

Chapter 2

The Impact of Climate Change in the Modern Enterprise

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ABSTRACT

This article analyses the profound and rapid climate changes that have taken place worldwide in the past two decades and their effects on modern enterprise. Reducing greenhouse gas emissions and developing strategies to adapt to and counterbalance future impacts of climate change sustainably are among the most pressing needs of the world today. Global temperatures are predicted to continue rising, bringing changes in weather patterns, rising sea levels, and increased frequency and intensity of extreme weather events. Such climatic events can have a major impact on households, businesses, critical infrastructure and vulnerable sections of society, as well as having a major economic impact. Therefore, society must prepare to cope with living in a changing climate. The effects of a changing climate have considerable impacts on modern enterprises. In some parts of the world, these impacts are increasingly becoming evident.

1. INTRODUCTION

All over the world, a large number of all catastrophic events since 1980 are attributable to weather and climate extremes: floods, storms droughts/heatwaves and cyclones. Economic losses resulting from weather and climate related events have increased significantly during the past

20 years. Climate change projections show an increasing likelihood of extreme weather events. Thus, a further increase in damage is very likely.

As climate change is expected to produce negative effects overall, there will also be important new societal needs related to climate change's direct effects on water, food, health, ecosystems, and coastal areas that businesses can focus on.

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These impacts can be thought of as both risks (your workforce becoming increasingly susceptible to disease) and opportunities (the chance to develop and distribute health-improving solutions).

Future climate impacts are a function of three things:

1. Impacts from today's climate, which may pose real risks, such as windstorms or floods, even if they haven't materialized.
2. The potential effects of climate change, which could multiply those threats.
3. Development paths that put more people and assets in harm's way.

To develop expectations about total future impacts, business can use various techniques for characterizing the future, such as scenarios, storylines, analogues, qualitative projections, sensitivity analysis, and artificial experiments such as thought exercises. These all offer different tools. For example, analogues use past events to anticipate how communities will respond in the future, and storylines create narratives about how the company might logically evolve in response to climate-related economic trends.

As it is assumed by scientists that global climate change leads to an increase in the frequency of extreme events, it is becoming more important to understand how modern enterprise is affected in their administration and management by extreme weather phenomena like droughts, floods and associated landslides, storms, cyclones and tornadoes, ocean and coastal surges, acid rain, heatwaves and cold snaps.

2. THE ISSUE OF CLIMATE CHANGE AND THE GLOBAL ECONOMY

The importance of the weather can easily be understood once you consider the impact it has on everyone's mood, on how people are dressed and on what they eat. 'Climate' however is not

the same as the weather. It is the average pattern of weather for a particular region over a long period of time.

The climate has and will always vary for natural reasons. Natural causes of this include fractional changes in solar radiation, volcanic eruptions that can shroud the Earth in dust which reflects the heat from the sun back into space, and natural fluctuations in the climate system itself.

However, natural causes can explain only a small part of this warming. The overwhelming majority of scientists agree that it is due to rising concentrations of heat-trapping greenhouse gases in the atmosphere caused by human activities.

Climate is a major parameter in all ecosystems and has always been a fundamental factor in human settlement, economy, and culture. Episodes of second-order climate change, such as the end of the Ice Age, the drying of the Sahara, the waning of the Medieval Warm Period, and the onset of the Little Ice Age, have had an important impact on human history. However, awareness of such change has remained shadowy at best, probably because the inherent time scales are beyond the span of individual human experience. The term "climate change" means changing the global climate due to human activities¹, driven mainly by increasing the concentration of greenhouse gases in the atmosphere.

An important factor that led to the discovery of the characteristics of the threat of climate change is the knowledge of past climate change. Scientists were the first to set the alarm about climate change due to anthropogenic causes. It is more than obvious that climate changes are not just an internal affair for a country or a multinational one, but a global issue. It is a worrying subject for the scientific community on a global scale but has not been widely considered by common people.

The extent and the rate of current climate change most likely exceeds all natural variation in the last thousand years and possibly further back in history. Our lifestyles, economies, health and social well-being are all affected by climate

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