

Early Childhood Development and Climate Change

Advocacy Brief



are much more vulnerable than other stages in life.

The climate crisis is a child rights crisis (UNICEF, 2021) as young children are affected disproportionately, starting in utero. As climate change, environmental degradation¹, and disasters increase, the stability and predictability needed in a young child's life for a nurturing environment essential to their development can be disrupted, especially in the first 1,000 days when the brain develops the fastest. Asia Pacific, as a region home to 60% of the world's young population, faces an immediate crisis. UNICEF's 2021 publication on the Children's Climate Risk Index highlights that approximately 1 billion children (nearly half of the world's children) live in countries classified as at extremely high risk to the impacts of climate change – many of them are from the region. Climate change and environmental shocks are complex challenges that can no longer be treated as purely environmental issues as they have social and economic implications on human development, including poverty, inequality, peace and security. Addressing these issues require working with a range of stakeholders across sectors, especially at the systems level on policies, financing, and programming. **Early Childhood Development (ECD)² has the potential to be a building block for climate adaptation, resilience, and sustainable development** given its cross-cutting nature that has the power to transform the lives of our youngest populations.

¹ Defined as physical environment, chemical, biological and work-related factors external to a person, such as air pollution, lack of clean and safe play spaces, and environmental toxins (including lead and mercury).

² ECD is a holistic approach to learning and development through five interrelated components of nurturing care (health, nutrition, responsive care, early learning, security and safety).

The problem

The negative effects of climate change and environmental degradation will be most pronounced for young children from the most disadvantaged and vulnerable populations who face multiple intersecting vulnerabilities (with overlaps in age, economic status, gender, physical abilities, and location).

Most strikingly, **toxic stress of young children** due to prolonged disruptions of essential services and adversities faced could lead to physical and cognitive impairments, behavioral issues, and poor mental well-being, if left unmanaged (Shonkoff & Garner, 2012). Therefore, given their interdependency with their parents and caregivers, young children from conception through age 8, are much more vulnerable to climate and environmental hazards compared to adults (University of Wollongong, 2022)

Starting from in utero, the likelihood is higher for babies to be born prematurely or with low birth weight to pregnant mothers who are exposed to high levels of air pollution (UNICEF, 2017). Similarly, extreme heat exposure on pregnant mothers has been linked to health issues in fetuses and newborns.

Physiologically if compared to adults, young children require more food and water per unit of their body weight as their brains, lungs, and bodies develop rapidly. This makes young children less able to survive climate extremes and dehydration; they are more susceptible to air pollution, toxic chemicals, temperature changes, and diseases such as dengue and diarrhea (UNICEF, 2021). Psychologically, young children may experience more severe impacts from witnessing and experiencing disasters.

Disruptions in consistent access of services across all Nurturing Care³ components will become a norm as young children and their families face increasing extreme weather, environmental hazards, and disasters:



Young children will be put to greater risks of hunger and malnutrition with increasing food and water insecurity due to climate change.



Learning systems and education opportunities for young children may also be threatened as disasters become the norm.



Families' abilities to ensure a safe and stable home could be disrupted due to prolonged extreme weather events – as young children are further exposed to greater development and humanitarian risks, including poverty, migration, and displacement.

³ Health, Nutrition, Early Learning, Responsive Caregiving, Security and Safety

17 million babies under the age of 1 breathe toxic air - putting their brains and lungs at risk (UNICEF, 2017).

Key arguments: ECD as a Climate-Friendly Investment

ECD as a powerful equalizer to climate change inequities

Climate change does not affect everyone equally. Young children will be impacted much more than adults from climate change and environmental shocks. This is most pronounced especially for the most vulnerable young children with the least resources to cope – those living in fragile contexts with poor infrastructure, weak governance, and low capacities to mitigate and adapt to climate change impacts. ECD for young children is key in addressing inequities more efficiently and effectively than later in life.

