

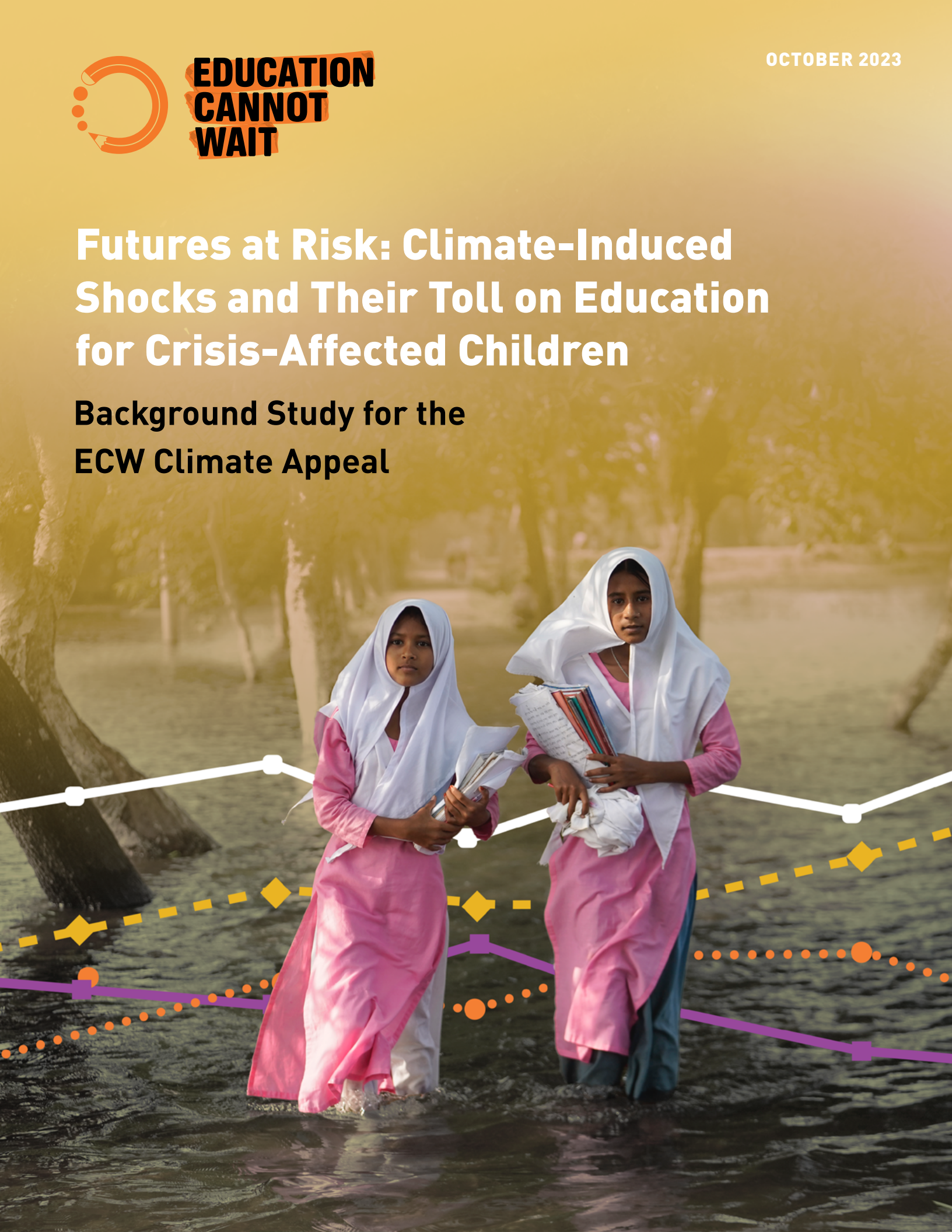


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OCTOBER 2023

Futures at Risk: Climate-Induced Shocks and Their Toll on Education for Crisis-Affected Children

**Background Study for the
ECW Climate Appeal**



About This Study

This study was prepared in October 2023 by Matteo Valenza under the guidance and supervision of Christian Stoff (Chief, Monitoring, Evaluation and Global Reporting) at Education Cannot Wait. Helpful comments were provided by additional Education Cannot Wait colleagues: Jihane Latrous (Gender Manager), Beza Tesfaye (Evaluation Manager), and Raakhi Williams (Chief of Strategy, Planning and Accountability). For any questions or feedback, contact Christian Stoff, cstoff@unicef.org.

Disclaimer: The estimates contained in this study must be considered indicative only and do not represent official UN estimates. The estimates should be considered as “educated guesses” of the number of children in need of educational support in emergencies and protracted crises, based on a combination of high-quality research, data from the INFORM Severity Index, and UN sources. The overarching goal of this study is to provide an understanding of the issue at the global level and not to produce or supersede any official estimates at the country level. Therefore, country-level estimates contained in this study should be considered indicative and should not be used as a substitute for any official data or estimates produced by other governmental or UN bodies at the national level. The estimates were produced by Education Cannot Wait based on information available in October 2023. As humanitarian situations can change quickly, these estimates are subject to change.

The findings, interpretations, and conclusions expressed in this study are those of the author and do not necessarily represent the views of ECW, the United Nations, or UN Member States. The depiction and use of boundaries, geographic names, and related data in this study are not warranted to be error-free, nor do they necessarily imply the expression of any opinion whatsoever on the part of ECW concerning the legal status of any country or territory of its authorities, or the delimitation of its frontiers or boundaries.

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About Education Cannot Wait

Education Cannot Wait ([ECW](#)) is the United Nations global fund for education in emergencies and protracted crises. We support quality education outcomes for refugee, internally displaced and other crisis-affected girls and boys, so no one is left behind. ECW works through the multilateral system to both increase the speed of responses in crises and connect immediate relief and longer-term interventions through multi-year programming. ECW works in close partnership with governments, public and private donors, UN agencies, civil society organizations, and other humanitarian and development aid actors to increase efficiencies and end siloed responses. ECW urgently appeals to public and private sector donors for expanded support to reach even more vulnerable children and youth.

