Young People's Guide to

Climate Change and Children's Health

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Preface

"We must not forget that no matter where we are or how old we are, we can all work for life and take action."

Francisco Vera, 15, UNICEF Child Advocate

This is the global volume of the Young Climate Activists Toolkit and is designed to complement the regional toolkits for Latin America and the Caribbean, and the Middle East and North Africa Region.

The **Young Climate Activists toolkit** was created by advocates of all ages who, like you, are deeply concerned about our planet's future. Having faced numerous challenges in advocacy and action, our aim is to provide clear, concise and easily understandable information about global, regional and national climate action. This will equip you for meaningful and informed participation. The toolkit booklets are designed to be read sequentially to build a comprehensive understanding of each topic, though they can also be consulted independently based on your needs.

Acknowledgments

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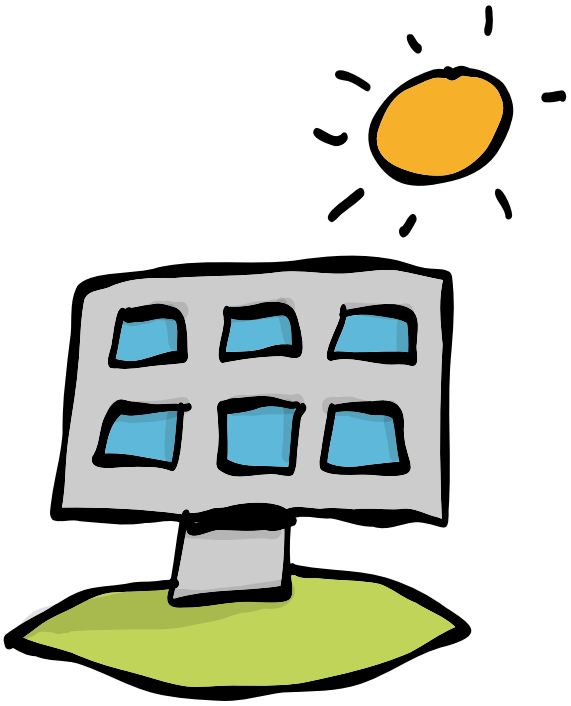

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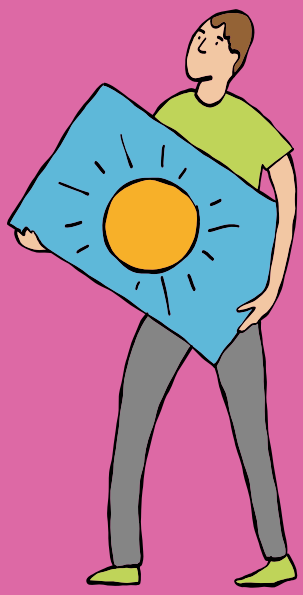
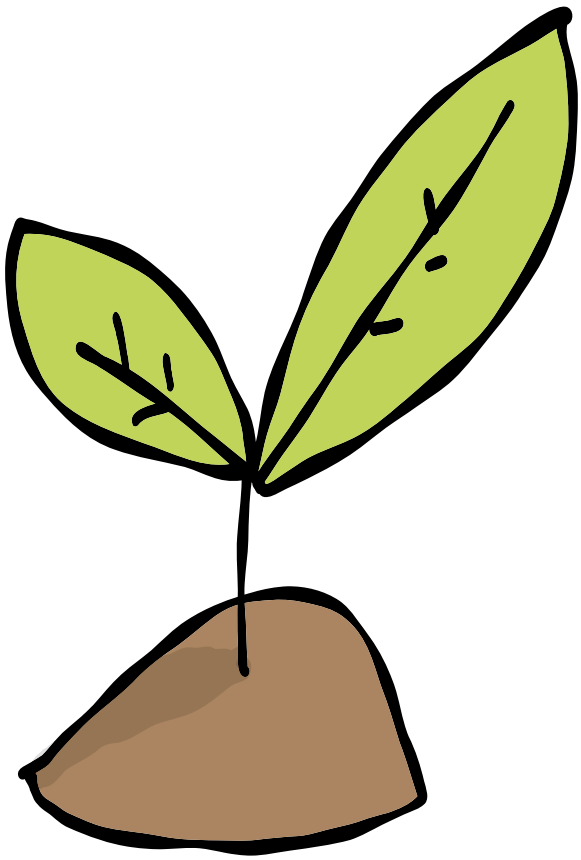


Section 1:

Acronyms and Abbreviations

- **COP:** Conference of the Parties
- **SDGs:** Sustainable Development Goals
- **UNCRC:** United Nations Convention on The Rights of the Child
- **UNFCCC:** United Nations Framework Convention on Climate Change
- **UNICEF:** United Nations Children's Fund
- **WHO:** World Health Organization
- **YOUNGO:** Official children and youth constituency of the UNFCCC

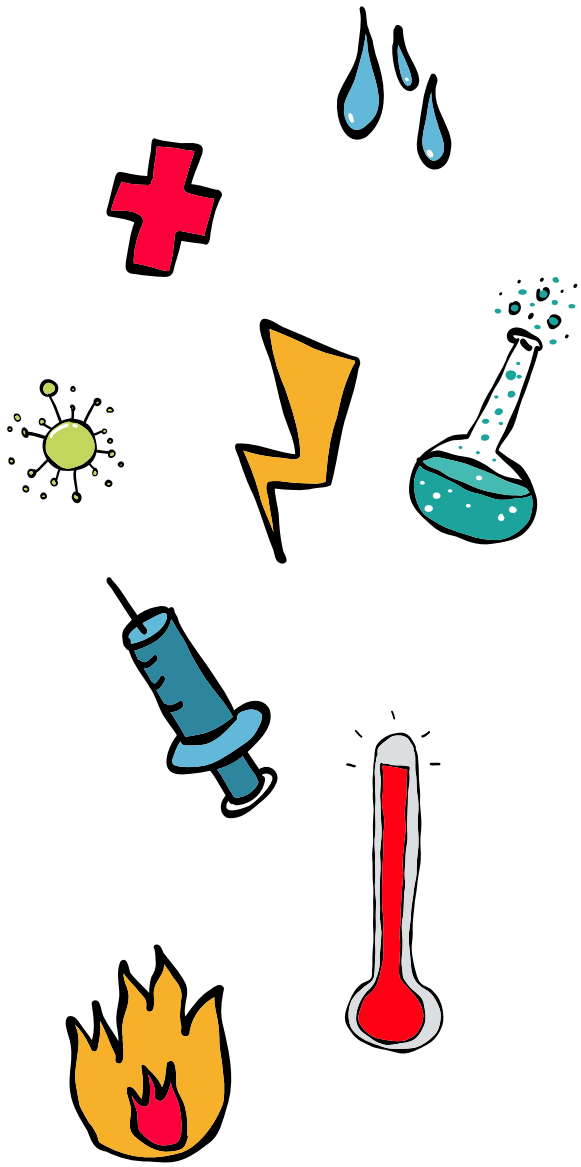


Section 2:
Background and Rationale

The climate crisis is profoundly impacting the health of children. Extreme weather events, extreme heat, water scarcity and impacts on food quality all pose direct threats to children's ability to survive, grow and thrive.

