



Media Brief

Feeling the Heat - How heatwaves are affecting the world's children

Heat on the rise

Despite ongoing warnings from the scientific community over the need for [transformative change](#) by shifting away from fossil fuel energy and [immediate and deep emissions reductions across all sectors](#), global greenhouse gas (GHG) emissions continue to rise. In 2022, global [CO2 emissions grew by 1.5%](#), reaching a new high of 36.1 gigatonnes (Gt), a trend with far-reaching implications for the Earth's temperature.

The past [eight years](#) have been the warmest on record globally. This year's [record-breaking ocean temperatures](#), coupled with the emergence of the [El Niño](#) climate phenomenon in the Pacific, have raised concerns among scientists, who assert that we may be venturing into "[uncharted territory](#)", with 2023 potentially the warmest yet.

Asia has been confronted with an intense heatwave since [April 2023](#), affecting several regions in Bangladesh, India, Thailand and Lao PDR that have seen unprecedented high temperatures. Wet bulb temperatures in some regions in India [crossed](#) the safe mark. In [Europe](#), Portugal and Spain also experienced record-breaking temperatures for the month of April, reaching 36.9°C and 38.8°C respectively.

The record breaking heat has continued into July. In mid-July, more than [100 million people were under heat alerts in the US](#). In Europe, temperature records have toppled across the continent with the mercury climbing well above [40°C in Spain, Italy and Greece](#). July 2023 was [the hottest month ever recorded on earth](#).

This media brief looks at the impact of heatwaves on the world's children. It has been compiled by [Our Kids' Climate](#), a network of parent-led, family focused climate groups and leaders from across the globe, based on available research and drawing on the experiences of parents. As parents and caregivers, we are deeply worried about how children are being affected by heat worldwide and are concerned about what rising temperatures could mean for the world's children and future generations.

Impacts on children's health

According to UNICEF, approximately [559 million children](#) are currently exposed to frequent heatwaves, with this number expected to surge to 2.02 billion worldwide by 2050, which would be virtually all children on earth.

Children in northern regions, especially in Europe, will face the most dramatic increases in severe heatwaves. This summer has seen [1 in 2 children in Europe and Central Asia exposed to record breaking heat waves](#). Each year, Africa already experiences a significant number of

heat-related child deaths, ranging from [12,000 to 19,000](#). This figure could potentially double by 2050 under a business-as-usual scenario.

As children undergo the crucial stages of growth and development, their [physiological limitations make it difficult for their bodies to regulate temperature](#) as efficiently as adults, so they need adult assistance to safeguard against overheating. [Newborns and infants are particularly vulnerable](#), facing increased risks of illness and mortality caused by excessive heat.

Children born in 2020 are expected to face [nearly seven times more scorching heatwaves and twice as many wildfires](#) as their grandparents did. These impacts are [exacerbated by existing inequalities](#) such as access to healthcare and socioeconomic conditions.

Research has shown that children's health is affected by heat in multiple ways:

- A [US nationwide study](#) reveals a clear association between higher temperatures during hot spells and a rise in emergency room visits among children and adolescents in recent years. Similar findings have been observed in [Italy](#), the [Netherlands](#) and across different regions in [Australia](#).
- As children face increased exposure to extreme heat, their [vulnerability to respiratory and kidney diseases, fever and electrolyte imbalances](#) rises significantly, disrupting crucial bodily functions such as heart and neurological processes.
- From the earliest stages of pregnancy, extreme weather events like hurricanes, wildfires, floods and heatwaves [can have a profound impact on expectant mothers](#), both physically and mentally. These experiences can adversely [harm the developing fetus](#) and heighten the unborn child's vulnerability to diseases throughout their life. Additionally, [high temperatures have been associated with premature birth](#), contributing to long-term health issues.
- Extreme heat has been [associated with increased rates of emergency room visits](#) for mental health-related disorders, specifically stress and anxiety. This is particularly [evident among children and adolescents](#), who have limited capacity to avoid or adapt to high temperatures and are also more likely to worry about climate change than any other age group.
- [Extreme heat threatens children's access to food and water](#). Heatwaves exacerbate drought, causing crop failure and food insecurity, with severe impacts on child nutrition, particularly in communities that depend on agriculture. Higher temperatures also increase demand for water. The resulting water scarcity hinders children's ability to regulate body temperatures and stay hydrated. It can also force communities to rely on unsafe water sources, leading to outbreaks of waterborne diseases like cholera.
- [Children's developing immune systems also make them especially vulnerable to diseases like dengue and malaria](#), which thrive in high-temperature environments.