Cover credit: © UNICEF Bangladesh
Girls wade through floodwaters on their way to school in Bangladesh.

Layout and design: Svenja Greenwood



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A family makes their way to a refugee camp in Ethiopia after fleeing drought and conflict in Somalia.

Summary of findings

- **About 62 million crisis-affected children and adolescents in 27 countries have had their education disrupted by climate shocks since 2020. These climate shocks also triggered 13 million displacements of children of school age.** Nearly one-third of the [224 million crisis-affected children in need of educational support](#) worldwide face the repercussions of climate-related events like floods, droughts, and storms, which are further intensified by climate change. Among these, around 31 million children find themselves in countries ill-prepared to handle the impacts of severe climate-related crises. Droughts, closely followed by floods, are the most frequently encountered climate-related shocks.
- **Over the last decade, more than 91 million school-aged children impacted by crises have faced climate shocks amplified by climate change. The effects have been particularly pronounced in Sub-Saharan Africa, affecting 42 million children, and South Asia, impacting 31 million children.** Among the various climate hazards assessed, droughts emerge as the most severe and persistent, disproportionately affecting children in Sub-Saharan Africa.
- **Children affected by climate hazards are at risk of educational disruptions due to forced displacement.** In the 27 crisis-affected countries where 62 million children have been exposed to climate shocks since 2020, there were **13 million forced movements of school-aged children due to floods, droughts, and storms.** Looking back further to the past ten years, the number of forced movements of school-aged children is an alarming 31 million — each movement representing a unique instance of disruption to a child's education. While droughts are more intense and affect more children, floods are the primary cause of these forced displacements.
- **Displacement by climate-induced hazards boosts inequities in access to education, to the disadvantage of girls and the poorest households.** Children who are already at risk of dropout face an even higher risk when exposed to crises worsened by climate change and environmental degradation. In Sub-Saharan Africa, where climate-related crises are prevalent, internally displaced children are 1.7 times more likely to be out of primary school compared to their non-displaced peers. Girls are disproportionately affected by the impacts of climate change, with a higher likelihood of dropping out of school and being forced into early marriages.

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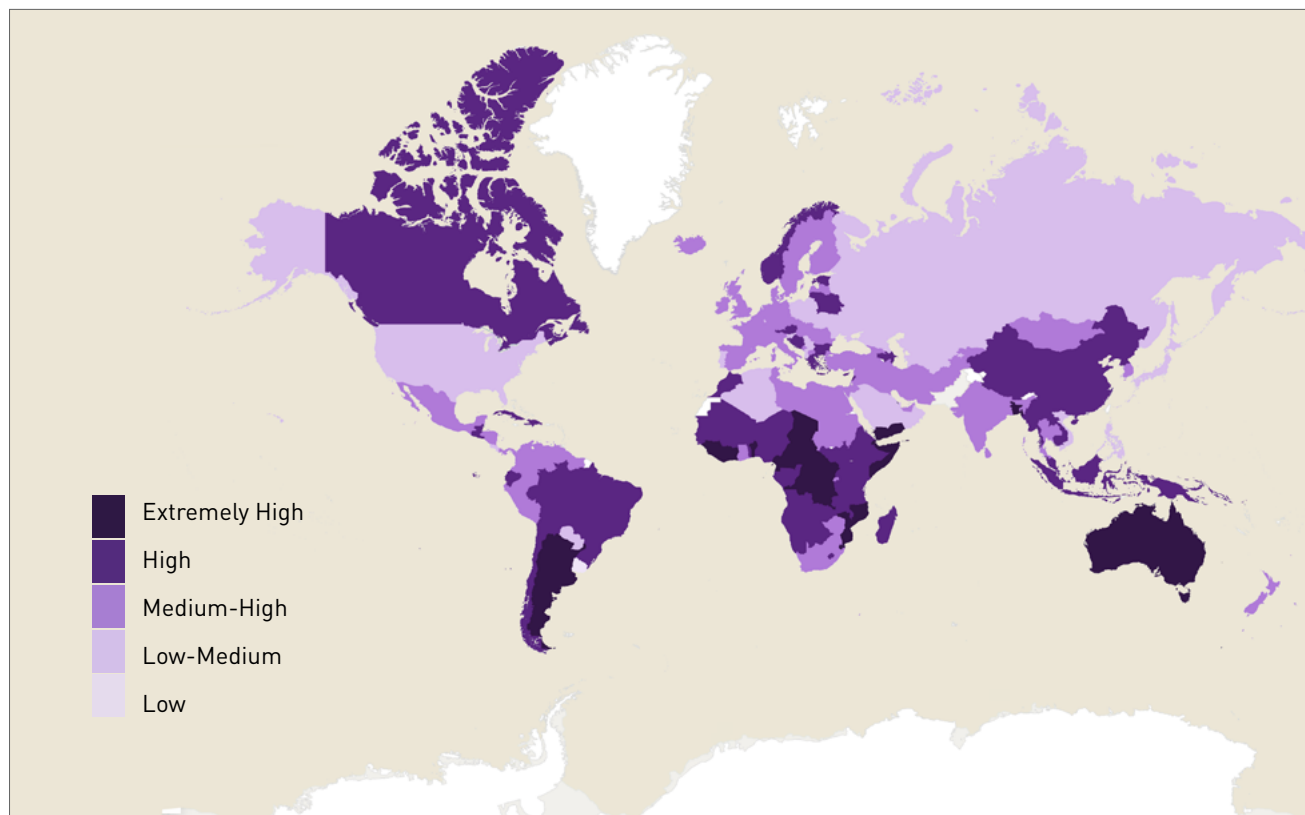
Introduction:

Education in emergencies in the climate crisis

The last decade has borne witness to a catastrophic surge in the frequency and severity of extreme weather events, making the consequences of climate change, environmental degradation, and biodiversity loss (abbreviated as CCED henceforth) [starkly visible on a global scale](#).