Children are one of the most vulnerable groups due to many factors. Their families' socio-economic levels can affect their access to basic needs like health care and nutritious food. Their bodies are not yet fully developed to fight bacteria and viruses, putting them at a higher risk of disease. Children are solely dependent on their parents and families, meaning their entire support system could be lost in a catastrophe, compounding the impact on both their physical and mental health.

Despite the urgency of addressing these issues, current efforts lack adequate attention to and emphasis on protecting children from the effects of climate change. Children and youth, however, play a pivotal role in climate action. They raise awareness, mobilize communities, join the green workforce and demand action from policymakers. Their passion, energy and innovative ideas often catalyse momentum for change. Through advocacy and lobbying, they amplify the urgency of addressing the climate crisis and push for equitable and inclusive policies and practices that protect their future and rights. Moreover, they demand that leaders act to implement effective solutions to mitigate and adapt to the impacts of the climate crisis.



Section 3:
About this Toolkit

This toolkit complements the 2024 UNICEF report *A Threat to Progress: Confronting the effects of climate change on child health and well-being*. This report is a global summary of the existing literature on how six key climate-related hazards – extreme heat, wildfires, droughts, floods and storms, ecosystem changes and air pollution – impact children's health and well-being. It also includes key recommendations for how policymakers and communities can protect children going forward.

Section 4:
Key Terminologies

Air pollution or air pollutant: Any physical, chemical or radioactive substance that can harm human beings, animals or plants when airborne. Examples include particulate matter made of solid material such as lead or carbon, and gases such as ground-level ozone, carbon monoxide or sulfur dioxide.[1]

Anemia: A condition caused by low levels of red blood cells or hemoglobin in the blood, which are needed to carry oxygen to the body's tissues. It can make you feel very tired and weak, and is often due to a lack of iron in the body.

Asthma: A chronic lung condition often affecting children that makes it hard to breathe, caused by inflammation and narrowing of the airways in the lungs.[2]

Bacteria: Very small living organisms found everywhere. Some are good, like those in our stomachs that help digest food, but others can cause infections and make us ill.

Biodiversity: The variety of life on Earth, including plants, animals and microorganisms. Each species plays a unique role in maintaining ecological processes, making biodiversity vital for the planet's overall functioning and sustainability.

Carbon footprint: The total amount of greenhouse gases released by a person, organization or product. It is a way to track global emissions that contribute to global warming.[3]

Children's environmental health: A focus of environmental health that looks at how children's health and well-being are impacted by changes in their environment. Children are more susceptible than adults to environmental hazards due to their growing bodies, developing minds and behaviours, and lack of control of their surroundings.

Climate- and eco-anxiety; grief and solastalgia: Feelings of worry, sadness and distress about climate change and environmental destruction. Solastalgia is a specific kind of sadness related to the deterioration of one's home environment.[4]

Climate-resilient health systems: Health systems designed to withstand and adapt to the impacts of climate change, ensuring that hospitals and clinics can continue to function during extreme weather events like hurricanes or heat waves.

Coastal flooding: Flooding that happens in areas along the coast, usually caused by a combination of sea level rise, storm surges and high tides, often worsened by strong storms like hurricanes.[5]

Congenital anomalies: Also known as birth defects, these are conditions that newborns are born with, affecting either the structure or function of the body.

Diarrhoea: A condition characterized by frequent, loose and watery bowel movements, often caused by dirty water, bad hygiene or infections.[6]

Early warning systems Systems that provide advance notice of extreme weather or health threats, allowing time to prepare and mitigate potential disasters.[7]

Environmental health: An area of public health focused on identifying and reducing negative environmental impacts on human health.[8]

Extreme heat/heatwave: Extreme heat occurs when the temperature and/or humidity level is higher than usual. A heatwave is a prolonged period of excessively hot weather.[9]

Food and nutrition security: When all people have access to adequate amounts of safe and nutritious food that meets their dietary needs for an active and healthy life.[10]

Fresh water: Water that is not salty, coming from rivers, lakes and underground sources, essential for all life and requiring careful management to keep it clean and safe.[11]

Health and well-being: A state of complete physical, mental and social well-being, not just the absence of disease.[12]

Health co-benefits: Added benefits to society from actions taken to address climate change, such as improving air quality and promoting physical activity.[13]

Health risk assessment: A process to evaluate the likelihood and impact of health risks in order to plan for prevention.[14]

Health system: Includes all organizations, people and activities that work together to promote, restore and maintain the health of people and communities.[15]

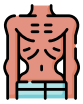
High drought risk areas: Regions where there is a significant risk of drought, which can lead to water shortages and have severe impacts on both the environment and people.[16]

Hygiene: The practice of maintaining cleanliness of ourselves and our surroundings, essential for preventing disease.[17]

Immunodeficiency: When the body's defense system is too weak to fight off infections and illnesses properly.

Indigenous knowledge: Knowledge about the natural world developed over generations by Indigenous peoples living sustainably within their environments.[18]

Lead poisoning: Illness resulting from exposure to lead, which can be present in certain products like paints and toys, potentially damaging the brain and other organs.



Malnutrition: The lack of proper nutrients needed for health, often due to inadequate food intake or insufficient vitamins and minerals.

Mercury: A toxic heavy metal that can harm human health, particularly affecting neurodevelopment in children.

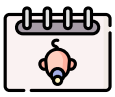
Non-communicable diseases: Illnesses that cannot be caught from others, such as heart disease, diabetes and cancer, often developing slowly and lasting a long time.

