Exploration of The Interplay Between Tourism, Global Warming And Health In Nigeria

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Abstract

It is obvious that tourism development has not been given serious attention in Nigeria, still the likely implications of global warming on it cannot be ignored. It is in view of this that this paper is exploring ways by which the two phenomena have been affecting each other. Using Nigeria as a case, the implications of this on the health of the populace was given attention in the study. The change in the nature of the climate was mentioned as inevitable, so also is the possibility of this influencing the graceful spread of diseases among the populace. In the process, negative manifestation of warmer climate like increasing the risk of heat-related illnesses and death besides the worsen conditions for air quality was noted. Probable increase in the frequency and strength of extreme events (such as floods, droughts, and storms) that threaten human safety and health were highlighted and discussed. The paper brought to the fore, the inherent benefits of tourism when it takes a sustainable approach, which include simultaneous control of ravaging global warming. In view of this, the paper made case for sustainable tourism and jettisoning of traditional ideas of tourism development for optimization of the benefits inherent therein.

Keywords: *Global Warming, Tourism, Ecotourism, Conservation, Greenhouse Effect*

A. Introduction

Tourism has become one of the largest industries in the world (UNWTO, 2020, 2018 and 2017; Bankole and Odularu, 2006; UNEP 2002; Roe and Urquhart 2001). It is an economically important sector with consistent global growth (Hussain and Fusté-Forné, 2021, León-Gómez, *et al.*, 2021). It continues to play an important and certainly positive role in the socio-economic and political development in destination countries by offering new employment opportunities (Okharedia, 2017; Postelnicu and Dabija, 2016; Mishakin, Razumovskaya, Berdnikova and Ivanov, 2015). As an affirmation of its unprecedented growth, international tourist arrivals was reported to have exceeded 1.5 billion globally in 2019, which represents an increase of 3.8% year-on-year (UNWTO, 2020). In certain instances, contributing to a broader cultural understanding by creating awareness,

respecting the diversity of cultures and ways of life. In the words of Egbuewu (2007), tourism beautifies the environment and does everything that would make one feel satisfied. Within the broad spectrum of tourism, scholars have noted nature tourism or *ecotourism* as the fastest growing segment of tourism (Dimitrios, 2010; Awake 2005; The Nature Conservancy 2004). This brand of tourism is becoming increasingly popular in both conservation and travel circles hence its description as environmentally responsible travel to natural areas in order to enjoy and appreciate nature.

The importance of tourism in contemporary time is becoming more entrenched via its economic benefits. Each year over 600 million people travel internationally; hundreds of millions more journey within their home country, doing so for both work and pleasure. As a result, the tourism industry – including hotels, resorts, airlines, travel agencies, and other businesses that have direct influence on travel and travellers is described as the world's number one employer. Worldwide tourism generates an estimated trillion dollars annually (Conservation International, 2013; Awake, 2005). In view of this economic prospect, it is seen as one of the viable options available for countries experiencing economic depression (Adeyemo, 1995). Although there is no denial that high economic benefits have been derived from tourism activities, unfavorable effects have also been commonplace. Prime concerns include environmental consequences and destruction of cultural heritage (Lane, 2005). In similar vein tourism enjoys little recognition within the world's largest development bureaucracy, the World Bank in spite of its global recognition as a development strategy. The reason behind this is the assertion of WorldPaper (1997) that countries using tourism in the struggle to develop may only win the currency battle, but all too often at the expense of losing cultural wars.

The general believe is that tourism has not fulfilled its expectations in spite of its prospect as a tool for economic gains and job creator. Complaints from tourist destinations revealed massive negative impacts of tourism on the environment, culture and residents' ways of life hence the rise in demand for a more sustainable development in tourism (Scott, Gossling and Hall 2012; CBD, 2010; 2004; UNCSD, 1999). The concerns of some scholars about environmental impact of tourism centre on the issue of pollution. It has been noted that tourists produce pollution – an average of one kilogram of solid waste and litter each day per tourist, according to estimates by the UNEP – United Nations Environment Programme. Unabated environmental pollution according to

the experts is capable of producing greenhouse effect and invariably global warming (Ezirigwe, 2008). It is no wonder that UNEP (nd) observed that global tourism is closely linked to climate change and invariably global warming.