The climate emergency is most significantly affecting children in countries that have contributed the least to levels of pollution and greenhouse gas emissions (figure 1): according to the [UNICEF Children's Climate Risk Index](#) (CCRI), nearly half of the world's children – about 1 billion – live in countries at 'extremely high risk' from the effects of the climate crisis. About 80 percent of countries categorized as being at 'extremely high risk' are categorized as 'Least Developed Countries'. A composite index, the CCRI brings together geographical data by analyzing both the exposure to climate and environmental hazards, shocks and stresses, and child vulnerability by country. The CCRI helps understand and measure the likelihood of climate and environmental shocks leading to the erosion of development progress, including the deepening of education deprivations.

FIGURE 1. UNICEF'S CHILDREN'S CLIMATE RISK INDEX (CCRI), 2023



Source: UNICEF Global CCRI [dashboard](#)

Approximately 224 million school-aged children globally are affected by crises, necessitating diverse forms of educational support (ECW, 2023). These crises stem from a multitude of drivers, such as conflicts, earthquakes, and floods, which often intertwine and exacerbate one another. The intricate connections between CCED and education in emergencies and protracted crises (EiEPC) have been historically underemphasized. This study, drawing from the latest ECW global update’s findings and methodology, as well as the latest research, endeavors to bridge a few knowledge gaps: first, the extent to which CCED impacts and displaces ¹ school-aged children globally, and second, the way various crisis drivers linked to CCED may influence access to education.

The study is structured into four sections, around the following key findings:

Finding 1.

62 million crisis-affected children and adolescents in 27 countries have had their education disrupted by climate shocks since 2020.

Finding 2.

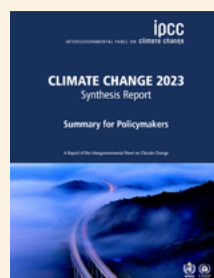
High-severity droughts and floods disproportionately affected school-aged children in Sub-Saharan Africa and South Asia.

Finding 3.

Floods, storms, and droughts triggered an estimated 31 million displacements of children of school age in the last decade, at a growing pace.

Finding 4.

Displacement by climate-induced hazards boosts inequities in access to education to the disadvantage of girls and of the poorest children.



The Sixth Assessment Report (AR6) of the

Intergovernmental Panel on Climate Change (IPCC) confirms that global warming is a consequence of increasing human activities. Emissions

and pollution have grown in most regions but are concentrated in the wealthiest countries, both in the present day and cumulatively since the nineteenth century. Findings from the latest IPCC report also confirm that CCED is influencing and amplifying multiple underlying risk drivers, and likely doing so to a larger extent in fragile settings. However, attributing the effects of climate change to specific crises can be challenging due to the complex and multifaceted nature of these interactions. Climate change does not act in isolation; it operates within a web of interconnected factors, including social, economic, and political conditions. These interdependencies make it difficult to isolate climate change as the sole cause of a particular crisis. Consider a drought that leads to food shortages, resulting in social unrest or conflict. While climate change may have exacerbated the drought, it is often impossible to definitively quantify the extent to which it contributed to the conflict. Most crises have multiple drivers, including historical, political, and socioeconomic factors, which further complicate the attribution process. Furthermore, the impacts of climate change are often indirect, influencing other drivers such as resource scarcity, food insecurity, or migration patterns. This complexity makes it challenging to establish and measure a direct “cause-and-effect” relationship between climate change and a specific crisis.

¹ In this study, the focus is specifically on internal displacements, which are more precisely measured and can be more discernibly attributed to the influence of climate change and environmental degradation. In addition, the 1951 Refugee Convention does not recognize people who are displaced by famine or natural disaster as refugees, unless they also fear persecution. This is because the Refugee Convention defines a refugee as someone who has a well-founded fear of persecution on the basis of race, religion, nationality, membership in a particular social group, or political opinion. In short, people who are displaced by climate change are eligible for temporary protection or humanitarian assistance but are not automatically considered refugees under international law.

Finding 1.**62 million crisis-affected children have had their education disrupted by climate shocks since 2020**

Approximately 62 million children – nearly one-third of the 224 million crisis-affected children worldwide in need of educational support – face the repercussions of climate-related events like floods, droughts, and storms, which are further intensified by climate change. Among these, around 31 million children find themselves in countries ill-prepared to handle the impacts of severe climate-related crises. Droughts, closely followed by floods, are the most frequently encountered climate-related shocks.

The severity of the impacts on education of extreme events caused by climate change and environmental degradation depends on pre-existing vulnerability and exposure levels. In turn, these are influenced in each country by a mix of underlying “structural” risks, such as poverty, inequality, inadequate social and environmental policies, and inadequate mechanisms for risk governance. Additionally, various factors, including public policies related to risk reduction, adaptation, and resilience, can alter the overarching disaster risk landscape. The intricate interplay of these factors adds complexity and makes it challenging to attribute specific effects of climate change on education outcomes. In an attempt to explore this complexity, this section introduces **a classification algorithm to determine the degree to which crises affecting school-aged children** (identified via the [ECW methodology](#), 2023) **are likely to be exacerbated by CCED**. The algorithm leverages a combination of data from UNICEF (notably the 2023 update of the CCRI), the IDMC, and the [INFORM Severity Index](#) (ISI henceforth).