One Health/Eco Health/Planetary Health: Approaches that recognize the interconnectedness of human, animal and environmental health.

Parasites: Tiny organisms that live in or on another organism (the host), taking nutrients at the host's expense and potentially causing illness.

Pesticides: Chemicals used to kill pests that can also harm humans and ecosystems.

Pollution: The introduction of harmful substances into the environment, including plastic waste, dirty air from factories, or chemicals in rivers.



Preterm birth: Also known as premature birth, occurring when a baby is born before 37 weeks of pregnancy, potentially leading to lifelong health issues.[19]

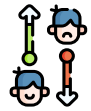
Public health: The science of protecting and improving the health of people and their communities by ensuring access to healthy food, clean water and safe living conditions.[20]

Renewable energy: Energy from sources that are naturally replenished, such as solar power, wind power, geothermal and hydropower, which do not run out like fossil fuels.[21]

Riverine flooding: Flooding that occurs when rivers overflow their banks, often due to excessive rain, rapid snow or ice melt, or dam failures.[22]

Sanitation: The practice of keeping our environment clean and safe from diseases, including maintaining clean toilets and proper disposal of waste.[23]

Stillbirth: When a baby is born without signs of life at or after 28 weeks of pregnancy.[24]



Stunting: When children are shorter than they should be for their age due to inadequate food or care, impacting their physical and cognitive development.[25]

Tropical cyclones: Powerful storms that form over warm tropical oceans, known by different names like hurricanes, typhoons and cyclones, bringing strong winds, heavy rainfall and flooding.[26]

Underweight: When a child's weight is low for their age, indicating potential issues like stunting or wasting.[27]

Vector-borne diseases: Diseases transmitted from one host to another, often via bites from flies, ticks or mosquitoes, including malaria, dengue fever and Zika virus.

Virus: A microscopic infectious agent that can only replicate inside living cells, not considered a living organism and responsible for illnesses like the flu.

Wasting: A life-threatening form of acute malnutrition where children are too thin for their height, often due to significant weight loss.[28]

Water security: Having reliable access to enough safe and clean water for all uses.

Waterborne diseases: Illnesses caused by germs in dirty water, leading to diseases like cholera, hepatitis and diarrhoea.[29]

Wildfires: Uncontrolled fires that spread through natural landscapes, often caused by human actions or natural events like lightning, and especially dangerous in hot, dry and windy conditions.

Section 5:
Climate change is changing children

Children are not in control of their environment. They may not know when it is too hot or too cold. They may not drink enough water unsupervised. They cannot protect themselves from insect attacks. Infants breathe twice as fast as adults, which means they breathe in more air pollution while their lungs are still growing.

Children's developing immune systems make them more susceptible to diseases like Zika and dengue, which are spreading more quickly due to climate change. Children are disproportionately affected by extreme weather events – like droughts and floods – and their consequences, from famine to water scarcity. Children's rapid growth means they eat and drink more than adults relative to their body size and therefore are at greater risk of malnutrition and dehydration.

Simply put: Climate change is changing children.

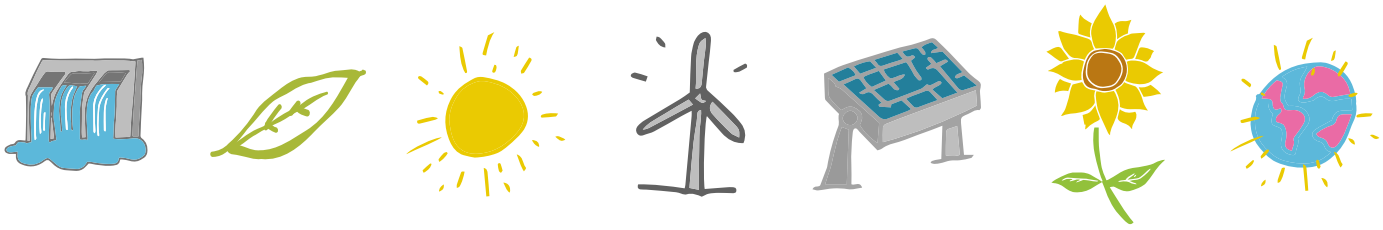
According to the United Nations Convention on the Rights of the Child,[30,31] children's right to safe and clean surroundings means having access to physicians, drugs, nutritious food and a healthy environment that will ensure they thrive.

A healthy environment can include, for instance, clean air, safe play areas for children and a land free from pollution. This right and others seeking to improve children's environmental health are crucial because they enable children to play, learn and grow as well as enjoy nature while staying safe from environmental hazards.

The rights of children are safeguarded through international and national agreements, laws and policies.

National governments supporting international agreements (discussed in the next section) have committed to working towards providing health care and a healthy environment for all children.[32]

National policies support children's rights to health and a safe environment. For example, the Clean Air Act in the United States aims to reduce air pollution so that people's health can be protected.[33]



International conventions and agreements

International conventions, also referred to as treaties or agreements, are essentially legally binding contracts (meaning the countries have legal obligations to abide by the treaty),[34] though sometimes they are voluntary conventions between countries. International agreements serve multiple purposes where a lot of countries, United Nations organizations, civil society organizations and others come together.

Let's look at some important agreements that address or support children's health through climate action.

United Nations Convention on the Rights of the Child (UNCRC)

The UNCRC is a binding treaty that seeks to ensure the rights of children.
Article 24 of the convention states that children have the right to enjoy optimal health, safe drinking water and a clean environment for survival.[35]

United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC was adopted in 1992 at the Earth Summit in Rio de Janeiro, making it one of the three 'Rio conventions' (the other two being conventions on biological diversity and combating land degradation). It has nearly universal membership and is aimed at preventing dangerous human interference with the climate system.

Agenda 2030: Sustainable Development Goals (SDGs)

The SDGs are 17 goals which have been set by the United Nations to secure a better world by 2030. They are aimed at eradicating poverty, protecting the planet and ensuring dignity for everyone.

While many goals include indicators to protect children's right to a healthy life, the specific purpose of SDG 3 is to "ensure healthy lives and promote well-being for all at all ages", focusing particularly on child and maternal health. SDG 13 calls for "urgent action to combat climate change and its impacts".