B. Result and Discuss

1. What is Global Warming?

Global Warming has been described as the greatest threat facing humanity (Awake, 2008). Global warming or Climate change denotes increase in world's temperatures. It is an increase in global average surface temperature resulting from an increase in the amount of carbon dioxide, methane, and certain other trace gases in the atmosphere. These gases are known collectively as greenhouse gases because they contribute to a warming of the Earth's surface and lower atmosphere, a phenomenon called the greenhouse effect (Encyclopædia Britannica, 2014). Scientists believe Earth is currently facing a period of rapid warming brought on by rising levels of these heat-trapping gases (greenhouse gases) in the atmosphere (Allaby, 2014; Pielke, 2014).

Depletion of the ozone layer is also one of the traveling partners in global warming. The ozone layer, which is situated in the upper atmosphere (or stratosphere) at an altitude of 12-50 kilometers, protect life on earth by absorbing the harmful wavelengths of the sun’s ultraviolet (UV) radiation, which in high doses is dangerous to human and animal existence. Ozone depleting substances (ODSs) such as CFCs (chlorofluorocarbons) and halons has contributed to the destruction of this layer (Van Dijk, Zhang, Jun, Kuenzer and Wolf, 2011; Evans, 2005). The fact here is that these along with other pollutants combine to change the composition of the atmosphere causing less heat to escape thus influencing the rise in earth’s temperature (Adeyefa, 1995).

Climate scientists now generally agree that the Earth’s surface temperatures have risen steadily in recent years because of an increase in the so-called greenhouse gases in the atmosphere, which trap heat from the sun (Hecht, 2014, UNEP, 2008, UNEP, *nd*). Greenhouse gases retain the radiant energy (heat) provided to Earth by the Sun in a process known as the greenhouse effect. Greenhouse gases occur naturally, and without them the planet would be too cold to sustain life as we know it. Since the beginning of the Industrial Revolution in the mid-1700s, however, human activities have added more and more of these gases into the atmosphere (Encarta, 2008). One of the most significant of these gases is carbon dioxide (CO_2) (WHO, 2017; Mora, 2013; UNEP, *nd*). Levels of

carbon dioxide, a powerful greenhouse gas, have risen by 35 percent since 1750, largely from the burning of fossil fuels such as coal, oil, and natural gas (e.g. in industry, electricity generation, and automobiles) and when there are changes in land use, such as deforestation. In the long run, the accumulation of CO_2 and other greenhouse gases in the atmosphere can cause global climate change (UNEP, *nd*; Conservation International, 2006b) as the atmosphere acts like a thickening blanket and traps more heat (Encarta, 2008).

2. Global Warming and Tourism

Recent years have been among the warmest on record. Research suggests that temperatures have been influenced by growing concentrations of greenhouse gases, which absorb solar radiation and warm the atmosphere (Rayamajhi, 2012). Research also suggests that many changes in atmospheric gas are human-induced. The demographic influence appears primarily in three areas. *First*, contributions related to industrial production and energy consumption lead to carbon dioxide emissions from fossil fuel use; *second*, land-use changes, such as deforestation, affect the exchange of carbon dioxide between the Earth and the atmosphere; and *third*, some agricultural processes, such as paddy-rice cultivation and livestock production, are responsible for greenhouse gas releases into the atmosphere, especially methane (Friel, Dangour, Garnett, Lock, *et al.*, 2009; Thornton, van de Steeg, Notenbaert and Herrero, 2009, RAND, 2000). By extension, global tourism has been linked to climate change. This is in view of movement of people from their homes to other destinations, which accounts for about 50% of traffic movements. Rapidly expanding air traffic contributes about 2.5% of the production of carbondioxide (CO_2). Tourism is thus a significant contributor to the increasing concentrations of greenhouse gases in the atmosphere (UNWTO, 2018, 2017; Page, 2009). Studies equally revealed that the direct impacts of tourism industry to global warming start with the construction of resorts and development of attractions and continue during daily management and operations.

