

A Healthy Planet, Healthy People: Exploring The Links Between Environment and Health

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1. Introduction

While the perception of human health being synonymous with the environment is not commonly practiced, its correlation is as absolute as the sunlight to life on Earth. Air, a heterogeneous entity that constitutes oxygen, the major component that is a necessity for life and water for consumption the food we eat, and the environment where we live are the essential elements of health. The intertwining nature of the environmental crises and the human health implications commands that this channel be considered as one of the factors in the policy development and the remedial action taken to sustain the ecological system and humankind. This chapter specifies the environmental health sector, a discipline that is considered to be very wide, as it shows how the environment inhabited by human beings has either a positive or negative impact on health (as shown in Figure 1). First of all, the main ecological health principles involve the understanding that people are perhaps the most connected to nature (Sandifer et al., 2015) which shows that environmental change can lead to changes in health outcomes in all aspects of life (from mental to physical) and consequently it can take years to restore the state, and the appearance of some diseases might be experienced as a result by some part of the population. An intricate web of factors such as air, water, and soil quality, biodiversity, and climate patterns influence how well people are and how sick they get. They typically launch either chemical effects e.g. air and water pollution or biological threats such as pathogens and allergens. Environmental health, which promotes perfect accommodation and sanitation faces, also has social and economic aspects. Analyzing these natural components of the environment aids in the adoption of fitting approaches in treatment, low risk of diseases, and thereby improving wellbeing.

The environment threatens life and can harm it in myriad ways via direct as well as indirect ways. The scary list of the ways polluted air and water can contaminate organisms includes all that bad air to breathe and eating and drinking unsafe food. When one touches the skin of s/he chemicals and toxins, it is equivalent. People and communities are prone to health hazards that become worse over time as they face various kinds of living, jobs, locations, and health associated with socioeconomic position, behaviors, and inequalities (DeFur et al., 2007). Environmental health research refers to studies that focus on quantification and in-depth portrayal of the prevalence of health outcomes that correlate with the indicated level of exposure. This could be, for example, some acute (bacterial) diseases like food poisoning and respiratory infections and injuries due to weather-related extreme weather events. Also, some chronic diseases like cancer, cardiovascular disease, dementia, and autoimmunity may have been experienced from the long-term pollution of the environment over time as claimed by (Kim et al., 2020).

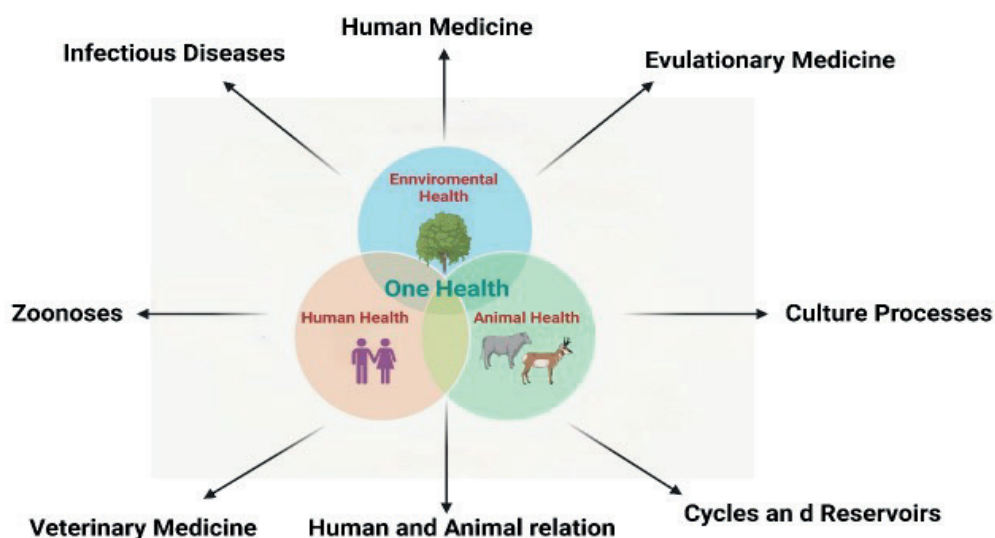


Figure 1. One Health Concept

The ambient environment of the healthcare spot is also complex, and the parameters might be altered more often. For example, the correlation may be unidirectional, similar to that between a child's lead contact and delays in development. Yet at times, these bonds echo in the chords. For this point, let us look at a visual example of how climate change results in different disease types such as malnutrition from changes in farming which brings the number of dengue and malaria cases up in different areas (Kim et al., 2020). The chapter's main agenda is to enlighten the new and old debates that show the link between environmental health and the health of humans. Set down the standard pollution questions concerning air and water, but also share the wider concerns connected with nutrition, global warming, and conserving biological diversity to a healthy society. Last but not least, attaining a sharp eye on how our locality and the external environment are related to our health is necessary before browsing further steps that will lead to a healthier life as well as a safer environment.