The Paris Agreement

The Paris Agreement was signed in 2015 at 21st session of the Conference of the Parties (COP 21) aims to reduce carbon emissions and limit global temperature rise to 1.5° C to fight against climate change. This pact created the Nationally Determined Contributions.[36]
The Paris Agreement is also recognized as a fundamental public health agreement of the 21st century.

World Health Organization (WHO) Resolution on Climate Change and Health

A resolution made in May 2024 by countries during the World Health Assembly a decision-making body of WHO).[37]
Its main objective is providing resilient, sustainable health care systems in relation to climate changes.

A history of children and environmental health

1989: UNCRC – A global agreement among nations that children have special rights, including the right to protection, good health care and participation in decisions concerning themselves.

1990: World Summit for Children – One of the biggest gatherings hosted by the United Nations, in which world leaders worked together to set priorities to tackle children's issues, including children and the environment. The primary outcome document focused on nine main topics, examining the challenges presented and creating a work plan for implementing solutions.

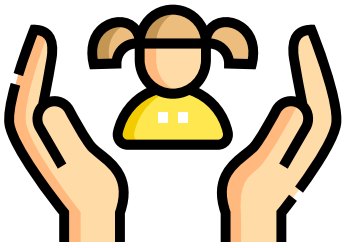
1992: United Nations Conference on Environment and Development – Held in Rio de Janeiro, world leaders decided at this 'Earth Summit' that everybody should help take care of Earth, including children's rights on it. It resulted in the three 'Rio conventions': the UNFCCC, the United Nations Convention to Combat Desertification and the Convention on Biological Diversity.

1997: Declaration of the Environment Leaders of the Eight on Children's Environmental Health – Eight major powers (Canada, France, Germany, Italy, Japan, the United Kingdom, the United States and Russia) made a promise to raise their children in safe places which are support their growth by ensuring things like clean air, safe water and a tobacco-free environment.

2002: 27th Special Session of the General Assembly on Children – At this follow-up to the World Summit for Children, leaders highlighted the urgency to turn plans into action to protect children, creating a world that put children first.

2002: World Summit on Sustainable Development – The goal of this conference was to make cities and communities better places for children to live and grow. It resulted in the creation of the Healthy Environments for Children Alliance, and the launch of the Children's Environmental Health Indicators to track and evaluate whether nations are doing enough to protect their environment.

2003: Fourth Session of the Intergovernmental Forum on Chemical Safety – Children and chemical safety was a main topic of this forum, establishing that child safety can be profoundly impacted by chemical exposure that may happen before conception, during pregnancy, and throughout infancy, childhood and adolescence. Experts issued recommendations on protecting children from toxic chemicals.



2011: Global Alliance to Eliminate Lead Paint – A coalition formed to stop the use of lead paint, which is very harmful to health, especially for children.

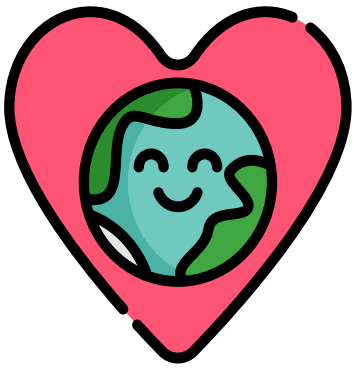
2011: World Health Assembly Resolution on Drinking-Water, Sanitation and Health – An affirmation that everyone should have clean water and proper sanitation to stay healthy.

2013: Minamata Convention on Mercury – After a big disaster in Minamata, Japan, countries agreed to reduce mercury pollution, which is harmful to children's health.

2006: Strategic Approach to International Chemicals Management – A global plan to manage chemicals safely so that they do not harm people, especially children.

2008: World Health Assembly Resolution on Climate Change and Health – A declaration of the consensus that climate change is a health issue and should be dealt with to protect everyone, including children.

2009: Busan Pledge for Action on Children's Health and the Environment – A commitment made by countries to take steps to prevent environmental hazards from affecting children.



2015: Global Strategy for Women's, Children's and Adolescents' Health (2016–2030): World leaders set goals aligned with the SDGs to make the world a better place by 2030, focusing on health and well-being for all, especially women and children.

2015: World Health Assembly Resolution on Health and the Environment: Addressing the health impact of air pollution – A statement that clean air is crucial for health, especially for children.

2016: World Health Assembly Resolution on the Role of the Health Sector in the Strategic Approach to International Chemicals Management towards the 2020 Goal and Beyond –A resolution to continue managing chemicals safely to protect the health of everyone.

2019: WHO Global Strategy on Health, Environment and Climate Change – A strategy for improving health and well-being through the creation of healthy environments.

2022: United Nations General Assembly Resolution on the Human Right to a Clean, Healthy and Sustainable Environment – A clear declaration that everyone deserves to live in an environment that is clean, safe and conducive to good health.

2023: Committee on the Rights of the Child General Comment No. 26 on Children's Rights and the Environment, with a Special Focus on Climate Change – An assertion that children have a right to live in a clean, healthy and sustainable environment, and a reminder for countries to take bolder actions towards climate change, since children are impacted in both the present and the future.

2023: Global Framework on Chemicals – A multistakeholder platform aimed at environmentally sound management of chemicals and wastes to protect children and the entire population from toxic chemicals.

This history shows that discussions on the impacts of climate change and environmental degradation on child health were not sudden. It took more than two decades to get to today's level of recognition of interconnectedness and to apply it to national and regional policies.

Now that we have seen how the approach to children's environmental health has been evolving, let us look at the development of the topic of health at the UNFCCC COP:

COP 11 (2005):

Established the Nairobi work program, in which health was a key thematic area.

COP 17 (2011):

Adopted the Durban Declaration on Climate and Health and the Health Sector Call to Action, establishing the engagement of civil society.

COP 21 (2015):

Created the Paris Agreement.

COP 22 (2016):

Included the 10th Focal Point Forum of the Nairobi Work Programme, which focused on health and adaptation.

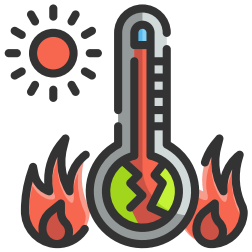
COP 26 (2021):

Promoted the COP 26 Health Programme and formalized the Alliance for Transformative Action on Climate and Health.

COP 28 (2023):

Held the first ever Health Day, which was composed of the first Climate and Health Ministerial and resulted in a strong Climate and Health Declaration. Moreover, donors from governments, development banks and charitable foundations committed more than $1 billion for climate-health projects.