Protecting our youngest children as the climate crisis is a child's rights crisis

Young children who have contributed the least to global emissions will face the greatest impacts of climate change. They will also feel the effects longer than adults into the future hence it is crucial to include them in today's decisions on climate change responses to mitigation, adaptation, and resilience. A failure to integrate children's rights (including their [rights to a clean, healthy, and sustainable environment](#)) to climate action poses a threat to young children in already vulnerable situations given their unique vulnerabilities and evolving capacities.

ECD in climate change is a key building block in achieving the SDGs

Holistic ECD with its multiplier effect across all Sustainable Development Goals (SDGs) is a key contributor to increasing climate change adaptability and resilience of young children and their families. By investing in equitable, high quality, well-financed ECD policies, programs, and practices that cut through silos across sectors, we can foster the developmental potential of young children who will then benefit from all nurturing care components while reaching many of the SDGs to combat climate change impacts.

Young children as agents of change

The voice of young children remain the most underrepresented in most of the decision fora. This presents us with a unique opportunity to shift the current predominant narrative that focuses on children as victims and their vulnerabilities, passivity, and powerlessness towards children with vital voices (as well as their caregivers) empowered as strong agents of change and valuable contributors in a changing climate into the future. We need to include children's rights to participate meaningfully in decisions that affect them.

Costs of inaction is too high

Early childhood is a time of significant opportunity, especially during the first 1,000 days of life when the brain develops the fastest. Investing in children's formative years is more cost-effective than equivalent investments later in life: For every US\$1 invested in a child's first 1,000 days of life, there can be a future return of USD\$ 17 (Heckman, et al., 2010). Young children should not be sidelined in climate actions as the negative impacts from climate and environmental shocks in childhood can last throughout a lifetime with risks of deepening poverty and inequality across generations.



Nearly 90% of the burden of disease attributable to climate change is borne by children under the age of 5⁴.



INVESTMENT MENU ECD and Climate Change

Young children need to be at the center of climate and environmental responses as few investments in the social sector have as high returns as investing in ECD. Well financed, quality, and equitable ECD has shown to be cost effective in breaking stubborn cycles of intergenerational equity, while increasing resilience and adaptive capabilities of young children.

In a region highly prone to climate change and environmental degradation, UNICEF EAPRO is working towards securing a climate-resilient future to transform every young child, aged 0–8, from vulnerable to most valuable for a sustainable future.

Mainstream ECD in climate resilience and adaptation systems.

Building young children’s resilience is as important as investing in physical infrastructure in the face of climate crisis. This includes measures to mainstream ECD into Climate Change policies, financing, programming; and vice versa, **ensure that climate change, environment, and disaster risk reduction is embedded within ECD policies, financing, programming.** Another key component of this pillar is building capacities of key stakeholders to be able to articulate ECD as a climate-friendly investment and a solution to climate resilience.

Invest in child, caregiver, and community focused interventions.

Ensuring that all boys and girls aged 0–8 years as well as supporting parents and caregivers (including mothers who face increased care responsibilities during disasters and environmental crises) to become resilient as agents of change in the contexts of climate change, environmental degradation, and disasters. This includes community engagement, awareness raising, ensuring continuous quality ECD interventions, establishing relevant standards and tools.

Invest in physical space and infrastructure-focused initiatives.

Ensuring safe, clean, healthy, and sustainable physical environments are ensured so all girls and boys can grow, learn, and play in a healthy environment. This includes clean energy investment in ECD infrastructure and facilities to address poor air quality and environment, establishing early warning systems and security standards, advocating for child-friendly green spaces.

