Chapter 4
Carbon Footprint Mitigation

Tapfumanei Chikosha
Midlands State University, Zimbabwe

Zachary Tambudzai
Bindura University of Science Education, Zimbabwe

ABSTRACT

The chapter investigated the nature of climate change global risk and proposed climate change mitigation measures using a doctrinal methodology based on available literature. The atmosphere is a common property resource that experiences the tragedy of commons through pollution. Corporates emit greenhouse gases that cause climate change. In line with the Paris Agreement's long-term goal, measures should be taken to limit temperature increase to a maximum of one and half degrees Celsius above pre-industrial levels and achieve net zero target by 2050. Climate change mitigation is a collective process. There are opportunities arising from green management. Technological inventions for decarbonisation give corporates a competitive advantage through increased demand from green customers. Corporates should implement a phased management approach during a crisis with a strategic repositioning that incorporates modalities to address climate change. Corporate strategies for the 21st century should therefore ensure internalisation of their cost to the environment other than climate inaction.

DOI: 10.4018/979-8-3693-5912-9.ch004

1. INTRODUCTION

International risks negatively affect businesses in various economic sectors at different scales. The contagion effects may threaten the survival of both large firms and small firms leading to corporate crisis. At micro level, corporate crisis is triggered by management failure to adapt to changes in a dynamic business environment. Visionary managers with a global outlook are fully aware of the negative impact of climate change and may therefore prioritise climate issues in their strategic plans. Protecting the environment helps the business to gain a competitive advantage.

However, management's full commitment to the threats of climate change is compromised by the universal nature of climate change crisis and resource inadequacy, among other factors. During corporate crisis, managers may prioritise objectives with short-term gains and those with high opportunity cost such as survival. Corporate crisis may lead to business failure if managers are not innovative and adaptative to changes in the external environment such as the current call to green management.

2. BACKGROUND TO THE STUDY

Climate change is a global risk ranked in the top five with extreme weather events expected to top the list in the next 10 years (Global Risk Report, 2024). However, international efforts to mitigate climate change risk is lagging behind. The undesired catastrophic effects of climate change globally include frequent flooding, drought, veld fires, global warming and sea rising levels among others. People are being displaced, with floods now common even in drought prone areas whose infrastructure is not climate proof to the changing weather patterns. The extreme weather patterns are a common feature in both developed and developing countries, damaging infrastructure, ecosystems and causing loss of human and wildlife.

Climate related risks also include health risk such as skin cancer and water borne diseases, and risks to livelihoods, food security, water supply and economic growth. The much-desired national economic growth objective over the years created an unsustainable economic model based on the rationality principle of self-interest and is associated with undesirable increasing negative externalities in the form of green-house emissions. The use of non-renewable fossil fuels like coal, oil and gas in the production and processing of much-needed consumption and capital goods increased the global carbon footprint beyond the capacity of the universe to replenish itself sustainably, leading to climate change.

Greenhouse gases such as carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), among others are continuously being emitted into the atmosphere (Intergovernmental Panel on Climate Change [IPCC], 2014). Greenhouse gases absorb heat

Related Content