INSTITUTE FOR DEVELOPMENT IMPACT

EFFECT OF CLIMATE CHANGE ON EDUCATION

Education is crucial for combatting climate change, but unfortunately, it's facing mounting challenges exacerbated by the impacts of climate change itself. In various regions worldwide, rising sea levels and temperatures are already straining ecosystems. These environmental shifts result in food and water shortages, compromised livelihoods, and a decline in educational access and quality. UNICEF warns that half of the global population is vulnerable to the adverse effects of climate change, which significantly affect education.

EDUCATIONAL STATUS BY REGIONS (AVERAGE OF LAST 2 DECADES)

World Regions	Children and Adolescents Out of School, *% of lower primary and secondary school age*	Primary and Secondary completion rate, *% of lower primary and secondary school age*	Literacy rate, *youth total (% of literate people ages 15-24)*	Pupil-teacher ratio, *lower primary and secondary school ratio*
North Africa	8%	79%	80%	21
Asia-Pacific (Asia)	9%	83%	77%	19
Central, West Asia	6%	73%	85%	17
Europe	3%	84%	97%	11
Latin America & Carribbean	7%	79%	73%	15
North America	1%	93%	100%	10
Sub saharan Africa	27%	51%	69%	28

Sources

UNICEF Literacy Rate Data | UNESCO Education Data | UNICEF State of the World's Children 2023 | WorldBank Education Data

THE IMPACT OF CLIMATE EVENTS ON EDUCATION

40 MILLION

children experience disruption in education due to disasters exacerbated by climate change every year and this number continues to increase

Climate change directly and indirectly affects education, with primary impacts stemming from extreme weather events. Secondary impacts result from households responding to and coping with climate change through activities such as income supplementation and migration.

FOOD AND WATER CRISES

Food and water crisis resulting from drought leads to a decrease in the availability of school meals and safe water.

Increase in temperature is expected to reduce crop yield globally. In 2020, **almost one in five children under 5, or 149 million**, experienced stunted growth due to malnutrition, with **45 million suffering from wasting**. Malnutrition in the first two years of life is linked to lower IQ scores, impaired brain development, and lower educational attainment.

DESTRUCTION OF INFRASTRUCTURE

In the wake of destruction or damage to infrastructure, such as schools and educational buildings, the education of students comes to a standstill.

This is especially true in low and middle-income countries with little or no access to technological workarounds.

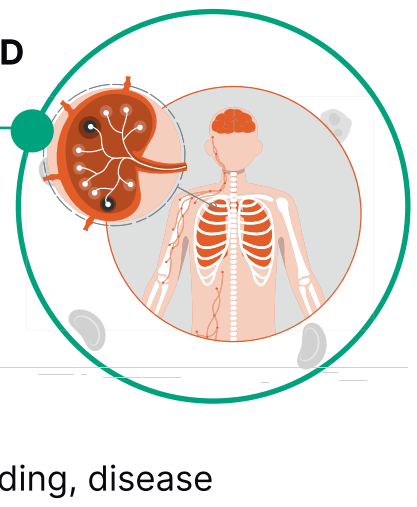
LOSS OF LIVELIHOOD

$3 BILLION **total economic loss due to climate events on a yearly basis for the last 10 years globally**

The impact of climate change on parents often affects their children. Climate events, such as droughts, floods, and storms, lead to economic losses, impacting parents' livelihoods. This, in turn, results in the inability to cover children's school expenses and causes psychological stress.

The loss of livelihood, worsened by climate events, may also prompt parental migration, further hindering the child's education.

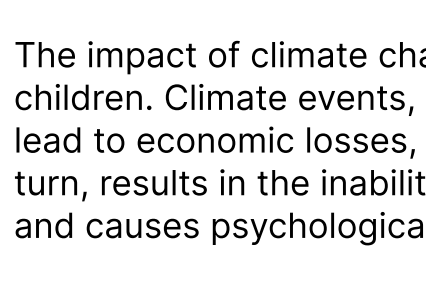
CLIMATE RELATED ILLNESS



99% **of children globally are currently exposed to at least one of the climate and environmental hazards, shock and stress**

These encompass water scarcity, flooding, disease vectors, and air pollution. Exposure to overlapping hazards and triggers can amplify each other, emerging as a significant factor in children's health abnormalities. Consequently, this could lead to absenteeism from school and impairments in learning.

