Educators at the heart of greening education

A climate resilience toolkit for policymakers



Greening Education Partnership

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Foreword

Our world is facing an increasingly complex and interconnected set of challenges. The climate crisis threatens ecosystems and economies, and has a profound impact on people—especially children and young people in communities that have contributed the least to the problem. Education is one of our most powerful responses. It equips children and young people with the knowledge, skills and confidence to shape climate-resilient communities and drive the transformations needed for a sustainable future.

Greening education begins in the classroom, with educators leading the way. Teachers, school leaders and education support personnel are instrumental in enabling learners to understand climate change in their own contexts and contribute to more sustainable and climate-resilient societies—but they can only fulfil this role if they have the conditions, resources and support they need.

This toolkit is therefore designed to empower educators, grounded in a simple conviction: to invest in educators is to invest in climate resilience. To support this vision, the toolkit adopts a holistic approach to strengthening climate resilience in education systems. It recognizes that supporting educators goes beyond preparing them to teach about climate change. It also encompasses: ensuring learning continuity during climate-related disruptions; protecting educator and learner safety and wellbeing; strengthening working conditions; and enabling educators to contribute meaningfully to climate-related education policy and planning.

When teachers are protected, valued and prepared, they can help ensure that learning continues – even when faced with crisis – and they can empower the next generation to take climate action with confidence and purpose. Teachers, school leaders and education support personnel are agents of transformation. They turn policy into practice, bring climate literacy to life and inspire students to protect our shared planet and future. Strengthening their roles, rights, capacities and readiness is essential if we want education to remain a force for justice, equity and sustainability in a rapidly changing world.

This toolkit is part of our efforts to make education a long-term solution to the climate crisis and is released under the auspices of the Greening Education Partnership, bringing together governments and teacher organizations, youth, civil society and development partners to support countries in integrating climate action across their education systems.

It covers one of the four pillars of the Partnership: greening teacher training and education system capacities. Publications on the three other pillars devoted to greening schools, greening curriculum and greening communities have already been released by UNESCO within the framework of the Greening Education Partnership. Collectively, they offer a comprehensive package for anyone committed to advancing green education.

Let us work together – governments, education unions, partners and communities – to ensure that every educator is equipped, supported and empowered to confront the challenges of climate change and environmental degradation. In doing so, we can mobilize entire education systems for a greener future.

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Acknowledgements

The Greening Education Partnership, convened by UNESCO, is a global initiative that supports countries in transforming their education systems to respond to the climate crisis. It is structured around four interconnected pillars: **greening schools**, **greening curriculum**, **greening teacher training and education system capabilities**, **and greening communities**. This tool was developed under the auspices of the Greening Education Partnership's *Working Group on Greening Teacher Training and Education System Capabilities* (WG3), co-coordinated by Education International (EI), the Global Partnership for Education (GPE) and UNICEF. WG3 focuses specifically on strengthening policy, planning, finance and implementation processes to develop climate-smart education systems, positioning educators as central actors in driving and sustaining systemic change.

This policy tool was developed under the guidance of the Greening Education Partnership WG3 co-coordinators, Sarah Beardmore and Rikke Kristiansen (Global Partnership for Education), Ingrid Sánchez-Tapia and Bassem Nasir (UNICEF) and Jennifer Ulrick and Nikola Wachter (Education International), with support from Lauren Simmons. The tool also benefited from significant input from across the WG3, with particular contributions from members of the WG3 Reference Group: Anne Kamonjo, Deb Morrison, Arnaldo Bruno Lopes Vital, Dijan Sadadou, Inge Vandevyvere, Isabelle Tremblay-Chevalier, Jennifer Cooper, Jeremy Wetterwald, Maria Heller, Ruby Bernado, Sifiso Ndlovu, and Getrude Ziracha. Teachers were also extensively consulted in their capacity as members of Education International. We also thank the Greening Education Partnership team at UNESCO for their ongoing support and leadership, particularly: Julia Heiss, Katerina Ananiadou, Won Jung Byun, Simon Wanda Makokha, and Hee Eun Ahn. The publication process was coordinated by Paula Cantor, copy-edited by Stephen Flynn, and designed and laid out by Laëtitia Molinari.

This guidance also complements existing Greening Education Partnership resources, including the Greening Curriculum Guidance (2024a), Green School Quality Standard (2024b) and Greening Communities Guidance (2025). WG3 would like to thank the co-coordinators of the other Working Groups for their input and collaboration on the suite of tools developed under the Greening Education Partnership.

Glossary

Alternative instructional delivery: Flexible teaching methods and modalities – such as remote learning, mobile classrooms and community-based instruction – that enable educational continuity when normal classroom instruction is disrupted.[1]

Biodiversity: The variability among living organisms and the ecosystems of which they are a part, including terrestrial, marine and other aquatic environments. This includes variation in genetic, phenotypic, phylogenetic and functional attributes, as well as changes in abundance and distribution over time and space within and among species, biological communities and ecosystems.[2]

Climate adaptation: In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects.[3]

Climate change: A change of climate – which is attributed directly or indirectly to human activity – that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.[4]

Climate-change education (CCE): Educational approaches that develop learners' understanding of climate science, impacts and solutions while building capacity for climate action and fostering attitudes and values that support sustainable development.[5]

Climate data integration: The systematic incorporation of climate and weather information into comprehensive analyses, planning, risk assessments, resource allocation and preparedness processes to enhance system resilience and responsiveness and informed decision-making across disciplines and sectors.[6]

Climate disruptions: The ways in which climate change interferes with the functioning of natural and human systems by increasing the frequency and intensity of climate-related hazards that damage infrastructure, interrupt production and transport, affect workforce availability, strain public services and reduce essential ecosystem services.[7]

Climate events: In education systems, climate-related events such as floods, droughts, heatwaves, storms and other extreme weather events disrupt education and undermine learning continuity by damaging school infrastructure, reducing educator availability and limiting student attendance.[8]

Climate finance: Financial resources from public and private sources – from local to global levels – that are used to address climate change by reducing greenhouse gas emissions (climate mitigation) and/or enhancing adaptation and resilience (climate adaptation) to current and projected climate impacts.

1 Adapted from INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards
2 Adapted from IPCC, https://apps.ipcc.ch/glossary/
3 Adapted from IPCC, https://apps.ipcc.ch/glossary
4 Adapted from IPCC, https://apps.ipcc.ch/glossary/
5 Adapted from UNESCO, https://unesdoc.unesco.org/ark:/48223/pf0000222117
6 Adapted from the Climate Sustainability Directory, https://climate.sustainability-directory.com/term/climate-data-integration/
7 Consistent with IPCC assessments of climate change impacts and systemic risks. Intergovernmental Panel on Climate Change (IPCC). (2022). *Climate Change 2022: Impacts, Adaptation, and Vulnerability*. Cambridge University Press.
8 Adapted from IPCC, https://apps.ipcc.ch/glossary/

Climate finance comprises domestic and international flows – particularly to support developing countries – and is delivered through a range of instruments such as grants, concessional and non-concessional finance, and budgetary allocations.[9]

Climate literacy: Climate literacy refers to the knowledge, skills and values that enable individuals to understand climate change, make informed decisions, and take individual and collective action on mitigation, adaptation and climate justice.[10]

Climate mitigation: Actions taken to reduce greenhouse gas emissions and enhance carbon sinks, contributing to efforts to limit climate change.[11]

Climate resilience: The ability of individuals, communities, institutions and systems – including education systems – to anticipate, prepare for, respond to, and recover from climate-related shocks and disruptions while also adapting and transforming in ways that reduce future climate risks.[12]

Climate-responsive pedagogies: Teaching approaches that equip learners with the knowledge, skills, attitudes and values needed to understand climate change, foster resilience and actively participate in climate action. They emphasize holistic learning across cognitive, socio-emotional and behavioural dimensions while integrating diverse knowledge systems—including Indigenous and local perspectives.[13]

Climate risk: Risk is the potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain. In the context of climate impacts, risk refers to the potential for adverse consequences of a climate-related hazard – or of adaptation or mitigation responses to such a hazard – on lives, livelihoods, health and well-being; ecosystems and species; economic, social, and cultural assets; services (including ecosystem services); and infrastructure. Risk results from the interaction of an affected system's vulnerability with its exposure over time to a climate-related hazard, along with the likelihood of the hazard occurring.[14]

Climate-smart education system: An education system that works to achieve three interrelated goals: (1) protect and advance equitable, relevant and quality education; (2) protect the planet's ecosystems; and (3) promote climate justice.[15]

Climate vulnerability: The degree to which a system is susceptible to, or unable to cope with, the adverse effects of climate change, such as climate variability and extremes. Vulnerability is a function of a system's exposure to climate hazards, its sensitivity and its adaptive capacity.[16]

Comprehensive School Safety: A holistic approach to creating safe, protective and resilient learning environments that address structural safety (safe, climate-resilient school facilities), non-structural safety (school disaster management, preparedness and response systems), and functional safety (protective school environments, safety education, and safeguarding measures that prevent violence—including physical, sexual and gender-based violence).[17,18]

9 Adapted from IPCC, https://apps.ipcc.ch/glossary/

10 Adapted from IPCC, https://apps.ipcc.ch/glossary/

11 Adapted from IPCC, https://apps.ipcc.ch/glossary/

12 Adapted from IPCC, https://apps.ipcc.ch/glossary/

13 Adapted from UNESCO, https://unesdoc.unesco.org/ark:/48223/pf0000379733

14 Adapted from IPCC, https://apps.ipcc.ch/glossary/

15 Adapted from GPE's Climate Smart Education Systems Initiative, https://www.globalpartnership.org/content/climate-smart-education-systems-initiative

16 Adapted from IPCC, https://apps.ipcc.ch/glossary/

17 Adapted from the Comprehensive School Safety Framework by Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector, https://gadrrres.net/files/cssf_2022-2030_en.pdf

18 While the primary focus of this toolkit is on safety from climate-related hazards, Comprehensive School Safety also recognizes that these hazards are closely interconnected with risks of physical, sexual and gender-based violence. Climate-related disruptions can heighten vulnerability – particularly for female educators and learners – by increasing exposure to unsafe travel, school closures, displacement and community instability. Ensuring safe learning environments therefore requires addressing both climate-related and violence-related risks, acknowledging how they compound one another and disproportionately affect those already facing gendered barriers.