Section 6:
Climate-related hazards that significantly harm children



Extreme heat

Around the world, 820 million children are at risk from heat waves.[38]

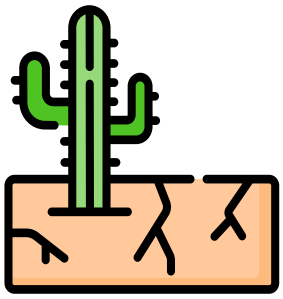
In warm and humid conditions, children's bodies can overheat, leading to exhaustion or even heat stroke. In severe cases, this can cause organ damage, brain injury and other serious health issues. The risk increases significantly during a heatwave, defined as a period of extreme heat lasting three or more consecutive days.

Global warming is causing the Earth to become hotter, resulting in more frequent and intense heatwaves, as well as an increase in extremely hot days. This exposes children to harsh or extreme heat more often, making it difficult for them to lead a normal life compared to their parents or grandparents.

Extreme heat can be dangerous for pregnant women and young children. High temperatures during pregnancy can increase the risks of stillbirths, premature births and low birth weight in babies. Babies are also at higher risk of being born with congenital anomalies. Being born with these challenges can make healthy development harder.

Children's bodies aren't as good at handling heat as adult bodies. Infants don't sweat as much, and their bodies can get hot faster. This can lead to overheating and serious heat-related illnesses, and when they're older, this can impact their mental well-being and school performance. For example, research shows that during hotter years student performance on exams declines on exams.[39]

By 2050, almost every child will regularly experience heat waves, proving that we have no choice but to act against climate change if we want the next generation to live healthy lives.[40]



Droughts

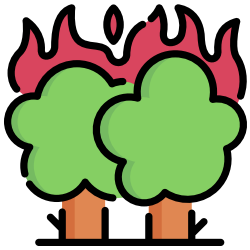
As of 2022, almost 45 per cent of children were exposed to high or extremely high water stress.[41]

Children exposed to that level of water stress endure severe water shortages with very limited access to safe drinking water. Droughts can also lead to crop failures, resulting in severe food shortages, starvation and malnutrition. Research indicates that unborn babies or young infants exposed to drought have higher mortality rates, poorer development and an increased risk of chronic medical conditions.[42]

Children and young people living in drought-stricken areas often experience high levels of stress and anxiety. For instance, adolescents may have an emotional response to climate degradation, or solastalgia, whenever they feel that their livelihoods are being threatened by lack of water. Such continual strains could lead to serious psychological disorders, including a rise in suicides.

Climate change is causing hotter temperatures for longer periods, which can cause more frequent and severe drought situations.

By 2050, half of the world's children could be living in drought if we don't act today.



Wildfires

More than 2 billion people worldwide were exposed to dangerously polluted air from wildfires between 2010 and 2019.[43]

Wildfires are increasing in number and intensity, and are not only destructive to nature and communities, but also release smoke that can affect the health of millions living near and far from the fire. Wildfires can spread quickly and cause massive damage to ecosystems and property and endanger lives.

Wildfire smoke has small particles and chemicals that can be more harmful than regular air pollution, especially during pregnancy and for young children.[44]

Among pregnant women, it may result in complications like gestational diabetes (a type of diabetes discovered during pregnancy) and hypertension (a constriction of blood vessels associated with higher heart rates) due to inhaling smoke from wildfires.

According to the United Nations Environment Programme, fires could increase by 14 per cent globally by 2030 and by over 50 per cent by 2100.[45]

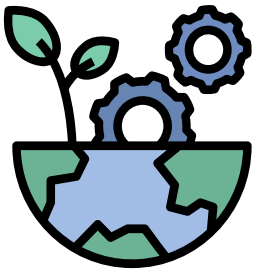
Floods and storms

In 2021, approximately 400 million children were highly exposed to cyclones; 330 million children were highly exposed to riverine flooding; and 240 million children were highly exposed to coastal flooding.[46]

These children are encountering more rain, stronger and more frequent storms like cyclones or hurricanes, and problems such as soil erosion, all of which make floods worse. Climate change is causing rising sea levels and fiercer storms which pose a greater threat to these young people.

In Pakistan in 2022, massive floods due to extremely heavy rains killed more than 500 children and destroyed homes and other important infrastructure.[47] Such floods can increase waterborne diseases among children, in addition to stunting their growth due to malnutrition.

Climate change is increasing the chances of floods, especially in places that are low and close to water sources.



Ecosystem changes

In 2022, pneumonia, diarrhoea and malaria continued to be the leading causes of death among children under 5, claiming nearly 5 million young lives globally.[48]

Climate change is intensifying these threats by altering ecosystems and creating conditions favourable for diseases to spread. Vector-borne diseases, like dengue, Zika and malaria, are expanding their reach as rising temperatures and changing rainfall patterns create ideal environments for disease-carrying insects such as mosquitoes and ticks. Malaria is a significant killer of African children, with its impact made worse by growing mosquito populations in warmer climates.[49]

Malaria during pregnancy is a serious threat, leading to anemia and increased risk of death for both mother and child. Children who survive severe cases of malaria may develop long-term problems that affect their brain development and learning ability in school.[50]

Diarrhoea among infants is on the rise due to waterborne diseases worsened by ecosystem changes. It's a serious threat to the health of children and even adults because diarrhoea dehydrates the body and deprives it of nutrients. Prolonged exposure to contaminated water leads to underweight and stunting among children, and sometimes even leads to mortality.

By 2050, areas infested by zoonotic/vector-borne diseases are projected to increase by 9.6 per cent globally.[51]

Section 7:

Key risk factors increasing children's vulnerabilities to climate change

Climate change affects people unequally. The most impacted countries are the least polluting and poorest. Each country has its specific challenges, but climate change does not respect borders. The interconnectedness of countries makes this problem a global problem.

Food insecurity and malnutrition

When a country that is a lead producer of wheat faces a natural disaster that causes crop loss, all countries will be affected because the price of wheat will go up. This will make it more expensive to buy products like bread around the world. In this way, climate change can influence agricultural productivity, causing food scarcity as well as malnutrition. Illnesses are more common among undernourished children because they have impaired growth. 'An increase in insect populations can lead farmers to use more pesticides, which affects the health of people that live nearby, especially children.

