

CHAPTER 1

THE EFFECTS OF GLOBAL CLIMATE CHANGE ON HUMAN HEALTH

Veysi AKPOLAT¹

GENERAL INFORMATION

Based on the extensive and extensive scientific evidence obtained by geologists, it has been determined that the age of the Earth is approximately 4.54 billion years (4.54×10^9 years) according to radiometric measurements (1). According to the best estimates, the world's population, which is about 8 billion today, is projected to stagnate before the end of the century and reach just over 10 billion (2).

While there are many reasons to appreciate and express our gratitude for the natural blessings offered by the Almighty Creator, it is helpful to consider how this ever-increasing population may affect the environment. Because environmental problems, which are inevitable because of the reckless use of the aging world, are caused by both natural processes and human activities. These problems adversely affect people and other lifestyles. It is very important to provide a clean environment to support life. However, the development activities carried out by humans deteriorate and pollute the environment. For this reason, it has become necessary to closely monitor its effects on the environment.

The list of problems that have emerged due to the crowded population in the world, technological progress in recent years and the decrease in environmental awareness is increasing day by day. The list continues to expand with the addition of problems such as global warming to environmental pollution and depletion of natural resources. Although natural events such as earthquakes, floods, hurricanes and fires greatly affect the environment, nature has the capacity to heal itself. However, to contribute to the protection of the environment, it is time for every citizen of the world to be aware of these issues. Because the capacity that our old world can tolerate is now limited. Environmental problems can arise due to natural disasters and/or deterioration caused by human activities. A natural or man-made disaster causes large-scale loss of life and property. The impact of these

¹ Prof. Dr., Dicle University, Faculty of Medicine, Department of Biophysics, drvakpolar@gmail.com, ORCID iD: 0000-0002-2435-7800

ards may have different effects on individual and social health. These effects are generally; health problems caused by changes in air quality, food and water-related diseases, diseases associated with heat and cold waves, infectious diseases associated with changing vectors, mental health problems, side effects of UV radiation, new and re-emerging diseases (18,23).

The effects of climate change will not only manifest themselves with individual and social health problems but will also affect all components in the field of health. This effect can be individual, or it can be seen in the form of multiple effects due to multiple hazards.

As a place where the world can be lived, it is a very important trust that we must carry to future generations. The lives of other living things on earth depend on the decisions and measures to be taken by humanity. Considering this situation, to prevent all life-threatening negativities that are foreseen to be due to global warming soon, it is imperative to raise awareness of all stakeholders of this problem and to receive their contributions, both individually and between countries, with solidarity and cooperation. Because, according to our current knowledge, unfortunately, there is no other world with an atmospheric structure where all life forms can live.

REFERENCES

1. Alashti, M.S. (2015) Accurate Age of the Earth Calculation by a New Fundamental Parameter. *Open Access Library Journal*, 2: e1296. <http://dx.doi.org/10.4236/oalib.1101296>
2. <https://www.unfpa.org/news/what-does-it-mean-live-world-8-billion-people-and-counting>.
3. Türkeş M. *Physical Science Basis of Climate Change-I. Review*. *Toplum ve Hekim*. Nov.-Dec. 2019 34(6): pp;457-75.
4. <https://www.mgm.gov.tr/iklim/iklim-degisikligi.aspx> Access date:20.08.2024
5. <https://iklim.gov.tr/dokumanlar>. Access date:20.08.2024
6. https://climate.ec.europa.eu/climate-change/causes-climate-change_en#greenhouse-gases
7. IPCC. (2007). *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., et al. (eds.)]. Cambridge and New York: Cambridge University Press.
8. IPCC. (2019). *Climate Change 2019: Global warming of 1.5°C. Contribution of Working Group I,II,III to the Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte V., et al. (eds.)]. Cambridge and New York: Cambridge University Press.
9. Lawrence D., Coe M., Walker W., Verchot L., Vandecar K. *The Unseen Effects of Deforestation: Biophysical Effects on Climate*. *Front. For. Glob. Change*, 24 March 2022 Sec. Forest Disturbance Volume 5 - 2022 | <https://doi.org/10.3389/ffgc.2022.756115>
10. United Nations (2022). *Causes and effects of climate change*. <https://www.un.org/en/climatechange/science/causes-effects-climate-change> (access date:16.08.2022).
11. Akyol, A. ve Örüçü, Ö. (2019). *Investigation of Cornelian Cherry (Cornus mas L.) in the Scope of Non-Wood Forest Products According to Climate Change Scenarios and Species Distribution Model*, *Avrupa Bilim ve Teknoloji Dergisi*, 17, 224-233.
12. WHO (2021). *Climate change and health*. <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health> (access date:16.08.2022).

13. Republic of Turkey Ministry of Health (2015). *National program and action plan to reduce the negative effects of climate change on health* (1st ed.). p: 44-45 Ankara Anil Press
14. Özvar S. *Climate Change: An Evaluation of Its Impacts and the Encountered Challenges*. *Journal of Public Finance Studies* 2022; 68: 81-106.
15. IPCC (2022 a). *Climate change 2022: Impacts, adaptation and vulnerability* (Technical summary).
https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_Technical_Summary. pdf (access date:16.08.2024)
16. Doherty, T. J., & Clayton, S. (2011). *The psychological impacts of global climate change*. *American Psychological Association*, 66(4), 265–276. <https://doi.org/10.1037/a0023141>.
17. Ekici M. (2019). *Resilience to the Climate Change: Carbon Detox for the Earth*. *Resilience Journal* 3(2), 2019, (113-125) DOI: 10.32569/resilience.51852.
18. WHO (2021). *Climate change and health*. <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health> (access date:15.08.2024).
19. Karaman, S. ve Gökalp, Z. (2010). *Impacts of Global Warming and Climate Change Over Water Resources*. *Tarım Bilimleri Araştırma Dergisi*, 3(1), 59-66.
20. IOM (2014). *IOM outlook on migration, environment and climate change*. https://publications.iom.int/system/files/pdf/mecc_outlook.pdf (access date:15.08.2024)
21. IDMC (2022). *GRID 2022 Children and youth in internal displacement*. https://www.internal-displacement.org/sites/default/files/publications/documents/IDMC_GRID_2022_LR.pdf (access date:15. 08. 2024).
22. IPCC. (2007). *Climate Change 2007: Historical Overview of Climate Change Science: Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007 1(1):93-127 Chapter: 1[Treut L., S., et al. (eds.)] Cambridge and New York: Cambridge University Press.
23. https://climate.ec.europa.eu/climate-change/causes-climate-change_en#greenhouse-gases (access date:20.08.2024)