In the words of, tourism has tremendously impacted on the environment thereby contributing to emission of greenhouse gas that are derived from energy consumption, use of fossil fuels, and the transportation of tourists. Such impacts constitute the most urgent environmental problem related to tourism, imposing on the industry the challenge of finding mechanisms to reduce environmental impacts, leading countries to reduce carbon

dioxide (CO_2) emissions, one of the elements responsible for global warming (Hall and Coles, 2008).

Air travel itself is another contributor to the greenhouse effect. Passenger jets are the fastest growing source of greenhouse gas emissions. The number of international travelers is increasing and expected to further increase to 1.6 million by 2020 compared to 594 million which it was in 1996. This undoubtedly will greatly compound the problem unless steps are taken to reduce emissions (World Wildlife Fund cited by UNEP, *nd*). A substantial proportion of greenhouse effect also comes from gadgets that are widely used in the hotel and tourism industry as a result of ozone depleting substances (ODSs) contained in these gadgets. Such gadgets are refrigerators, air conditioners and propellants in aerosol spray cans, among others. Apart from the above, the sheer volume of tourists today has been stressed as leading to problems (Cook, Nuccitelli, Green, *et al.*, 2013) as a result of this, it is noted that uncontrolled tourism can kill or stunt vegetation when hordes of visitors' tramp through conservation areas. Lending credence to this, UNEP (*nd*) looked at this through the loss of biodiversity.

According to it, tourism causes loss of biodiversity when land and resources are strained by excessive use, and when impacts on vegetation, wildlife, mountain, marine and coastal environments and water resources exceed the carrying capacity. This loss of biodiversity in fact means loss of tourism potential and subsequent negative effects on people's health. The issue here is that changes in climate affect the average weather conditions that we are accustomed to. Warmer average temperatures will likely lead to hotter days and more frequent and longer heat waves. This could increase the number of heat-related illnesses and deaths. Increases in the frequency or severity of extreme weather events such as storms could increase the risk of dangerous flooding, high winds, and other direct threats to people and property. Warmer temperatures could increase the concentrations of unhealthy air and water pollutants. Changes in temperature, precipitation patterns, and extreme events could enhance the spread of some diseases.

3. Global Warming and Production of Diseases

A number of scholarly works on contributory factors to global warming have pointed to man's activities in meeting his basic daily needs. Environment experience sporadic warming and change in climatic condition through unregulated social and industrial activities. In this process, man continues to influence the emission of greenhouse gases

such as carbon dioxide, methane, and nitorous oxide (Mora, 2013; Davis and Caldeira, 2010; Canadell, Le Quere, Raupach, *et al.*, 2007; Azar, Lindgren, Larson and Möllersten, 2006). In developing societies, almost every activity of man leads to aggravation of the level of greenhouse gases. As a result, the planet has shifted from relatively stable Holocene[1] period into a new geological era often termed the Anthropocene[2] (Allen, Dube, Solecki, *et al.*, 2018). In Nigeria, Adeyefa (1995) was of the view that vehicular transportation facilitates emission of gasses of greenhouse gases. Vehicular transportation according to him contributes more than 60% of these emissions with the exception of SO_2 and particulate matter.

Tourism is equally an important factor in generation of gasses that bring about greenhouse effects. For a country like Nigeria that has weak social and economic infrastructure, an increase in tourism activities and international arrival into the country may spell doom for the environment except urgent actions are taken. The health implication of the above on the general populace alone speaks volume about impending dangers when poor preparation and commitment on the part of the government is taken into cognizance. The most appalling issue here is that the devastating effects of this have been highlighted by scholars as applicable to warmer and wetter climatic conditions (Epstein and Ferber, 2011, Mia, Begum, Er, Abidin and Pereira, 2010; McMichael, *et al.* 2006; Hunter, 2003; Reiter, 2001).