Disaster Risk Reduction (DRR): The practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, including through avoidance of hazards, reduction of vulnerability, and improved preparedness.[19]

Education for Sustainable Development (ESD): Education that equips learners with knowledge, skills, values and attitudes to make informed decisions and responsible action for environmental integrity, economic viability and a just society—empowering people of all genders, for present and future generations, while respecting cultural diversity.[20]

Educator: Any person working in the education sector – such as teachers, school leaders or education support personnel – whose roles contribute directly or indirectly to teaching, learning and the delivery of quality education. [21]

Educator safety and preparedness: Ensuring that educators have clearly defined roles, necessary training, reliable communication, and secure working conditions to manage climate-related emergencies effectively while maintaining student safety and educational continuity.[22]

Educator voice: The meaningful involvement of teachers, school leaders and education support personnel in shaping education policies and strategies related to climate change through structured consultation, social and policy dialogue, and collaborative decision-making processes.[23]

Emergency preparedness: Knowledge, capacities and organizational systems developed to effectively anticipate, respond to, and recover from climate-related emergencies – whether likely, imminent, or current – and their effects.[24]

Emergency teaching resources: Pre-prepared educational materials, lesson plans and instructional tools designed for rapid deployment during climate disruptions to maintain learning continuity.[25]

Equity-focused approaches: Strategies that prioritize support for marginalized communities and individuals (such as migrant women, LGBTI+, Black, Indigenous, and people of color [BIPOC], people with visible and invisible disabilities, young people from marginalized groups, etc.) who face greater vulnerability to climate impacts, ensuring that climate-responsive education interventions address existing inequalities and reduce disparities.[26]

Gender-responsive approaches and education: Gender-responsive approaches in education intentionally design and implement policies, systems and teaching practices that identify and address gender-related barriers and the different needs of different genders—with the aim of promoting equitable access, participation, safety, and learning outcomes. Such approaches recognize how gender influences experiences within education systems and seek to create enabling environments in which every learner and educator – regardless of gender – can thrive.[27] In climate-smart education systems, gender-responsive approaches recognize that climate risks are experienced differently by learners and educators of different genders, and seek to ensure equitable access, participation, safety, working conditions, decision-making, and learning outcomes for all—without necessarily seeking to transform underlying gender norms or structures.[28]

19 Adapted from IPCC, https://apps.ipcc.ch/glossary/
20 Adapted from UNESCO, https://www.unesco.org/en/sustainable-development/education
21 Adapted from UNESCO, https://www.unesco.org/en/teachers
22 Adapted from INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards
23 Adapted from INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards
24 Adapted from INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards, https://inee.org/eie-glossary/emergency-preparedness
25 Adapted from INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards
26 Adapted from the Climate and Sustainability Dictionary, https://esg.sustainability-directory.com/term/equity-focused-approaches/
27 Adapted from UNESCO, https://unesdoc.unesco.org/ark:/48223/pf0000380971
28 Adapted from UNGEI, https://www.ungei.org/what-we-do/gender-responsive-education-systems

Greening Education: Rooted in long-standing efforts towards education for sustainable development, it offers a holistic educational approach to the climate crisis, equipping young people with the knowledge, skills and attitudes needed to engage in transformative action for mitigation, adaptation and resilience to climate change, and helping them shape green, low-emission, climate-resilient societies.[29]

Indigenous and traditional knowledge holders: Knowledge, innovations, practices and cultural understandings developed and maintained over generations by Indigenous Peoples and other local or traditional knowledge holders—often rooted in deep connections with local ecosystems, natural resource management and cultural heritage. This knowledge often embodies holistic approaches to environmental stewardship, climate understanding, adaptation and sustainable practices, and is maintained, transmitted and applied by individuals and communities who play a key role in sustaining ecological, cultural and social resilience.[30]

Just transition: Securing the future and livelihoods of all workers and their communities throughout the transition to a low-carbon economy and environmental sustainability. A just transition requires addressing inequalities, prioritizing social justice and guaranteeing decent work. Social dialogue and the protection of labour rights are central to a just transition.[31]

Learning continuity: The ability of education systems to sustain learner progression, instructional quality and holistic educational experiences despite interruptions or disruptions caused by emergencies or crises – such as climate events – by implementing flexible, context-sensitive approaches that maintain coherence across educational levels and settings.[32]

Multi-hazard approach: An approach that systematically considers multiple hazards, whether natural, climate-related or human-induced – and their potential interactions, cascading effects and combined impacts – in order to reduce overall risk and strengthen preparedness, resilience and response across systems and sectors.[33]

Psychosocial support: Processes and actions that promote the holistic well-being of individuals within their social contexts – including support from family, peers and communities – and which facilitate resilience following crises or adverse events, helping people recover and return to normal functioning.[34]

Social dialogue: All forms of negotiation, consultation or information exchange among government, employer and worker representatives on issues of common economic and social interest. Social dialogue may be tripartite or bipartite, formal or informal, and can take place at national, regional, sectoral, or enterprise levels.[35]

Workforce retention: The ability of an organization or sector to retain its employees over time, encompassing both the outcome of staff remaining in their roles and the strategies and practices employers use to support, engage and sustain their workforce.[36]

29 Adapted from UNESCO, https://www.unesco.org/en/sustainable-development/education/greening-future
30 Adapted from IPCC, https://apps.ipcc.ch/glossary/
31 Adapted from IPCC, https://apps.ipcc.ch/glossary/
32 Adapted from INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards
33 Adapted from UNDRR, https://www.undrr.org/terminology/hazard and UNDRR. (2015). *Sendai Framework for Disaster Risk Reduction 2015–2030.*
34 Adapted from INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards
35 Adapted from UNESCO, https://unevoc.unesco.org/home/TVETipedia+Glossary/lang=e/show=term/term=social+dialogue
36 Adapted from UNESCO, https://unevoc.unesco.org/home/TVETipedia+Glossary/lang=e/show=term/term=Retention

1. Overview

As climate-related disruptions intensify globally, education systems face unprecedented challenges that extend far beyond damaged infrastructure or temporary school closures. Educators must navigate increasing responsibility and hardship while supporting students through climate-induced stress and uncertainty, and this often compounds other existing crises and vulnerabilities. Educators are often on the front lines of climate disruptions that are progressively shaping their working realities—from missed instructional time caused by school closures or displacement to unsafe travel, extreme temperatures in learning spaces, forced relocation and deteriorating working conditions due to infrastructure damage. Mounting pressures on educators threaten the very foundation of high-quality, equitable education delivery, and the impact on male and female educators is likely to differ; for example, female educators may face higher risk due to unsafe travel.

On the other hand, educators are the cornerstone of effective education systems, and climate-ready educators are the lynchpin for a climate-resilient education sector. Urgent measures are needed to support their professional safety, security, working conditions and capacity to provide continuous, quality education. These elements are essential for every student's safety, inclusion and well-being, for learning continuity, and for overall education system stability before, during and after times of crisis.

Acknowledging the urgency of this agenda, the Greening Education Partnership identified a need for better tools to support decision-making by policymakers concerning the climate readiness of their education systems. Central to this effort is the recognition that educators are vital actors not only within classrooms but also across diverse learning ecosystems where they enable learners to understand and act on the climate threats facing their communities.

This policy tool therefore supports ministries of education and other education stakeholders as they reflect on appropriate policies that help teachers deliver continuous, equitable, quality education for all learners despite intensifying climate change and environmental degradation. By enabling education sector decision-makers to reflect systematically on the policies and plans in place to address climate threats – and the role and needs of educators at the front lines of the climate crisis – this tool offers a framework for building climate-smart education systems.

