

A child's right to clean air

July 2021

 Freedom to breathe

Introduction



“Air pollution causes 7 million premature deaths annually, including 600,000 children under the age of 5.”

- UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 2020

According to UNICEF¹, 300 million children live in areas of extremely toxic air pollution and around 2 billion children live in areas where pollution levels exceed the minimum air quality standards set by the World Health Organization.

Globally, nine out of ten children are exposed to high levels of air pollution outdoors and in homes and other buildings across the world. In particular, levels of indoor air pollution can often be significantly higher than outdoors.² Indoor air pollution is estimated to kill more children globally than outdoor air pollution, especially in Africa and Asia, with the main source of this pollution coming from the use of solid fuels for cooking.³

While these statistics are concerning, critically, they mask significant disparities along economic and racial/ethnic lines. Children living in poor housing situations, especially those homes that use solid fuel for cooking, and those living, playing or attending schools near busy roads or highly polluting industries, are all at a greater risk of adverse health effects arising from air pollution than other children.⁴ In many situations, research shows that children from ethnic minority backgrounds⁵ are disproportionately more likely to have a health condition exacerbated by air pollution compared to their non-minority peers.

And while the **existing** impacts are grim for children, their **future** is equally stark, as air pollution can not only harm children’s physical and mental health but also, their ability to effectively learn, which compromises their ability to realise their full potential and as UNICEF states, “fuel intergenerational cycles of disadvantage.”⁶

Hence, the case for a child’s right to clean air is clear.

Clean air is an essential necessity for life – just like clean water, healthy food, and safe shelter, which are all explicitly reflected in the UN Convention on the Rights of the Child. Unlike other essentials, the right to clean air is not mentioned in the UNCRC. However, we want it to be included, alongside the other children’s rights listed in the Convention.

In February 2021, the UN Secretary General, Antonio Guterres⁷ alerted the world to the three planetary crises of the 21st century - climate change, biodiversity and pollution, which unless effectively addressed, will have catastrophic consequences for the future of all people and the planet.

While each crisis demands urgent attention, our focus remains on air pollution, and ensuring our children's ability to breathe clean air is elevated at the United Nations.

This White Paper is a rallying cry for a child's right to clean air.

Why clean air is necessary for children



Every day around 93% of the world's children under the age of 15 years breathe air that is so polluted it puts their health and development at serious risk.

- World Health Organization, 2018

We all need clean air to breathe but children need it more than adults. Why?

Because during gestation and infancy⁸, children's brains and bodies are growing and developing rapidly, making childhood a very vulnerable stage of life and one that we believe, requires extra protection under international law.

Harmful air pollutants, found both inside and outside of buildings, can adversely affect children's health in significant ways.⁹

Higher incidences of premature birth and low birth weight have been linked to air pollution exposure during pregnancy¹⁰. Each of these early impairments can have significant adverse repercussions for infants, through to adulthood.

Add to this the fact that infants exposed to high levels of air pollution are at an increased risk of death during the first year of life, particularly from respiratory illnesses,¹¹ and the disproportionate potential physical harm on babies is clear.

And these physical health challenges can continue throughout a child's life.

Many studies note the strong association between children exposed to air pollution and those that develop respiratory illnesses, such as pneumonia, bronchitis and asthma.¹²

Developing such illnesses whilst young has significant negative knock-on effects for a child, including, higher incidence of hospitalisation and doctor visits¹³, leading to a reduction in school attendance, and lack of capability to participate in many physical activities other children usually enjoy.



Almost one million children die from pneumonia each year, more than half of which are directly related to air pollution.

- UNICEF, 2016

Emerging evidence has also suggested that prenatal pollution exposure could affect a child's brain, which could have huge implications for a child's future educational achievement and their ability to learn, socialise and play.¹⁴

Children's ability to learn at school may also be compromised by indoor air pollution, as research suggests that air pollution at school can impair cognitive function such as working memory.¹⁵

Similarly, a report by the Royal College of Physicians and the Royal College of Paediatrics and Child Health suggests that "children exposed to high indoor NO₂ levels from cooking and heating sources have been shown to have poorer cognitive function and seem to be at increased risk of ADHD."¹⁶

While more research on the effects of air pollution on children's mental and physical health will always be welcomed, the evidence so far is compelling – children need clean air.

Children's unique vulnerability and why they are at greater harm

We understand that children are disproportionately affected by air pollution compared to adults but why are they uniquely vulnerable?

What is it about children that places them at greater harm compared to adults?