Communities struggling with food shortages often have fewer resources to invest in education for their children, health care and other essential services. This creates a cycle of poverty and disadvantage that is hard to break. All of this leads to serious mental and emotional distress for children who may see their families struggle and worry about where their next meal will come from. In some cases, it might result in child marriage to alleviate the financial burden on the families.

Socio-economic distress and other factors

When families face economic problems, it makes it difficult for them to recover from natural disasters like hurricanes or floods, which are becoming more common due to global warming. Farmers, people who fish and many traditional jobs rely on nature for their sole income source. Because of these changes, many families are going to face huge socio-economic losses.

Built environment

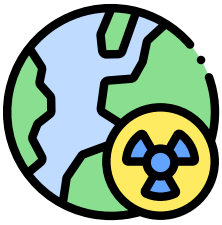
Homes, schools and communities that are poorly built or located in hazardous areas, such as floodplains or fire-prone zones, increase children's risk during extreme weather. For example, inadequate insulation exacerbates discomfort in extreme temperatures, while limited green spaces and poor infrastructure hinder physical activity and overall well-being.

Climate-related disasters can damage critical infrastructure, including buildings, transportation, energy and water systems, as well as essential services like health care and education. For instance, hospitals might not have backup power during blackouts, and schools could lack air conditioning to keep children comfortable in extreme heat.

Education and migration

Droughts, floods and storms are forcing families from their homes, shattering children's lives. Imagine your school vanishing beneath flood waters, and it's the only school in your community. This is the harsh reality for countless young refugees who are displaced because of climate change. Uprooted from familiar surroundings, grappling with new languages and culture, and far from family and friends, these children face an uphill battle just to continue their education.

This also leads to overcrowding in schools as many families move together into safe areas. The situation makes it hard for children to learn since there aren't enough books or desks for everybody. For some children, this might become too much to bear and they may decide to drop out of school, resulting in generational stress that will continue with their children. These changes can also affect their ability to get jobs when they become older. This means that this vicious cycle of poverty will continue, and it will be harder for them to escape it.



In-utero exposures

Risks before birth

Babies in their mother's stomach can be affected by environmental hazards. This is called 'in-utero exposure'. Things that can impact a baby while in-utero include car exhaust, cigarette smoke, lack of nutrition, or stress from events like natural disasters. Additionally, if mothers become ill due to events like relocating during floods or lacking access to food and clean water, their babies may also suffer as a result. These risks can have a significant impact on a baby's health. For example, it can affect how the baby grows, leading to premature birth (i.e., being born too early), development of congenital defects, or stunted growth. Such a start can compromise the child's lifelong health.

Section 8:

Climate and health advocacy

It's time we stopped using children as 'canaries in the coal mine'. Canaries are birds that were used to warn miners of danger. They got sick before the miners if the air was bad. Children are like those canaries today; they're the first ones to feel the effects of pollution and climate change. It's time for young people to use their voices to demand change.

Here are 5 ways you can start to become powerful advocates for a healthier planet:

1 Build your knowledge and raise awareness among your peers

Knowledge is power. Encourage your school to incorporate the impacts of climate change on child health and nutrition into the curriculum. You can also organize presentations, workshops or film screenings to raise awareness among your peers. By educating your classmates, you're building a solid foundation for future advocacy efforts. And keep educating yourself, as well, as new research and information is made available.

Use the following resources to build your knowledge on children's environmental health:

- A Threat to Progress: Confronting the effects of climate change on child health and well- being – UNICEF
- Children's Environmental Health Collaborative
- Climate Change and Children's Health – US Environmental Protection Agency
- Children's Environmental Health Network
- Environmental Health 101 – US Environmental Protection Agency
- Textbook of Children's Environmental Health

2 Join or create a youth group

Connecting with other young people who are passionate about climate and child health can be incredibly empowering. Joining an existing youth group allows you to learn from others, share ideas and collaborate on projects. If there isn't a group in your community, consider starting your own! Organize events, or awareness campaigns to bring attention to the issue.

3 Engage with decision makers

Through safe platforms, you can find the best way to engage with policymakers and decision makers to express your concerns about climate change and its impact on children's health. Share your recommendations about how to prioritize policies that protect children, such as investing in clean energy, improving air quality and building resilient health and food systems.

Examples of suggestions you could discuss with policymakers and decision makers:

- Prioritize children's health in climate policies by integrating child-sensitive approaches into climate action plans like the Nationally Determined Contributions and the Health National Action Plan.
- Invest in climate-resilient health systems by ensuring they can operate during extreme weather events.
- Support vulnerable communities by offering clean water, clean energy, and access to health care and nutrition services, especially during a natural disaster.

4 Share your story

Use a safe platform to inspire people around you. Share your knowledge about climate change and child health on social media, in your community or through school projects. By sharing your experiences and actions, you can motivate others to get involved and create a ripple effect of positive change.

5 Collaborate and build partnerships

Partnering with organizations, schools and community groups can amplify your impact. Collaborate with local health departments, environmental groups or child advocacy organizations to create stronger and more effective campaigns.

Remember, every action counts. By taking these steps, you are not only making a difference for your own health but also for the health of future generations. Your voice is powerful, and your actions can inspire a wave of change.

Section 9:

Journeys of young climate and health advocates

Climate change isn't just a problem for grown-ups. It's affecting your health right now. From the air you breathe to the water you drink; climate change is making life tougher for young people everywhere. But don't worry, you're not alone! This section is filled with inspiring journeys of amazing young people like you who are protecting their health and our planet.

Ema, 20 years old, Albania

When I first entered medical university, my histology professor shared two critical insights that every future doctor should remember: cardiovascular accidents account for half of global deaths, while respiratory issues contribute to the other half. These stark statistics stayed with me, underscoring a pressing reality. UNICEF's report on the situation of children in Europe and Central Asia reveals that a staggering 83 per cent of children breathe polluted air.[52] This finding is alarming.

In my country, the law on environmental protection aims to improve the quality of life and safeguard human health. However, despite this legal framework, the critical link between climate and health remains challenging to measure and address. In November 2023, Albania became the 41st country in the world to sign the Declaration on Children, Youth and Climate Action.[53] As a climate advocate, I was part of the youth group that met with high government officials to address the challenges faced by children and young people due to exposure to climate change and pollution. We presented our recommendations to the Minister of Environment and Tourism, urging action to improve air quality and protect children's health.