Teachers may also be unable to educate students due to illness. In villages with only one or two instructors, a climate-related illness will have the same impact as the school being destroyed.



CLIMATE DISPLACEMENT

32% **of total global climate refugees are below 18 years of age**

Climate migration can mean a more permanent break from school. The major cause of migration due to climate event is Flooding and storms.

DEATH AND INJURY

Over **12,000** lives were claimed in 2023 by climate disasters due to floods, wildfires, storms, cyclones and landslides, **30%** more than in 2022.

Over **200,000** people were injured due to climate events from 2010 to 2020.
Injury to a teacher or child could lead to absenteeism from school on the part of the student and an inability to educate the student on the part of the teacher.

Sources UNICEF Climate Change | UNICEF Migration Data | EMDAT Database | UNICEF CRC Report | UNICEF SWC 2023

Created by Linda Hiebert, Augustine Adah and Ochanya Adah
© 2024 Institute for Development Impact

INSTITUTE FOR DEVELOPMENT IMPACT

EFFECT OF CLIMATE CHANGE ON EDUCATION

Education is crucial for combatting climate change, but unfortunately, it's facing mounting challenges exacerbated by the impacts of climate change itself. In various regions worldwide, rising sea levels and temperatures are already straining ecosystems. These environmental shifts result in food and water shortages, compromised livelihoods, and a decline in educational access and quality. UNICEF warns that half of the global population is vulnerable to the adverse effects of climate change, which significantly affect education.

CLIMATE EVENTS AND CLIMATE DISPLACEMENT

40 MILLION **children experience disruption in education due to disasters exacerbated by climate change every year and this number continues to increase**

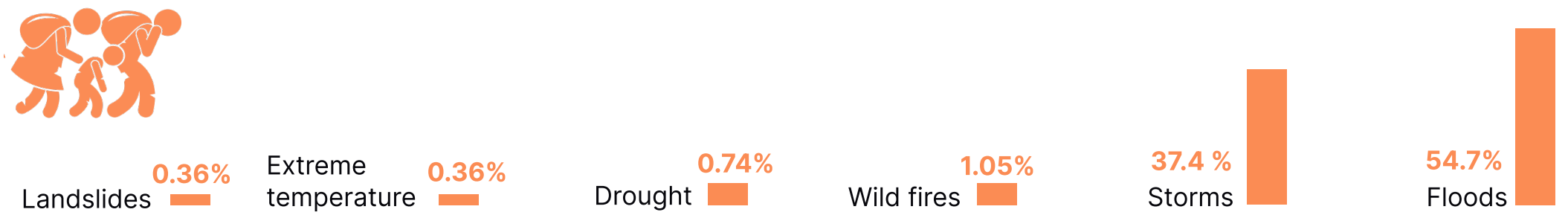
32% **of total global climate refugees are below 18 years of age**

Climate displacement occurs when families react to or deal with the different challenges of climate change, including extreme weather and disasters. This complex migration process, prompted by the need to address environmental changes, indirectly affects education in different ways. These effects on education include disruptions in consistent schooling, changes in access to educational resources, and shifts in community dynamics. All these factors contribute to the broader impact of climate change on education.