For instance, global warming comes with higher air temperatures, which can increase cases of salmonella and other bacteria-related food poisoning because bacteria grow more rapidly in warm environments. These diseases as were noted by Karl, *et al.* (2009) can cause gastrointestinal distress and, in severe cases, death. Flooding and heavy rainfall as being intermittently witnessed were resulting from global warming and subsequently causing overflows from sewage treatment plants into fresh water sources. Public health implication of overflows could be in the form of contaminating certain food crops with pathogen-containing feaces (Alderman, Turner and Tong, 2012*).*

Mosquito-borne diseases are probably the greatest threat to humans as they include malaria, elephantiasis and various forms of fever (McMichael, Woodruff and Hales, 2006;

1 This is the name given to the last 11,700 years of the Earth's history, the time since the end of the last major glacial epoch, or 'ice age.'
2 It is the current geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment.

Hunter, 2003; Reiter, 2001). Malaria is especially susceptible to the effects of climate change because mosquitoes lack the mechanisms to regulate their internal temperature. This implies that there is a limited range of climatic conditions within which the pathogen (malaria) and vector (a mosquito) can survive, reproduce and infect hosts (Greenwood, Bojang, Whitty and Targett, 2005). Vector-borne diseases, such as malaria, have distinctive characteristics that determine pathogenicity.

These include: the survival and reproduction rate of the vector, the level of vector activity (i.e. the biting or feeding rate), and the development and reproduction rate of the pathogen within the vector or host (Mia, *et al*. 2010). Changes in climate factors substantially affect reproduction, development, distribution and seasonal transmissions of malaria. Other diseases on the rise due to extreme weather include: Hantavirus (Klempa, 2009), Schistosomiasis (McMichael, *et al.* 2006; Hunter, 2003), Onchocerciasis (river blindness) (McMichael, *et al.* 2006), and Tuberculosis (Epstein, 2001).

As studies (Hunter, 2003; Reiter, 2001) have shown in cases of extreme prevalence of these diseases in areas that have experienced severe flooding and drought, it is obvious that Nigeria with similar experiences could also be vulnerable to this. This is possible because flooding creates more standing water for mosquitoes to breed. Not only this, these vectors are able to feed more and grow faster in warmer climates. As the climate warms over the oceans and coastal regions, warmer temperatures are also creeping up to higher elevations allowing mosquitoes to survive in areas they had never been able to before. The implication of this may not be limited to our immediate environment when considering the positions of Epstein and Ferber (2011a) that malaria will make a return to the developed world and continue to wreak havoc on developing societies where it is dominant as the climate continues to warm.

Going by the projections of the Scientists (USEPA, 2010; NRC, 2010; Gamble, Ebi, Sussman and Wilbanks, 2008), warmer temperatures from climate change will increase the frequency of days with unhealthy levels of ground-level ozone, a harmful air pollutant, and a component in smog. This projection equally makes it apparent that ground-level ozone may engender the damage of lung tissue and reduction of lung function and inflammation of airways. At the end of the day, an increase in respiratory symptoms and aggravation of asthma or other lung diseases may be prevalent. It is

especially harmful to children, older adults, outdoor workers, and those with asthma and other chronic lung diseases.

Ozone exposure also has been associated with increased susceptibility to respiratory infections, medication use, doctor visits, and emergency department visits and hospital admissions for individuals with lung disease. Some studies suggest that ozone may increase the risk of premature mortality, and possibly even the development of asthma (USEPA, 2010; Karl, Melillo and Peterson, 2009; Gamble, *et al.* 2008; USEPA, 2006). Because warm, stagnant air tends to increase the formation of ozone, climate change is likely to increase levels of ground-level ozone in already-polluted areas and increase the number of days with poor air quality (Karl, *et al.* 2009).