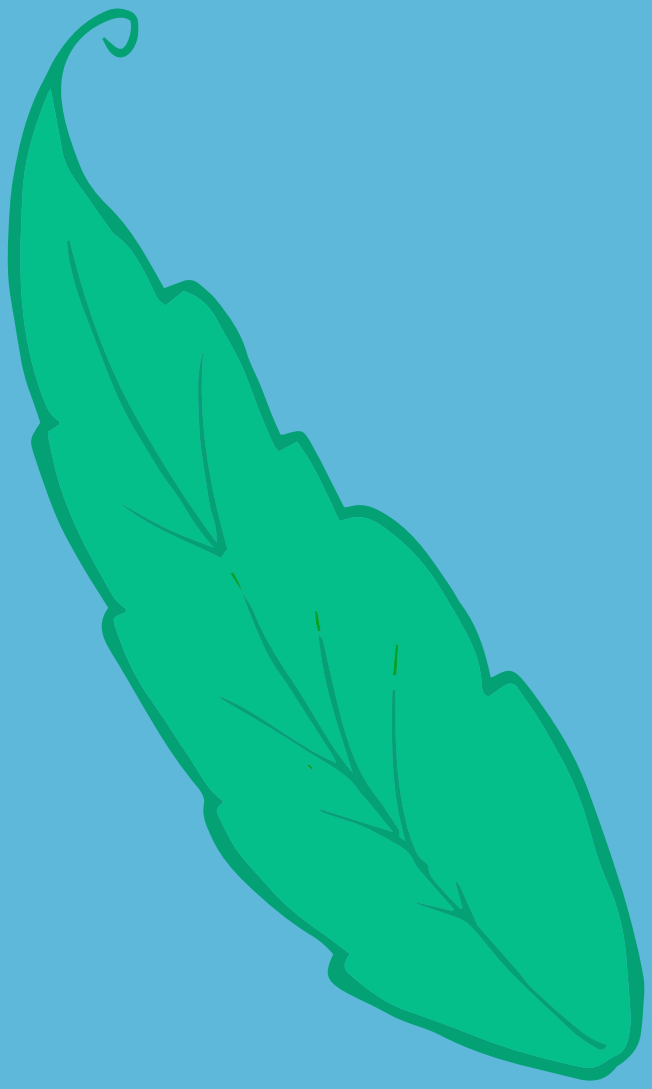
The climate crisis is not only affecting our economies and environment, but its socio-economic consequences are also directly impacting our bodies and minds. Exposure to air pollution can impair lung function and increase the risk of strokes, heart disease and various respiratory diseases. Water pollution significantly contributes to the spread of cholera and hepatitis A, which inflames the liver. Beyond physical health, environmental damage can affect cognitive development and lead to eco-anxiety among young people.

Over the years, I have witnessed how the negative health impacts of climate change disproportionately affect children and women. This realization motivated me to speak up and advocate for climate action. I joined the climate movement

and facilitated discussions across different cities in my country, engaging citizens and professionals alike. The objectives were to raise awareness, identify the main environmental challenges faced in local communities, and mobilize accelerated action for environmental protection.

Learning about effective communication strategies, designing strategic plans to address the climate crisis, and connecting with other climate activists have strengthened my capacities and skills as a young advocate. Unfortunately, policymakers often overlook prioritizing climate action in their agendas, making it more difficult for youth activists like me to influence climate policies. As young people, we are not always heard by our governments, whose main responsibility is to ensure the effective prevention, response, and protection of every citizen from climate change.

The main lesson I have learned as a health climate advocate is that change does not happen overnight. Young people need to be patient and consistent in speaking out because our engagement in policymaking processes is crucial for developing child- and youth-sensitive policies that better reflect our needs and aspirations. Our role in building a resilient and equitable society is vital. Everyone can start small, in their families, schools or communities, by raising awareness, promoting ecological and sustainable practices, and initiating behavioural change.



Governments need to invest in targeted services for children, and it is essential that the perspectives of children and youth, especially those from rural areas and marginalized communities, are incorporated into planning and policy formulation. My final message to my peers is to be active and always raise your voices about issues that impact your lives and well- being. Our generation must build a more inclusive and safer future, not only for ourselves but also for the generations to come.

At the end of the day, we must never compromise our health because it's the most valuable thing each of us has.

Catarina, 17 years old, Brazil

In Brazil, the year 2024 saw three thousand people die due to dengue,[54] an infection that is transmitted from mosquitoes to humans. This marked the highest number of deaths in history since the start of the 'dengue crisis' in 2000. Research from Observa Infância reveals that children aged 0 to 5 years have had the highest mortality rates from the most severe form of the disease, followed closely by those aged 5 to 9.

Coincidentally – or perhaps not – as dengue infections rise each year, climate change is worsening. According to the World Meteorological Organization, 2023 was the warmest year in the 174-year observational record. The correlation is evident: as temperatures rise, so do dengue infections. As the climate crisis escalates, human health crises also become aggravated. Both are interconnected. Yet, awareness about this interconnectedness is not common knowledge in my country. Most people don't understand that by destroying local forests, they are contributing to the rise of dengue. They don't understand that by producing food through unsustainable practices, they are contributing to the droughts that affect 10 million people in the Northeast Region of Brazil, where I come from.[55]

Before I became a health advocate, I was already a climate and environmental activist. I grew up immersed in nature, surfing since I was two years old and climbing trees as soon as I could walk. My parents always taught me to take care of nature. Yet, for them, it was essential that I build my own connection and love for the environment so I would genuinely want to protect it. They always told me, "Taking care of the environment is taking care of yourself, Catarina." I never fully understood this, until one very important day.

My family had been fighting to protect a local Atlantic Forest, Vale Encantado, in my city of Salvador since before I was born. When I was 11, there was a public gathering to push for creating a policy to protect such forests. During this gathering, we were advocating for Vale Encantado when a surge of people entered the building and started to chant that they wanted to work. In their view, this required the destruction of Vale Encantado, as the local government, in partnership with a business, planned to build a road through the forest where Vale is located.