The algorithm is based upon the recognition that at least two primary consequences² are closely tied to global warming: extreme heatwaves and heavy rainfall events. As temperatures increase, more water evaporates, and the atmosphere’s capacity to hold moisture rises exponentially, leading to heavier rains in some areas and longer dry spells in others. This is very likely to result in more floods and droughts (refer to the [latest IPCC report](#) for more details). Accordingly, the first step of the proposed algorithm is to single out a subset of CCED-related crisis drivers, namely **droughts, floods, cyclones, and similar extreme weather events**³.

The second step involves the classification of the 224.4 million school-aged children affected by crises and in need of educational support (estimated in [2023 by ECW](#), referred to as “the 2023 ECW update” henceforth) in different categories, according to the degree to which CCED is likely to have exacerbated climate hazards. The categorization takes place around three dimensions:

- 1) Crisis severity, measured by the ISI;
- 2) Exposure to climate and environmental hazards, shocks, and stresses (pillar 1 of the CCRI);
- 3) Child vulnerability (pillar 2 of the CCRI).

² There are other effects at play, most notably loss of biodiversity triggered by – and triggering – further changes in climate and environmental degradation, but they are not directly accounted for in this analysis; this is another reason to consider the estimated subtotals in this section as a “lower bound”.

³ A similar methodology to select crises whose impacts are exacerbated by CCED is followed by [UNICEF \[2023\]](#).

Accordingly, crisis-affected children of school age are classified into the following groups.

- 1 School-aged children affected by **severe crises (max ISI > 3)** whose drivers are exacerbated by CCED (namely droughts, floods, extreme weather events) in countries with a CCRI listed as “high” or very high”;
- 2 School-aged children affected by **medium-severity crises (max ISI between 2 and 3)** whose drivers are exacerbated by CCED in countries with either an underlying protracted crisis unfolding, or a child vulnerability⁴ score (pillar 2 of the CCRI score) listed as “high” or “very high” – that is, a high risk related to CCED combined with low coping capacity on behalf of national systems.
- 3 School-aged children affected by **medium-severity crises (max ISI between 2 and 3) in countries with better coping capacity**, as measured by a CCRI child vulnerability score listed as “medium”, “low”, or “very low”.
- 4 School-aged children affected by crises whose drivers are very unlikely to be exacerbated by CCED. This category comprises all crisis drivers other than droughts, floods, cyclones, and extreme weather events⁵.

TABLE 1. CATEGORIZATION OF CRISES AFFECTING CHILDREN OF SCHOOL AGE IN EMERGENCIES AND PROTRACTED CRISES

Category (Floods, droughts, and cyclones only)		Affected children of school age ⁶ (millions)	Percentage on total crisis-affected of school age
1	High severity crises in countries with high CCRI (e.g., large-scale floods in Pakistan)	30.8	14%
2	Medium intensity crises in countries with high child vulnerability (e.g., drought in Tanzania)	19.6	9%
3	Medium intensity crises in countries with medium or low child vulnerability (e.g., cyclone in Honduras)	11.2	5%
Total, categories 1 to 3		61.6	27%
4	Crisis not directly linked to CCED ⁷	162.8	73%
Total, all categories		224.4	100%

Source: author’s calculations based on the 2023 ECW global update and the INFORM Severity Index database

4 Often children in category 2 are already affected by other high-severity crises, hence the choice of using child vulnerability scores in lieu of the CCRI as in category 1.
 5 Children living in Small Island Developing States (SIDS) also face unique social, economic, and environmental vulnerabilities. These nations are already threatened by escalating tides, cyclones, flooding, damaged crops, increased disease, the inundation of coastal areas, and the loss of freshwater supplies. Rising sea levels pose serious implications for SIDS – including imperiling their territorial rights, and access to resources, and raising questions about migration as residents seek higher ground. While recognizing that a significant portion of the 65 million people living in SIDS will be affected by rising sea levels as a consequence of rising sea levels, in this categorization we only focus on current crises, as opposed to impending future crises.
 6 Children from one year prior to the legal age of entry into primary education to the legal age of completion of secondary education.
 7 For example, conflicts, earthquakes, etc.

About 62 million children⁸ in 27 countries⁹ – out of the global 224 million school-aged children in need of education support in crisis settings – faced crises whose impacts were amplified, to different degrees, by climate shocks. CCED operates in conjunction with a complex array of interconnected factors, including social, economic, and political conditions. While it cannot be claimed that CCED exclusively “caused” the crises, there is overwhelming evidence that CCED significantly contributed to their severity (IPCC AR6, 2023). Accordingly, the educational needs of children in Category 1 can be considered as most directly linked to climate shocks, followed by children in Category 2, and then by children in Category 3. The sum of children in categories 1, 2, and 3 can be conceptualized as a set of children on a spectrum of unmet educational needs¹⁰. A disaggregation by crisis driver follows:



Mariano Abdala stands in front of the ruins of her school in Mozambique, destroyed by Cyclone Gombe in 2022.

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TABLE 2. SCHOOL-AGED CHILDREN AFFECTED BY CRISES EXACERBATED BY CCED
(March 2020 to March 2023)

Crisis driver	Category 1	Category 2	Category 3	Total Categories 1 to 3
Floods	10,803,098	3,834,731	5,142,392	19,780,221
Drought	16,277,615	8,983,631	-	25,261,246
Cyclones, storms, and similar weather events	3,748,361	6,810,033	6,072,702	16,631,096
Total	30,829,074	19,628,395	11,215,094	61,672,563

Source: author’s calculation based on the INFORM Severity Index database

As illustrated in detail in Section 3, internal displacement triggered by these climate shocks also resulted in approximately 13 million education disruptions in the 27 countries affected.