"The stifling hot summer and monsoon months have been made even more unbearable by the climate change related heatwave. Children suffering from common illnesses like diarrhea and viral fevers which were amenable to home care are now being hospitalized with associated heat related

complications like dehydration and fevers."

Dr Shalini Anurag, Paediatrician, Bilaspur, Chhattisgarh, India

Disruptions to children's daily lives and education due to heatwaves

Heatwaves do not only affect the physical well-being of children but also [disrupt various aspects of their daily lives, including schooling, playtime](#) and other vital components of their learning process and overall development.

Heatwaves have a detrimental impact on various aspects of children's lives, including [sleep](#), [learning](#) and [education](#). These disruptions can hinder a healthy transition to adulthood and potentially harm long-term social and economic prospects.

Every year, climate and environmental threats, such as disasters and disease outbreaks, cause disruptions to the education of [over 37 million children](#). The impact of heat on educational attainment is significant, with students performing less well during hot years compared to cooler years. [Research](#) indicates that each degree increase in temperature throughout a school year leads to a 1% reduction in the amount learned during that time.

This year, [many states across India](#) postponed the opening of schools after the summer vacation due to the heat wave. The Indian Education Ministry advised schools to keep Oral Rehydration Solutions handy to offer students who show symptoms of a mild heatstroke.

Parents on the impact of heat on children

"The heatwaves we've had this year have meant that children are spending much more time indoors. It's only bearable outside if we're in the middle of a forest or a park, walking in the streets is increasingly unbearable, the air seems thicker, which means people use more cars which contributes to more pollution.

"The heat has meant that children stop playing with other children at the park, the climbing frames are too hot to touch, the fountains are closed because of the water shortage. They laugh less and spend all day sheltering under a roof, with air conditioning on, which contributes to more global warming. The heat makes you want to stay still and not have other people close: it isolates you from family and friends."

Paulina Seguí, mother with Zurciendo el Planeta, Mexico City, Mexico

"Having grown up myself in the northeastern United States back in the 1980s and '90s, summer would always be a time of joyful outdoor play and gatherings with family and friends. This summer in Austin, Texas, with temperatures hovering around a seemingly endless 105 degrees F (40.5°C) and the air outside oppressive even at night, we spend much of the time inside. There's such a disconnect between the summer freedom and memory-making I want to pass down to my 8-year-old and the reality of a more isolated, indoor summer for my child."

Eileen McGinnis, mother with Parents Climate Community, Austin, Texas, USA

"Here in Italy we faced a week in which temperatures of 40°C were reached, with peaks of 45°C. We are talking about temperatures of 8°C higher than the seasonal averages in July. I'm a dad, and I'm very worried about the discomfort my two children have faced, especially the youngest who is just 4 months old. He was sweating heavily, especially during meals, and his crying was inconsolable. We cannot allow children to pay the consequences of decades of indiscriminate greenhouse gas emissions, which are increasingly amplifying the worst effects of the current climate and ecological crisis."

Marco Ferrari, father with Parents for Future Italy, Alessandra, Italy

"This summer was downright frightening and although it's 4 degrees cooler than it was in June, it's still 36°C most days. I live in Chennai, India. We are used to the heat but over two weeks of temperatures at 40°C and a couple of days at 41 and 42 was not normal. Instead of hanging out at the beach down the road from our home, my teenage daughter spent her vacation in a darkened room. The government delayed the opening of schools after summer twice. There were reports of heatwave deaths coming in from all over India. My anxiety about my child's future has nothing to do with school scores, college admissions etc...I only worry about climate change. The anxiety is like a dull headache that never goes away."