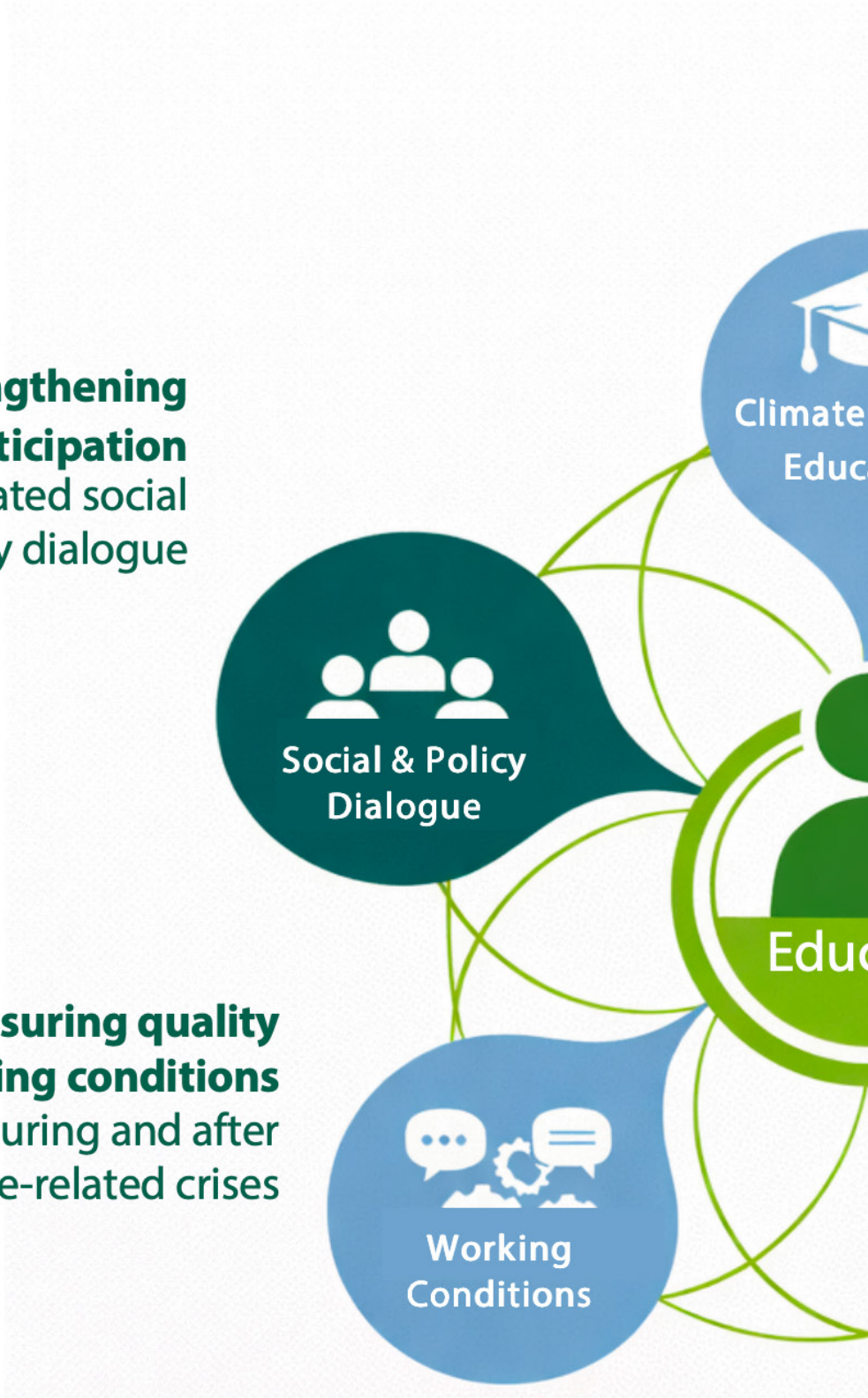
First, this tool facilitates structured self-reflection and climate readiness assessments, enabling ministries to identify their systems' specific vulnerabilities and strengths in anticipating, preparing for, responding to and recovering from climate-related shocks and stresses. By examining system readiness to support quality climate-change education, ensure educational continuity, protect educators and students from climate threats, ensure decent working conditions for every educator, and engage educators in inclusive social and policy dialogue, ministries can reflect on the gaps and opportunities for action.

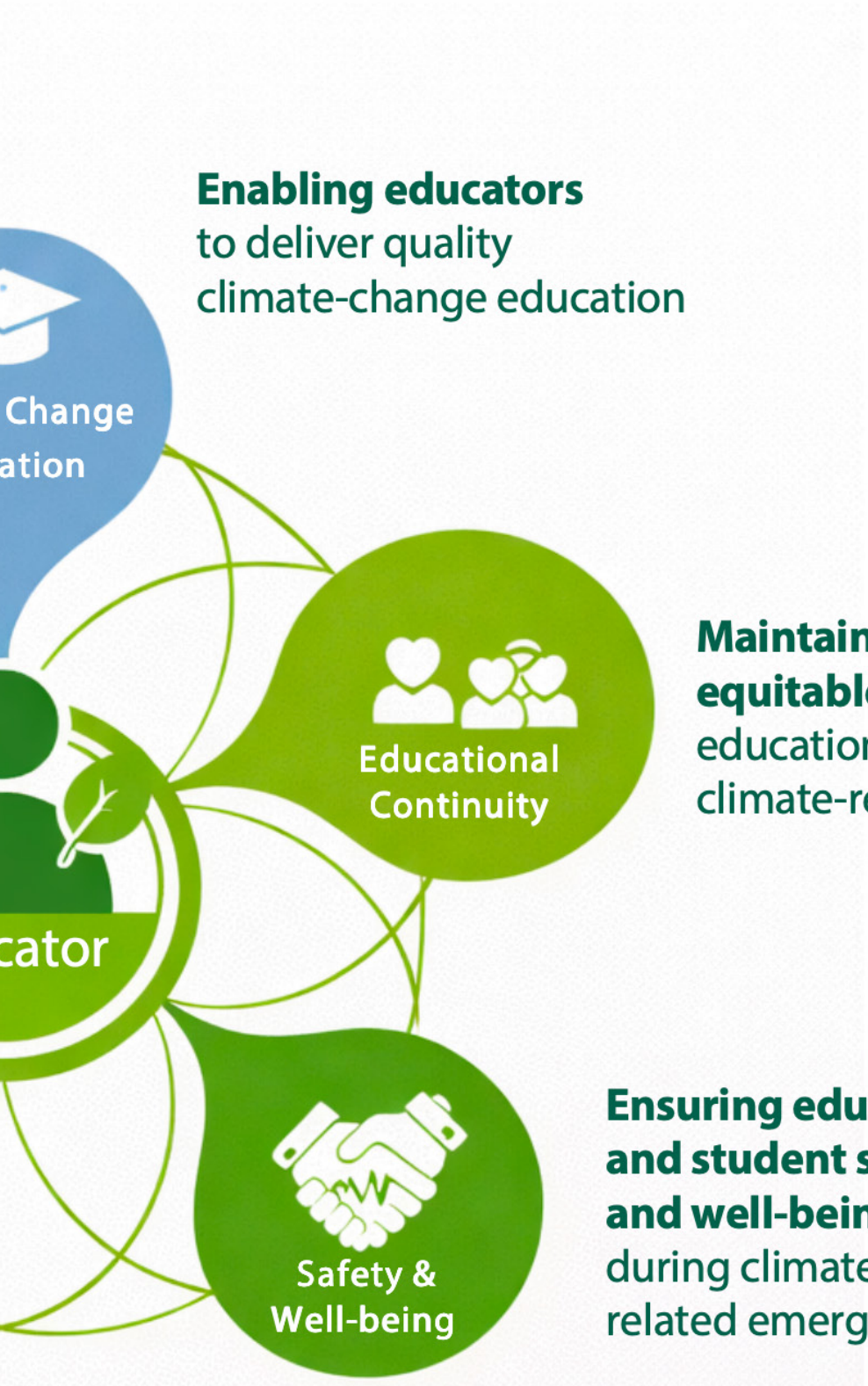
Second, the tool encourages ministries to strengthen the climate resilience of their education systems through strategic and inclusive engagement with teachers and school leaders, school administrators and other education personnel. Insights gained from this participatory reflective process are intended to feed directly into national education policies, climate adaptation strategies and broader national sustainability frameworks, promoting coordinated action across sectors and governance levels.

By focusing on the role of educators in climate-change strategies, education systems can strengthen their resilience to climate disruption whilst equipping learners and communities with the skills and knowledge to address climate-induced challenges within their own contexts.

Strengthening educator participation in climate-related social and policy dialogue

Ensuring quality working conditions before, during and after climate-related crises





Enabling educators
to deliver quality
climate-change education

Maintaining inclusive, equitable and quality
education during
climate-related disruptions

Ensuring educator and student safety and well-being
during climate-
related emergencies

1.1. How should this tool be used?

The tool is organized into five objectives. Each objective contains guiding questions for reflection that can be used to assess current policies, identify gaps and prioritize actions based on available resources and urgent needs. The guiding questions in each section are followed by practical examples illustrating concrete approaches undertaken in other countries. The reflection prompts and action items in this policy tool are designed to be flexible and relevant across a range of different contexts, enabling its use by ministries of education and other decision-makers at varying stages of planning—and with diverse capacities, resources and expertise. The five objectives can be addressed simultaneously or sequentially, depending on ministry capacity and the existing climate preparedness of the education system.

The resulting insights can then be drawn on to inform national education policies, strategies, implementation or monitoring plans, as well as climate change policies, disaster risk planning and interministerial coordination efforts. At the same time, **a gender and inclusion lens should be integrated into this approach**, alongside complementary resilience-building measures that address other hazards and threats to education (e.g. conflict, displacement), ensuring comprehensive school safety and disaster risk reduction in the face of the often-intersecting crises that teachers confront in their daily work.

How often this tool is used will depend on the specific context, including the level of climate risk, system capacity and planning cycles. It is most effective when integrated into existing education sector and climate-related planning and review processes, rather than treated as a stand-alone activity. Ministries are encouraged to conduct regular check-ins using the tool, both to assess progress and to adapt to evolving climate challenges and policy needs.

As a general recommendation:

1. **Use the tool at least once every 2–3 years as part of education sector planning and monitoring cycles.**
2. **Consider annual or biannual reviews in high-risk or rapidly changing contexts.**
3. **Apply the tool—particularly the guidance developed under Objective 2: Strengthening educators' capacity to maintain inclusive, equitable and quality education during climate-related disruptions to inform response, recovery and resilience planning.**

Regular review and updating ensure that the tool remains relevant as climate risks and system capacity evolve. Annex 1 provides a checklist for each objective that can be used not only to facilitate structured dialogue but also, optionally, to track and document progress across implementation phases.

Box 1. Beyond climate change: Crisis-sensitive education planning

Climate change often compounds other crises, exacerbating conflict, fragility and violence—which in turn erode communities' ability to anticipate, absorb and adapt to climate hazards. Ministries might also consider integrating further crisis-sensitive educational planning approaches when using this tool.
Relevant guidance, such as the IIEP-UNESCO Crisis-Sensitive Educational Planning framework and UNESCO's guidance on integrating conflict and disaster risk reduction into education sector planning, offers practical approaches for ministries to embed climate, disaster and conflict considerations into policies and strategies – through a gender and inclusion lens – ensuring that teacher development efforts are not only robust but also responsive to evolving risks from multiple hazards.