⁸ This estimate should be regarded as conservative. When a drought exacerbates the impacts of conflict, sometimes the INFORM Severity Index datasets classify the school-aged children affected under the ‘conflict’ – and not under the ‘drought’ – driver. However, for this analysis, we have opted to exclude the ‘conflict’ driver due to the complexity of discerning the degree to which climate change may exacerbate conflicts. Consequently, the presented methodology is unable to account for these ‘interaction effects’ in the categorization, even though their presence is acknowledged. Therefore, the 62 million estimate is very likely to underestimate the full extent of CCED impacts.

⁹ These countries are: Angola, Burkina Faso, Bangladesh, Central African Republic, the DRC, Colombia, Djibouti, Ethiopia, Guatemala, Honduras, India, Kenya, Madagascar, Mozambique, Mauritania, Malawi, Niger, Pakistan, Philippines, Sudan, Senegal, Somalia, Eswatini, Chad, Tanzania, Uganda, and Zambia.

¹⁰ This is consistent with the [approach detailed in ECW \(2022\)](#).

Finding 2.




High-severity droughts and floods disproportionately affect school-aged children in Sub-Saharan Africa and South Asia

Over the last five years, more than 91 million school-aged children impacted by crises have faced climate shocks amplified by climate change. The effects have been particularly pronounced in Sub-Saharan Africa, affecting 42 million children, and South Asia, impacting 31 million children. Among the various climate hazards assessed, droughts emerge as the most severe and persistent, disproportionately affecting children in Sub-Saharan Africa.

To delve deeper into the trends in the number of school-aged children affected by crises, a new database was compiled encompassing CCED-related crises covering the period from January 2019 to August 2023 utilizing data underpinning the INFORM Severity Index¹¹. The aim is to ascertain the number of school-aged children affected by CCED-related crises across geographies and also to examine how the severity of each crisis has evolved over time, thus complementing recent analysis from UNICEF (2023).

Over the period 2019-2023, we estimate that about 92 million children of school age experienced crises with impacts intensified by climate-induced hazards. A regional analysis by crisis drivers suggests that the consequences of CCED are far from equitable. While Sub-Saharan Africa is disproportionately affected by droughts – affecting about 42 million children – South Asia is disproportionately affected by storms (table 3).

TABLE 3. NUMBER OF SCHOOL-AGED CHILDREN AFFECTED BY CCED-RELATED CRISES,
by region, 2019 to 2023




	 Storms/cyclones	 Drought	 Floods	Total
Latin America and the Caribbean	2,430,353	-	174,064	2,604,417
Northern Africa		-	264,184	264,184
South-Eastern Asia	8,894,957	-	-	8,894,957
Southern Asia	10,494,626	3,166,703	17,342,237	31,003,566
Sub-Saharan Africa	6,798,114	38,589,559	3,805,474	49,193,146
Total	28,618,050	41,756,262	21,585,958	91,960,270

Source: author's calculation based on the INFORM Severity Index data

¹¹ This database effectively serves as an extension of the one used for the 2023 ECW update, extending its coverage from three years (March 2020 to March 2023) to almost five years (January 2019 to August 2023).




Focusing on crises of “medium” to “high” intensity (that is, those crises with an ISI larger than 3) shows that droughts in Sub-Saharan Africa are responsible for about two-thirds of the total number of crisis-affected children in the region. Crises driven by droughts are of higher intensity (table 4), and tend to last longer (table 5), thus representing a formidable risk for the education of children in affected communities.

TABLE 4. NUMBER OF SCHOOL-AGED CHILDREN AFFECTED BY CCED-RELATED CRISES WITH ISI > 3,
by region and driver, 2019 to 2023

	 Storms/cyclones	 Drought	 Floods	Total
Latin America and the Caribbean	1,938,586	-	-	1,938,586
South-Eastern Asia	4,001,164	-	-	4,001,164
Southern Asia	-	1,968,776	10,949,568	12,918,344
Sub-Saharan Africa	2,014,484	31,989,712	258,781	34,262,977
Total	7,954,235	33,958,489	11,208,349	53,121,072

Source: author's calculation based on the INFORM Severity Index database

TABLE 5. DURATION OF CCED-RELATED CRISES WITH ISI > 3,
by region, Jan 2019 to Oct 2023 (months)

	 Storms/cyclones	 Drought	 Floods
Latin America and the Caribbean	11	-	-
South-Eastern Asia	8	-	-
Southern Asia	-	1	12
Sub-Saharan Africa	6	19	17

Source: author's calculation based on the INFORM Severity Index database

Slow-onset events such as droughts or heatwaves significantly affect learning and teaching environments. Classrooms constructed decades ago show signs of obsolescence when heatwaves hit, calling for new solutions with effective cooling facilities. Teachers' absenteeism is likely to increase, and the mental health and well-being of teachers and students alike will be affected. During heatwaves or droughts, children who still manage to attend school suffer the effects of subpar nutrition and hydration, which calls for school feeding and WASH interventions. Droughts impose significant financial burdens that deplete national education budgets, diverting scarce funds away from the education sector and hindering much-needed long-term investments to counter the learning crisis.

Finding 3.

Floods, storms, and droughts triggered an estimated 31 million displacements of children of school age in the last decade, at a growing pace

Children affected by climate hazards are at risk of educational disruptions due to forced displacement. In the 27 crisis-affected countries where 62 million children have been exposed to climate shocks since 2020, there were 13 million forced movements of school-aged children due to floods, droughts, and storms. Looking back further to the past ten years, the number of forced movements of school-aged children is an alarming 31 million — each movement representing a unique instance of disruption to a child’s education. While droughts are more intense and affect more children, floods are the primary cause of these forced displacements.

While the influence of CCED on the triggers and drivers of crises such as conflict or food security are not in dispute, measuring the effects on forced displacement that can be directly attributed to climate change is challenging. Climate-related shocks, on their own, often increase the likelihood of conflicts or food security crises, which, in turn, often become the primary drivers of forced displacements.




