nature and a community's natural resources and its infrastructure on a global scale. With a growing global population and the growing availability of more affordable travel, the potential level of destruction will also grow. With the financial health that a large number of visitors bring there is also the other side the problem of trying to balance the dollar with the destruction. This paper's focus will explore the degree of damage caused by over-tourism in various global ecosystems.

Keywords: Hospitality; over-tourism, ecosystems, destruction

Tourism Ecosystem Destruction: A Literature Review

This paper will discuss the destruction of global ecosystems caused by increasing tourism. Global tourism is causing the destruction of the very environment in which tourists visit. The question is how much destruction is there and how it affects a tourist's decision to travel to an area? We are in an age of unprecedented freedom to travel to all corners of the globe. The competition for travel dollars has left all corners of the earth open for travel and adventures to be had. Merely a couple of generations ago travel beyond our borders that was more than the annual family vacation was non-existent for the average person. The costs were high, and the availability was low.

In 1980 there were just over 600 million travelers worldwide and fast forward that to 2018 were there were around 4.2 billion worldwide travelers (Air transport, 2020). In 1978 President Jimmy Carter signed the Airline Deregulation act, “a law allowing airlines to set their own fares and routes, an event that transformed the industry and the passenger experience”, (Deregulation.2007 para 1). This opened air travel to many to which lead to increased travel to many natural sites thus ultimately causing increased damage to the fragile ecosystems. This increased travel has led to the many human footprints that have begun to degrade and destroy the very places we have held so dearly and coveted to visit. From tons of trash on mountain tops and ruined coral reefs, there are few places on the planet tourists have not left their mark. This paper will explore the continents and discover the level of damage incurred by tourists in the world.

Over Tourism

Merriam-Webster defines carrying capacity as “the maximum population that an area will support without undergoing deterioration” (nd). In a report from The World Tourism Organization (UMWTO) describes over tourism as “the absence of good management and uncontrolled development” (2018 p. 5). As the world opens and travel becomes more accessible the damage to the earth by exceeding capacity will continue to grow. With carrying capacity of areas being toppled, an ever-growing population, and the accessibility to travel growing the delicate balance of the earth will be put into turmoil. This is far from a new problem. Capocchi et al, (2019), brings up the point that this growing issue has been a concern of the scientific community for more than 40 years. There was in the past as it continues today the discussion “concerning excessive tourism concentrations harming the local environment” (p. 8). As the travel industry continues to boom it will be difficult to find a balance of growing the economy of many places where tourism is their only true industry and preserving the places so they will be viable for the future. In an article from Pratt (2019) states that travel will continue to increase annually of at least 3.5% with a large emphasis on the East. With increasing populations and increasing travel without some balance the potential damage from tourism will also increase. Milano et al. (2019) state that:

The commercially expedient practices of policymakers, destination managers, and key firms in the tourism sector (especially airlines and cruising) have evidently led to unsustainable and inadvertent tourism outcomes and excessive dependency on tourism at the expense of alternative economic sectors (p. 353).

These policies bring up a very important point that as long as the money keeps coming in that is all that matters. Looking at the demographics of a smaller city like Venice, Italy from World Population Review 2020 which currently has a population of just over 200 thousand has an annual

tourist visitation rate of around 20 million. Luty (2020) gives numbers of approximately over 1 ½ million cruise ship visitors to Venice annually. This brings thousands of passengers into an already fragile ecosystem in droves. This the case in many places all over the world especially in fragile places like the Galapagos Island chains and the Antarctic continent.

Kariminia, Ahmad, Hashim, & Ismail, Z. (2013) write about the number of visitors to the Antarctic continent in the late 80's to be under 1,000 to well over 35,000 by 2013. McClanahan, P. (2020,) reports further growth of the number of visitor's approach 80,000 in the coming year to a very fragile ecosystem. The same fate has befallen the island chain of the Galapagos. The tourists have risen from under 12,000 in 1979 to around a quarter of a million people in 2015 (Toral-Granda, et al 2017). This issue is global and will continue to get worse as the population increases and travel becomes easier and more affordable by the public in general.

