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Contents

Introduction 2

Climate Change 3

What is climate change? 3

Company 4

Effects of climate change 5

Repercussions faced by the company 6

Supply chain and the Logistic sector in South Africa 7

Bibliography ..... **Error! Bookmark not defined.**

Introduction

It is certainly undoubtable that climate change is a real phenomenon, and that its side effects have already started to affect and shape the way in which we live. These effects do not only just alter our daily routines, but it also presents challenges and risks within the business and economic sector. We cannot ignore the significant role that both Government and privately owned enterprises play in the sustainability of the economy and the environment. In the following sections will be a brief analysis of what climate change is, how it was instigated, and probable steps which we as humanity can take in order to better manage and promote a greener sustainable environment. Furthermore, the following sections will also broadly focus and shed light on the impact that climate change has on local businesses, and the strategies we may deploy to reduce its impact within the South African logistics, and supply chain industry.

Climate Change

It is imperative to firstly briefly define the concept of climate change, to grasp and get the full picture of the subject at hand. This section will therefore address and expand on climate change and provide answers to questions such as: What is climate change? What are the associated risks and effects? How do we manage or mitigate against climate change and associated impacts?

I believe it is when we have acquired knowledge and an understanding of climate change that we may scrutinize and find means to mitigate and better manage the effects of climate change.

What is climate change?

Climate change may be defined as a change in the pattern of weather, and related changes in oceans, land surfaces and ice sheets (Anon 2018). Weather as we know it is influenced by the oceans, land surfaces and ice sheets, together with the atmosphere these form what is called the climate system (National Geographic Kids 2018). Given this definition of the climate system, climate change will then be a 'measure' of the change in the climate system over a specified period of time.

Climate change can be substituted for global warming, which is the process of our Earth heating up. As this phenomena occurs it brings about dire repercussions not only to the environment but to the human species, and the animal kingdom.

What are the causes of climate change?
The causes of climate change includes:

1. Burning of fossil fuels
2. Farming
3. Deforestation

Humans and the Earth population are perhaps the key reason as to why climate change (global warming) is on the rise. With the Earth's population approximated to be a staggering 7.6 billion, the environment is under pressure to provide and feed our population(Global Citizen). As it stands the number of people born is significantly greater than the number of people dying, thus the world's population is an increasing linear graph, this means the we are slowly reaching the maximum capacity of our environment (Bostrom. 2012).

In the struggle for human survival, we have erroneously used and mismanaged our natural resources to feed and support the human race. Countries continuously burn large amounts of fossil fuels such as oil and gas. The gases released into the atmosphere during this process act like an invisible 'blanket', trapping heat from the sun and thus warming the Earth.

Tress are vital in sustaining and controlling the amount of greenhouse gases in the atmosphere. However rainforests are being cut down to make wood, palm oil and to clear the way for farmland, roads, oil mines, and dams.

Company

Company Name : SkyHigh Innovations

Established date : 7 October 2016

Number of Employees : 10

About SkyHigh Innovations

SkyHigh Innovations is a green technological and innovations company, which is focused on creating green innovative solutions to the problems faced by communities and the world. It turns raw ideas into fine products which ultimately contribute to a greener more stable environment, whilst simultaneously optimising efficiency and hygiene. Their products uniquely improve and change the way think and conduct our normal everyday lives.

Founded in October 2016, the business has been successfully operating for the past two years.

What the company does

- The company is aimed at producing quality innovative products which ultimately contribute to the conservation of the environment for the future generations.
- Their products optimise hygiene while lowering household costs incurred due to their innovative unique design and construction.
- They create solutions that optimise efficiency whilst keeping them simple and very user orientated.
- Create and foster a culture of innovation with the sole purpose of creating environmental sustainability awareness.

The company manufactures a wide variety of products, to which some materials are outsourced and shipped from various suppliers around the world. After liaising with the company's founder, Mr Ndimande said "Importing materials from international suppliers is a way in which we as a company minimise our costs, since imported materials are often cheaper than buying them from local suppliers. This is vital in ensuring that the users of our products get the best value at the best price."

Effects of climate change

Jackson (2017) suggests that global climate change already has observable effects on the environment. Glaciers have shrunk, ice on rivers and lakes is breaking up earlier, plant and animal ranges have shifted and trees are flowering sooner. In this subsection, the effects of climate are listed and briefly explained.

Effects include:

- More rainfall
- Changing seasons
- Shrinking sea ice
- Rising sea levels
- Loss of life
- Food Supply

Jackson (2017) continues to elaborate because human-induced warming is superimposed on a naturally varying climate, the temperature rise has not been, and will not be, uniform or smooth across the country or over time. This increase in temperature will also cause changes in our precipitation patterns.