Various models and estimates attempt to gauge the impact of CCED on migration and displacement. For instance, the Global Center for Climate Mobility estimated that with every additional one degree Celsius of warming, the global [risks of displacement from flooding are projected to rise by approximately 50 percent](#). The latest [World Bank’s Groundswell report](#) suggests that climate change may compel up to 216 million people to migrate within their own countries by 2050. While these estimates pertain to the broader category of migrants – rather than forcibly displaced populations – and are projected over an extended time horizon, the alarming escalation in displacement poses a formidable challenge to education systems worldwide.

Building upon the categorization of crises described in Section 1, we calculate the number of forced internal displacements between 2020 and the end of 2022 in the 27 crisis-affected countries considered in Section 1 and then estimate how many of these affected children of school age, in function of the structure of the education system in each country. We find that about **13 million forced movements of children of school age have been triggered by floods, droughts, and storms since 2020**. Floods were the primary cause of these movements, accounting for about 3.4 million forced displacements, followed by storms/cyclones, and drought (see Table 6). According to this logic, every “instance of forced displacement” or “forced movement” for a child of school age can be considered a disruption of education¹².

¹² Data on instances of internal displacement are more accurate than data on “totals of people living in displacement” in each country since they are easier to measure. Note that internal displacements correspond to the estimated number of internal displacements – as opposed to people living in displacement – over the reporting year, hence figures may include children whose education have been disrupted more than once.

TABLE 6. FORCED MOVEMENTS OF CHILDREN OF SCHOOL AGE, COUNTRIES WITH CRISES IN CATEGORIES 1 TO 3

(2020-2022)




Year	 Storms/cyclones	 Drought	 Floods	Total
2020	18,866	1,946,326	2,582,980	4,548,172
2021	80,480	976,102	1,931,434	2,988,016
2022	689,335	3,436,968	1,705,259	5,831,563
Total	788,682	6,359,396	6,219,673	13,367,751

Source: author's calculation based on IDMC, UIS, and UN World Population Prospects data

Expanding the time horizon of the analysis to the last decade (2013-2022) confirms the severe and quick increase in internal displacements following crises driven by floods, extreme weather events such as storms and cyclones, and (to a lesser extent) droughts. The cumulative number of forced internal displacements of children of school age exceeded 31 million in the last decade.

TABLE 7. FORCED MOVEMENTS OF CHILDREN OF SCHOOL AGE, COUNTRIES WITH CRISES IN CATEGORIES 1 TO 3

(2020-2022)

Year	 Storms/cyclones	 Drought	 Floods	Total
2013	-	647,445	2,184,014	2,831,459
2014	-	1,105,241	1,599,922	2,705,163
2015	-	1,197,327	700,948	1,898,275
2016	-	1,005,855	1,471,368	2,477,223
2017	410,053	863,720	616,563	1,890,336
2018	118,702	951,581	1,072,754	2,143,037
2019	80,381	1,489,260	2,403,940	3,973,581
2020	18,866	1,946,326	2,582,980	4,548,172
2021	80,480	976,102	1,931,434	2,988,016
2022	689,335	3,436,968	1,705,259	5,831,563
Total	1,397,818	13,619,825	16,269,182	31,286,825

Source: author's calculation based on IDMC, UIS, and UN World Population Prospects data

The stark increase in displacements following climate shocks is evident when considering countries with an INFORM Severity Index (ISI) greater than 2 (Figure 2), all countries (Figure 3), and countries with a high CCRI (Figure 4). In countries with high CCRI, floods emerge as a more impactful driver¹³. Results are largely consistent with the findings presented in [UNICEF \(2023\)](#).

FIGURE 2. EVOLUTION AND TRENDS OF INTERNAL DISPLACEMENTS BY FLOODS, DROUGHTS, AND EXTREME WEATHER EVENTS

(storms, cyclones, and similar events), countries with crises in categories 1-3 (2013-2022)

Source: author's calculation based on IDMC data

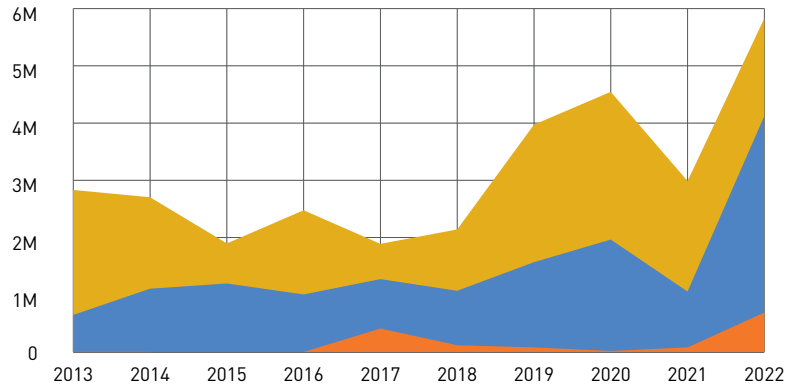


FIGURE 3. EVOLUTION AND TRENDS OF INTERNAL DISPLACEMENTS BY FLOODS, DROUGHTS, AND EXTREME WEATHER EVENTS

(storms, cyclones, and similar events), all countries (2013-2022)