Destruction

The damage done to the environments from the over-tourism of the areas is as diverse as the areas themselves. One tourist destination caught between economy and destruction is the state of Alaska, USA. Cerveny (2005), comprised a study for the United States Department of Agriculture (USDA) discussing the increasing damage by tourism many of the Southern Alaskan areas that include not only the environmental issues from over-tourism but the cultural, social and economic toll that has been incurred. Cerveny (2005) states "Tourism has become integral to southeast Alaska's regional economy and has resulted in changes to the social and cultural fabric of community life as well as to natural resources used by Alaskans (p.8).

The native population worries about the degradation of their culture and larger corporations taking from their businesses. The local fishing and game industry worry about the

overfishing and hunting done by the tourist population that pulls from their livelihood.

According to a study for the Alaskan Seafood Industry by the McDowell group the industry brings in " \$5.2 billion in annual labor income, \$12.8 billion in economic output" (2016 p. 5).

Cervený (2005) reported an increase of more than 1,000 charter boat licenses during his study period. Huddart and Stott (2020) bring up issues such as the marine ecosystem pollution from the cruise ships that bring more than a million passengers a year and 1.5 nonresident fishing licenses were sold for every residential license. Camping has shown its toll on the state with damage to the landscape with fire pits, broken trees, trash left behind, and "vegetation loss of greater than 50% was observed in 40% of campsites" (p.213). There is certainly a need to balance and protect the delicate nature and preserve the state for the future.

In similar peril from over-tourism damage are places like Australia and the Galapagos Island chain. Both islands have had the advantage of developing their own unique ecosystems without the interference of humanity. Pickering & Hill, (2007) write about many direct and indirect environmental damages from tourism in Australia. With millions of annual visitors engaging in activities such as horseback riding, four wheelings, hiking, camping, and diving the damage potential is endless. Beyond the direct impact damage of the flora the "introduction and spread of exotic species and pathogens such as the soil fungus" (Pickering & Hill, 2007, p. iv).

Along with the destruction of the land and foliage itself items brought in accidentally by tourists like microbes, foreign flora, and foreign insects and rodents. The same issues come across to the Galapagos and its archipelago islands. Toral-Granda et al (2017) make the point that "So far, 1,579 alien terrestrial and marine species have been introduced to Galápagos by humans. Of these, 1,476 have become established and growth from just over 11,000 to well over

a quarter-million in recent years. Toral-Granda et al (2017) also report an increase of daily visitors “from 328 tourists/day in 1982 to 3,324 tourists/day in 2010 and 4,310 tourists/day in 2015” (para. 16). Included in this problem are tourists that now remain on the island and those staying offshore with boats. These issues are bringing not only destruction to the island itself but also the water around the islands and the air pollution from the flights bringing the thousands of tourists back and forth. Stefănică, & Butnaru, (2015) write about the pollution of the waters affecting the reefs and death of marine flora and fauna due to poor oxygen in the waters and an increase in algae tipping the natural balance.

A growing global concern is a damage to the air quality from over-tourism. Zhang, Hou, & Li, (2019) make the argument “tourists experience greater pessimism in an environment with high air pollution”. The issue of poor air quality produced by travel has never been more evident than recently with the high level of reduction of all forms of travel globally. Although it is too early for the final outcome of this information initial findings show a significant drop. In an initial study presented by Berman, & Ebisu, (2020) the atmosphere showed a significant drop of nitrogen dioxide (NO₂) of more than 25% in the first quarter of 2020 in the USA. The difference can be seen globally with the clearing of the canals of Venice and the increased visibility in some of the most polluted cities in the world. As the pandemic evolves and the world returns to normal there will be more distinct information to examine the total outcome of the effects of the pandemic.

There is one study currently in progress through the United Nations (UN) entitled the Mediterranean Strategy for Sustainable Development (MSSD) in which a study between the years 2016-2025 containing 17 goals which:

features a specific key role as regards the creation of jobs and the promotion of local culture and products (Goal 8), the promotion of sustainable consumption and the production and the implementation of tools for monitoring the sustainable development of tourism (Goal 12), and, finally, the sustainable use of marine resources (Goal 14) and life on land (Goal 15) (Mancini, Evans, Iha, Danelutti, & Galli, (2018 para 1.1).