Childhood is a unique stage of life development

In the womb and during childhood, a child's brain and body is rapidly developing. Toxic air pollutants can interfere with critical stages of organ development in a child, damaging the lungs and heart, with growing evidence also suggesting a link to brain and nervous system effects. Much of this damage may be irreversible.^{17 18}

Children are relatively small in size compared to adults

Children are more physiologically vulnerable to air pollution than adults based on their smaller relative size. They have greater exposure to air pollution based on their relative faster breathing rate, per unit of body weight, compared to adults. They also exhibit higher rates of mouth-breathing compared to nose-breathing, which increases the number of inhaled pollutants.¹⁹

Children's immune systems are also smaller in size and developing, making them more vulnerable to respiratory infections resulting from exposure to harmful pollutants. The Royal College of Physicians confirms that, "the developing heart, lung, brain, hormone system and immunity can all be harmed by air pollution."²⁰

Children have unique behaviours and activities placing them at greater harm

Young children's behaviour and the activities they engage in can lead to increase levels of exposure to harmful pollutants. For example, particulate matter is known to be prevalent in higher concentrations at ground level, arising from dust or car fumes, making young children more exposed to inhaling these pollutants as they play, walk, or are transported around in prams or pushchairs.²¹

Furthermore, inside buildings, children are also exposed to high levels of diverse harmful air pollutants. The Royal College of Physicians and the Royal College of Paediatrics and Child Health's (2020) report details the various sources of indoor pollution including smoking, damp, cooking, the burning of fossil fuels and wood, dust, chemicals from building materials and furnishings, aerosol sprays, cleaning and other household products.

They note research that considers concentrations of volatile organic compounds (VOCs) inside an average house, which are up to seven times higher indoors than in the air outside, and the use of personal-care and household products indoors, which produces a significant portion of outdoor VOC pollution²².

The high levels of harmful pollutants found indoors is alarming and there is growing evidence that respiratory problems among children may be exacerbated by indoor air pollution in homes, schools and nurseries²³.

Indoor air pollution is linked to a range of childhood health problems including asthma, wheezing, conjunctivitis, dermatitis and eczema²⁴. This is exacerbated by the increasing amounts of time children are spending indoors. For example, in the UK, the average child spends just 68 minutes outside per day²⁵.

Similarly, research in low-income countries suggests that children under 5 years are at greater exposure to high levels of indoor air pollution because of their closeness to their primary caregiver, often their mother, who maybe engaging in cooking on an open fire. In these situations, young girls are more impacted than boys, as they often engage more in household chores.²⁶

The World Health Organisation states indoor air pollution to be one of the most insidious killers in many of the poorest areas in the developing world, with close to four million people dying prematurely from illness attributed to household air pollution from inefficient cooking practices. Close to half of deaths due to pneumonia among children under 5 years of age are caused by particulate matter (soot) inhaled from household air pollution²⁷. Added together, these points all indicate a need for indoor air pollution to be urgently addressed by international and national policy makers, alike.

The immediate and long-term implications for individual children's health are immense, as both indoor and outdoor pollution exposure is documented as affecting children's ability to learn, socialise, play and achieve their true potential, ultimately compromising their capability to fully embrace all of life's opportunities.

This impact is further compounded when viewed from a societal perspective, as a greater number of children not fulfilling their true potential today, will hamper the growth of organisations, businesses, economies, and societies of the future. By protecting the children of today through strengthening normative standards on clean air, we will foster future generations that are both physically and mentally, stronger and healthier, leading to a brighter future for everyone around the world.

The need to safeguard their future and ours is clear.

The right to clean air: from baby steps to teenage strides

As the Introduction noted, children do not have an explicit right to clean air under the UN Convention on the Rights of the Child (UNCRC) that was founded in 1989. However, Article 24 enshrines the right of the child to the enjoyment of the highest attainable standard of health, and specifically, Article 24 (2) (c) of the UNCRC calls on governments, "to pursue full implementation of this right and, in particular, shall take appropriate measures...to combat disease..., taking into consideration the dangers and risks of environmental pollution."²⁸

While this is commendable, it is arguable that the reliance on asking states to consider the dangers and risks to environmental pollution in 1989 and not explicitly stating that children have a right to clean air within this overarching right to health, left a gap, enabling air pollution to rise unimpeded over the decades, resulting in 93% of children under 18 living in areas with air pollution levels above WHO guidelines.²⁹

However, over recent years, important interventions in various guises at the United Nations has started to address this vacuum.

The below list details some noteworthy reports that point to an increasing groundswell of acknowledgement and support within the United Nations family, that air pollution is harming children and children have a right to breathe clean air.

- General comment No. 15: The right of the child to the enjoyment of the highest attainable standard of health (Article. 24), Committee on the Rights of the Child (2013)³⁰
- The report of the UN Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes (2016)³¹
- UNICEF's report, 'Clean the Air for Children' (2016)³²
- Day of General Discussion on Children's Rights and the Environment by the Committee on the Rights of the Child (2016)³³
- WHO's report 'Air pollution and child health: prescribing clean air' (2018)³⁴
- The report of the UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment specifically on children's rights and the environment (2018)³⁵
- Report of the UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment (2019)³⁶
- UN Human Rights Council Resolution 45/30: Rights of the child: realizing the rights of the child through a healthy environment (2020)³⁷

Reflections on progress and call to action

The above list of interventions are all examples of UN organisations, UN mandate holders and an UN resolution all recognising that air pollution disproportionately harms children and acknowledging that they require specific normative protections based on their unique vulnerabilities.

