



Environmental Education in High-Risk Natural Disaster Areas

United Nations Educational, Scientific and Cultural Organization (UNESCO)



Empowering Future Generations: Cultivating Global
Literacy and Enlightenment



Forum: United Nations Educational, Scientific and Cultural Organization (UNESCO)
Issue: Promoting environmental education in high-risk natural disaster areas
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Introduction

Climate Impacts on Education in Emergencies²



There are growing numbers of crisis-affected and displaced children and youth, making it hard to meet diverse needs



The physical safety, mental health and psychosocial wellbeing of students and teachers are put at risk



Physical infrastructure and resources are damaged, destroyed or used as shelters



The teaching and learning environment is made unfit for learning



Household economies and livelihoods are undermined, leading to more school dropout



National education finances are strained, making it difficult to invest in resilient education

Environmental education is an issue that mostly affects areas and regions prone to natural disasters, the so-called High-risk disaster areas. Education for displaced and crisis-affected groups of people is crucial to not only promote climate action but also build resilience and sustainability within the high-risk communities. Individuals and populations can comprehend the intricacies of natural disasters, the environmental factors that affect their frequency and severity, and the influence of human activity on catastrophe risks when environmental education is done effectively. Additionally, it gives people the information and abilities they need to anticipate, react to, and recover from such events.

Summing up, environmental education in High-risk areas does not focus merely on ecological facts about natural disasters but ensures that communities are prepared and informed in case they need to respond urgently to any environmental uncertainties that occur in their area.

Definition of Key Terms

Environmental education (EE)

A process of learning that increases people's knowledge and awareness about the environment and its associated challenges, develops necessary skills to address these issues, and fosters attitudes that promote sustainable and adaptive behaviour. In times of crisis, education is a lifeline to children and their families. It can help protect their physical and mental health, allows them to continue to learn and develop, and offers them a sense of normalcy and hope for a better future.



Education in Emergencies (EiE)

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Education in Emergencies for Climate Action



Crisis-sensitive EiE policy and planning recognises the existential threat of the climate crisis



EiE, DRR and emergency preparedness are established, and anticipatory action gains momentum



Integrated, locally appropriate coordination supports the education of displaced and crisis-affected children and youth



Crisis-affected children and young people are taking leadership roles



The right of every child to a clean, healthy and sustainable environment is reaffirmed



EiE is chronically underfunded and needs increased financing

Disaster Risk Reduction (DRR)

Strategies and practices aimed at minimizing vulnerabilities and disaster risks through preparedness, mitigation, and prevention measures to enhance resilience.

General Overview

Natural disasters can be catastrophic, especially in high-risk regions the damages sometimes seem irreversible. In these areas, the risk of underinsurance is high, and it is therefore important to deal with those risks to ensure that all populations are adequately compensated. The impacts of environmental disasters on high-risk areas can affect a region in numerous ways such as the economy, environment, and quality of life of individuals. Natural disaster types vary from area to area meaning the risk of underinsurance and type of education needed are different from region to region. In order to find ways to prepare an EE plan, a government must act according to the area's needs.



Importance of Environmental Education in High-Risk Areas

Environmental education helps individuals and communities understand the underlying causes of natural disasters, such as climate change, deforestation, and urbanization. It fosters awareness of how human activities exacerbate risks and the role of environmental stewardship in mitigating them. Through knowledge, skills, and capacity-building, environmental education equips individuals to take proactive measures such as preparedness planning, sustainable land-use practices, and implementing early warning systems. Environmental education integrates disaster risk reduction (DRR) strategies with environmental management, creating a comprehensive approach that combines hazard awareness with sustainable practices to mitigate risks. People in high-risk areas, especially marginalized groups, are often the most affected by disasters. Education tailored to local contexts ensures inclusivity and promotes adaptive strategies that consider socioeconomic and cultural dynamics.

Challenges in Implementation

Many high-risk areas lack the financial and educational infrastructure necessary to deliver effective environmental education.

Environmental education is often taught as a standalone subject, with insufficient emphasis on its connections to disaster risk management and local realities.

Education initiatives must consider the diverse cultural contexts and languages in high-risk areas, making it essential to involve local communities in the development of programs.

The lack of coordination among governments, NGOs, and local institutions can hinder the creation and implementation of comprehensive EE programs.

Major Parties Involved

COUNTRIES INVOLVED

Earthquake-Prone Countries

Japan: Japan experiences frequent earthquakes and tsunamis. Its well-established disaster education system serves as a model for other High-risk countries.

Nepal: Highly vulnerable to earthquakes due to its location in the Himalayan seismic zone, Nepal faces challenges in implementing environmental education.

Indonesia: Home to frequent seismic and volcanic activities, Indonesia has significant needs for environmental education, particularly in rural and island communities.



Flood-Prone Countries

Bangladesh: One of the most flood-affected countries globally, due to its geography. It is highly vulnerable to sea-level rises.

India: Regularly affected by monsoonal flooding, particularly in states like Bihar and Assam, India requires widespread environmental education to mitigate and prepare for floods.

Vietnam: Flooding from typhoons and heavy rains affects millions annually, especially in coastal regions.