2. Environmental Determinants of Health

The ecology of this century is a critical factor in human health competition. The major problems of carbon emissions, the acid rain phenomena, the decreasing of artwork, and the exhaustion of resources, have the lesser concern compared to climate change (Karpudewan et al., 2015). Origins of the warming planet are manifold and multifarious meaning they permeate the macro environment responding differently to different weather patterns and processes. Climate change is generally referred to as a clampdown multiplier on a wide array of health concerns that already exist in different parts of the world while also exacerbating the health inequality experienced in all countries. It is now the moment to focus on and speak of several important factors of climate change that will knock your health. The expansion of heat waves, floods, droughts, forest fires, and storm occurrences in certain areas leads to direct consequences that threaten life and infrastructure. This becomes the failure key element, as people can suffer physical harm, eviction, and even not have the opportunity to go to clinics during such times(Comfort et al., 2015). The top contributor to the worsening of the heatwave is also the heat rise which is a very dangerous factor, as heat-related illnesses increase predominantly in elderly and sick individuals as well. In some areas,

the forces of F injected air pollution in different ways. This increased level of ozone induces the production of ground-level ozone which from now on is only becoming worse in the condition of respiratory diseases (as shown in Table 1). Similarly, during wildfires of this kind, huge numbers of particulates and polluting gases are sent into the air causing it to get polluted, and yet, various consequences other than impacts from climate change have been noted as well. The second example is that seasons become longer so there are many pollens which makes asthma and allergies even worse (Barnes, 2018).

Table 1: Environmental Determinants of Health and Their Impact (Prüss-Ustün et al., 2017)

Determinant Type	Examples	Health Impacts
Physical	Air pollution, radiation, noise, extreme weather	lead to respiratory diseases, cancer, hearing loss, heatstroke, injuries, and mental health impacts.
Chemical	Toxic substances like lead, mercury, pesticides, and endocrine disruptors	neurological damage, cancer, reproductive problems, and hormonal imbalance.
Biological	Bacteria, viruses, parasites, and allergens	It causes infectious diseases like cholera and malaria, as well as allergies and asthma.
Social	Quality of housing, availability of healthcare, economic status	chronic illnesses, mental health issues, physical injuries, and heightened susceptibility to other factors.

Unpredictable weather patterns as a result of climate change have caused the interruption of agro-ecosystems which have affected crop yield as well as lowered the nutritional content of various food products. Extreme cases like flooding and droughts are often the very reason for the instability and insecurity of the food supply, which can lead to a food deficit situation in some areas that are already very fragile (Mohamed, 2017). Community hazards have been identified in both the cases of under nutrition and malnutrition among children which may be the situation that sets the path for such a community to be a health burden forever. Changing the direction of rainfall, flooding occurrences and droughts result adversely in the adverse effects on water quality and drainage and sanitation system. There could be a transmission of person-derived bacteria from water bodies into the community raising cases of diseases like cholera and typhoid which are more common in low-hygiene areas. The hottest temperatures and the unusual imbalances in the precipitation make many vector species that are spreaders of diseases overgrow, which live long and expand their regions. It is even possible for these usually local diseases, such as malaria, dengue, and zika, to spread to the areas where there were previously none, thus threatening human lives even more in the regions in which these diseases already prevail (Chala & Hamde, 2021).

This is very difficult to feel certain of an accurate definition of the mental well-being consequences affected by climate change as these effects are very diverse. Oncoemokrediton severe weather and way of life complexities may lead to psychological problems, like PTSD. Different changes; whether short-term changes like the alterations of agriculture or long-term changes that cause the reduction of livelihoods microbiologists' feelings of anxiety and depression in association with suicide (Kim et al., 2014). The effects of climate change on health are two-fold, they do not only not affect all populations similarly, but they also, do not only affect them at the same o or on the same level. Among the many socioeconomic groups people that are the youth, the elderly, and people with pre-existing medical problems as well as individuals living in slums, those who are marginalized are the ones who are hit the hardest by the devastating effects of climate change. Climate change is currently seen as a threat multiplier, a process by which climate change is escalated as well as worsened, and thus leads to health inequities that already exist (Friel, 2019).

Climate disasters have taken on multiple dimensions of the threat to public health. Nevertheless, the mentioned issue should be dealt with, as it has always required collective action for climate change reduction by inhibiting carbon emissions levels and enhancing the energy sources to renewable ones. So along with the development of adaption systems to cope with it will also require that healthcare systems and communities become more resilient to such unprecedented environmental events. This approach includes the establishment of diverse early warning mechanisms for extreme weather, monitoring of world diseases, erection of structures constructed to climate change demands, and mental health support facilities (Pinheiro & Luís, 2020). One of the most serious effects of climate change on both the ecosystem and human beings is an inseparable relationship between our planet's health and humans' health. Presenting this challenge may be a structured and fair-based international action, which could protect not only the present population of the local community but also their prosperity.