These people had been paid and sent by the business owner. They came from the peripheral community and were not fully aware of the implications of their actions or what they were truly fighting for. I vividly remember that my mother stood up, took the microphone and questioned, "Do you even know what area we are talking about?" No one responded, pure silence. She went on and explained where Vale Encantado was located, articulated why protecting Vale Encantado

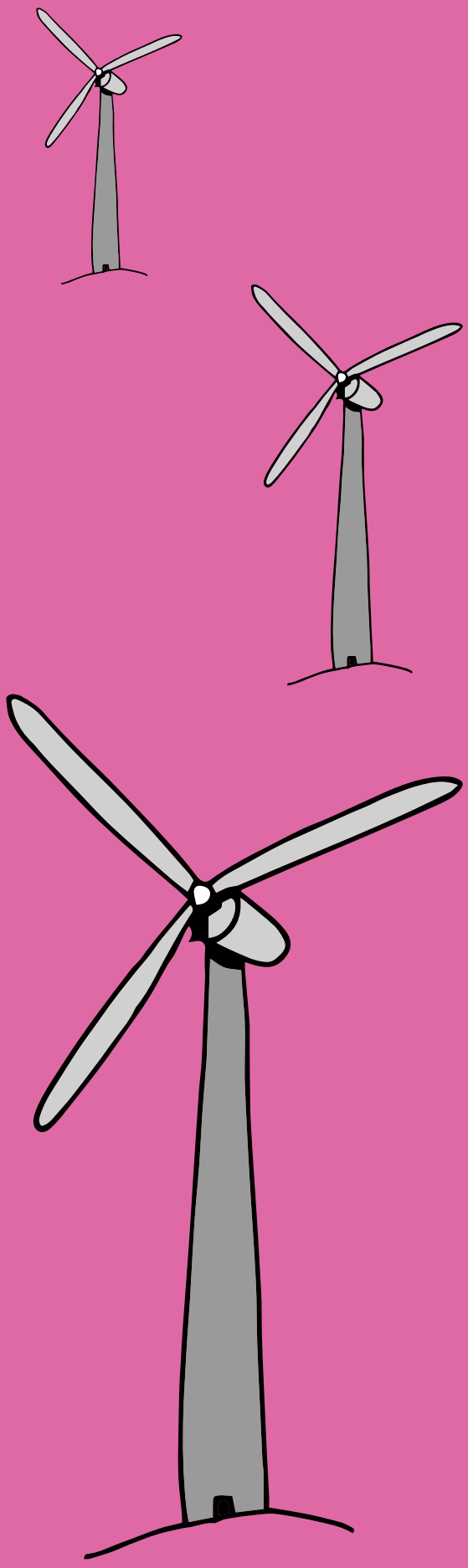
could actually help them and specifically highlighted how saving Vale Encantado would also help combat dengue. By preserving a forest, we can reduce the conditions that lead to the spread of dengue. According to the Fiocruz Foundation, mosquitos are more common in urban areas, resulting in a higher intensity of dengue infections in densely populated regions.

Thus, the preservation of forests correlates with a decrease in dengue outbreaks. The people were mesmerized, and so was I. I had never understood that the fight I had been part of for my entire life was also a fight for protecting human health.

In that moment, we managed to engage each individual and they left the building, promising to support us. However, advocacy is not easy, especially when we are dealing in countries where corruption is a big problem. Additionally, for Vale Encantado, we face challenges such as a lack of funding and resources needed to organize events like the one described above, which are crucial for effective advocacy.

As a child advocate, I know how hard it is to be taken seriously in such spaces. Yet, I remember my 11-year-old self, after listening to what my mother said, using the same arguments and other strong statements about Vale that she used to advocate for the forest. As I grew older, I became more familiar with health and environmental statistics, and used that knowledge for my advocacy work. Sadly, that had been a challenge for me beforehand, as adults seemed to respect only those who presented statistical data, which often left young advocates like me excluded for not having access this evidence.

In my activism journey I have learned that as a child advocate I need to be strong and resilient. I need to stand tall and show that I know what I am talking about, because I do! In my health and climate advocacy journey, I've realized that my knowledge will always be expanding, and I should always be open to new concepts and to new connections. It was this understanding that led me to become involved with the health space. I hope that through my work, I can encourage many others to get involved as well – and that more people will recognize the interconnectedness of the environmental and climate crisis with the health crises we face around the globe.



Oumnia, 22 years old, Morocco

Since I was in high school, I have been part of a school club called the Health and Environment Club. At that time, I didn't understand the intersection between health and the environment, as the actions we took were separate from one another.

However, when the pandemic happened in 2020, I began hearing that COVID-19 was a zoonotic disease, meaning it resulted from the close interaction of people with animals. This led me to think about many zoonotic diseases that caused outbreaks before, like the plague, tuberculosis, malaria, and even theories that AIDS initially emerged as a zoonosis.

My research into these topics led me to discover the concept of One Health, which helped me understand that many scientists, advocates and the international agenda are increasingly aware of the importance of this field. Nevertheless, when I joined medical school at the end of 2020, I started realizing that not many professionals and academicians at both the local and regional levels are aware of the effects of the environment, particularly climate change, on our health. This motivated me to start a serious journey of advocacy, from the national to the global level, about the climate and health nexus.

I first joined the Health Working Group of YOUNGO [the official children and youth constituency of the UNFCCC], which was a great starting point for my advocacy. It helped me navigate the different challenges and opportunities in this field.

My participation at COP 27 led me to work with a community of health advocates who worked tirelessly to raise awareness about climate change as the biggest public health threat of the century. This community had a long-documented journey of engagement at UNFCCC COP, but it was a very niche field that typically only technical people joined. That's why recently the health community, along with youth groups like YOUNGO, started promoting the agenda among the wider audience of climate activists and negotiators.

At COP 28, I represented the youth at the Health Steering Committee of the COP 28 Presidency. It was a win for children and youth, as we included them as stakeholders to be engaged by countries in the COP 28 Climate and Health Declaration, which was presented at the first Health Day and adopted by over 120 countries.

Youth should advocate for this issue because they can build awareness and take action within their families and smaller communities, via social media and traditional campaigns, to create a sense of urgency. Moreover, they can promote the importance of educating the population on preventive methods to mitigate the impacts of climate change on their health, such as limiting exposure to the sun during midday, checking air quality indicators when going out, and staying hydrated during the summer period.

The right to a healthy environment shouldn't be just a motto on paper; it should be a living reality for our parents, ourselves, our children, and all people, especially those who are particularly vulnerable.

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