Cyclone and Hurricane-Prone Countries

Philippines: Faces multiple typhoons annually and struggles with widespread displacement and damage. Education is essential to promote disaster preparedness and resilience.

United States: Coastal areas like Florida and the Gulf Coast are frequently impacted by hurricanes, highlighting the importance of disaster education at the local level.

Mozambique: Cyclone Idai (2019) exposed vulnerabilities in environmental and disaster preparedness education in southeastern Africa.

Wildfire-Prone Countries

Australia: The country frequently faces catastrophic wildfires fuelled by dry conditions and climate change, with education focusing on fire prevention and safety.

United States (California): Wildfires in California have highlighted the need for public awareness about managing forest ecosystems and evacuation planning.

Brazil (Amazon Region): Forest fires, often human-induced, impact local populations and ecosystems, underscoring the need for education on sustainable land use.

Tsunami-Prone Countries

Indonesia: Frequent tsunamis due to tectonic activity emphasize the need for early warning systems and community awareness programs.

Sri Lanka: The 2004 Indian Ocean tsunami highlighted vulnerabilities and led to increased efforts in EE.

Thailand: Thailand has prioritized tsunami preparedness, but there is still room for improvement in community education.

Climate Change Hotspots

Maldives: As a low-altitude island nation, it faces existential threats from rising sea levels, requiring strong emphasis on climate education.

Kiribati: Like the Maldives, Kiribati is highly susceptible to sea-level rise.



Countries with multi-Hazard Environments

Haiti: Vulnerable to earthquakes, hurricanes, and landslides, Haiti sets an example for the urgent need for environmental education amidst social and economic challenges.

Pakistan: Exposed to a variety of hazards, including floods, droughts, and earthquakes, with limited preparation in some rural regions.

Mexico: Faces risks from earthquakes, hurricanes, and volcano eruptions, making it a high-priority area for comprehensive EIE's.

Important NGO's involved

Red Cross

The International Federation of Red Cross focuses on educational programs and awareness campaigns as well as school-based initiatives to teach communities basic survival skills against natural disasters.

Save the Children

The save the children organisation is actively offering its aid to children in need through the delivery of food, supplies, medicine and providing shelter. Their humanitarian efforts extend outside natural disasters crises as the goal of this NGO is to ensure safety for all children.

UNESCO (United nations educational scientific and cultural organization)

UNESCO is also determined to assist high risk regions taking multiple forms of action such as the integration of DRR into education with their Comprehensive School Safety Framework program and other guidelines for DRR in School curriculum.

Timeline of Events

1975 - 1983	Start of the UNESCO-UNEP International Environmental Education Programme
1994	Establishment of the United Nations International Strategy for Disaster Reduction (UNISDR)
2005	Adoption of the Hyogo Framework for Action
2015	Adoption of the Sendai Framework for Disaster Risk Reduction
2016	Adoption of the 2030 Agenda for Sustainable Development
2021	UN Climate Change Conference (COP26) in Glasgow, Scotland



Previous attempts to solve the issue

The Hyogo Framework for Action

This international agreement, adopted in Kobe, Japan, provided a framework for governments to implement legislation aimed to reduce disaster risk. This highlighted education and public awareness as important considerations within the context of national legislation.

UNESCO Global Action Programme on Education for Sustainable Development

This program brings together various stakeholders and highlights the importance of coordinating initiatives addressing this issue. By enhancing the capabilities of educators and providing resources for the advance of general awareness, this program aims to target the underlying issues with long-term adaptation and mitigation, thereby fostering preparedness and understanding within vulnerable communities.

The Sendai Framework for Disaster Risk Reduction

Similar to the Hyogo Framework for Action, this framework intends to modernize and adapt outdated strategies. Though in large part based on the Hyogo framework, various improvements have been brought forward, mostly having to do with scope and implementation. This new framework allows for better monitoring and accountability mechanisms and further addresses integration throughout stakeholders.

Possible solutions

School curriculum integration

By integrating education on this issue within school curricula, there is a society-wide base understanding on precautions and options to adapt to incidents. An effective path for that would be to provide educators with resources either directly, or indirectly, by opening up fora for stakeholders and supporting local initiatives to implement such strategies.

Community-Based Training and Workshops

Although not a solution as general as the previous one, the support for initiatives intended to provide those within high-risk places with essential information and resources to reduce risk is extremely important and could be instrumental to allow for a much more effective first response to possible disasters.

Utilizing Technology and Digital Platforms

With increasing capabilities for leveraging technology to spread information, any approach not including such measures would be incomplete. Digital platforms could, for example, be leveraged to provide information on risks, preparedness tips, and contact information in the case of disaster. Especially in more remote areas, the diffusion of previously mentioned information would be slow and ineffective without measures such as these.



Useful documents

UNESCO-UNEP programme document:

[Activities of the UNESCO-UNEP International Environmental Education Programme: 1975-1983](#)

UN, World Conference on Disaster Reduction

[Hyogo Framework for Action 2005-2015](#)

UN, Sendai Framework for Disaster Risk Reduction

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