3. Air Quality and Respiratory Health

Around 6% of deaths are caused by the worsening in air condition leading to respiratory allergies and infection air pollution, as multi-component wood-blacken peril, for years has been extensively talked about, especially by inhabitants of urban areas and industrial places. Air pollution can act as a catalyst for various complications thereby resulting in the interplay of existing respiratory diseases, and chances of riding chronic respiratory diseases, subsequently radiating negatively on our lives and shorter lifespans. Now sit back a second and we move to a specific level of the issue dealing with the primary pollutants and their recognition in the respiratory system. PM, in other words, those minute particulate elements of which air is made and which inhalation passes right through to the lungs, is a major cause of pollution (Akther et al., 2019). It is burnt up all vehicle emissions and energy-producing facilities as well as the events made due to forest fires, generally speaking, are the major sources of air pollution. Smaller particles, like PM_{2.5} (as shown in Figure 2) aside an inevitable aspect is that 90% of these particles are categorized as ultrafine (i.e. having a diameter less than 2.5 μm) forms that are much riskier to attain the terminal bronchioles (Isaxon, 2014). Inflammation of the airways and a decrease in lung function are two other adverse effects that could lead to an increase in asthma severity for the patient. Ozone that is produced from the nitrogen oxides from vehicles and industries and the organic air pollutants can scatter UV radiation directly under the sun and return it to the earth, thus becoming harmful to all living beings. In the polluted air, there is the hazardous gas ozone which is an irritant and a swelling agent in the airways that can cause respiratory problems when it is mixed with other pollutants and airborne particles (Patocka & Kuca, 2014).

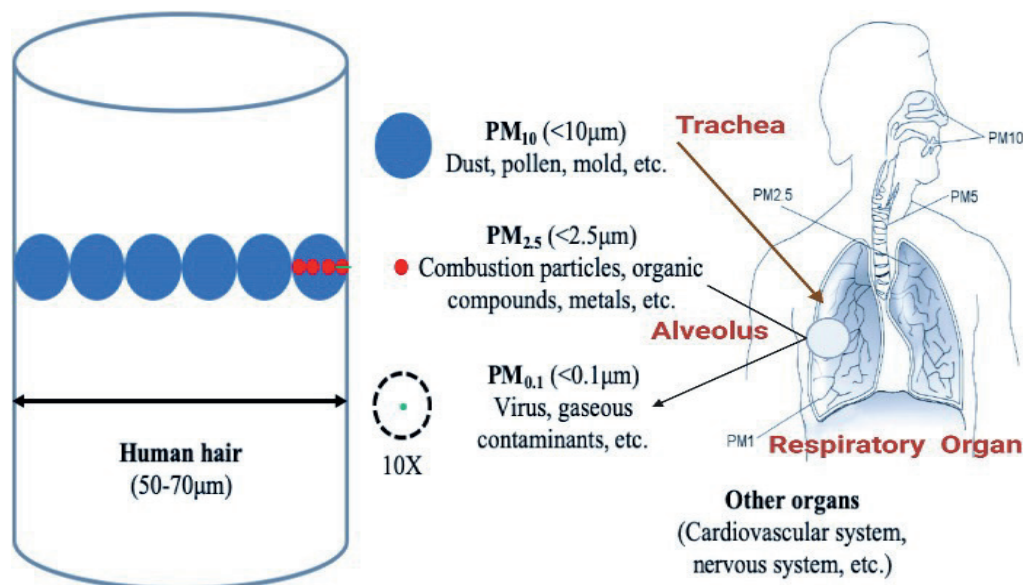


Figure 2. Impact of PM_{2.5} on respiratory disease.

After the air contamination is done, fewer areas are still left for breathing and as a consequence, the lung capacity is reduced in general. Nitrogen dioxide (NO₂) is most frequently emitted by vehicular transportation and power stations. It is one of the major causes of respiratory irritation which ultimately results in lung development problems in kids and heightens susceptibility to lung infections (Goldizen et al., 2016). The influence remains a known risk trigger for both asthma and COPD development. Sulfur Dioxide (SO₂), coming from the sulfurous chemicals discharged into the environment that burn fossil fuel, is a very good contact irritant, especially the persons who have abnormal conditions in the respiratory system (Verma et al., 2021). In other words, through air pollution, asthmatic patients experience complications of their illness and the pulmonary ward of the hospital experiences the heaviest workload (as shown in Figure 3). It is not just individual pollutant effects that contribute to the elevated risks of impaired respiratory function; overall air pollution is the underlying factor. These chemicals cause many diseases in the body's organs thereby down-regulating the body's immune systems and this results in the general architecture and the body cells being toxic. Those who stay in pollution levels of high (egg. smog) are more susceptible to respiratory diseases, like asthma, Chronic Obstructive Pulmonary Disease, lung cancer, or pneumonia, than the ones whose air is not polluted and of better quality (Saxena & Sonwani, 2019).