4. Implications of Global Warming on Societal Health and the field of Tourism

The effects of climate change on health will depend on many factors. These factors include the effectiveness of a community's public health and safety systems to address or prepare for the risk and the behavior, age, gender, and economic status of individuals affected. Impacts will likely vary by region, the sensitivity of populations, the extent and length of exposure to climate change impacts, and society's ability to adapt to change.

As unabated severe climatic condition sustains heated environment, occurrence of natural disasters like floods, earthquakes, wildfires, volcanoes, avalanches, drought, diseases and heat waves are likely to be a recurring issue. With occurrences such as these, potential tourists are kept away from the holiday destinations. Catastrophes like floods, earthquakes and other natural disasters can seriously affect inbound and domestic tourism and thus on local tourism industries. Such disasters equally have health implications. For instance, in a warmer world, scientists predict that more people including the livestock will get sick or die from heat stress (Kristjanson, Neufeldt, Gassner, *et al.*, 2012; Thornton, van de Steeg, Notenbaert and Herrero, 2009), due not only to hotter days but primarily to warmer nights (giving the sufferers less relief).

More frequent and intense heat waves will further contribute to this trend. At the same time, there will be some decreases in the number of cold-related deaths. Diseases such as malaria, now found in the tropics and transmitted by mosquitoes and other animal hosts, are projected to widen their range as these animal hosts move into regions formerly too cold for them. Other tropical diseases may spread likewise, including dengue fever, yellow fever, and encephalitis. Scientists also project rising incidence of allergies and

respiratory diseases as warmer air grows more charged with pollutants, mold spores, and pollens (Epstein and Ferber, 2011a & b; Encarta, 2008).

For clarity of implication of this on tourism industry, UNEP (*nd*) cited the case of outbreak of the foot and mouth disease epidemic in England in 2001. This was noted to have severely affected Great Britain's inbound tourism market. Quoting a BHA/Barclays Hospitality Business Trends Survey, UNEP (nd) revealed that 75% of hotels in England, 81% in Scotland and 85% in Wales continued to be affected by the foot and mouth outbreak, and over 60% forecasted a decline in business in the June – September 2001 period.

On general note, climatic changes affect local climates and rainfall which in turn affects vegetation and wildlife. The cumulative effect of global warming represents a threat to the survival of humanity in general due to its effects on agricultural conditions, especially food production that will be affected adversely. Both tourists and tourism environmental resources are equally placed at greater danger by global warming. In view of the fact that tourism is environment dependent; therefore, maintaining the quality of the environment is critical to the continued growth of tourism industry, since the survival of the populace inhabiting the environment will invariably influence the sustainability of the industry.

Apart from this, the decrease in biodiversity has several implications for human health. One such implication is the loss of medicinal plants (Muhammad, Hussain, Ahmad, Al-Quariny and Hameed, 2012). The use of plants for medicinal purposes is extensive as most people worldwide rely solely on plant-based medicine as their primary source of healthcare (Hamilton, 2006) particularly in developing countries that only consume 15% of manufactured pharmaceutical drugs, many of which are fake. Local knowledge surrounding medicinal plants is useful for screening for new herbal medicines that may be useful for treating disease. Villages and communities which reside continually in a single geographic area over time, create, transmit and apply widespread information surrounding the medicinal resources in the area (Mirsanjari and Mirsanjari, 2012).

5. How does this concern Nigeria as a nation?

At this point in time when countries that have embraced tourism as viable instrument for economic development are propagating the gospel of sustainable tourism, Nigeria tourism

industry is just trying to find its feet. This is manifested through the slow pace of development of tourist sites that are found across the country (Akpabio, 2007). This poor attitude towards tourism development may mean attendant poor mechanism for mitigating the impact of tourism on the environment, which included the public health. On this note there is dire need for plausible solution that will take care of general lackluster attitude towards tourism and at the same time bring about sustainable tourism activities that will be environmental-friendly. In this situation, the issue of global warming will be effectively handled as well as the healthcare and by extension the overall wellbeing of the citizenry, which has been particularly acknowledged to be in shambles.