Source: author's calculation based on IDMC data

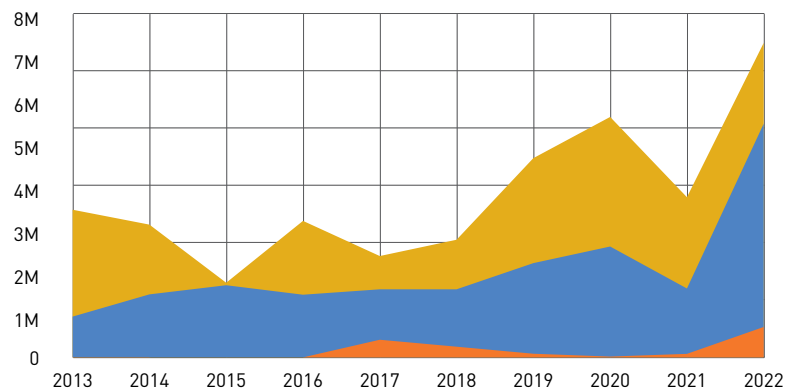
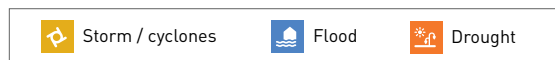
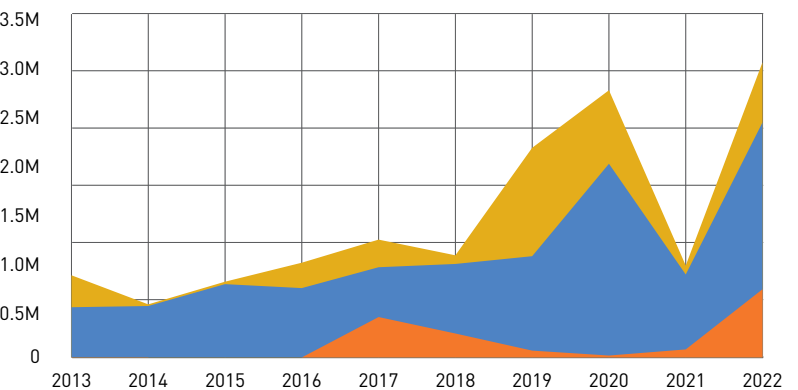


FIGURE 4. EVOLUTION AND TRENDS OF INTERNAL DISPLACEMENTS BY FLOODS, DROUGHTS, AND EXTREME WEATHER EVENTS

(storms, cyclones, and similar events), countries with high CCRI in 2023 (2013-2022)

Source: author's calculation based on IDMC data



13 Following UNICEF's categorization, all countries with a CCRI higher than 5.4 are considered as having a "high" CCRI.



© UNICEF/Zaidi

Nine-year-old Fazila's village was washed away in one of the worst floods in Pakistan's recent history – affecting over 30 million people in 2022.

Results in Sections 2 and 3 show that floods are the primary driver of internal displacement, while droughts exhibit higher intensity, longer durations, and impact over 40 million school-aged children worldwide. Droughts may not force internal displacement as prominently as floods, yet their strength in driving internal migration depends on their severity and duration. Attributing displacement to drought is complicated, mainly due to the challenges in connecting slow-onset emergencies like droughts to migration, as compared to more immediate crises like floods, where attribution is more straightforward.

The extended drought in Syria from 2006 to 2011 led to food insecurity and pushed millions into poverty. This crisis initiated mass internal migration, exacerbated socioeconomic pressures, and contributed to political instability, which contributed to the outbreak of a civil war. However, this causal chain involves substantial complexity and lacks sufficient research to definitively confirm the links between the various drivers. While climate change likely exacerbated the drought in Syria, quantifying its specific impact on the subsequent mass displacement remains elusive.

Finding 4.

Displacement by climate-induced hazards boosts inequities in access to education to the disadvantage of girls and of the poorest children

Children who are already at risk of dropout face an even higher risk when exposed to crises worsened by climate change and environmental degradation. In Sub-Saharan Africa, where climate-related crises are prevalent, internally displaced children are 1.7 times more likely to be out of primary school compared to their non-displaced peers. Girls are disproportionately affected by the impacts of climate change, with a higher likelihood of dropping out of school and being forced into early marriages.

The previous sections showed that education disruptions due to CCED-related displacement are most common for girls and boys in Sub-Saharan Africa (SSA) and South Asia (SA). Following the methodology of the latest ECW global update¹⁴, in this section we derive estimates of regional out-of-school rates for IDPs in CCED-related displacement (disaggregated by education level, as well as by sex) for SSA and SA in 2022 and compared with the latest available regional estimates for the general population (UIS).

TABLE 8. REGIONAL OUT-OF-SCHOOL RATES FOR INTERNALLY DISPLACED CHILDREN OF SCHOOL AGE IN SSA AND SA (CCED-RELATED CRISES),
by sex and education level, 2022 (percentage)

Regional OOS rates for IDPs (CCED-related crises)						
	Males			Females		
	Primary	Lower Secondary	Upper Secondary	Primary	Lower Secondary	Upper Secondary
SSA	29.9	41.2	57.3	35.2	46.0	68.1
SA	9.9	22.2	35.1	8.2	21.6	35.2

Source: author's calculation from ECW data

¹⁴ The ECW approach estimates OOS rates for IDPs by taking the average of the OOS rate of the general population in each country and the OOS rate of refugees in the same country, disaggregated by level and sex. This strategy is necessary because there are no internationally comparable data on school attendance, learning outcomes, or out-of-school rates for internally displaced persons.

TABLE 9. REGIONAL OUT-OF-SCHOOL RATES FOR THE GENERAL POPULATION, 2021

Regional OOS rates (general population)			
	Both sexes		
	Primary	Lower Secondary	Upper Secondary
SSA	19.7	33.7	47.2
SA	4.0	8.4	17.8

Source: UIS

TABLE 10. REGIONAL PARITY INDICES, CHILDREN WHOSE DISPLACEMENT IS RELATED TO CCED VS. GENERAL POPULATION

Regional OOS parity indices (CCED-related crises)			
	Both sexes		
	Primary	Lower Secondary	Upper Secondary
SSA	1.7	1.3	1.3
SA	2.3	2.6	2.0

Source: author's calculation



An older student carries a younger one across a flooded path on their way to school in South Sudan.