Nina Subramani, Chennai, India

"It is getting hotter every year. Recently I was out with my mother and she said she has never faced this kind of heat – she said that it feels as if the sun is falling out of the sky. But it's not just about how scorching it is out there. Everyone is sneezing and coughing because of the unpleasant air we are breathing which is full of dust. Our children are the most vulnerable. We need to think about how we will shield our kids from this heat and its associated illnesses."

Herbert Murungi, Fort Portal City, Uganda

"Due to the heatwaves, my son spent more time indoors. He is a very active person and this makes him feel like a prisoner. Playing in open spaces in the city is difficult. Children stay at home and play alone. This can cause problems with mental health as well as physical health."

Karolina Bartos, mother with Rodzice dla Klimatu, Warsaw, Poland

"The landscape is brown and parched, the sky sandy coloured, almost hazy. Like one huge dust globe. Some trees in our neighborhood look like they're dying. I'm down to one student, as all the others have left town. The one student still around is attending summer camp at his church, and the activities are all inside. Even their free time. It's too hot to be outside even in the shade."

Alicia Messing, mother and teacher, Phoenix, Arizona, USA

"In this last heatwave, there were days when the temperature was 40°C in the shade. At my older son's school, they canceled outdoor sport activities because it was impossible for the kids to bear that kind of heat. I know the climate crisis will worsen and make extreme weather more frequent and that anguishes me more, thinking about the future that they will have."

Alin Moncada, mother with Mamás y Papás por el Clima, Zapopan, Jalisco, Mexico

"High temperatures at high altitudes are associated with extremely high UV indices, which in our contaminated valley full of cars and surrounded by industry, usually means dangerous levels of atmospheric ozone. Ozone is an oxidiser and is known to irritate the respiratory system, worsen asthma and pulmonary disease, reduce lung function and (in the long term) reduce life expectancy. When the city government declares "ozone contingencies" children cannot play outside at break time and sports classes are either moved indoors or canceled, which impacts on children's health, both physical and mental."

Dora Napolitano, mother and founder of Zurciendo el Planeta, Mexico City, Mexico

Children and families feeling the heat differently

The WHO estimates that between 2030 and 2050, the annual number of additional heat-related deaths could rise to approximately [250,000](#), with more than [half projected to occur in Africa](#). The IPCC indicates that the number of individuals facing a high risk of mortality is projected to [triple](#) under 3°C warming, compared to 1.5°C warming.

The [social impacts of heat-related events are not distributed evenly among populations](#). Wealthier individuals have greater access to resources such as water, cool environments and the ability to relocate, exacerbating social and economic inequalities. On the other hand, impoverished neighborhoods and informal settlements, including slums, which are currently inhabited by approximately [900 million people worldwide](#), are more frequently exposed to environmental hazards like heat due to inadequate infrastructure and disadvantaged locations.

A [study](#) carried out in Southern California found that residents in low-income areas were less likely to use air conditioners when temperatures got hot, due to their expense, putting them at heightened risk. Likewise, in the UK research shows heatwaves [disproportionately affect those with lower incomes and ethnic minorities](#), placing them at the greatest risk.

What our children need

The key driver of the climate crisis and the extreme heat waves associated with it, is the burning of fossil fuels. Our leaders must embrace life-saving renewable energy at pace. Leaders must prioritize immediate and rapid emissions cuts from all fossil fuels – coal, oil, and gas. They must end the funding and expansion of new fossil fuel infrastructure, exploration and extraction. Our children's health, safety and futures depend on leaders with the willpower and wisdom to accelerate the renewable energy transition and phase out fossil fuels.

[Our Kids' Climate](#) is a network of parent groups from across the world who are uniting for climate action to protect the kids we love from the climate crisis. Currently we are supporting parent leaders and groups in over 30 countries. We believe all children today and tomorrow should inherit a healthy planet and just world, rooted in renewable energy and built through intergenerational solidarity. Our Kids' Climate has been active in calling for fossil fuel phase down and a transition to clean, renewable energy for the sake of children's health and futures. The network made this call at [COP27](#) and [COP26](#), calling on world leader's to put children first.

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