



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Abandoned Wildlife-A Testament of Climate Crisis

Jinu Medhi, PhD research scholar, Gauhati University.

Prof. M. C. Kalita, Head, Department of Biotechnology, Gauhati University.

Abstract: The increase in consumption of energy is vastly damaging the atmosphere by releasing huge amounts of carbon-di-oxide (CO₂) and thus resulting in catastrophe called climate change. Today, climate change has emerged to be a threat to not only humans but also to flora and fauna. Change in ecosystem, can then reduce the survival instinct of animals and also deterred their reproductive rates. The wildlife also interact with their ecosystems and hence, any latency in protecting them may also affect our ecosystems. Children and younger people are the people that will have to deal with the future impacts of climate change and hence their role in conservation of environment and wildlife has been garnering a lot of media attention.

Human activities are extensively dependent on fossil fuels such as natural gas, coal and oil for generation of energy and the verity of this statement can be traced back to prehistoric times. The increase in consumption of energy is vastly damaging the atmosphere by releasing huge amounts of carbon-di-oxide (CO₂) and thus resulting in catastrophe called climate change. Climate change can be linked to change in the pattern of weather, land surfaces and oceans that occur over an extended period of time. However, due to the large scale use of fossil fuels and expansion in green-house gases, the event of climate change has increased by manifold. Today, climate change has emerged to be a threat to not only humans but also to flora and fauna. Most of the plants and animals are used to their natural habitat, they are chronic dwellers and become accustomed to their territory's temperature and rainfall patterns which also enables them

to thrive. However, a shift in any of those habitual exposure may lead them to migrate. For example, some North American animals are moving farther north to higher elevations to find suitable places to live. It is thus a common phenomena for animals to react to climate change. This article will elucidate the ill-effects of climate change or climate emergency on animals, comprehend the severity of the situation and subsequently look out for some prospects of change in that path.

Side Effects on Animals due to Environmental Changes

Climate change can reduce viability of species along with escalating the biodiversity loss resulting in implications on the ecosystem functions and services. Change in ecosystem, can then reduce the survival instinct of animals and also deterred their reproductive rates. Even if populations react positively and adapt to their changing environment, they will still undergo structural, functional and behavioral transformation which will eventually reduce their phenotype to their surrounding, this phenomena is commonly termed as mismatch. Phenotype refers to genes that influence certain characteristics or traits in an organism. These phenotypic changes are attributed as 'adaptive response' which impart gradual transformation in animals. Adaptive response can harbour effects like phenotypic plasticity, genetic drift resulting in microevolution which is due to the tandem relocation of territory. Phenotypic plasticity is attributed to the transformation in an animal's morphology, behaviour or internal functioning which happens in response to an unusual environment whereas microevolution is change in the gene frequency of an organism. Morphological changes like melatonin concentration, increase in the size of bird eggs and loss of genetic biodiversity are often reported in animals. Besides the above mentioned consequences, change in familiar outlets for animals may develop into two types of effects: direct effects and the other one being indirect effects. The direct effect usually arises due to a spike in temperature and intensity of heat waves. Direct effects may result in metabolic dysfunctioning, oxidative stress, subduing of the immune system and an eventual death. Homeotherms (animals that can regulate their body temperature) like humans, birds, amphibians like frogs and some fish respond well to rise in temperature by excessive heat loss and a reduced heat production. This biological activity is a counter reaction to hyperthermia (increased body temperature). Profuse sweating, respiration and decrease in the food intake are some of the outcomes of metabolic dysfunctioning that have direct effects on animals. Oxidative stress may result from an increase in oxidants or lack of antioxidant in the body. Many studies from the past 10-15 years have confirmed that oxidative stress is induced due

to the soaring temperature. Similarly results from many studies undertaken in the past have shown impairment of the immune system due to rise in temperature. Climatic change may also incur some indirect effects on animals like parasitic or viral disease which can also result in morbidity or death. Indirect effect may also sequel in social and ecological forces which eventually reduces the life-expectancy of animals.

Many affidavit sources in recent times have presented a list of animals that are becoming endangered in the face of the current environmental crisis. The list includes names of magnificent animals like Cheetahs, Green Turtles, Asian Elephants, Polar Bears and Giant Panda Bears and many more. These animals are now sadly on the brink of extinction as their habitats are the most affected by climatic changes. They are stricken by polluted land, water and air which also affects the food they eat. Some have altered their breeding and feeding patterns but many withered down under such colossal change.

Conservation Strategies to Annul the Impact from Climate crisis

It's certainly important to conserve wildlife so that the future generations can also rejoice the natural world and ponder the magnificence of species that live within it. The wildlife also interact with their ecosystems and hence, any latency in protecting them may also affect our ecosystems. It's critical to save the deteriorating conditions of animals and ecology and for that effective mitigation measures need to be adopted. The first in this endeavour is to reduce the greenhouse gas emission. The global emissions of greenhouse gas must not exceed the atmospheric concentration. The second step is to stop using biological diverse plantations such as tropical forest, wetlands and so forth for commercial use. Deforestation alone accounts for 20-25 percent of total annual greenhouse emissions. The next step is to consider the value of social, economical and environmental distraught while undertaking new projects and also implementing policies that adhere to the above criteria. There is an evidential need for a new conservation paradigm and in this government can play a catalyst. Children and younger people are the people that will have to deal with the future impacts of climate change and hence their role in conservation of environment and wildlife has been garnering a lot of media attention. Riddhima Pandey an inherent of Uttarakhand is one such young activist from India who is advocating the youth and adults on the matter of ecological conservation. Her name was also included among the prestigious list of invitees to the conference of climate change held in Paris. Conclusively, young minds can also actively help in preserving climate change and thereby safeguarding the lifeline of wildlifes.