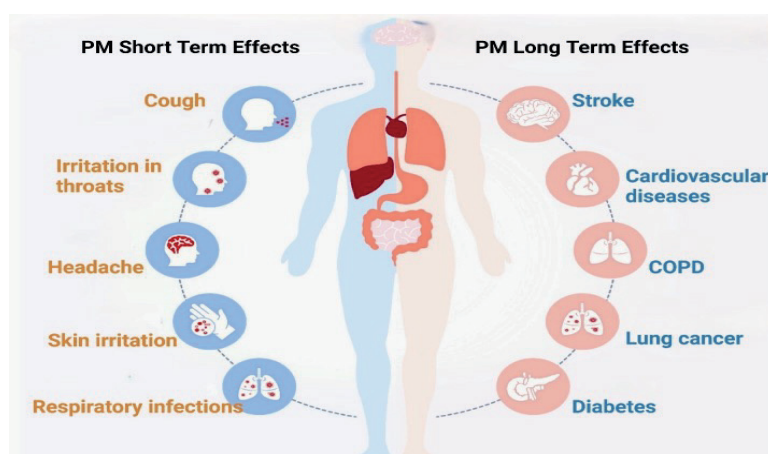


Figure 3. Effects of PM_{2.5}

Combating the health issue from air quality deterioration, therefore, contemplates working out all the problems whatsoever. It is required to undertake changes to the already existing energy sources either by solar, wind, or other renewables or with stricter emissions limits from cars and power stations. Instruction can be considered as one of the chief factors for improving urban air quality (Fripp, 2012). Most of the measures like public transit, bicycling, and walking may help make significant amendments to urban air quality. While emitting information should be tracked and limited, such expenses need to be aimed at being raised for further investment in clean technologies. For individuals, the first step is to be mindful of the issue and check the air quality on websites regularly, regarding special populations, they are of utmost importance, and on poor air quality days anyone with health issues should avoid exhausting even physical activities are the procedures. The effect of air pollution on respiratory health becomes more alarming given the seriousness of the cause. It has grown to a stage that now counts as a health menace. Pollution control is a multi-faceted program and it should focus not only on environmental objectives but also be people-centered (Singh & Kumar, 2018). Breathing clean fresh air ensures the physical and mental health of every individual.

4. Water Quality, Waterborne Diseases, and Disease-Free Water Source.

The availability of drinking water being a fundamental necessity is not only a health and welfare enhancer but also an economic activity stimulant (as shown in Figure 4). Aggravating the health issue is that the contaminations in water are, actually one of the most powerful threats to the well-being wherever in the world. Contrarily, the withdrawal of water may bring advantages

in many cases but also may create some problems like waterborne diseases caused by bacteria which can easily grow when water is polluted. According to this, diarrheal diseases have led to unhealthier illnesses and deaths, but this is more inevitable in areas where sanitation infrastructures are inaccessible (Nagtegaal et al., 2020).

