Topic: Climate Change impact on human health

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Since the 1980s, when the term was popularized, climate change described the full effects of greenhouse gases on the climate. It refers to both natural and anthropogenic changes. Other terms such as climate crisis or climate emergency are also used, the latter being the 2019 word of the year as chosen by Oxford Dictionary, where it is defined as follows: a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.[1] Climate change started being studied in the second half of the nineteenth century and continues to be an incredibly vast and relevant subject today, more than ever. It impacts our physical environment, the nature and the wildlife, resulting in extreme weather conditions, ecological collapse and habitat destruction, as well as threatening our very existence as humans on Planet Earth. Extreme weather events also have an overwhelming impact on temperature, clean air, safe drinking water, sufficient shelter and food, therefore causing many illnesses related to malnutrition, heat stress and lack of hygiene. In extreme cases, they can lead to drought and famine.[2] According to the WHO, World Health Organization by the late twenty-first century, climate change is likely to increase the frequency and intensity of these conditions on a global scale. Also, the increased warming of the atmosphere eases the transmission of certain infectious diseases, like dengue fever and malaria as the seasons lengthen and vectors such as insects and snails grow in numbers, widening their geographic range. A WHO, assessment concluded that climate change is expected to cause around 250 000 deaths on a span of twenty years, between 2030 and 2050, 38 000 due to heat exposure in the elderly, 48 000 due to diarrhoea, 60 000 due to malaria and 95 000 due to childhood undernutrition.[3]

One of the first past actions against climate change's impact on human health was made on 22 March 1994 when The United Nations Framework Convention on Climate Change (UNFCCC) took place. The Convention was about the way human activity interferes with the climate system, how to prevent this kind of interference and how to stabilize the greenhouse gases concentrations.[4] Even if the convention was not specifically about the way climate change affects human health, it was just as important because preventing climate change means also preventing the negative impact that comes with it. Next was the Kyoto Protocol started on 11 December 1997 but it became more effective after 2005. The protocol was about limiting and reducing greenhouse gases emissions in industrialized countries.[5] A recent action is The Paris Agreement which is a "legally binding international treaty on climate change". There are 196

[1] Wikipedia: Climate change: terminology
[2] CDC: Climate and health
[3] World Health Organization: Climate change and health
[4] United Nations Climate Change: Process and meetings: The Convention: What is the United Nations Framework Convention on Climate Change?
[5] United Nations Climate Change: Process and meetings: The Kyoto Protocol: What is the Kyoto Protocol?

Parties at this agreement and it came into effect on 4 November 2016. The goal is to bring the global average temperature below 2 and ideally to 1.5 degrees Celsius.[6] The United Nations Environment Programme (UNEP), founded in 1975, is the "leading global authority on the environment" and currently works for the UN 2030 Agenda for Sustainable Development.[7] The UN Environment Assembly adopted the third resolutions 3/8 on Preventing Air Pollution and it asks the UNEP to regularly monitor the progress made by the Member States, to adopt and to implement key actions to improve air quality. The UNEP updated the 2016 report „Actions on Air Quality" as a response to their statement.[8] The UNEP also works on minimizing the adeverse effects of chemicals and waste on human health and on the environment.[9] Disasters like floodings, droughts, etc. caused by climate change have a huge impact on human health and the UNEP has supported for the last 20 years the territories which have this kind of problems. The organization works under projects like Crisis Management Branch, UNEP/OCHA Joint Environment Unit, Environment and Security Initiative to respond to crisis situations and to offer their expertise to the national governments.[10]

Germany's climate action policies are embedded in a multitude of national laws, government programmes, EU regulations and international agreements. Several German states have their own climate action laws[11]. Germany's national climate targets were set down in a government policy programmes in 2007 and 2010 and have been upheld by every government since. They were reinforced with Germany's Climate Action Plan 2050, the country's long term climate action strategy. In a landmark ruling on 29 April 2021, Germany's highest court ruled that the government's climate action legislation is insufficient because they lack emission reduction targets beyond 2030. In the 2018 coalition treaty, Chancellor Angela Merkel's conservative CDU/CSU alliance and the Social Democrats (SPD) promised to introduce "a law that guarantees compliance with the climate targets for 2030". The government decided that this would not be a single law. Instead, it is working out a comprehensive climate package. As their final product, the parties presented a 23-page-document with the key elements of this package on 20 September and is now working out the details. The government decided the package would consist of: (A) a major framework "Climate Action Law" and (B) a policy programme of measures, called "Climate Action Programme 2030".[12] Moreover, Germany's climate protection act was approved by the government in 2019. Under the act, Germany is obliged to cut greenhouse gas emissions by 55% by 2030, compared to 1990 levels. It also sets out yearly upper limits for greenhouse gases across various sectors such as energy, transport, buildings and agriculture. If these individual targets are missed, an obligation to make improvements takes effect.[13]