1.2. Who should use this tool?

This guidance document is primarily intended for national-level policymakers who oversee education sector planning, policy development and implementation. While the reflection questions are tailored for decision-makers within ministries of education, the content is equally relevant to school leaders, teacher educators, teachers and education support personnel. It also applies to policymakers working at sub-national, provincial, district and regional levels, recognizing their essential role in adapting and applying education policies within local contexts.

Given the complex challenges posed by climate change, many of the issues addressed in this guidance – such as climate adaptation, infrastructure resilience, and intersectoral planning – require collaboration beyond the education sector. Ministries responsible for environment and climate change, finance, labor, health, agriculture, public works and disaster risk reduction all play a role in shaping effective responses. Coordinating efforts across these sectors helps ensure that education strategies are aligned with broader national climate policies, emergency response frameworks and disaster risk reduction plans, ultimately enhancing coherence and impact.

In addition to serving government actors, this guidance is aimed at a wider community of stakeholders who influence or support education planning and practice. These include development partners and donors, international and national NGOs, civil society organizations, parent-teacher associations, community education committees, student councils, research institutions, education experts and professional organizations representing teachers and education support personnel.

To make the most of this tool, ministries are encouraged to convene collaborative policy reflection sessions involving officials from various units.

Policy reflection sessions could involve the collaborative participation of ministry officials from:

- Policy planning units to integrate findings into national education strategies and sector plans, or national climate policies such as Nationally Determined Contributions or National Adaptation Plans
- Curriculum development divisions to develop climate-responsive materials for teaching and learning
- Teacher professional development divisions to design educator training programmes and climate-focused pedagogies
- Infrastructure and emergency management teams to coordinate safety protocols
- Financing units to inform the prioritization and allocation of budgetary resources and deployment of financing mechanisms

Ministries should adapt this configuration based on their organizational structure, ensuring representation of both technical expertise and operational implementation capacity. This process should be carried out through close collaboration not only within and across ministry teams, but also with ministries outside of education, as well as a diverse set of education workforce stakeholders such as **teachers, their representatives and other key parties**—reinforcing the importance of inclusive, participatory approaches to climate-resilient education planning.

While education systems vary widely in context, capacity and exposure to climate risks, **this guidance is designed to be adaptable across a broad range of national and sub-national education systems**. Ministries of education everywhere can use the tool to assess their system's readiness and resilience

in the face of climate change, and to align education planning with national and global sustainability goals. By supporting both locally grounded and globally informed responses, the guidance promotes a more inclusive and equitable approach to building climate-resilient education systems worldwide.

1.3. What is the scope of this policy tool?

While the primary focus of this tool is on **pre-primary**, **primary and secondary education**, many of its policy suggestions are also relevant for teaching in early childhood, as well as in further and higher education. Additional guidance specific to the further and higher education sectors is being developed through UNESCO's Higher Education and Research Ad Hoc Working Group. This guidance may also be relevant to wider learning ecosystems; libraries, museums, community centres and other learning spaces are increasingly evolving as interconnected hubs for lifelong, intergenerational and community-based learning that enhance climate literacy and act as critical public resources for community resilience.

While many recommendations in this tool focus on teachers, **the term educator is used to reflect a holistic view of education as a collaborative effort in times of climate crisis**. It encompasses both those directly responsible for learning – such as teachers in classrooms, early childhood settings, vocational training and special education, along with volunteers – and the wider group of education personnel who support, manage and enhance teaching and learning, including school leaders, administrators, counselors, janitors, librarians and support staff. Where this tool's recommendations specifically address one of these roles, this is clearly indicated.

This guidance focuses on climate-related disruptions to education systems and on education as a means of preparing learners for a future impacted by climate change—while recognizing that climate change is closely linked to other environmental challenges such as **biodiversity loss, ecosystem degradation and resource depletion**. Education systems need to tackle climate impacts while fostering broader environmental awareness, given the fundamental interdependence of the earth's ecosystems and its climate.

This tool also recognizes that education strategies are an important part of ensuring a **just transition** so that climate adaptation and mitigation efforts uphold principles of fairness, inclusion and equity for all education stakeholders while preventing further marginalization—particularly for vulnerable and underserved educators and learners. Equipping teachers with the knowledge, skills and support to navigate systemic climate transitions and lead change is central to a just transition. This must go hand in hand with decent working conditions, respect for educators' rights and access for all learners to inclusive, relevant and empowering climate-change education. Social and policy dialogue is also crucial: a just transition cannot be achieved unless the education workforce has a seat at the table in co-designing adaptation strategies for the sector.

1.4. How can educators support climate resilience?

As teachers, school leaders and education support personnel witness first-hand how climate-related disruptions affect student attendance, learning conditions, well-being and wider community life, **they must be placed at the heart of climate-informed education policy and planning**. Their capacity to adapt teaching practice, maintain student engagement and support local resilience can determine whether education systems bend or break under the pressures of extreme climatic conditions. In this way, a targeted, climate-informed strategy to support educators at all levels of learning across a variety of educational contexts is a prerequisite for a high-quality, equitable education system.

Effective climate-smart education strategies should thus be developed in consultation with educators, placing them at the forefront of the process. The frontline experiences of educators offer critical insights into the nature and scope of school- and learner-level impacts of climate disruptions. Their insights can help ensure that recommendations for instructional practice, school safety and environmental interactions are informed by classroom-based realities and contexts. By involving educators, school leaders, support personnel, curriculum leaders and others in the education workforce in planning and policy development, ministries can also ensure greater alignment between policy guidance and its implementation—thereby significantly enhancing the impact such policies can have locally while also promoting educator engagement and uptake. This approach ensures that these frontline professionals are supported in maintaining educational quality and resilience, particularly in regions most severely impacted by climate change.

Box 2. The United Nations High-Level Panel on the Teaching Profession

This policy tool can be seen as a companion to the recommendations of the United Nations High-Level Panel on the Teaching Profession – convened by the Secretary-General of the United Nations in 2023 – which calls on governments to tackle the global teacher shortage. Specifically, this reflection tool provides more detailed guidance to support the implementation of Recommendations 32 and 34 (ILO/UNESCO 2024, p.8):

> *32. In view of the urgent planetary environmental crisis, education for sustainable development, including climate and ocean literacy, should be integrated into curricula and teaching as a cross-cutting issue from early childhood through tertiary education. Teacher training and professional development should be developed accordingly, and teachers should have access to free, quality and up-to-date teaching and learning materials on these topics.*
>
> *34. Adaptation and contingency strategies should be developed, sufficiently funded and implemented in order to make educational institutions more resilient to the negative impacts of climate change, natural disasters and other emergencies.*

2. The Five Objectives

The goal of ensuring that equitable and quality education remains uninterrupted, and that students are taught by trained and qualified teachers in safe and supportive learning environments, is now one that every education ministry must tackle in the context of increasing climate threats. To achieve this goal, they must ensure that their education workforce is climate-ready.

In practical terms, this means ministries must adopt targeted policies and invest in supportive measures and enabling environments that allow educators to deliver continuous, equitable and quality education for all learners. The reflective approach of this guide centers on five critical objectives that simultaneously strengthen educator capacity and advance system-wide climate action and resilience:

Objective 1. Enabling educators to deliver quality climate-change education[37]

Objective 2. Strengthening educators' capacity to maintain inclusive, equitable and quality education during climate-related disruptions[38]

Objective 3. Ensuring educator and student safety and well-being during climate emergencies[39]

Objective 4. Ensuring quality working conditions before, during and after climate-related crises[40]

Objective 5. Strengthening educator participation in climate-related social and policy dialogue[41]

37 Aligned with the INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards for Education: Response & Recovery. Domain 4: Teachers and Other Education Personnel. Standard 17: Support and Supervision

38 Aligned with the INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards for Education: Response & Recovery. Domain 4: Teachers and Other Education Personnel. Standard 17: Support and Supervision

39 Aligned with the INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards for Education: Response & Recovery. Domain 4: Teachers and Other Education Personnel. Standard 17: Support and Supervision

40 Aligned with the INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards for Education: Response & Recovery. Domain 4: Teachers and Other Education Personnel. Standard 16: Conditions of Work

41 Aligned with the INEE (Inter-Agency Network for Education in Emergencies) Minimum Standards for Education: Response & Recovery. Domain 4: Teachers and Other Education Personnel. Standard 16: Conditions of Work

These five areas are deeply interconnected, forming a holistic approach to supporting teachers in a changing climate. Providing quality climate-change education depends on teachers having the capacity, resources and training to deliver relevant content— even during disruptions. This, in turn, requires ensuring their safety, well-being and clarity of roles in school preparedness plans. When educators feel supported and valued – especially in crisis contexts – it strengthens workforce retention before, during and after climate impacts. Finally, amplifying educator voices through social and policy dialogue ensures that strategies are grounded in classroom realities, informing all other efforts and enabling more responsive, equitable education systems.

2.1. Enabling educators to deliver quality climate-change education

Defining climate change education and climate-responsive pedagogies

Climate change education (CCE) refers to an educational approaches that develop learners´ understanding of climate science, impacts and solutions while building capacity for climate action and fostering attitudes and values that support sustainable development.

