

Letter to Editor

Social Inequalities of Climate Change With a Regional and Global Approach



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ABSTRACT

Climate change is a slow and long-term change that is different from other types of crises, and its effects will eventually cause the paralysis of society and the world economy. Considering the last climate change summit in Glasgow and the previous summit, according to the authors of this text, preventing and dealing with climate change in the present era will not be possible except with the cooperation of all countries. In this regard, considering the discussion of social inequalities of climate change, we attend a series of ideas and suggestions that are further discussed.

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1. Introduction

To avoid aggravating the consequences of climate change, we need to slow the increase in temperature and keep global warming at 1.5 degrees celsius until 2100.

However, without further action, the earth could still warm by over two degrees celsius by the end of the century [1]. Scientists believe that global warming can exceed four degrees celsius. In this case, destructive heat waves and rising sea levels will lead to the loss of homes for millions of people and the irreversible loss of plant and animal species [2]. Severe climate changes have occurred currently and threaten life and livelihood [3, 4]. As it warms, some regions may become uninhabitable as agricultural land becomes desert [5]. In some areas, the situation is reversed, with heavy rains causing severe flooding, as recently seen in China, Germany, Belgium, and the Netherlands [4]. Populations in the poorest countries will suffer the most because their economies lack the infrastructure they need to adapt to climate change [6]. Climate change affects precipitation, temperature, and evaporative potential, which in turn affects the severity of the drought [5].

Many farmers in developing countries are already facing extremely hot temperatures, and the situation will only get worse. Oceans and their habitats are also under threat. For example, the great wall reef in Australia has lost half of its corals since 1995 due to warming seas and climate change. Forest fires are on the rise because climate change increases the risk of warm, dry weather. Because of these changes, frozen lands in places like Siberia are melting, and greenhouse gas emissions, which have been trapped for centuries, exacerbate climate change [1, 2, 7]. In a warmer world, animals have difficulty finding the food and water they need for survival [5, 7]. For example, polar bears depend on ice for their lives and perhaps die when the ice melts, or elephants will struggle to find 150 to 300 liters of water a day [7]. Scientists believe that if climate change is not controlled, at least 550 animal species may disappear in this century [4]. Climate change has different effects across the globe. Some places will be warmer than others will, some will have more rain, and others will experience more drought [8]. If the temperature rise cannot be kept to 1.5°C, Britain and Europe will be vulnerable to flooding from heavy rainfall. The countries of the Middle East will experience a severe heat wave, and agricultural lands may turn into deserts. Island countries in the pacific region may disappear under the seas. Many African countries are likely to experience drought and food shortages. Drought conditions are likely in the western United States, while other

areas will experience severe storms. Australia has the potential for extreme heat and drought [4, 8, 9]. In 2006, the World Health Organization (WHO) published a report entitled “prevention of disease through a healthy environment”. Also, the United Nations International Strategy for Disaster Reduction (UNISDR) has reported that climate change affects all societies in four main parts: Water, food, industry-economy, and health [3].

For example, in the health sector, there are many studies on the possible consequences of dust storms and heat and cold waves. These mentioned researches aimed to investigate the relationship between these factors with increased mortality or emergency admission related to cardiovascular and respiratory diseases. The results of these studies in Iran, the United States, and Taiwan show significant relationships between the investigated factors [10]. In other studies, it has been discussed that numerous water crises and their consequences on the environment, the destruction of water resources, and their pollution were caused by non-environmental activities. For example, the “hidden microplastics (MP) crisis” has recently become a threat to water resources, aquatic organisms, and human health [11]. Therefore, climate change control is essential to preserve life on earth. As a result, in the present work, we have examined three significant aspects of the problem: 1. What governments should do? 2. What can people do? And what are the available solutions?

What governments should do?

Countries agreed that climate change is achieved by working together, and in a landmark agreement in Paris in 2015, they pledged to try to keep global warming to 1.5 degrees celsius. Britain is hosting a summit for world leaders called the 2026 Cup, where countries will present their carbon reduction plans for 2030. Many countries have committed to achieving net zero carbon emissions by 2050. As a result, the emission of greenhouse gases will be reduced as much as possible, and the remaining amounts of these gases will be balanced by absorbing their equivalent amount from the earth’s atmosphere. Experts agree that this is achievable, but it will require governments, factories, businesses, and individuals to make fundamental changes [12-14].