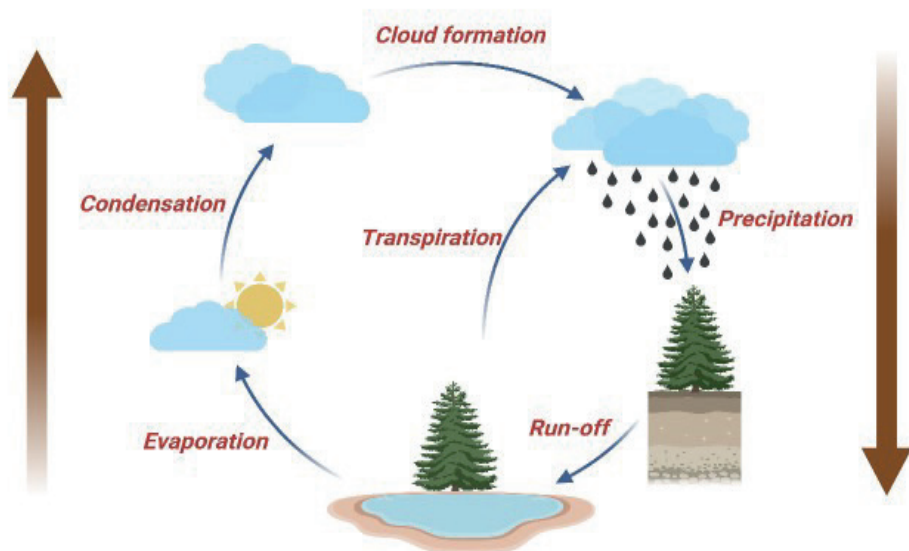


Figure 4. Water Cycle

Unsanitary sources of drinking water have pronounced implications, both in terms of public health, and they are associated with economic and global development, literacy, and other social development. Water is our body's holy grail in every physiological operation from eliminating wastes, maintaining the body temperature, and transporting or dissolving nutrients. Piled water is likely to impair the coordination of healthy functioning of these vital systems (Gillen, 2013). The type of illnesses that mostly kill the children in poor countries such as dysentery and cholera, are a result of unclean water that has contamination of bacteria, viruses, and parasites. The situation is made worse by the fact that the poor countries, which host the most children, are the places where these diseases are present. Child mortality was high before the advent of clean water because many water-borne diseases found their way to people through drinking contaminated water (Organization, 2019). Cholera disease is the name which organism named as *Vibrio cholerae* has caused. The occurrence of dehydration could be the outcome if proper medical treatment is not provided, which in turn, might lead to death. Typhoid fever is commonly known to be deadlier. The initial symptoms present high fever, fatigue, and vomiting, whereas, in severe conditions, it develops into a critical life-threatening situation. Examples of virus types capable of causing gut-type diseases like rotavirus, norovirus or infectious hepatitis are those transmitted via importing polluted water. Giardiasis and Schistosomiasis, both of which are caused by germs that are similar to parasites, are among the most widespread ailments that affect the lives of people (Cox, 2002). However, this is not to disregard the violation of the right to health which is caused by diarrhea which is the illness we often and more frequently pay attention to. The consequences of water quality issues on a community's status are more than that. The emerging danger of chemical contamination, in fact, in numerous instances being stealthy and underhandedly is a rather experienced issue. When a production land is used, pollutants sources change into it by introducing pesticides and fertilizers to water body systems. The case is entirely different with trace elements (such as lead, arsenic, and mercury) that industrial effluents and poor management of waste bring. Hexavalent heavy metals exhibit a vast range of effects depending on the substance (Azeez et al., 2021). These chemical

substances, equally demanding, release these relatively harmful effects to humans. Lead, even though is a primary reason the younger children's IQ decreases, the long-term effect on the entire brain of these children shows permanent brain consequences. Just because arsenic is present does not mean that causing cancer, cardiovascular disease, and diabetes is a simple act. These chemicals disrupt bee cycle activity in such a way that they turn their natural actions harmful and in the long run, they may affect their procreation development (Leska et al., 2021).

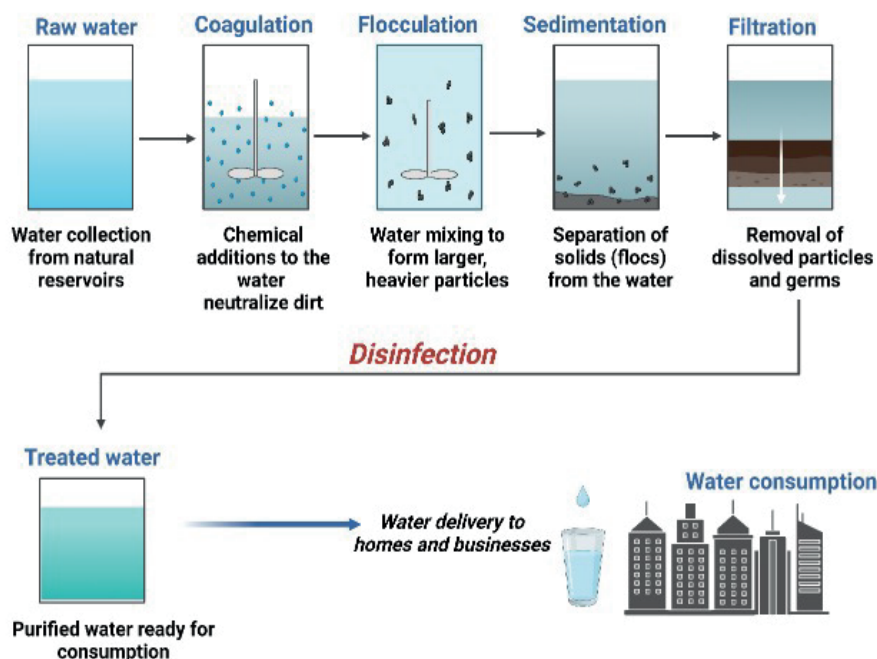


Figure 5. Water Cycle and Potential Contamination Points.

The quality of water that goes beyond only serving as a medium for drinking is also another matter. A quality of low sanitation, which one can come to have when the water is used for bathing, washing clothes, and irrigating, can negatively influence one's health. Yes, direct contact having physical contact with the person who is infected one might be not exposed, but still, it can be a low-level health threat. Water stewardship consists not only of water sources such as rivers, lakes, and aquifers. It reaches transmission systems to reach homes and communities through the treatment of water (Pokhrel et al., 2022).

The combination of quality of water and diarrhea illnesses requires understanding strategy to the core. Along with this scheduled investing in environmental sanitization interventions is the primary concern of these most underserved communities where the data has shown to have many disease transmission routes (Howard et al., 2020). The point to be considered is that the supply of improved toilet facilities which keep feces within themselves and keep them from the areas of a freshwater source should be the central issue. Besides that, preparing reliable plans covering the issue of clean water for drinking, hygiene, and domestic use is the other vital cover. This can be manifested in varied ways such as; the use of different water purification processes, protecting watersheds, and creating reliable water distribution networks. Apart from water quality issues, wastewater treatment is also an issue. The micro bio contamination test and the chemical pollutants test are tested sporadically to be in a better position to deal with issues at an early stage. Setting very rigorous rules and checking for industrial water pollution by neighborhood activities such as factories, agriculture, and waste, as well as collecting waste, are very important for preventing pollution. Including in public awareness campaigns lessons of water safety and hygiene does even

more as community members learn and begin to take steps towards being safe for themselves and their families (Allender et al., 2013).