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[6] United Nations Climate Change: The Paris Agreement
[7] UN Environment Programme: About UN Environment Programme
[8] UN Environment Programme: Action on Air Quality Report
[9] UN Environment Programme: About chemicals and waste
[10] UN Environment Programe: Why do disasters and conflicts matter?
[11] United Nations: Climate Change
[12] Germany's Climte Action Law
[13] UN: Documents and record of a reasolution

Discussing solutions for combating further damage in the environment and people's health status caused by climate change is of great priority. By implementing measures that diminish carbon emissions, the prevalence of cardiovascular and respiratory diseases among vulnerable and elderly people will be minimized, as these are conditions to which extreme heat and air pollution contribute directly. This is a priority for Germany, since almost a quarter of its population is 65 or older and is therefore at risk in front of climate change's effects on the environment.[14] The first measure is aimed at transport. In order to increase the percentage of carbon emissions cut, it is recommended to highlight the importance of investing in sustainable mobility by managing funds into railway systems, cycle tracks, electric cars and campaigns to promote public transport. The development of the railway infrastructure must be prioritized in this economic branch, since the rail has one of the lowest carbon footprints. The railway system should connect as many cities as possible inside a country, thus reducing the need to use personal cars. Besides constructing more bike lanes and enlarging green spaces, vouchers for the purchase of bicycles and electric scooters will be offered in all cities to people who work or study in the designated area. In the historical areas of the cities and towns will be introduced an access fee for all vehicles. In the next years it is vital to establish an efficient electric car industry in the developed countries, being feasible both for the economy and the environment. The goal is to develop a manufacturing technology that brings the prices for electric cars lower than the gas fueled vehicles. Another solution refers to coal-fired power generation and aims to shut down half of the power plants currently functioning on coal, orienting towards green energy procurement.[15] Our country is also proposing some solutions that can minimize the negative impact of climate change on human health. We should introduce instructions for heat events and solid communication structures. Heat plans should include public awareness campaigns, training for medical staff and in the most affected countries, heat protective shelters equipped with the needed supplies. The most vulnerable people should be identified and instructed on how to take better care of themselves during extreme weather events. In urban areas we should increase the tree coverage and create more green belts. To reflect the sun's radiation, green roofs, lighter colored pavements and buildings are another possible solution and instead of installing air conditioning systems people should be encouraged to isolate their buildings better. Reducing planting monocultures, introducing genetic diversity and a large spectrum of forest types can prevent wildfires and therefore save the forests which leads to less storms, floods and reduced heat stress in the urban environments.[16]

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[14] Climate change and health
[15] DW: A close look at Germany's climate action plan
[16] Global Climate Risk Index 2020: Adapting to and Coping with Heatwaves

Links:

- https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
- https://unfccc.int/kyoto_protocol
- https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change
- https://www.unep.org/explore-topics/air/what-we-do/taking-stock-global-efforts/actions-air-quality-report-update
- https://www.unep.org/explore-topics/disasters-conflicts/about-disasters-conflicts
- https://www.unep.org/explore-topics/chemicals-waste
- https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_9.pdf
- https://www.cleanenergywire.org/factsheets/germanys-climate-action-law-begins-take-shape
- https://www.un.org/en/ga/documents/voting.asp
- https://cop23.unfccc.int/
- en.m.wikipedia.org/wiki/Climate-change
- www.cdc.gov/climateandhealth/effects/defalt.htm
- www.who.int/news-room/fact-sheets/detail/climate-change-and-health
- https://www.dw.com/en/a-close-look-at-germanys-climate-action-plan/a-36386077
- https://www.statista.com/statistics/1105835/share-of-elderly-population-in-europe-by-country/
- https://cleanair.camfil.us/2018/02/09/diseases-caused-by-air-pollution-risk-factors-and-control-methods/