What people can do?

Although governments, industries, and businesses need to make fundamental changes, scientists believe that some small changes can limit our impact on the climate. For example, taking fewer flights, living without a car or using an electric car, replacing your household

electrical appliances with low-energy products, switching from a gas heating system to an electric heat pump, and insulating your houses [14-16].

What are the available solutions?

First, the most significant step in this direction is the participation of industrialized countries in reducing greenhouse gas production or creating carbon absorption technologies [16]; however, this vital issue in the current industrial age may be impossible with force, commitment, and forced closure of large and important industries such as oil and gas. Considering the role of greenhouse gases in global warming, perhaps the way out of this crisis is the investment of advanced countries in changing the environment in their own countries or other parts of the world. In other words, let's straight climate change in a positive direction [14]. For example, by extensive desertification in Africa and Asia or by creating artificial lakes in desert countries, we can change the weather conditions of those areas from hot and dry to hot and humid in the next step, and we will have moderate weather by creating forests and pastures around these lakes. Such changes, as a strong resilience, can slow down climate change speed and global warming. As a result, in this way, it is possible to avoid the drying of the most fertile areas, the creation of dust, and migration from these regions [9] affected by unfavorable climate, uninhabitability of the places, and the crisis of water and food resources. Researchers predict that due to climate change and global warming, areas of developed countries such as the Netherlands, Germany, parts of China, America, England, and Italy will go underwater [15].

Therefore, we can conclude that the impact of developed countries is more than other countries. For example, several lakes have dried up in Iran and have created many problems for the residents around these lakes, such as drought, salt dust and water salinity, and loss of fertile soils. Either in this country, some lakes are drying up (like Urmia), and the Aral Lake (Uzbekistan), the second largest lake after the Caspian, is in the same situation. In this situation, if climate change as earthquakes, floods, etc. are considered by advanced countries as a crisis, by using advanced technologies of water transfer from the neighboring seas, the terrible consequences of the drying up of lakes in these areas can be reduced to adjust biosphere conditions [6]. Therefore, all advanced countries and humanitarian organizations need to overcome the effects of climate change by changing their perspective, considering it as a crisis, and just like when natural disasters occur, reducing the after-effects of incidents to face climate change from a preventive point of view. These

measures can be financial and technological aid for the protection of forests and pastures in these countries, protection of underground water resources and the necessity of aquifers, desertification measures, and cultural development of agriculture and animal husbandry in this field. Measures such as natural glaciers protection and forest fires prevention can play a crucial role in this field. The use of solar energy in desert areas and clean energy development in underdeveloped or developing countries may be the final key to reducing greenhouse gas production. In any case, the aid of advanced countries to poor and desert countries, in addition to preserving their water resources, can reduce health and hygiene problems, migration, famine, and other social and economic problems. Also, actions such as creating green spaces and forestry in the semi-arid and arid regions of the world by preventing global warming can help preserve the reserves of natural glaciers, and if this cycle is stopped or slightly reversed, it can lead to less use of chlorofluorocarbons (CFC) and halogen cooling gases. It seems that there should be a strong intention in all countries, especially developed countries, to save the planet from this crisis. It is necessary to mention that there may come a moment when no temporary measures will work and heal this story. Therefore, advanced countries and humans should put aside colonial and exploitative practices, and by allocating appropriate and sufficient budgets and carrying out scientific, accurate, practical programs, and monitoring their implementation in third world countries, create and provide the base of resilience against this crisis. On the whole, the order and balance of the world are disturbed to the point of non-return. Nations and governments must know that when the life of the earth is threatened, its inhabitants will be condemned to destruction. Therefore, basic and effective measures can reduce the process of planet erosion and its consequences on life on the planet. Finally, governments and people need a new attitude: "Look at the earth as a community".

Ethical Considerations

Compliance with ethical guidelines

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Authors' contributions

The authors equally contributed to preparing this article.

Conflict of interest

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