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IMPACT OF CLIMATE CHANGE ON TOURISM AND HOSPITALITY INDUSTRY

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ABSTRACT:

Climate Change has affected many facets of the economy of the world and also impacted on the livelihood of people living in various parts of the world. Among the various economic activities affected is Tourism. This review work is on the Impact of Climate change on Tourism. Relevant and related literature were reviewed in line with the topic. The study showed that the Climate Change which is basically caused by anthropogenic activities and its impacts have affected Tourism and hospitality in various ways which ranges from loss of life, flight cancellation, loss of money and other psychological trauma etc. The paper proffered the need to step up the actions to control and mitigate climate change and boost the tourism and hospitality industry.

KEYWORDS: Climate change, Tourism, Economy, Livelihood, Anthropogenic

1.0 INTRODUCTION

Our lives, economies, health and social well-being are all affected by climate change, and although the consequences of climate change will vary on a regional basis, all nations and economic sectors will have to contend with the challenges of climate change through adaptation and mitigation. Over the past decade, studies have shown that there have been evidences of climate variability and climate change. Climate change is the global phenomenon of climate transformation characterized by the changes in the usual climate of the planet (regarding temperature, precipitation, and wind) that are especially caused by human activities. Human activities result in emissions of four principal greenhouse gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and the halocarbons (a group of gases containing fluorine, chlorine and bromine). It is also a broad range of global phenomena created predominantly by burning fossil fuels, which add heat-trapping gases to Earth's atmosphere. These phenomena include the increased temperature trends described by global warming, but also encompass changes such as sea-level rise; ice mass loss in Greenland, Antarctica, the Arctic and mountain glaciers worldwide; shifts in flower/plant blooming; and extreme weather events."(Youmatter, 2020). These phenomena that occur as a result of climate change do not only affect the ecosystems or the workability of the various cycles (such as water, carbon etc), it also affects economic activities, survival and leisure activities. These effects can be complete or partial, direct or indirect. Climate change's impact on leisure tilts more to the disruption of tourism and services rendered by hospitality industries around the world over. In some scenarios, climate change affects the movement of Tourists from one area to another because of what is obtainable in various areas.

2.0 METHODOLOGY

This work is based on the review of related literature on the areas of climate change and tourism. Published researches and review works were consulted and synthesized to come up with this work.

3.0 LITERATURE REVIEW

3.1 Causes of Climate Change

Human activities contribute to climate change by causing changes in Earth's atmosphere in the amounts of greenhouse gases, aerosols (small particles), and cloudiness. The largest known contribution comes from the burning of fossil fuels, which releases carbon dioxide gas to the atmosphere. Greenhouse gases and aerosols affect climate by altering incoming solar radiation and outgoing infrared (thermal) radiation that are part of Earth's energy balance (Rastall, 2021). Since the industrial revolution, there has been a significant increase in the use of carbon (coal, oil, and natural gas), which, when burned, releases carbon dioxide (CO_2) into the atmosphere, increasing its power of retaining heat. This carbon burning represents more than 50% of global Green House Gas emissions (Grimm, Alcântara and Sampaio, 2018). The main driver of climate change is the greenhouse effect. CO_2 produced by human activities is the largest contributor to global warming. By 2020, its concentration in the atmosphere had risen to 48% above its pre-industrial level that is, before 1750 (EC, 2022).

The current warming trend is of particular significance because it is unequivocally the result of human activity since the mid-20th century and proceeding at a rate that is unprecedented over millennia. It is undeniable that human activities have warmed the atmosphere, ocean, and land and that widespread and rapid changes in the atmosphere, ocean, cryosphere, and biosphere have occurred (NASA's Jet Propulsion Laboratory, 2022). The e vidence is clear: the main cause of

climate change is burning fossil fuels such as oil, gas, and coal. When burnt, fossil fuels release carbon dioxide into the air, causing the planet to heat up (Met Office, 2022).