More draughts and heat waves are also projected to be more intense. The rising temperatures will cause summer temperatures globally to continue rising, this causes a reduction of soil moisture, which aggravates heat waves.

The increase in global temperature causes the polar ice glaciers and inland ice to melt, this together with the thermal expansion of water contribute or cause the global mean sea level (MSL) to rise. Jackson (2017) states that in the upcoming years, storm surges and high tides could combine with sea level rise and land subsidence to further increase flooding in many regions.

Loss of life is also an important issue that needs to be addressed. Seeing that majority of the repercussions of climate change ultimately alter our weather and food supply, one cannot ignore the question of sustainability of human life on earth. In the issue of food, genetically modified (GM) foods may be considered as an answer, however the side effects associated with them cannot be overlooked. Since humans are able to adjust faster to a changing environment than animals and plants, there is a strong chance and possibility that, crops may fail to grow and animals may fail to survive in a changed climate. This puts the question, what then happens to the food supply?

A constant and reliable food supply is essential in maintaining human life. This is the first threat that challenges the survival and sustainability of the human race. Weather is another component which is crucial in the equation of human survival. With the changing climate and the global temperatures rising, weather patterns are predicted to be altered and phenomena such as storms, hurricanes and tsunamis are expected to be more severe and very hazardous. Current facts and statistics of lives claimed by weather related phenomena are staggering.

All the points mentioned above might be a reality people need to face, hence it is imperative that ways of mitigating and reducing the effects are found.

Repercussions faced by the company 14/20

Increased freight and logistical costs: It is certainly undoubtable that the perils associated with the shipment of good from international stock suppliers is a threat to production, company integrity, and the costs structure.

Insurance costs: The change in climate change causes an upset in the seas, the currents, and the associated risks and dangers with shipping, thus the insurance premiums will be significantly higher so as to cover the costs in the event of cargo losses or damage.

Delays in shipments: The upset in the sea state may cause irregular currents and freak waves. Thus routes may be changed so as to take advantage of the currents or greater diversions can influence and cause delays in the shipment times.

Infrastructure: Upgrades to manufacturing systems, buildings and installations of energy saving apparatus in and around the factory and company offices.

Staff: UIF, Medicals and all the related staff costs. These costs are expected to increase since life expectancy, and the sustainability of life may be compromised. The change in global temperatures alters the climatic conditions which has a direct impact in the survival of humans and the way in which we live.

Fuel and on-land product transportation: Drilling fuel and the conversion of raw petroleum costs are expected to rise. Thus the costs of in land transportation and product deliveries are to rise and cause an increase in the transport expenditure, this then minimises profits and threatens the whole profit margins of the companies.

These are the several ways in which climate change may affect the company, the growth, and the sustainability of the company. As the company currently employs 10 people, the sustainability of the company is of vital important, an impact in 10 peoples lives who are supporting their families is vitally important.

Supply chain and the Logistic sector in South Africa 10/20

Supply Chains: May be defined as the sequence or networks of processes involved in the production and distribution of a commodity or product. The oversight of materials, information, and finances forms part of supply chain and supply chain management.

Logistics: The activity of organising the movement, equipment and shipment of products or commodities.

There is an indefinite link between climate change, supply chain and logistics. The problems and associated risks are highlighted in the above section.

Some solutions to alleviate the problems linked to supply chain and logistics.

- Adapting electronic vessels.

- Use of less transportations (Transport commodities in bulk).

- Government incentives to companies or individuals taking a step forward in environmentally friendly transport systems.

- The promotion of solar powered vehicles that could shape, redefine and make logistics more efficient, reliable and fast.

- The use of bio-fuels and promoting environmentally friendly systems.

These systems are to positively influence the way in which the world views and responds to the issue of environmental sustainability.

Conclusion

It is undoubtable that climate change has dire consequences if not properly managed, it should be the top priority that the human species is fighting hard to combat and raise awareness. The above sections have discussed climate change and its associated effects on the human species, the South African logistics & supply chain industry, furthermore these sections reveal how climate change goes to affect a local South African company. This makes it clear that climate change is a broad topic and it has various repercussions which must be fully understood and mitigated.

Solutions to the problems around the logistics and supply chain industry are also highlighted and reviewed. It is if utmost importance that these solutions are looked into and developed, as an attempt to manage and control the effects of climate change.

Finally, taking care of the environment is a responsibility of every individual human on this planet. It is only when we understand and admit that our negligence and transgressing actions towards the environment is a cause of climatic change and its the evident effects, that we may be united as one in addressing and solving these risks and perils.

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