According to 2003 National Demographic Health survey in Nigeria, children and women are dying every day of preventable illness and avoidable complications of pregnancies in Nigeria. The country accounts for 10% of the global estimate of maternal death. Coupled with this is that the pace of health development in the last few decades has stagnated. There has been little or no change in under-five and infant as well as maternal morbidity and mortality rates. Unfolding events on life expectancy is becoming a tale of regret due to poor finances and government neglect. The resultant effects of this according to Fajemilehin (2009) had worsened Nigeria's Human Development Index (HDI).

Human Development Index (HDI) as a summary measure of average achievement in key dimensions of human development highlights the centrality of certain issues. These include (a) long and healthy life, (b) being knowledgeable and (c) having a decent standard of living. The HDI was created to emphasis that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. HDI is also being used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with different human development outcomes (UNDP, 2018)

In 2007 United Nations Human Development Index ranks Nigeria 158 out of 177 countries; this is a significant decrease in its human development rank of 151 in 2004. About 64 per cent of households in Nigeria consider themselves to be poor while 32 per cent of households say their economic situation had worsened over a period of one year. Although National Statistics report that the trend in poverty is on the decline, it is painstakingly sluggish and progress towards meeting the Millennium Development Goal of eradicating extreme poverty and hunger is slow. Poverty still remains one of the most

critical challenges facing the country and population growth rates have meant a steady increase in the number of poor. Life expectancy remains low and is estimated to have decreased from 47 years in 1990 to 45.9 years in 2007. WHO (2019) Global reports showed that life expectancy at age 60 years was greater for women than men: 21.9 versus 19.0 years in 2019. Between 2000 and 2016, global life expectancy at birth, for both sexes combined, increased by 5.5 years, from 66.5 to 72.0 years. The number of years lived in full health – that is, healthy life expectancy (HALE) – also increased over that period, from 58.5 years in 2000 to 63.3 years in 2016. By the year 2017, Nigeria's life expectancy at birth has increased by 8.0 years thereby making it 53.9 years.

With all the abysmal performances from all sectors which is reflecting on quality of life of the people particularly in terms of health in Nigeria, one should wonder what will happen at the time when tourism will be making its inevitable negative contributions in terms of environmental challenges. The fear is about what will become of Nigerian populace, their health situation as well as productivity for sustainable development at that point in time, if United States of America with its preparedness for possible occurrence of mishaps could be raising health alarm as illustrated in the foregoing, what becomes of Nigeria where the political will to take care of the populace is zero and everybody relies on faith and superstition is frightening hence the need for a solution in order not to allow the superlative benefits of tourism slip by. Continuous relevance of tourism as lender of economic resorts made the embracing of sustainable tourism a necessity in view of the need to take care of dwindling economic resources all over the world and at the same time mitigate the impact of environmental challenge like global warming.

6. Mitigating Potential Adverse effect through Sustainable Tourism Strategies

Over the last 20 years the concept of sustainable tourism has been developed to counter the threats which unmanaged tourism can bring. Sustainable tourism sees tourism within destination areas as a triangular relationship between host destinations and environment, the tourists, and the products and service providers (industry operators) (Lane 2005). Sustainable tourism aims to reconcile the tensions between the three partners in the triangle, and keep the equilibrium in the long term. The mandate of sustainable tourism includes minimizing environmental and cultural damage, optimise visitor satisfaction, and maximize long- term economic growth for the region. It is a way of obtaining balance between the growth potential of tourism and the conservation needs of the environment

(Duxbury, *et al.,* 2021, Bramwell and Lane, 1993; Hawkes and Williams, 1993; English Tourist Board, 1991 and Bramwell 1990).