These are just a few of the items under investigation in a goal to combat the ongoing issues of over-tourism and the impact of those areas.

Research Design and Methods

This paper will use a combination of both qualitative and quantitative research methods retrieved through secondary sources via the internet. Information provided shows both the issues of the tourist damage itself and the level of the problem. Primarily a literature review of scholarly articles will be performed to collect the needed information on the extent of damage incurred by the environment. Quantitative information will be gathered in the same manner in order to ascertain the numbers of tourist growth and the amount of damage. The sources used obtained their quantitative information from surveys and available information from historical records and company information records.

Literature review

The growing concern over tourism and the destruction of the ecosystem is not a new concept but has been gaining ground in recent years. With growing populations and the growing

availability of global travel, the correlation between increased tourism and increased destruction will need to be followed more closely in the future. This review of the literature concentrates on the extent of tourism growth and the amount of destruction this increase has contributed. The research shows that this is far from a new concern and the issues are global. The endpoint of exceeding capacity and the level of destruction will be an ongoing issue.

The increased availability of affordable travel was expanded with the deregulation of the airlines in 1978 signed by President Carter that removed government control over airline pricing and route control, creating a competitive environment in the battle for travelers' dollars ((Deregulation, 2007). Capocchi et al (2019) make the added point that much of this travel is happening in emerging areas adding an increased level of pressure on the ecosystems and the insufficient infrastructures. This added pressure to increase local income will also increase the dangers to those countries' ecosystems if their infrastructure is incapable of handling the numbers of incoming travelers. The new emerging areas of travel includes fragile parts of the world like the Antarctic, the Galapagos Islands, and Australia. All areas that have developed their ecosystems without human intervention for milieu are now under attack with annually growing numbers. Capocchi et al (2019) state “On the other hand, uncontrolled demand alongside a concentration of tourism in particular destinations impact negatively both territories and local communities”. Such damage as pollution of the waterways and its flora and fauna due to watercrafts and cruise ships. Also, damage to coral from divers and uncontrolled numbers of visitors to areas being just a few of the problems created by tourists on the ecosystems (Capocchi et al (2019). This escalates perhaps the largest problem in trying to limit the destruction of the ecosystem, infrastructure, and culture while supplying a means of supporting the economy.

A constant theme in the correlation between tourism and destruction is the growing cruise ship travel into both established and newer territories. This includes delicate territories that the ships bring invasive flora and fauna that damage the natural ecosystem. Along with the increased pressure on the cities with pressured infrastructures and ecodamage is the large number of cruisers that invade an area at one given time. This can be overwhelming for the infrastructure of an area. Davenport, & Davenport, (2006) discuss the harm to the marine ecosystems that are damaged from the ships and the marine activities are polluting the waters and harming the marine animals. Along with the land and water pollution from over-tourism there is also the secondary issue of the air quality. Gupta (2020) states that since the COVID-19 lockdown on travel that the air quality pollution in Northern India is at a 20-year low. Prior to this Zargar, (2019) reports Delhi, India's pollution was so severe on some days that they declared public health emergencies restricting travel into the city. The Air Quality Index (AQI) registered over 700 when 50 or less is considered safe during these emergent days (Zargar, 2019). In an article Egypt General Health Risks: Air Pollution. (n.d.) the World Health Organization (WHO) has placed travel advisories for travelers with health issues going to Cairo because of the poor air quality.

The research clearly shows that there is a direct correlation between increasing tourism with overcrowding the degradation of flora, fauna, ecosystem, and cultural heritage. The increase in adventure tourism brings these problems to the further reaches of the world. Ginder, (2014) research shows the exponential growth of mountain climbers to Nepal for trekking in the Himalayas. The author remarks on well over 800,000 annual visitors and the tripling of Sherpas to act as guides (p. 5). This has also led to the destruction of natural areas for infrastructure and the buildup of thousands of pounds of trash left in the environment. Jovanovic (2019) reports that tons

of trash left by climbers including climbing gear, tents, oxygen canisters, plastics, and human waste is cleaned by volunteers. The research shows not only that the world is in danger of over-tourism but there is a very strong need for there to be a balance between the world and the dollar.