Sources

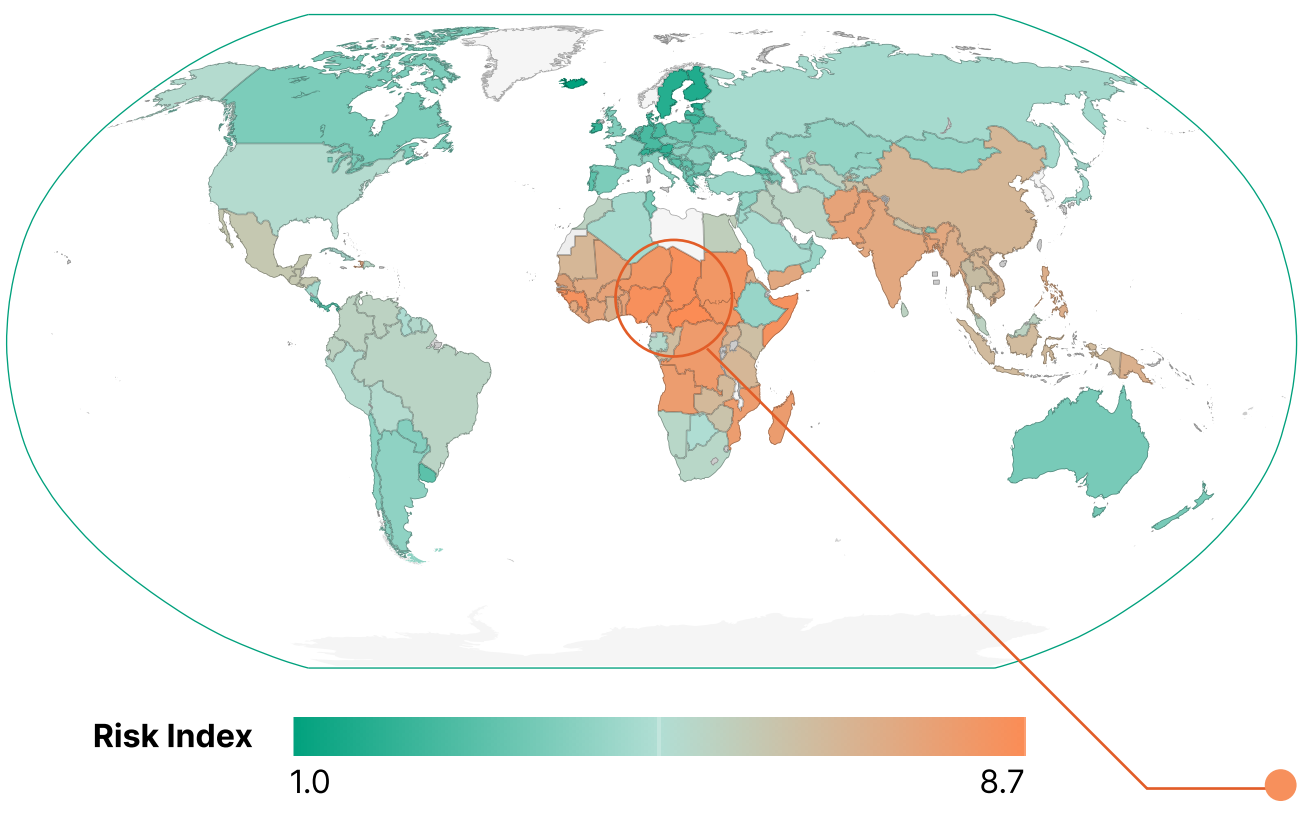
UNICEF Climate Change
UNICEF Migration Data
EMDAT Database
UNICEF CRC Report
UNICEF CRI Report
UNICEF SWC 2023

Climate related displacement between 2008-2020 (*% disaster related displacements due to weather hazard)*



Flooding and storms make up more than **90%** of all climate related displacement or migration, with the number of displaced people exceeding **250 million** between 2008 and 2020.

CLIMATE CHILDREN RISK INDEX



The children's climate risk index is calculated based on child vulnerability and exposure to climate and environmental shocks. **Exposure to climate measures the frequency of water scarcity, riverine and coastal flooding, tropical cyclone, vector borne diseases, heatwaves, air pollution, soil and water pollution. Child vulnerability checks child health and nutrition, education, water sanitation and hygiene and poverty of the country.** These shocks compound, marginalize communities, and heighten inequality, making some regions precarious for children, limiting their future potential and education. A higher risk index indicates greater child vulnerability.

Children in the **Central African Republic, Chad, and Nigeria** face the highest risk indices. The Central African Republic encounters various natural hazards, primarily floods, wildfires, and droughts. **With 72% of the workforce engaged in agriculture**, there is a heightened risk of increased poverty and loss of livelihood. The country's vulnerability to these hazards and its ability to recover from natural disasters are exacerbated by poverty.

Sources

UNICEF Climate Crisis Child Right Crisis Report
UNICEF Children Climate Risk Index Report

Created by Linda Hiebert, Augustine Adah and Ochanya Adah
© 2024 Institute for Development Impact