Harmonizing a shared convention or a unanimous set of guidelines at the international level, researching water resources, and engaging in joint water management among countries creates a platform that should define the water management agenda (McIntyre, 2016). An increase in water scarcity as a result of extreme events, like population growth and the changing climate, impacts the lives of the most vulnerable, especially the country's poor people. Safe water is not an issue of just helping protect people from a particular illness, but something even more fundamental that is, monitoring the health of the children and communities, and emerging parity in life (as shown in Figure 5). Clean water leads to stronger human characteristics and enables people to produce good results, get rich, and help other people too in the growth of their community.

5. Food Safety and Nutrition

All nutrients will be derived from the food although they can bring us diseases if they are not carefully treated and prepared. Intestinal diseases are another public health issue contributed by food. Examples are Salmonella, E. coli, Norovirus, and parasites as they can be spread through foods, causing sometimes life-threatening illness (Flint et al., 2012). They may be short-term lead to minimal side effects such as nausea and can be even life-threatening in extreme cases. Contamination can arise at each step of the food chain, from farming and processing at initial levels and cooking at a later point. Concerning it, the molds or certain bacteria species are at most capable of producing toxins on the surface of the food that they eat, which then may become diseases that make us sick. Microbial contaminants are just one of the many unsafe components of food, and chemical residues like pesticides or metal contaminations which accidentally find their way into the food and enter the mainstream are yet another example that can be cited (Landrigan et al., 2018). The connection between food and health is not confined to only the food intake, but beyond that, it encompasses the quality of diets. The foundation of normal activities in people begins with regular balanced nutrition in the sense that this nutrition regulates growth and development processes, strengthens the human immune system, and serves as protection from various chronic diseases (Sardesai, 2011). Poor dietary habits are; being deficient in foods, consuming too many unhealthy foods, and consuming those foods in large quantities; which causes a lot of diseases to be common in large parts of the world.

6. Climate Change and Health Impacts

Climate-Exacerbated Health Crises Pose Not Only a Public Health Menace but also Significant Amounts of the Soft of Sickness and Diseases. While "normal" devastating weather events such as hurricanes, floods, wildfires, and droughts which used to occur from time to time are daily an occurrence today and cause casualties, injuries, displacement of the population, health facilities disruption, and livelihoods loss (Bell et al., 2018). There is the potential for problems even though heat waves carry danger to certain population groups. For example, the probability of heat stroke heat stress, and aggravation of cardiovascular and respiratory diseases increases. Climate change continues to become a factor setting the stage for an epidemic arising with diseases like Zika that are affected by temperature changes. Less likely would the collective range of such disease vectors, like mosquitoes and ticks, be affected by the temperature rise and a shift in the rainfall patterns, eventually extending their geographic positions (as shown in Figure 6). Thus, malaria, dengue, and vector-borne diseases like Lyme will spread further. At the top of the list, we should remember the negative consequences of climate change and farming the so-called "agricultural problems." Moreover, food security and scarcity of food due to malnutrition (Herforth, 2010).