Climate-responsive pedagogies are teaching approaches that empower learners with the knowledge, skills, attitudes and values needed to understand climate change, foster resilience and actively participate in climate action. They emphasize holistic learning across three key dimensions – (1) cognitive (critical understanding of climate systems and sustainability), (2) socio-economic (empathy, emotional intelligence and collaborative skills), and (3) behavioural (competences for taking effective action) – and integrate gender responsiveness, Indigenous Knowledge and local perspectives. These pedagogies aim specifically to:

- Foster critical thinking and informed decision-making;
- Position learners as proactive agents of sustainable change;
- Equip learners to address diverse environmental and social challenges; and
- Promote inclusive, equitable, and transformative education.[42]

42 Adapted from *UNESCO Greening Curriculum Guidance* (2024)

Despite widespread global recognition of the importance of integrating climate-change education into education systems, two critical challenges persist: insufficient integration of climate education into national curricula and inadequate professional support for educators to teach the climate-change curriculum through active pedagogies. Currently, only about half of national curricula explicitly reference climate change, and just 30% of primary and secondary teachers globally report feeling confident teaching topics related to climate change, despite broad recognition of their importance.[43,44]

To prepare learners effectively for a rapidly changing world, climate literacy must become a foundational educational competency and a key component of a quality education system—similar in importance to literacy and numeracy.[45] Ministries should therefore embed climate literacy as a core competency across all educational stages, from early childhood through tertiary education.

Yet a well-structured curriculum alone is insufficient without adequately trained and supported educators. Evidence indicates that simply imparting factual knowledge about climate change does not necessarily lead to changes in action or behaviours.[46] Learners need comprehensive educational experiences that nurture learning across three dimensions: cognitive, socio-emotional and behavioural. Effective climate literacy should indeed integrate essential scientific understanding (cognitive), as well as emotional resilience and collaborative abilities to manage uncertainty and foster empathy (socio-emotional), along with practical skills such as problem-solving and community engagement, enabling informed decision-making and meaningful climate action (behavioural).[47] This comprehensive approach should also integrate a gender-responsive element and diverse knowledge systems—including Indigenous knowledge that offers essential insights into life-giving cosmologies, environmental stewardship, climate adaptation and sustainable practices developed over generations.

Equally essential are general policy principles of professional autonomy. Cultivating working environments characterized by safety, trust, autonomy and opportunities for educators to lead is crucial, as educators frequently introduce innovative responses to climate disruptions that extend beyond their formal responsibilities. Empowering educators through autonomy and trust can significantly enhance instructional effectiveness for climate literacy as teachers can adapt their approaches to the current conditions of both their students and the wider environment in which environmental stressors may be playing out.[48]

Providing educators with opportunities to lead also requires that they be supported with the basic conditions they need to innovate, for example manageable workloads, access to professional development and supportive working environments. More fundamentally, it is essential that educators' professionalism is respected and their freedom of expression and academic freedom guaranteed. Educators teaching about climate change or engaging in climate activism must have their labour rights guaranteed.

School leaders play a particularly critical role in cultivating school environments that enable collaboration, innovation and safe engagement with climate-related teaching and action, as well as in enabling teachers to exercise leadership within their classrooms and school communities. By shaping organizational culture, setting clear expectations around collaboration and trust, supporting staff well-being and modelling climate-responsive values and practices, school leaders strongly influence whether educators feel empowered to innovate, take initiative and sustain high-quality teaching—especially in contexts affected by climate-related stress and disruption.

43 Iyengar, R., & Kwauk, C. T. (Eds.). (2021). *Curriculum and learning for climate action: Toward an SDG 4.7 roadmap for systems change* (Vol. 5). Brill.

44 UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific. (2024). *Greening Education Partnership: Getting every learner climate-ready* (BGK/DOC/EO/23/036). UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000389128

45 Organisation for Economic Co-operation and Development. (2024, November). *Empowering young people through climate literacy* [Brochure]. OECD. https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/11/ClimateBrochure_Nov2024_FIN.pdf

46 Colombo, S.L., Chiarella, S.G., Lefrançois, C., Fradin, J., Raffone, A., Simione, L. (2023). Why knowing about climate change is not enough to change: A perspective paper on the factors explaining the environmental knowledge-action gap. *Sustainability, 15*(20), 14859. https://doi.org/10.3390/su152014859

47 UNESCO. (2024). *Greening curriculum guidance: Teaching and learning for climate action*. UNESCO. https://doi.org/10.54675/AOOZ1758

48 Newsome, D., Newsome, K. B., & Miller, S. A. (2023). Teaching, learning, and climate change: Anticipated impacts and mitigation strategies for educators. *Behavior and Social Issues*, 32(2), 494-516.

Strategic investments in educator training, contextually relevant and gender-sensitive resources and supportive professional environments will yield measurable improvements such as enhanced instructional effectiveness, better-prepared learners and more resilient education systems.[49] When educators feel trusted and adequately supported, their confidence in climate-responsive teaching increases, sustaining instructional quality even during disruptions. As a result, students develop critical transferable skills, becoming empowered agents of change capable of advancing broader educational quality and equity goals.[50] Ultimately, adopting flexible and inclusive teaching practices, fostering trusted educator leadership and ensuring the appropriate resources collectively strengthen educational continuity and long-term resilience.

49 Mazari, H., Baloch, I., Thinley, S., Radford, K., Kaye, T., & Perry, F. (2023). *Learning continuity in response to climate emergencies: Pakistan's 2022 floods* [Technical Report]. EdTech Hub. https://docs.edtechhub.org/lib/42XI4RCK

50 Anderson, A. (2010). *Combating climate change through quality education*. Washington, DC, Brookings Global Economy and Development.

2.1.1. Guiding questions for ministries

To enable teachers to provide quality climate-change education, ministries should consider:

Curricular integration

- **To what extent is climate-change education clearly and systematically embedded across national curricula?** If not yet integrated, what opportunities exist within current curricular learning guidelines for introducing climate-change education in age-appropriate, racially- and gender-responsive, culturally and contextually meaningful ways—without necessarily creating a separate subject but by weaving it into existing ones?

Educator capacity development

- **To what extent are climate-change education and climate literacy systematically integrated into initial teacher education programmes?** If not currently integrated, what practical opportunities exist to introduce climate change-related knowledge, competencies and pedagogies into initial teacher preparation in contextually relevant and sustainable ways? Which modules or subjects within the initial teacher education curriculum provide the entry points? How can teacher unions be involved in co-designing initial teacher training modules on climate-change education?
- **Are educators currently offered structured continuous professional development (CPD) specifically designed for climate-responsive teaching that can be adapted to meet learners' specific and unique needs?** Which entities are offering such CPD opportunities? If not, what initial steps can be taken to build educators' capacities in climate-responsive pedagogy and reflect local contexts and diverse knowledge systems? Can teachers and their representatives be consulted to ensure that CPD is more relevant to educator needs? How can these CPD programmes be (re)designed to ensure that they do not overburden educators or increase stress, and ensure that they are offered during contracted work hours?
- **Is a focus on readiness to teach climate-change education included in educator professional standards?** If not, how can ministries co-create or revise professional standards in collaboration with the profession to ensure that standards reflect the need for teachers to deliver quality climate-change education?

Access to instructional resources

- **Are contextually relevant and high-quality instructional materials for climate-change education consistently available to educators, particularly in climate-vulnerable and/or resource-constrained areas?** If not, what specific initial steps can the ministry take to either develop locally relevant resources or identify and adapt existing resources by other climate actors that meet local educators' practical instructional needs?

Professional autonomy and academic freedom

- **Do policies support teachers' professional autonomy and academic freedom when it comes to delivering quality climate-change education, and are policies in place to safeguard teachers' right to freedom of expression?** If not, can ministries review policies and practice and make adaptations to better protect teachers' freedom of expression and academic freedom through a process of policy dialogue with educators and their representatives?

Incentives and professional recognition

- **Are professional incentives or recognition mechanisms in place to encourage educators' and/or their schools' active engagement in climate-responsive teaching, leadership roles, and cross-curricular or hands-on climate-action or school greening projects?** If not, what practical steps could the ministry take to begin recognizing educators' efforts in these areas?
- **Is educator knowledge and expertise regularly sought and meaningfully used to guide decisions about climate change-related curricula, training and resources? Specifically, who within the ministry or the broader education system is responsible for gathering and analyzing educator insights, and how does the ministry systematically monitor whether collected contributions from educators translate into clear actions and policy improvements?** If structured mechanisms for feedback collection, analysis and monitored action are not currently in place, what initial practical processes could the ministry feasibly implement to ensure educators' experiences and insights directly inform ongoing policy development and improvement?
- **Does the ministry provide structured opportunities for educators – including from BIPOC communities – to collaborate, reflect and exchange practices related to climate-responsive teaching, climate change curriculum development and resilience-building?** If not, what simple, practical spaces or mechanisms (e.g., regular peer meetings, school-level workshops, virtual communities of practice) could be introduced to foster ongoing and inclusive teacher collaboration and reflection?

Box 3. Kenya: Strengthening strategies for teacher capacity to deliver quality climate-change education

Central to Kenya's push to strengthen climate-change education is the recognition that curriculum reform alone is not enough—teachers must have the knowledge, confidence and tools to translate climate literacy into meaningful learning for all students.

In 2020, the Ministry of Education and the Ministry of Environment and Forestry jointly developed the Implementation Guidelines for Mainstreaming Climate Change into Education, which mandate the integration of climate-change content from pre-primary through tertiary education and task the Kenya Institute of Curriculum Development (KICD) with ensuring that climate and environmental concepts are systematically embedded across all learning areas.

To support teachers with rolling out the new curriculum, the government launched the National Climate Change Learning Strategy (2021–2031) in line with Kenya's broader Competency-Based Curriculum. This strategy positions educators as central agents of climate action and sets out an ambitious plan to train up to 100,000 teachers in climate-responsive pedagogy, learner engagement and assessment. Its trainer-of-trainers model is designed to ensure that new knowledge and skills reach classrooms across all counties, including remote and arid regions most affected by climate impacts.