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The analysis shows that communities faced with human-induced climate-related shocks and subsequent displacement have diminished ability to access education, compared to their non-displaced peers, thus exacerbating issues of inequitable access to education. In SSA, for example, an internally displaced child of primary school age is 1.7 times more likely to be out of school than its non-displaced peers. In absolute terms, disruptions in access to education are larger in SSA, where many countries still lack robust disaster preparedness systems within their education infrastructure, and have weak social protection mechanisms, leaving children – particularly [displaced girls](#) – susceptible to harm.

The combined [effects of CCED do not affect boys and girls equally](#). For instance, drought-affected areas in the Horn of Africa have witnessed stark increases in school dropout for girls, and child marriage rates surged by 119% in 2022 compared to 2021 ([UNICEF, 2022](#)). Similarly, in Pakistan, the destructive floods in 2022 have exposed approximately 640,000 adolescent girls to higher risks of school dropout, gender-based violence, and child marriage ([Global Protection Cluster, 2022](#)).

Girls and adolescents are particularly at risk of missing out on education in displacement settings. In disaster contexts in Ethiopia, Nepal, and Papua New Guinea, gender disparities remained after displacement as more boys than girls were enrolled following displacement ([IDMC, 2023](#)). A recent case study of flood-induced displacement in Somalia underscores gender disparities in education access. While both boys and girls faced disruptions in their schooling when floods displaced them from their homes, girls tended to experience more prolonged absences, with some not returning to school at all. In contrast, and on a more positive note, a case study conducted in Ethiopia revealed an improvement in girls' access to education following displacement

caused by drought. Such improvement can be attributed to a combination of factors, including post-COVID programs aimed at promoting the benefits of education; additionally, households displaced by drought found themselves in better-serviced urban areas after transitioning from pastoralist lifestyles in rural areas, which contributed to improved access to education, particularly for girls (IDMC, 2023)¹⁵.

In terms of wealth disparities, there is very clear evidence that students from privileged backgrounds are significantly more likely to find alternative learning opportunities when schools close due to crises, while those from disadvantaged backgrounds often remain shut out. Increasingly more frequent [extreme weather events will force families to rely on children for activities such as looking after animals or traveling long distances to collect water](#) (World Bank, 2023). This shift in resources from learning to survival is likely to affect vulnerable communities the most. Finally, it is important to note that climate-related crises may also hinder migration as a consequence of economic shocks. For instance, during severe droughts, socio-economically disadvantaged households often lack the resources required for mobility, making it less likely for them to migrate and relocate. These vulnerable groups, commonly referred to as 'trapped populations,' suffer profoundly from the impacts of crises exacerbated by CCED.

¹⁵ These case studies represent useful anecdotal evidence, yet they should not be extrapolated to represent the entirety of IDP populations.

A call for action:

Delivering on Education in the Climate Crisis

These findings show that climate change, environmental degradation, and biodiversity losses represent an education emergency. In low-income countries, where hope rests on the shoulders of eager young learners, a warming world is dimming the prospects of millions of children. In addition to depleting household resources, extreme weather events destroy education infrastructure, erode the teaching workforce, create significant risks for children's mental and physical health, and hinder access to learning spaces, all of which intersect with gender and pre-existing vulnerabilities.

At least 62 million crisis-affected children impacted by climate shocks since 2020 require educational support. In the coming years, without significant global action to mitigate climate change and address funding gaps, many more may fall behind in their education. Despite the clear need for increased investment, funding for Education in Emergencies (EiE) remains catastrophically low. [Only 3%](#) of humanitarian funds are allocated to EiE contexts, and [only 30% of education needs](#) in 2022 humanitarian response plans and appeals received funding. Increased funding translates to better responses that keep school-aged children learning amid climate-induced crises. In addition to long-term investments, such as revitalizing curricula to support adaptation in the future, immediate resilience-building measures should be integrated into EiE responses to catastrophic events, so that communities are better able to cope and adapt to future crises. Investments in Disaster Risk Reduction (DRR), emergency preparedness and climate-sensitive rehabilitation of infrastructure can all safeguard educational investments and the wellbeing of children.

Additional resources should target the most marginalized children in the most vulnerable countries, especially children on the move. This analysis points to the particularly disruptive effects of climate-related hazards on displaced populations, as well as girls who are already less likely to be in school. Regions like Sub-Saharan Africa and South Asia are at the forefront of climate change yet are the least prepared to respond. Children in these regions are faced with a stark future. Tailored strategies to mitigate the climate risks experienced — whether from increasing and severe droughts or floods — can change these trajectories and reduce the millions of school disruptions caused by climate-induced displacement. An emphasis on anticipatory and early action is particularly critical to avert many millions more displacements of school-aged children.

The time for immediate action has arrived to safeguard the universal right to education for all children and to harness its potential as a source of resilience against the climate crisis. When children face disadvantages or barriers to accessing education due to climate shocks, the [repercussions can extend across generations](#). The international community has the power to prevent that. A quality and inclusive education is a right, not a privilege. While this study focuses on the impacts of climate change on education, ample evidence supports that education can be a catalyst for adaptation, offering children the capacity to reduce their vulnerabilities to climate change. Education empowers children to confront climate-related challenges, fortifies their resilience and bolsters their prospects for the future. The climate crisis is an education crisis and the time for action is now. The education of climate-affected children and adolescents cannot wait.

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EDUCATION CANNOT WAIT

Education for Crisis-Affected Children

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Education Cannot Wait (ECW) is the United Nations global fund for education in emergencies and protracted crises. We support quality education outcomes for refugee, internally displaced and other crisis-affected girls and boys, so no one is left behind. ECW works through the multilateral system to both increase the speed of responses in crises and connect immediate relief and longer-term interventions through multi-year programming. ECW works in close partnership with governments, public and private donors, UN agencies, civil society organizations, and other humanitarian and development aid actors to increase efficiencies and end siloed responses. ECW urgently appeals to public and private sector donors for expanded support to reach even more vulnerable children and youth.

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