3.2 Impact of Climate Change on Economy

The economy of various countries are driven by economic activities. Tourism and hospitality industries are economic activities that operate hand in hand in most cases and equally helps drive the economy of most countries. In some countries it is a major generator of foreign exchange to such country. The impact of climate change on the economy as it relates to tourism and hospitality industries tickles down to issues such as cancellation of flights and cruise ships already booked by tourists, cancellation of already booked accommodation, unfavorable weather conditions which could lead to the destruction of tourist sites, death of animals that attract tourists and in some cases fear of the unknown to tourists. World Travel and Tourism Council (2022) observed that prior to the pandemic, Travel & Tourism (including its direct, indirect and induced impacts) accounted for 1 in 4 of all new jobs created across the world, 10.3% of all jobs (333 million), and 10.3% of global GDP (US$9.6 trillion). Meanwhile, international visitor spending amounted to US$1.8 trillion in 2019 (6.8% of total exports)**.** The most important economic feature of activities related to the tourism sector is that they contribute to three high-priority goals of developing countries: the generation of income, employment, and foreign-exchange earnings. In this respect, the tourism sector can play an important role as a driving force of economic development. The impact this industry can have in the different stages of economic development depends on the specific characteristics of each country (Organization of American States, 2022).

According to Global Citizen (2022) researchers who looked at aggregate economic data between 1961 and 2010 and compared it to temperature changes over this period. They found that temperature increases associated with global warming caused marked declines in economic activity.

These effects have been most pronounced in countries around the equator, where climate change has caused deadly heat waves, unleashed supercharged storms, and made extreme droughts more likely. Roson and Van der Mensbrugghe (2012) used an integrated assessment model (ENVISAGE), which includes a CGE-based economic module and a climate module, to assess the effects of a variety of economic impacts induced by climate change. These impacts include: sea level rise, variations in crop yields, water availability, human health, tourism, energy demand. Two scenarios are compared: a baseline growth path, disregarding any climate change effect, and a counterfactual case, accounting for the impacts. The model assesses the overall magnitude of the impacts, their regional distribution, and the contribution of each specific impact to the overall variation of income and welfare. The results (e.g., on real GDP) show that climate change impacts are substantial, especially for developing countries and in the long run, so that mitigation/adaptation policies are needed to make economic growth sustainable. The economic impact of climate change according to Fankhausera and Tol (2005) is usually measured as the extent to which the climate of a given period affects social welfare in that period. This static approach ignores the dynamic effects through which climate change may affect economic growth and hence future welfare. Greece – where travel and tourism make up 15% of GDP – has had to evacuate over 2,000 holidaymakers after wildfires broke out on the island of Rhodes. Athens took the unprecedented step of closing its top tourist attraction, the Acropolis, after temperatures reached 45°C (World Economic Forum, 2023).

3.3 Impacts of Climate Change on Tourism and Hospitality Industry

Tourism is an industry affected by climate change, but it also makes a significant contribution to Green House Gas (GHG) emissions, especially due to transportation (passenger transport) and infrastructure (accommodation). The data released by the World Tourism Organization (2008) revealed CO_2 emissions in three tourism sectors: transportation, accommodation, and leisure

tourist activities. The Organization estimates that emissions from national and international sources generated by tourism in these three sectors of the production chain, represent around 4.9% of global GHG emissions (Grimm, Alcântara and Sampaio, 2018).

The Second International Conference on Climate Change and Tourism, in Davos, Switzerland held in 2007 agreed that climate is a key resource for tourism and the sector is highly sensitive to the impacts of climate change and global warming, many elements of which are already being felt. It is estimated to contribute some 5% of global CO_2 emissions;

- tourism – business and leisure – will continue to be a vital component of the global economy, an important contributor to the Millennium Development Goals and an integral, positive element in our society;
- given tourism's importance in the global challenges of climate change and poverty reduction, there is a need to urgently adopt a range of policies which encourages truly sustainable tourism that reflects a 'quadruple bottom line' of environmental, social, economic and climate responsiveness;
- the tourism sector must rapidly respond to climate change, within the evolving UN framework and progressively reduce its Greenhouse Gas (GHG) contribution if it is to grow in a sustainable manner; this will require action to:

➢ mitigate its GHG emissions, derived especially from transport and accommodation activities;

➢ adapt tourism businesses and destinations to changing climate conditions;

➢ apply existing and new technology to improve energy efficiency; and

➢ secure financial resources to help poor regions and countries. (UNWTO, 2008). Climate change has affected many tourist destinations, where extreme events of drought, storm,

large quantities of rain, and hurricanes among others, have made many regions and global communities vulnerable to these events (Grimm, Alcântara and Sampaio, 2018).Climate change impacts on Tourism can be direct or indirect depending on the aspect of Tourism affected. Direct impacts of climate change on Tourism could range from Warmer temperatures that results in altered seasonality, changes in flora and fauna distribution and their population, emergence and occurrence of some infectious diseases and heat waves.

Coastal and island destinations are highly vulnerable to direct and indirect impacts of climate change(such as storms and extreme climatic events, coastal erosion, physical damage to infrastructure, sea level rise, flooding, water shortages and water contamination), given that most infrastructure is located within short distance of the shoreline. This high vulnerability often couples with a low adaptive capacity, especially in SIDS and coastal destinations of developing countries (UNWTO, 2008).

The climate is among the factors that motivate and determine much of the tourist flows and trends. However, climate change has affected many tourist destinations, where extreme events of drought, storm, large quantities of rain, and hurricanes among others, have made many regions and global communities vulnerable to these events. The increase in global temperature could shorten the winter, reducing the ice sheets and, in addition to reducing the tourism potential of ski resorts, could even make tourism unfeasible, generating an entire economic and social problem in the most affected regions (Grimm, Alcântara and Sampaio, 2018).

4.0 DISCUSSION

From the various reviews above, it will be noted that climate change is real and human activities are the major drivers of this change in the recent time. It is also observed that the effects of climate change can be felt by the various sectors of the economy. These various sectors of the economy gives rise to different economic activities of which Tourism and hospitality industries are a part. In as much as some activities boost Tourism and in turn increases the use of hospitality industries, the incident of climate change affects Tourism and hospitality industry both directly and indirectly. In affecting Tourism, climate change results in the destruction and loss of natural environments that attract tourists such as flooding of some beaches, melting of ice used for skating, increased rainfall, forest fires that destroy the natural habitats of wild life. With these hindrances to the flourishing of Tourism, the global economy is affected starting from low or non-visitation to these tourist sites, to cancellation of flights to these locations, loss of job for tour guides, and low patronage to hotels, motels or accommodation providing centers. This in turn affects the total money (both in foreign and local currency) a country or area can generate in a year. It also affects workers in various hospitality sectors directly and their dependants. In all there is also an indirect effect on the local economy especially those in the informal sector.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary and Conclusion

This work was focused on the Impact of Climate Change on Tourism and Hospitality Industry. Literature was reviewed on stipulated sub headings. From the review, it was noted that man is

highest driver of climate change and that climate change affects the economy of which Tourism and Hospitality are parts of, resulting in losses of various degrees.

In conclusion, it will be noted that climate change has a toll on Tourism and hospitality industries and this has a resultant effect on the economy of an area. The environment and its resources are also affected by climate change which results in both the loss of biodiversity and aesthetics of the environment.

5.2 Recommendation

From the foregoing, it will be observed that climate change affects Tourism and hospitality industries and as such these recommendations:

- Tourist centers should reduce their use of facilities or amenities that increase the contribution of greenhouse gases that aid climate change and global warming.
- Where natural environments has been altered or destroyed by climate change, there should be need to provide alternative to/in such areas to still encourage Tourism there.
- The Government and entrepreneurs should encourage and support the development and construction of man made tourist destinations in areas where climate change has affected the natural tourism sites to augment and encourage tourists to still visit

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