To further support teachers, KICD, with technical support from UNICEF and Alef Education, is developing digital resources, localized case studies and multimedia materials accessible nationwide via the Kenya Education Cloud. These tools aim to reduce teacher workload while enabling more interactive and participatory climate instruction.

2.2. Strengthening educators' capacity to maintain inclusive, equitable and quality education during climate-related disruptions

Defining learning continuity

Learning continuity refers to education systems' ability to sustain learners' progression, instructional quality and holistic educational experiences despite interruptions or disruptions caused by climate events by implementing flexible, context-sensitive approaches that maintain coherence across educational levels and settings.[51]

Education systems worldwide are grappling with extreme and sustained climate change-related disruptions that go far beyond isolated or seasonal weather events. In 2024 alone, prolonged floods, severe droughts, intense heatwaves and destructive storms disrupted education for approximately 242 million students, placing unprecedented strain on already fragile educational infrastructure and threatening students' fundamental right to quality education.[52] These are not routine disruptions— they are increasingly prolonged, overlapping and deeply destabilizing, not only undermining academic progress but also intensifying existing social inequalities and exacerbating negative outcomes related to health, nutrition and psychosocial well-being.[53] The ripple effects are severe: schools face mounting challenges in safeguarding nutrition, health and psychosocial well-being, while households experience heightened economic stress that deepens existing social inequalities and exposes the most vulnerable learners to long-term harm.

Disruptions often affect women first, as women educators frequently assume care responsibilities. This can reduce their ability to return to teaching, contributing to lower representation and potentially diminishing girls' engagement in education. In many contexts, girls are only permitted or able to attend school if women teachers are present. However, women teachers may themselves face considerable barriers to reaching schools, such as long and unsafe travel routes—challenges that are exacerbated during climate-related crises.[54]

Addressing these challenges can be particularly complicated due to the traditional design of many education systems, which tend to prioritize stability and predictability over adaptability. Many systems remain tied to rigid curricular frameworks, fixed progression criteria and learning objectives predicated on uninterrupted instruction.[55] As climate events force repeated closures, educators face difficult trade-offs—either condensing critical instruction into limited periods, compromising educational quality, or accepting that learners will fall short of established targets.[56] Both scenarios reduce instructional effectiveness, intensify educator stress,

51 Adapted from UNESCO's *Green School Quality Standard* (2024)

52 UNICEF. (2025, January 23). *Learning interrupted: Global snapshot of climate-related school disruptions in 2024.* UNICEF. https://www.unicef.org/reports/learning-interrupted-global-snapshot-2024

53 Venegas Marin, S., Schwarz, L., & Sabarwal, S. (2024, August). Impacts of extreme weather events on education outcomes: A review of evidence. *The World Bank Research Observer, 39*(2), 177–226. https://doi.org/10.1093/wbro/lkae001

54 Inter-agency Network for Education in Emergencies (INEE). (2023). *Women Who Teach: Recruiting and Retaining Female Teachers in Crisis Contexts*. INEE.

55 UNESCO. (2024, October 3). *2024 Global Education Meeting background document*. United Nations Educational, Scientific and Cultural Organization. https://www.unesco.org/sdg4education2030/sites/default/files/medias/fichiers/2024/10/2024%20GEM%20background%20document%203%20Oct_1.pdf; World Bank, Bill & Melinda Gates Foundation, FCDO, UNESCO, UNICEF, & USAID. (2022). *Guide for learning recovery and acceleration: Using the RAPID framework to address COVID-19 learning losses and build forward better*. Washington, DC, World Bank. Retrieved from UNESCO Institute for Lifelong Learning. (2022). *Making lifelong learning a reality: A handbook* [PDF]. Hamburg, Germany, UNESCO Institute for Lifelong Learning. Retrieved from https://www.uil.unesco.org/sites/default/files/medias/fichiers/2022/06/UIL_Handbook_170x240_RZ220601_Online.pdf

56 Sabarwal, S., Venegas Marin, S., Spivak, M., & Ambasz, D. (2024). *Choosing our Future: Education for Climate Action*. World Bank. Retrieved from https://openknowledge.worldbank.org/server/api/core/bitstreams/9d1c318a-bcd3-49fa-b1c6-cc03e18d4670/content

and widen achievement gaps, disproportionately affecting girls and marginalized communities and persons with disabilities and diverse learning needs, who already encounter significant systemic barriers to quality education.[57]

While mitigating the negative effects of these disruptions is undeniably challenging, ministries can begin to respond effectively by incrementally integrating greater flexibility and proactive planning measures into existing systems and processes. For example, ministries can identify curricular priorities to focus on essential learning during disruptions, develop training modules on alternative instructional delivery methods, and pilot or support existing learning recovery programmes.[58] Providing educators with targeted psychosocial and instructional resources will complement these approaches, reinforcing their ability to effectively support students during disruptions and ultimately minimize setbacks in their learning.[59]

57 Kagawa, F., & Selby, D. (2023, November). *Leveraging Education in Emergencies for Climate Action* (Flagship Report). Geneva Global Hub for Education in Emergencies. https://eiehub.org/wp-content/uploads/2023/11/Leveraging-EiE-for-Climate-Action-FINAL-lowres.pdf; Sims, K. (2021). E*ducation, Girls' Education and Climate Change* (K4D Emerging Issues Report No. 29). Institute of Development Studies.

58 Bascopé, M., Becerra, R., Salazar, D., Arenas, A., Morales, R., Merino, C., Cisternas, D., & Ampuero, P. (2025). Teacher continuous professional development in climate change education: Analyzing teachers' perspectives. *Journal of Environmental Education*, 1–22. https://doi.org/10.1080/00958964.2025.2471971

59 CARE. (2023, June). *Education and climate change*. CARE. https://careclimatechange.org/wp-content/uploads/2023/06/Education-and-Climate-Change.pdf

2.2.1. Guiding questions for ministries

To support educators' capacity to maintain inclusive, equitable and quality education during climate disruptions:

Curriculum

- **Does the ministry clearly identify curricular content and learning outcomes that educators can realistically maintain during climate disruptions?** If not, could the ministry initiate a time-bound working group – bringing together educators and professional bodies – to define a concise set of essential learning priorities appropriate for shortened and/or interrupted learning periods?

Capacity development

- **Do educators have access to practical reference materials and training on teaching during climate-related disruptions—such as in temporary learning spaces, with mixed-age groups or in low-resource environments?** If not, could the ministry curate or adapt field-tested guidance (e.g., managing mixed-age classrooms, temporary classroom setups or adaptable lesson outlines) from local and/or international resources and disseminate these to educators?
- **Has training on alternative instructional methods (e.g., remote or blended learning approaches) been integrated into pre-service and in-service teacher and school leader training programmes to support instructional continuity during climate disruptions?** If not, could the ministry partner with existing professional development providers (e.g., teacher training colleges, NGOs) to integrate basic remote-learning tools, resources and strategies that educators can immediately apply during climate disruptions?
- **Do existing teacher training programmes explicitly include gender- and inclusion-responsive techniques to maintain student engagement during instructional disruptions, with particular attention to the most vulnerable (e.g. marginalized girls, children with visible and invisible disabilities – including those living with PTSD or carrying significant trauma – refugees, remote communities)?** If not, could the ministry partner with training institutions or NGOs to integrate practical engagement strategies – such as interaction scaffolds, use of formative tasks and facilitation techniques – into upcoming professional development sessions?

Learning spaces

- **In areas with limited internet access during climate disruptions, does the ministry support the use of alternative learning spaces (e.g., religious buildings, community centers) and promote low-tech teaching methods (e.g., radio, printed packets, SMS, peer groups) in teacher training programmes?** If not, could the ministry partner with local governments, public institutions and NGOs to support educators in using community spaces and low-tech tools to maintain learning when schools or digital access are disrupted?
- **Do education infrastructure policies and emergency response plans ensure that both permanent and alternative learning spaces provide safe, climate-resilient and gender-responsive infrastructure, including adequate sanitation, water, hygiene and privacy facilities for learners and educators?** If not, could the ministry assess infrastructure and sanitation gaps during climate disruptions and prioritize improvements that enable the safe participation and retention of educators and students of all genders, recognizing that inadequate or unsafe sanitation can reduce gender diversity and attendance?

Resources

- **Does the ministry maintain pre-prepared emergency instructional materials produced in collaboration with educators (e.g., self-contained lesson plans, activity sheets, scripting guides) that educators can immediately access during climate disruptions?** If not, could the ministry identify and adapt suitable emergency learning materials from partner organizations, cross-border education programmes or international agencies for local use?
- **Does the ministry equip educators with clear guidance on working effectively with families, communities and religious leaders to maintain learning continuity during disruptions?** If not, could the ministry adopt existing resources to create a simple, actionable guidance or tools to support educators in engaging families and communities during periods of disruption?

Monitoring

- **Does the ministry regularly track how climate disruptions affect educators' ability to teach (e.g., access to schools, use of schools as shelters, relocation or lack of materials)?** If not, could the ministry begin collecting basic, easily obtainable data – such as educator attendance rates and infrastructure availability, disaggregated by gender and resource gaps – after each major climate event to better understand and respond to impacts on instruction?

Box 4. Bangladesh: Building teacher capacity for learning continuity in a landscape of climate disruption

In Bangladesh, floods close classrooms for weeks, cyclones displace families and heatwaves force shortened school days. For educators, these are not occasional interruptions, but part of the rhythm of professional life, and each disruption threatens the continuity, equity and emotional stability of learners who are already vulnerable.