In the words of Poon (2007) global developments, particularly the increasing deterioration of the environment and growing threats of environmental disasters; growing demands by increasing mature and informed consumers for more responsible products and services; as well as key positive actions undertaken by governments and businesses suggest that sustainable tourism practice is not a luxury item on the agenda, but a growing necessity for the travel and tourism industry.

Four main keys towards attainment of successful sustainable tourism were identified by Benard Lane (2005). Adoption of these keys for a sustainable tourism in Nigeria will be a worthwhile effort. Such effort in the long run will have percolating effects on healthful and sustainable living. The keys as thus stressed include (a) the person or team formulating the strategy must be skilled not only in tourism development but also in economic, ecological and social analysis. While local knowledge is useful, impartiality is much more vital if trust is to be maintained amongst the many parties taking part in the strategy-making process, (b) wide consultations amongst all interest groups are essential. These consultations will include trade and business, transport, farmers, administrators, and the custodians of the natural and historic assets of the area, (c) openness has a very special role to play as tourism relies more than any other industry on local goodwill - the ability to make holidaymakers feel welcome.

The local population must be happy with their visitors, and secure in the knowledge that the visitor influx will not overwhelm their lives, increase their housing costs, and impose new and unwelcome value systems on them. Openness can be achieved by public discussions, by careful use of the press, radio and television, and by the development of a two-way dialogue with the community, (d) the strategy-making process should not be a once-only affair. It has to be an evolving long-term enterprise, able to cope with change, and able to admit its own mistakes and shortcomings. This will form the beginning of a partnership between business, government and cultural and conservation interests. These are the ideals that should be encouraged and the strategy makers should strive to achieve.

C. Conclusion

It is obvious that tourism holds the ace when it comes to an easy way of earning foreign exchange without expending huge capital. While this economic advantage is imperative, it is an established fact that failure to plan tourism activities may lead to environmental problems. Not limited to this, the global warming and invariably unfavourable human ecology, health situation and attendant poor productivity and subsequent problem of sustainable growth will become apparent.

In line with the current clamour, sustainable tourism seems the best option for optimal harnessing of tourism potentials for high economic dividends that will at the same time take the issue of environmental management into cognizance. At the same time, achieving reasonable results in sustainable tourism according to UNEP (*nd*) is tied to NGOs and local acceptance of this strategy. This will ensure sustainable use of natural resources, mitigate impacts, preserve biodiversity and enhance local community involvement. Finally the following are provided for an all encompassing sustainable tourism: 1). Environmental awareness, in relation to tourism, needs to be promoted both within the private sector and local communities; 2). Recently, governments and NGOs started working jointly towards ensuring good economic, social and environmental practices within the region. There is hope that this will further develop and strengthen these ties in order to achieve sustainability within the tourism sector; 3). Sustainable tourism must be promoted, encouraged and developed by governments; 4). Enhancement of intra-governmental cooperation in promoting sustainable tourism and joint projects; 5). Government should develop nation-specific regulations in relation to and integrating tourism and the environment. Sectoral Environmental Impact Assessments (EIAs) are a must and mitigation measures must be put into place in order to avoid potential impacts; 6). Governments should not only encourage, but also enforce environmental certification through regular monitoring and auditing to ensure sustainable tourism; 7). Waste management needs to be implemented as part of a country's infrastructure before promoting, and in order to support tourism; 8). Natural resources management is a key issue in preserving the environment while promoting tourism. This should include coastal zone management, biodiversity conservation and land use management; 9). Governments should ensure the transparency and public dissemination of information (especially EIAs); 10). Local communities should be encouraged to be a part of the tourism development by

starting small and medium sized enterprises attracting tourists; 11). Governments should ensure job creation within local communities; 12). Governments need to ensure that culture and heritage is safeguarded; 12). Governments must promote the innovation of environmental technology within the private sector.

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