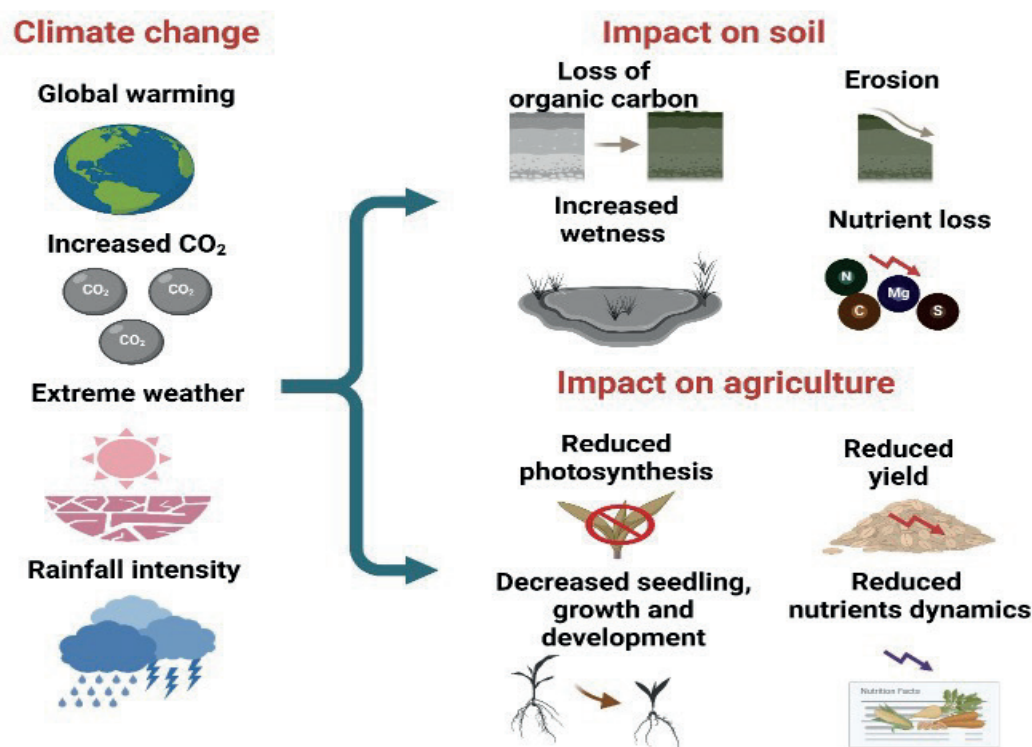


Figure 6. Global Vulnerability to Climate-Related Health Threats

7. Biodiversity and Ecosystem Health

Diversity of life, the distinctive components of life and nature, has the biggest role even if it may not be visible when examining the link between your health to the health of human beings. Human crop ecosystems provide valuable services to us, often detailing in a considerable amount. They uphold this by holding the atmosphere in which we breathe without toxic particles, health of water, nutrients from and into the earth, and ecosystems that sustain food production. Ecosystems in the border zone might be compared with the strong columns supporting any building and the building can hardly micro vibrate or collapse when being shaken by the shocks (Hsu, 2024). Simply, habitat loss is the consequence of deforestation, increasing the available land for agriculture, and urbanization which is the main threat to biodiversity. However, the destruction of ecosystems is the reason that we are losing plants and animals in the process. Moreover, disturbing natural balance, which supports our existence as well as our health, is our stake. The studies have also found that the reduction of local biodiversity leads to an altered way of transmission of contagious diseases. More specifically, habitat loss leads to the increase of the animal's close standstill and brushing of humans, cattle, or wildlife species. This is a feature that makes an epidemic occur and spread, as the number of COVID-19 cases shows as an example to be seen (Liu et al., 2021). The combination of these things makes biodiversity to be an issue of large importance to food security. A colorful mixture of crop types, besides the role of pollinators, is the factor of the long-term origin of food production. This is mainly the duo of attacks from pests, diseases, and climate change. However, the role of healthy marine life in nutrition and providing healthy food to more than billions of people who also reside on the coast is a very crucial basic component (Tacon & Metian, 2013). Moreover, if exploitation of marine resources and other types of species' destruction are out of control, there will be a loss of biodiversity, thus raising questions about human survival and food supply.

As research progresses and further connection between our well-being and biodiversity becomes more evident, it appears to be natural that our minds accept this information and learn, act, and behave in a way that helps us on several levels. Researchers found out that humans who live in close connection to nature and are rich in all kinds of diversity, decrease their depression, stress,

and general good mood, and allow them to think well (Sandifer et al., 2015). A growing number of scientists see nature connectedness (which is the kind of feeling when somebody understands their connection with the natural world) as the most important factor that helps to create a full and healthy life. Also, the diversity of habitats is considered an endless source of remedies for health care formulas. New treatments based on natural products are being discovered today by scientists, and similar molecular components used in them are being identified for the first time as the effects of existing drugs in completely different organisms (Harvey et al., 2015). Currently, this is about withholding the disappearance of the species without which we can never hope to find the ones capable of synthesizing the drugs used to treat various kinds of diseases. More than that functions of healthy and well-maintained ecosystems as well as their diversity of species play the role of the regulator of climate and the additional buffer in case of natural disasters which also along with giving benefits for health do their part in providing a better quality of air and water. Conserving biodiversity and healing once degraded ecosystems is an investment into health and prosperity and not only is it about environmental defense. The programs that address such sustainable land and watershed management harvest forest conservation, sea life protection, as well as ecosystem restoration, cannot be left out since different humans must share a planet that is their home (Chapin III et al., 2011).

8. Mitigation and Adaptation Strategies

Addressing the multifaceted health risks posed by environmental changes requires a two-pronged approach: mitigation and adaptation are the main activities directed by the ultimate goal which is the preservation of a healthy ecosystem. The measures intended to diminish several agents of pollution/environmental degradation are called mitigation strategies. The cause of these root problems is, for example, climate change, and they should be required to be dramatically reduced or eliminated as fast as it is possible. On the contrary, we are looking for ways to enhance the resiliency of the communities through a gradual activity even in the presence of climate change-determined health hazards (as shown in Table 2). The next sentence is dedicated to discussing finding a solution to the problem. The decline of coal and subsequent emissions led to the emphasis on renewable sources. In this case, such sources of alternative energies as the sun, wind, and geothermal wells are going to replace coal and other types of fossil fuels, which means that the emission of harmful air pollutants and greenhouse gases will be reduced (Shahsavari & Akbari, 2018). These sectors are considered the channels of energy where energy efficiency i.e. buildings, industries, and transportation can be used to reduce pollution and thus, conserve resources. One of the top priorities that are required from decision-makers and actors in the agricultural sector is to intimate actors with the environmentally friendly agricultural system, which will decrease the negative environmental impact or damage of soil, and they need to improve the use of pesticides with less toxic chemicals. As well as this, green development, such as fair and sustainable distribution of goods as well as walks to parks, public transport, and green spaces all not only improve the bio-diversity health of the ecosystem but also provide an extra benefit of physical activity by encouraging people to move around more and deter air pollution (Carlin et al., 2016).

