

The Adverse Effects of Climate Change on The Ecosystem using Africa as a Case-study

Abstract

The impacts of climate change on the African ecosystem are extensive, ranging from wildlife relocating to habitat and ecological damage.

In this paper, the repercussions of changing weather patterns, increasing sea levels, droughts, lack of food, and rising temperatures will all be discussed as they relate to African ecology.

With Africa getting its primary source of income from agriculture, it has been dramatically affected by climate change in multiple aspects and will change its way of life. In this paper, we will understand the effects of climate change on Africa and how it has affected this continent.

Overview

Climate change is a phenomenon that has dramatically impacted our daily life and has several effects on the ecosystem. Its drastic effects have caused it to be described as a wicked problem (which are problems that are impossible to solve because of their complexity and the lack of a single solution to such issues). Whether we classify climate change as an artificial problem or a natural phenomenon does not change the fact that it has and will continually affect our ecosystem.

Introduction to climate change

According to the (United Nations, n.d.), climate change is defined as "Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle." While climate change can be categorised as a natural phenomenon, it does not change the fact that man has done more harm than good when it comes to climate change.

Effects of climate change

Some multiple effects and outcomes are associated with climate change, but here we will be discussing the most important ones most particularly experienced in areas of Africa, which include; Higher Temperature, one of the most common effects of climate change, is the drastic increase in Temperature over the last decades, and it becomes warmer. This increases the risk of wildfires breaking out, making working outdoors more complicated, and making hotter days and heat waves more common, drying up vegetation and leading to habitat destruction and wildlife displacement. (Global Warming: Severe Consequences for Africa, 2019) the study found that Temperatures in Africa are projected to be higher than the global mean temperature increase; areas in Africa within 15 degrees of the equator are projected to experience an increase in hot nights and longer and more frequent heat waves.

Rise in sea level is another effect of climate change and, over the years, has continued to increase as global mean sea level reached a new record high in 2021, rising an average of 4.5 millimetres per year from 2013 to 2021 (WMO), compared to 2.1 millimetres per year from 1993 to 2002. Sea level

has continued to rise over the past decades due to increasing ice loss in the world's polar regions (United Nations, n.d.-b). This increase in sea levels can cause the destruction of habitat and displacement of wildlife in the sea.

Drought has been a recurring issue in various countries in Africa and has become more common and frequent over the years and has several causes, such as higher temperature increases, regular heat waves, and unpredictable weather changes. As these events frequently occur, drought becomes a more complex situation.

Drought also affects water availability, which has already become a significant problem in regions of Africa and exacerbates the situation even more, leading to food shortages affecting all sorts of crops. Furthermore, destructive drought can lead to migration or displacement from certain areas with an expansion of deserts, reduced land for cultivating food, and increased threat of lack of water supply. Changing weather patterns like more severe storms and heavy rainfall have had a very rough toll on regions of Africa where it is causing floods, destruction of properties, destruction of habitats, and displacement of wildlife. Whereas in the other areas, there is a decrease in rainfall, causing more intense and frequent droughts. This dramatically affects these regions as plants and animals find it hard to survive in such conditions.

Lack of food, there are several reasons for this, however, the main reasons being the frequent and increased droughts have made it harder for the plant to be grown anywhere, yet other factors in play, such as heat waves and lack of water, make it difficult to grow plants and crops, this also affects the yield of products even in livestock furthermore making livestock and crops less productive. Marine animals are also being affected by these issues, putting the marine animal that we depend on at risk of causing a global increase in hunger and poor nutrition.

Impact on wildlife and loss of species, as already mentioned, climate change has several effects on wildlife. Changes in Temperature, increase in sea levels, change in weather patterns, droughts, etc., have had a hard toll on African wildlife and have led to the displacement of animals and damage to natural habitats; these events have made it very difficult for plants and animals to survive in such conditions. Climate change has had a tremendous long-term impact on the African continent and must be mitigated to protect the African ecosystem and wildlife.

More health risks, aside from all the already mentioned effects of climate change, there is the risk it poses to human health caused by extreme weather conditions, air pollution, diseases, increased hunger, and poor nutrition in regions with insufficient food, which can cause health issues, infections, diseases, and other health-threatening conditions.

Conclusion, This presentation has explored the effects of climate change on the African ecosystem and its impact, focusing on the changing weather patterns, increasing sea levels, droughts, lack of

food, and rising temperatures. As already mentioned, these effects of climate change have been extensive, resulting in the destruction of properties and habitats, migration and displacement of wildlife, and difficult living conditions for wildlife. Moreover, this helps us understand the need to take immediate action to mitigate the effects of climate change to protect the African ecosystem and wildlife. Therefore we must work together to ensure and preserve our planet for future generations.

Reference list

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