Recognizing the strain on teachers and the mounting risk to learning, Bangladesh has gradually reshaped its policy environment to help educators adapt. The National Education Policy (2010) laid early groundwork by committing the system to equitable learning even when crises occur. Complementing this, the Disaster Management Act (2012) and Standing Orders on Disaster (2019) formalized the role of schools and teachers in preparedness, response and recovery, giving educators clearer expectations and institutional backing during emergencies when they are often the first point of contact for displaced or distressed girls and boys.

At the school level, the National School Safety Framework (2017) introduced practical tools that help teachers navigate disrupted learning environments. Through school-based risk assessments, drills and continuity planning, teachers receive guidance on how to keep learners safe, support their well-being and quickly resume instruction when a crisis occurs.

These reforms are reinforced through the Education Sector Plan (2020–2025). The plan acknowledges that educators cannot maintain quality teaching under stress without support. As a result, training modules increasingly focus not only on alternative delivery methods – such as community-based classes, radio lessons or remote instruction – but also on psychosocial support for teachers themselves, who routinely face personal loss, displacement and exhaustion during climate emergencies.

2.3. Ensuring educator and student safety and well-being during climate emergencies

Defining safety and wellbeing

Ensuring safety and well-being requires clearly defined roles, necessary training, reliable communication and secure working conditions so that educators can effectively manage climate-related emergencies. It involves structured guidelines, systematic professional development, resilient school infrastructure and proactive planning to support educators in maintaining student safety and educational continuity during disruptions. While the primary focus of this section is on safety from climate-related hazards, the toolkit recognizes that these risks are closely interconnected with protection from physical, sexual and gender-based violence, which can intensify when climate emergencies disrupt schooling—particularly for female educators and learners.

As climate change-related disruptions become increasingly frequent and severe, ministries of education face escalating pressure to manage complex emergencies that threaten educational continuity. During crises – such as floods, storms, droughts or extreme heat – ministries rapidly shift from routine administration to crisis response. This transition requires immediate action such as issuing school closures, conducting wide-scale damage assessments, tracking displaced students and educators, and collaborating with disaster management authorities.[60] With ministries stretched thin by these urgent demands, critical school-level preparedness measures – including clearly defined educator roles, practical, gender-responsive and inclusive emergency training, reliable communication channels and physically safe school environments – are often overlooked or considered less urgent in the short term.

However, failing to address these foundational preparedness policies and strategies significantly undermines system-wide resilience. Male and female educators, often frontline responders during emergencies, directly shoulder responsibility for student safety, instructional continuity and community support. This requires them to maintain both crisis-response capabilities and adaptive teaching skills to ensure learning continues—even under disrupted conditions. When educators face unclear emergency guidelines, insufficient practical training in emergency response practices or unsafe working environments, both their immediate well-being and capacity to support students are compromised.[61] Research consistently indicates that educator well-being directly influences instructional quality and student outcomes, disproportionately affecting learners and communities who already experience vulnerabilities and inequities—such as girls, children with disabilities, displaced populations and other marginalized groups.[62] Consequently, neglecting educator safety and preparedness – including clear emergency roles, practical crisis-response training, reliable communication systems and safe school environments – can exacerbate inequities, increase operational costs associated with prolonged disruptions, compromise stakeholder trust and delay educational recovery.

60 International Task Force on Teachers for Education 2030, UNESCO International Institute for Educational Planning (IIEP) & UNESCO. (2022). *Crisis-sensitive teacher policy and planning: Module on the Teacher Policy Development Guide*. https://teachertaskforce.org/knowledge-hub/crisis-sensitive-teacher-policy-and-planning-module-teacher-policy-development-guide

61 Falk, D., Varni, E., Johna, J. F., & Frisoli, P. (2019). *Landscape review: Teacher well-being in low resource, crisis, and conflict-affected settings*. Education Equity Research Initiative.

62 Mendez, P. Z., Corpuz, G. G., & Comon, J. D. (2024). Teachers' well-being and instructional efficacy: Basis for professional development plan. *European Modern Studies Journal, 8*(4), 26–74.

To strengthen preparedness and resilience effectively, it is essential for this objective regarding roles and responsibilities to recognize the distinct – yet interconnected – roles of teachers, education support personnel and school leaders. Teachers are primarily responsible for ensuring continuity of learning and providing psychosocial support to students during crises. Education support personnel – including administrative staff, counselors and maintenance workers – play critical roles in sustaining safe, functional and inclusive school operations, often managing logistics, sanitation and student services under challenging conditions. School leaders, meanwhile, are tasked with coordinating emergency plans, ensuring clear communication with authorities, supporting staff well-being and maintaining community trust. These roles are often carried out alongside significant personal and family caregiving responsibilities, which can be intensified during climate-related disruptions, and which continue to be disproportionately borne by women educators— while also affecting educators of all genders depending on context.

Each group requires tailored guidance, training and resources to fulfill their specific responsibilities before, during and after climate change-related disruptions. Prioritizing their differentiated needs within preparedness strategies is key to building resilient education systems.

2.3.1. Guiding questions for ministries

Ministries of education should consider the following questions to ensure educator and student safety and well-being during climate emergencies:

Roles and responsibilities

- **Are teacher, school leader and education support personnel roles and responsibilities clearly defined and communicated in emergency preparedness plans at both national and regional/provincial levels, with explicit focus on gendered roles, barriers and expectations—particularly in geographic areas more vulnerable to climate change-related emergencies?** If not, could the ministry either leverage existing coordination mechanisms (such as disaster risk reduction committees or education sector clusters) or convene a small working group of experienced school leaders or teachers from diverse regions and genders to clearly identify the most common tasks educators currently perform during emergencies to inform clearer, more context-specific guidelines?

Capacity development

- **Do teachers, education support personnel and school leaders receive systematic, regular training on managing climate change-related emergencies impacting students and educators (e.g., evacuation protocols, psychosocial support, maintaining instructional continuity during disruptions, securing sanitary infrastructures, overcoming the challenges faced by children [particularly girls], care responsibilities, safety concerns)?** If not, could the ministry establish partnerships with relevant government departments, tertiary education institutions and NGOs to deliver targeted training sessions and build directly on existing local capacities and resources?

Communications

- **Are communication systems robust and reliable enough to provide teachers, education support personnel and school leaders with timely, accurate crisis information?** If not, could the ministry consult educators and local administrators to identify which existing communication methods (e.g., SMS, WhatsApp, Signal, Telegram, local radio) were most and least effective during past emergencies, and use these insights to strengthen communication protocol and practices for future events?
- **Does the ministry have communication strategies to ensure communities are informed about education support personnel's and school leaders' specific roles and responsibilities during climate-related emergencies?** If not, could the ministry introduce practical community awareness measures (such as local radio campaigns, community–school dialogues or social media outreach) designed to communicate and reinforce the important roles educators perform in emergencies?

Infrastructure

- **Do educational facilities consistently meet infrastructure safety standards and demonstrate resilience against climate hazards?** If not, could the ministry select a manageable sample of schools in climate-vulnerable areas to assess the status of safety standards – particularly sanitary infrastructure allowing women teachers and girls to access safe, secure and gender-appropriate facilities – and prioritize where initial improvements are most urgently needed?

Monitoring and feedback

- **Has the ministry conducted an assessment of how climate change-related disasters specifically impact[63] educator safety and educational infrastructure, including journeys to school?** If not, what specific initial steps (e.g., reviewing past disruptions, using school vulnerability mapping, conducting rapid educator surveys, mapping the risks and dangers faced by girls and women teachers on the way to schools) could the ministry take to develop such an assessment and incorporate findings into national education and emergency preparedness plans?
- **Does the ministry actively engage BIPOC communities, traditional knowledge holders and community leaders in climate risk assessment and emergency preparedness planning?** If not, could the ministry establish partnerships with Indigenous organizations to incorporate traditional weather prediction, seasonal knowledge, and community-based disaster response practices into school-level preparedness strategies?
- **Are educator preparedness and safety regularly assessed, documented and refined based on structured feedback from educators and schools?** If not, could the ministry pilot a simple feedback mechanism (e.g., a brief survey or community meeting immediately following the next climate disruption) to gather actionable insights?

Cross-sectoral coordination

- **Does the ministry actively coordinate disaster preparedness, health and food systems to ensure that schools are integrated into broader resilience plans (e.g., access to school meals during disruptions, safe school and sanitary infrastructures, early warning systems)?** If not, could the ministry establish an inter-sectoral task force – including representatives from disaster response agencies, health and agriculture ministries – to align school-based preparedness with national emergency and food security strategies?

63 Guidance on conducting needs assessments includes:
https://www.educationcluster.net/education-emergencies-needs-assessments
https://gadrrres.net/collections/safe-schools-context-analyses
https://www.educationcluster.net/education-emergencies-needs-assessments
https://www.educationcluster.net/strengthening-education-and-child-protection-needs-assessment-and-preparedness

Box 5. Philippines: Building resilient, safe schools to protect students and teachers amid recurrent disasters

In the Philippines, the education system operates under persistent climate and disaster stress, with typhoons, floods, earthquakes and extreme heat frequently disrupting the delivery of education and requiring temporary adjustments at the school level. These include time-bound class and work suspensions, the limited use of school facilities to support emergency response in line with national policy and shifts to alternative learning modalities to maintain continuity of instruction. In the 2023–2024 school year alone, an average of 32 school days – approximately 15 per cent of the academic year – were lost due to climate-related disruptions. For educators, this often means navigating dual responsibilities: protecting students' safety while sustaining learning under crisis conditions, frequently in environments that are themselves affected by disaster impacts.