⁴ Sheffield, P. E., & Landrigan, P. J. (2011). Global climate change and children’s health: threats and strategies for prevention. *Environmental health perspectives*, 119(3), 291-298



HIGHLIGHTS

Regional partnerships and UNICEF Country Office initiatives

Partnership with ARNEC⁵ and Save the Children:

The purpose of the regional initiative on ECD and Climate Change and Environmental Degradation is two fold: 1) to ensure that climate policy makers are aware of climate and environmental risks on the youngest children before primary school age so that inclusion of ECD to Climate in policies, financing, programming is based on the Nurturing Care cross-sectoral components; and vice versa, and 2) to ensure that ECD continues to make the critical linkages with Climate Change and Environment while increasing the resilience and adaptation capacities of ECD programming in its longer-term role to reach the SDGs. The initiative focuses on four key strategies: building and sharing knowledge; strengthening partnerships across sectors; increasing awareness and commitment; building capacity of ECD, environmental and climate change stakeholders (See [Regional Call to Action](#) and [Regional Scoping Study](#) to address the climate crisis for young children).

Climate landscape analysis for children:

In Indonesia, Malaysia, the Philippines, Thailand and Viet Nam, UNICEF offices have completed child risk assessment reports on the impacts of climate change and environmental degradation on children.

Air pollution initiatives in Mongolia:

With the Government of Mongolia, UNICEF has been partnering with the academia by retrofitting kindergartens for better insulation, ventilation, air filtration and electric heating systems to improve indoor air quality, increase energy efficiency while improving the learning environment for young children. Air pollution is severe in Mongolia especially during winter when coal is traditionally used for heating and children 2–5 years of age typically spend long hours in kindergartens (See articles in [Early Childhood Matters 2021](#); [ARNEC Connections 2020](#)).

⁵ Asia Pacific Regional Network for Early Childhood



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Youth engagement to elevate ECD's role in climate adaptation in the Pacific:

In the 2022 ARNEC Conference on linkages between ECD and climate change, environment, and COVID, Pacific youth advocate heralded the call from Minister of Health in Fiji for greater inclusion of young children in the climate agenda. In the 2019 Pacific ECD Forum, UNICEF Pacific Islands launched dialogues on the linkages between ECD and climate change to reinforce the urgent need to invest in young children as part of while emphasizing how ECD policies and programs provide a pathway towards climate resilience and adaptation.

Multi-level climate and disaster risk reduction initiatives in Viet Nam:

- With the Ministry of Education and Training (MOET), UNICEF has developed and institutionalized a national Climate-Smart School Framework for pre-primary to upper secondary level; developed guidelines and training materials for preschool teachers on '*Guiding the organization of educational activities on climate change adaptation and environmental protection in preschools*'.
- In partnership with the National College for Education, UNICEF has conducted a survey report targeting early childhood education institutions to understand the context and behaviors of pollution and environmental protection in preschools.
- In partnership with Ha Noi National University of Education and Wakayama University in Japan, UNICEF has co-organized an international online workshop on the '*Impact of climate change and air pollution on children (from preschool age) with disabilities and education: Facts and Innovations*'.
- In partnership with the Global Green Growth Institute and MOET, UNICEF has been exploring possibilities of clean solar energy in the education sector through appropriate financing and replication of the model across the education sector from preschool level in Viet Nam, especially in remote areas.

References and key resources

ARNEC Connections (2020) [Ensuring the Well Being of Children Amidst Environmental Risks in the Asia-Pacific Region](#)

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Save the Children (2021) [Born into the Climate Crisis: Why we must act now to secure children's rights](#)

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Shonkoff and Garner (2012) [The Lifelong Effects of Early Childhood Adversity and Toxic Stress](#)

UNICEF (2017) [Danger in the Air: How air pollution can affect brain development in young children](#)

UNICEF (2021) [The Climate Crisis is a Child Rights Crisis: Introducing the children's climate risk index](#)

UNICEF (2022) [The Coldest Year of the Rest of Their Lives: Protecting children from the escalating impacts of heatwaves](#)

UNICEF, UNEP, OHCHR (2021) [Children's Rights to a Safe, Healthy and Sustainable Environment in the ASEAN Region](#)

University of Wollongong (2022) [From Most Vulnerable to Most Valuable: A scoping study on putting young children at the heart of environmental and climate actions](#)



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