Stainton, (2020) makes the point on growing tourism:

Many of the negative environmental impacts that result from tourism are linked with the construction of general infrastructures such as roads and airports, and of tourism facilities, including resorts, hotels, restaurants, shops, golf courses, and marinas. The negative impacts of tourism development can gradually destroy the environmental resources on which it depends.

Dr. Stainton writes of an example of the need for preservation when Borocay, an island in the Philippines was closed to visitors to clean and allow time for the environment to heal. It opened back up with many protective measures that showed “a positive example of tourism environmental management” (Stainton 2020). Further research is also needed to find the results of how the recent pandemic has allowed the earth to heal and make correlations to the full extent humans affect the condition of the planet.

Limitations

One limitation of this research paper is that of time. The short duration of the class limits information retrieval and limited to internet searches. This time limitation also limited the ability to gather information by surveys or other collection means. Also limiting is the information for additional areas of the world not mentioned. This could include more information about more areas in the Americas and more Northern European countries. One final limitation is that the information from the current COVID pandemic is not available. Peer-

reviewed papers on the effects of COVID-19 and tourism were still in the review process upon this writing.

Analysis of Findings

In reviewing the available information on the concept of over-tourism and ecosystem damage shows a direct correlation between the level of over-tourism and the amount of damage is being produced upon the earth. Milano et al (2019) makes the point that there is a “rapid the unfolding of unsustainable mass tourism practices” (para. 4) has raised concerns about “the detrimental use of urban, rural, and coastal spaces, among others, for tourism purposes”. Capocchi et al (2019) gives an example of this problem with a noted increase in visits to Venice, Italy of more than 12% between the years 2009 and 2010 with the majority of these due to cruise ship visitors. The issue with overcapacity of a is further demonstrated by Stainton (2020) when the island of Borocay in the Philippines was closed for six months to clean the trash and polluted waters.

The need for a balance between keeping an economy growing protecting the area so that it will be available for the future. Ștefănică, & Butnaru, (2015) brings up the issue of who is responsible for achieving the balance. One issue they bring up is that in a survey they found that “only 63% of the respondents consider that the implication in ecological education belongs to the family” (p. 599). This brings the issue of where do the changes need to come from in order to decrease the level of damage from capacity and care issues.

The review finds that for many decades the issues with the ecosystem damage have been a known entity. A review of the literature shows that many countries have begun to make rules to limit the potential of further damage to their environments. Some limit daily visitors, limit or

deny vehicles in city centers, or charge an extra fee for entrance. A review of the literature also shows current long-term studies are being conducted to help contain future damage. From the article ““Over tourism’? Understanding and Managing Urban Tourism Growth beyond Perceptions” (2018) offer solutions such as: promoting off-season events, pedestrian-only zones, define and limit carrying capacities, encourage and provide public transport, and take opportunities to educate the public about the need to protect the environment.

Conclusion

Tourism, whether local, global, or adventurous gives an economic impact on many places throughout the world. In growing areas of the world, this may be all they have to fund the growth of emerging economies. Tourism also provides a large amount of the gross national product (GNP) in a country’s economy. Stainton (2020) reports that tourism can contribute around 5% of the world’s GNP which totals around one trillion dollars a year to the world's economy. More importantly, Stainton (2020) states "Tourism is the main source of foreign exchange for one-third of developing countries and one-half of less economically developed countries (LEDCs)” (para. 7). The growing travel and hospitality industry also benefits greatly from the increased availability of travel to many socioeconomic groups.

The literature also concludes that this increased availability of the world is also causing severe damage to and overload to flora, fauna, and infrastructures throughout the world.

Notably, it has been shown that the absence of travel and tourism over most of the 2020 year has had a significant reduction of damage and pollution throughout the world.

It is evident that more research will be needed to determine how this temporary relief to the environment has affected the earth and how perhaps changes in the tourism industry may be changed to further protect the earth for future users.

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