Table 2: Mitigation vs. Adaptation Strategies for Environmental Health (Delpla et al., 2021)

Strategy	Goal	Examples	Potential Benefits	Potential Drawbacks
Mitigation	Decrease the factors contributing to climate change and environmental damage	shifting towards renewable energy, sustainable farming, and lowering emissions.	include fresher air and water, enhanced health, and minimizing the likelihood of disasters	International collaboration is necessary for significant upfront expenses and a chance of economic disturbances.
Adaptation	Develop resilience and safeguard communities from environmental change	implementing early warning systems, disaster preparedness measures, infrastructure enhancements, and disease surveillance programs.	lead to decreased vulnerability to disasters, better health results, and saved lives.	limited long-term effectiveness and a risk of maladaptation.

Adaptation strategies are of the first class because they are mostly demanded in the health area, climate change and their outcomes, as well as the events. This, therefore, includes building the resilience of healthcare systems to have them adequately equipped to deal with climate-related diseases and any other epidemics following these extreme events. Social awareness and disaster management protocols often decrease mortality by ensuring the safe evacuation of the population to shelters that are high enough or by taking the necessary precautions to protect themselves. House owners, essential services, and other entities living in the community place their trust in the construction of stronger infrastructure that's highly resistant to the impacts of flooding, extreme temperatures, and other kinds of disasters (Council et al., 2011).

Such resistant infrastructure reduces the extension of long-term damages resulting from natural disasters. Planting and aquaculture will be conducted to grow code drought-resistant crops, while the approaches to minimize food loss help farmers adapt for the future where climate change is the rule. The proper management and preservation of naturally developing biospheres, such as wetlands and forests aid nature itself in building up a buffer against natural calamities or disasters like storms, floods, and extreme temperature modification (Upadhyay, 2020). Aside from the provision of mental health counseling, recyclable and reusable services will give the individuals and community opportunities to live past climate change-related stress, anxiety, and trauma. Nevertheless, these mitigation and adaptation have their dual role in time to help our species withstand the war against climate change. While the mitigation strategies become too narrow for the current situation, the adaptation processes through fast tools ensure the present livelihood of the affected communities. It is on that note that the entire sustainability agenda integrates. The two-pronged tactic works to eliminate of poverty and installation of access to safe water and sanitation facilities that would facilitate equity and adapt vulnerable populations to environmental catastrophes (Dulal et al., 2009). To triumph over the medical impacts of ecological variability, the move should be embraced by society in general and the battle must be led on a global level. The policy could be the first in the implementation of sustainable technology/practices. Furthermore, international cooperation should take place as it would ensure that communities subjected to environmental pollution do not suffer many health burdens (Manisalidis et al., 2020). Efficient, disengaging environmental and human health actions due to their integrated nature automatically become ways to effectively reduce the risks from and adapt to various threats not only to our planet but also to ourselves to realize a unified and healthier world with everyone.

9. Conclusion

The health we enjoy is as closely related to the environment we live in, as our lungs and heart. At the end of the chapter, we learned that climate change is not per se bad or good, but if it overcomes the stable rainy cycles with less rain, the amount of food produced will be reduced, on the other hand, if it reduces oxygen levels, the levels of respiratory diseases will get higher. The environmental personification risk is an umbrella term for the challenges that already seem typical like air pollution and waterborne diseases among others as well as the emerging ones currently taking over the world like climate change, biodiversity loss, and chemical spectrum. The sector of environmental health human promotion is the core point. The undeniable evidence calls in the disproportionately urgency for the actionable laws that follow the goal of prevention of environmental risks and thus preserving the good health of people. The substitution of cleaner energy sources, the use of sustainable methods, and building a community to be able to withstand any challenge are not only the marks of green goals but of an individual's welfare and betterment as well. Learning how ecological disturbances and ill health are connected leads to the conclusion that joint action (of those disciplines) is an essential element when dealing with environmental problems and health. People from various fields such as health workers, environment science, policymakers, and residents are the key sources required for creating effective solutions. The issue of ecosystem protection is deeply rooted not only in the state agenda but in a global one as well, therefore, it opens up the way for transnational cooperation. By giving an ecology that it can live in a residents will get better lives. Environmental sustainability of the future, the one that is inhabited by both humans and nature side by side, needs to start with rethinking our consumption patterns and the patterns of production and relations for both humans and nature just as well. This metamorphosis presents an advantage on two fronts: on one hand, it changes the current lives of people in an upward way that benefits many individuals, and on the other hand, it helps discharge health issues and build reserves that will ensure that future generations will not only show stability but will be prosperous as well. The wellness of the planet as well as ours is connectedly irremissible. We should take action now to do something that is needed to overcome the stalemate and change the current situation to attain a desirable end.

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