These positions were formally considered by the UN Committee on the Rights of the Child in June 2021³⁸ and responded to, in their public commitment to develop General Comment no. 26 on children's rights and the environment, with a special focus on climate change³⁹.

The forthcoming General Comment will highlight the intersection between children's rights and the environment (including climate change) and according to Ms. Mikiko Otani, Chair of the UN Committee on the Rights of the Child speaking on World Environmental Day 2021 (5 June) will, "provide authoritative guidance to the governments of the 196 countries that have ratified the Convention on the Rights of the Child on what they must do to uphold children's rights to a safe and healthy environment."⁴⁰

Following the formats of other General Comments, no. 26 will likely include information to governments and the private sector, as respective duty/responsibility bearers, on how they could take action to realise the rights of the child through a healthy environment, which should include what steps can be taken to ensure children can breathe clean air, an essential component of what constitutes a safe and healthy environment.

Critically, the announcement of General Comment no. 26, arrives against a backdrop that is witnessing increasing global calls for an adoption of an UN resolution recognising the right to a safe, clean, healthy and sustainable environment.⁴¹

This call has been gathering momentum since September 2020 and is gaining traction among diverse international stakeholders including civil society groups, law firms, UN organisations, governments and businesses, currently amassing the signatures of over 1,100 organisations⁴². The right to a clean, healthy and sustainable environment also has the formal and public backing of the current UN Special Rapporteur on human rights and the environment, Dr. David Boyd.⁴³

All these interventions, pointing to a groundswell of mounting support, suggests that a child's right to clean air could be fully anchored within international normative law - practically, through the proposed General Comment on children's rights and the environment with a special focus on climate change, and the broader right to a clean, healthy and sustainable environment, once achieved.

We want to see a child's right to clean air become elevated within the UN system and support all efforts to see this objective realised.

Through international normative recognitions such as the proposed General Comment and advancements for a right to a safe, clean, healthy and sustainable environment, we believe that a child's unique vulnerability to the adverse effects of air pollution will be better protected, and their right to breathe clean air will be further secured, thus benefiting the health of all existing children and future generations.

We commend the UN Committee on the Rights of the Child for taking decisive action in committing to develop General Comment no. 26 on children's rights and the environment with a special focus on climate change. As an essential necessity for life and an integral part of realising a child's right to a safe and healthy environment, we hope to see explicit references in General Comment no. 26 enshrining a child's right to clean air.

We believe all children have the right to breathe clean air.

The time has come to guarantee this right.

Endnotes

- ¹ <https://www.unicef.org/reports/clean-air-children>
- ² <https://www.who.int/news/item/29-10-2018-more-than-90-of-the-worlds-children-breathe-toxic-air-every-day>
- ³ <https://www.unicef.org/reports/clean-air-children>
- ⁴ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>
- ⁵ <https://www.jstor.org/stable/40665769>
- ⁶ https://www.unicef.org/sites/default/files/press-releases/glo-media-Danger_in_the_Air.pdf
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- ⁸ https://www.unicef.org/sites/default/files/press-releases/glo-media-Danger_in_the_Air.pdf
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- ¹⁰ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>
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- ¹² https://www.unicef.org/sites/default/files/press-releases/glo-media-Danger_in_the_Air.pdf
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- ¹⁶ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>
- ¹⁷ https://www.unicef.org/sites/default/files/press-releases/glo-media-Danger_in_the_Air.pdf
- ¹⁸ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>
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- ²⁰ <https://www.rcplondon.ac.uk/file/2916/download?token=RzylFzis>
- ²¹ Columbia University School of Nursing, ‘Incidents Affecting Children’, accessed 13 July 2016
- ²² McDonald BC, de Gouw JA, Gilman JB, Jathar SH, Akherati A, Cappa CD, Jimenez JL, Lee-Taylor J, Hayes PL, McKeen SA, Cui YY, Kim SW, Gentner DR, Isaacman-VanWertz G, Goldstein AH, Harley RA, Frost GJ, Roberts JM, Ryerson TB, Trainer M (2018) Volatile chemical products emerging as largest petrochemical source of urban organic emissions. *Science*. 359:760-4.
- ²³ <https://www.rcpch.ac.uk/resources/inside-story-health-effects-indoor-air-quality-children-young-people>
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- ²⁵ <https://www.rcpch.ac.uk/resources/inside-story-health-effects-indoor-air-quality-children-young-people>
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- ³² <https://www.unicef.org/reports/clean-air-children>
- ³³ <https://www.ohchr.org/EN/HRBodies/CRC/Pages/Discussion2016.aspx>
- ³⁴ <https://apps.who.int/iris/bitstream/handle/10665/275545/WHO-CED-PHE-18.01-eng.pdf?ua=1>
- ³⁵ https://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/37/58

³⁶ <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>
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⁴² <http://healthyenvironmentisaright.org/>

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A circular logo featuring a stylized globe with a blue and white color scheme, positioned to the left of the text.

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