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Short Communication

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Short Communication

Should We be Concerned About Climate Change?

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The climate represents a state of equilibrium of a complex system that consists of the Earth surface, cryosphere (sea ice, ice sheets), atmosphere, hydrosphere (essentially ocean) and biosphere (vegetation) (Fluteau, 2003). Climate change is defined as a long-term and radical change in the statistical distribution of weather patterns over periods ranging from decades to hundreds of thousands of years (Trtanj and Houston, 2021). The concept of climate was established in ancient Greece in a geographical context, while it gained statistical content (mean weather) in modern times after meteorological measurements became available (Koutsoyiannis, 2021).

Climate change is caused by the interaction of external and internal factors that have been revealed and verified over a century; it includes galactic variations, orbital variations, solar activity variability, plate tectonics, volcanic activity, and variations in atmospheric composition (Hulme, 2005). In addition, human activities that have emerged and developed at an accelerating pace since the industrial revolution can also impose forcing by changing the atmosphere's composition.

Since the middle of the last century, the issue of climate change has sparked widespread controversy in the local and international media, and it has taken a great amount of discussion, whether at the scientific or political levels.

Many studies confirm that climate change has occurred in the past where there was no effect of human activity; it is happening now; indeed, it will undoubtedly continue to happen in the future. It appears that modern definitions of climate are deficient because they are affected by the misconception of the past two centuries that the climate in a particular place must be regularly constant unless an external factor acts on it.

Although the contribution of external factors in climate change has been identified early (Shindell *et al.*, 2003; Stern and Kaufmann, 2014), the blame is often placed on human activities as the main factor in climate change, as recent research focuses on the role of these activities in the climate change occurrence through atmospheric pollution. Yet, at the same time, it is deliberately overlooked the effective contribution of external factors that operate from outside the earth's climate system in the occurrence of this change.

In fact, it cannot be denied that man has contributed to a noticeable change in the atmosphere's composition, both qualitatively and quantitatively, especially at present. Still, when compared with other natural factors, this contribution is considered very small.

The undeclared political goals may have played an important role in directing public opinion for a long time to link climate change with anthropogenic activities, especially as it is related to the exploitation of fossil fuels as the most important energy resource on the planet. As an inevitable consequence, recent research focused on blaming human activities and local communities as significant factors for climate change. On the other hand, the governments of the great and industrialized countries exchanged accusations regarding the contribution of the activities of their competitors to climate change.

Researchers' efforts were supposed to focus on enhancing the ability of human societies to adapt to new climatic conditions and finding mechanisms that would enable us to withstand them. However, the role of human communities in bringing about tangible changes to the atmosphere composition should not be neglected.

We do not have to worry about climate change; the Earth has the flexibility to adjust its balance again. Moreover, the natural history of our planet has proven that our Earth has survived great natural disasters that almost wiped it out.

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Climate change does not recognize the political borders of countries; it will redraw the map of the world's climates and change the rainfall regime. It will also redistribute living organisms in their environment to suit the new conditions. Fortunately, this change does not happen quickly but over a relatively long period which gives us some hope.

Our systems of life must be based on the principle of flexibility that allows for a smooth transition. However, there will be concerns about human communities that manage fragile ecosystems that are difficult to adapt to new conditions. So, it will be beneficial to help them overcome the difficulties they will face. Because we live on one planet, we must coordinate efforts and cooperate to mitigate the potential effects of climate change. This will be one of the greatest tests for all of humanity. The responsibility lies primarily with scientists and researchers, politicians and decision-makers, and finally on local communities.

In conclusion, the climate has a profound influence on life on Earth. Perhaps it is time to recognize that climate change is nothing but a purely natural phenomenon and a critical stage that our planet is going through. It cannot be ignored or affected, but we can adapt and reduce its negative impact if we deal with it wisely and rationally.

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