Recognizing these risks, the Department of Education (DepEd) developed a Comprehensive Disaster Risk Reduction and Management (DRRM) in Basic Education Framework as early as 2015. The framework provides a national policy foundation that addresses disaster risk reduction across all four DRRM thematic areas [prevention and mitigation, preparedness, response, and recovery and rehabilitation] while supporting DepEd's core education outcomes related to access, quality and governance. DepEd has also issued national guidance to support decision-making during crises through the Guideline on Class and Work Suspension in Schools During Disasters and Emergencies. The guidelines aim to promote consistent and timely decisions while requiring schools to prepare Learning and Service Continuity Plans and to implement alternative learning modalities – such as modular, online or blended learning – to support instructional continuity during disruptions. This guidance operates within a broader and evolving policy framework for disaster risk reduction, education in emergencies and climate adaptation, and is subject to ongoing review and alignment with strengthened cross-agency coordination mechanisms.

Because many public schools are routinely used as evacuation centres during disasters, DepEd has also issued national-level guidance that reiterates the principle that schools should be used as evacuation centres only as a last resort, and supports schools in preparing for and responding to the impacts of climate hazards, in line with the School-Based Disaster Preparedness and Response Measures For Tropical Cyclones, Flooding, and Other Weather-Related Disturbances and Calamities and Guidelines on the Cancellation or Suspension of Classes and Work in Schools in the Event of Natural Disasters, as well as the Children's Emergency Relief and Protection Act. These set minimum standards for safety, sanitation and protection for displaced communities and education support personnel. However, the implementation of these standards often depends on available local resources, infrastructure conditions and inter-agency coordination.

To support implementation on the ground, UNICEF and partners are strengthening Education Clusters by developing practical guidance. These include the Safer Learning Facilities Guidebook under Pillar 1 of the Comprehensive School Safety Framework and the upcoming Pillar 2 guidance on School Safety and Educational Continuity Management.

The national policy framework also recognizes the importance of educator and learner well-being. This is especially reinforced through the Basic Education Mental Health and Well-being Promotion Act, which strengthens the obligation of the education system to promote mental health and well-being through school-based programmes, including psychosocial support, mental health awareness and literacy initiatives and appropriate referral mechanisms for both teaching and non-teaching personnel. In practice, however, the availability of trained personnel, time and resources to fully implement psychological first aid and psychosocial support activities continues to vary across schools—particularly in disaster-affected and resource-constrained contexts.

Taken together, these policies demonstrate a comprehensive national commitment to disaster risk reduction in education. At the same time, recurrent disasters, chronic infrastructure challenges, teacher shortages, a lack of dedicated education support personnel and insufficient funding mean that the protective intent of these frameworks is not always fully realized at the school level. As a result, teachers often continue to face unsafe working conditions and commutes, additional responsibilities, increased workloads and personal risks during climate-related emergencies, highlighting the gap that can persist between policy design and day-to-day experience on the ground.

2.4. Ensuring quality working conditions before, during and after climate-related crises

Defining workforce retention

Workforce retention refers to policies and measures designed to keep educators safely employed and professionally supported during and immediately following climate disruptions.
For effective retention and recruitment, it is essential to ensure quality working conditions, which include fair wages, safe and supportive environments, professional development, workload management, respect, autonomy and job security.

Even before accounting for climate change-related disruptions, education systems globally are confronting a critical shortage of approximately 44 million teachers in primary and secondary, and 6 million more in early childhood education, a deficit driven substantially by high attrition rates.[64] Among primary educators alone, attrition nearly doubled from 4.6% in 2015 to over 9% by 2022, significantly straining education budgets and compromising learning continuity.[65] These challenges are further intensified by climate-induced events, such as floods, droughts, storms and heatwaves, exacerbating existing vulnerabilities and disproportionately affecting educators in already under-resourced and marginalized communities.[66]

For ministries of education, the operational and financial repercussions of climate-driven educator attrition are severe, undermining long-term investments in training, institutional knowledge and workforce stability.[67] In the absence of proactive retention strategies – such as gender-responsive job protections, equitable contingency financing, clear redeployment policies, targeted psychosocial support and the promotion of educator well-being – educators frequently face uncertainty, financial hardship and professional burn-out. These cumulative pressures significantly accelerate attrition and make teaching an unattractive profession, hindering recruitment efforts, and ultimately threatening ministries' capacity to meet national and global educational commitments (SDG 4, Targets 4.c and 4.7).[68] Prioritizing quality working conditions for educators before, during and after climate disruptions is thus essential for preserving educational quality, safeguarding institutional expertise, minimizing recovery costs and ensuring long-term system resilience.[69]

64 UNESCO and International Task Force on Teachers for Education 2030. (2024). *Global report on teachers: Addressing teacher shortages and transforming the profession*. UNESCO.

65 *Ibid.*

66 Valenza, M. (2023). *Futures at risk: Climate-induced shocks and their toll on education for crisis-affected children*. Education Cannot Wait. https://www.educationcannotwait.org/sites/default/files/2023-10/f_ecw_appeals_background_paper_mech.pdf

67 Tan, T. S., & Patrick, S. K. (2024). *2024 update: What's the cost of teacher turnover?* [Technical supplement]. Learning Policy Institute. https://learningpolicyinstitute.org/2024-whats-cost-teacher-turnover-technical-supplement

68 Falk, D., Varni, E., Johna, J. F., & Frisoli, P. (2019). Landscape review: Teacher well-being in low resource, crisis, and conflict-affected settings. *Education Equity Research Initiative.*

69 Newsome, D., Newsome, K. B., & Miller, S. A. (2023). Teaching, learning, and climate change: Anticipated impacts and mitigation strategies for educators. *Behavior and Social Issues, 32*, 494–516. https://doi.org/10.1007/s42822-023-00129-2

2.4.1. Guiding questions for ministries

Ministries of education should consider the following questions to ensure quality working conditions that support workforce recruitment and retention before, during and after climate emergencies and disruptions:

Employment protections and support

- **Do educator employment contracts explicitly secure job stability and regular salary payments (with a gender focus on the most vulnerable and the challenges faced by women, men and gender-diverse educators), in general as well as during and after disruptions caused by climate change-related emergencies or other crises?** If not, has the ministry consulted directly with educators or their representatives to identify and prioritize exactly which employment and salary protections they most urgently need before, during and after such disruptions, including guaranteed salary even when teachers cannot come to work? Additionally, to what extent are these protections addressed through collective bargaining agreements or other formal negotiation processes between ministries and teacher unions or associations? What measures can be taken to provide educators with increased job security, particularly for women and gender-diverse educators?
- **Are incentive programmes (e.g., hazard pay, housing, hardship allowances, safe transportation, childcare, needs-based supports) in place to support educators working in climate-vulnerable areas?** If not, could the ministry directly consult educators about the types of incentives or recognition that would motivate and support them during and after climate change-related emergencies?
- **Do educator contracts include specific clauses that protect teachers from unmanageable workloads due to expanded responsibilities linked to climate disruptions?** If not, can ministries engage in collective bargaining with unions to ensure that safeguards are in place to limit teachers' mental and physical workload [with the acknowledgment of women's caregiving roles and the increased personal mental load they carry] and prevent burn-out and attrition associated with additional expectations placed on teachers in the context of climate crisis?

Contingency financing

- **Have dedicated contingency funds or mechanisms been established specifically to protect educator remuneration and ensure regular, fair and equal pay for work of equal value and salary payments during climate change-related or extended emergencies?** If not, could the ministry identify existing budget lines or emergency funds that could be adapted or expanded to secure educators' employment and salaries during disruptions?

Recovery and redeployment

- **Are all educators – including teachers, school leaders, education support personnel and early childhood educators – covered by social protection measures?** If not, how can social protection schemes such as healthcare, sick leave, disability and other benefits be strengthened?
- **Do crisis preparedness and recovery plans explicitly incorporate professional and psychosocial support to address educator stress and burn-out during and after climate emergencies?** If not, could the ministry identify and map local organizations or institutions already providing psychosocial services and engage them to explore extending or adapting their support specifically for educators?
- **Do existing ministry guidelines for emergency situations explicitly acknowledge and recommend adequate rest periods for educators to pause, disconnect and recover?** If not, could the ministry review the current emergency-response guidelines and identify gaps around educator rest and recovery periods?

Can the ministry review its emergency protocols and teacher policies through a gender and intersectional lens? Considering that teaching is often a female-dominated profession, and women are at the frontlines of the climate emergency, how can educators be better supported to combine work, family and community responsibilities during the climate crisis?

- **Are there clear, efficient policies to redeploy educators swiftly following climate change-related displacement?** If not, could the ministry document and formalize existing informal practices currently used or consult with school leaders and educator unions or representatives to develop basic redeployment guidelines?

Monitoring and feedback

- **Does the ministry regularly engage in structured social dialogue with representative teacher unions or educator associations specifically around working conditions related to climate emergencies and impacts?** If not, could the ministry initiate a stakeholder consultation or roundtable meeting with such stakeholders specifically to discuss educators' climate change-related working conditions?

Box 6. Somalia: Providing emergency incentives to stabilize educator salaries and retention after climate shocks

When a multi-year drought peaked in Somalia in 2022, schools in drought-affected regions faced acute risks of closure as teachers and families struggled to cope with the extreme conditions. Education assessments from the period highlighted the dual pressure facing educators: rising absenteeism linked to hunger, water scarcity and migration alongside the absence of reliable salary payments—which had already strained the system before the drought intensified.

In response, the Federal Ministry of Education and Culture, with support from partners, introduced emergency incentive payments for teachers and head teachers in the hardest-hit districts. These monthly stipends, typically around US$100 per teacher, were designed to ensure educators could remain in their posts despite severe environmental and economic stress. The programme also combined incentives with school-level support – such as water provision and school meals – recognizing that stabilizing teacher attendance required parallel relief for students and communities.

The impact on continuity was significant. Across the 235 supported schools, enrolment grew from roughly 77,000 to over 99,000 students within a single academic year, demonstrating that reliable educators and basic services encouraged families to keep children in school despite the drought's severity.

2.5. Strengthening educator participation in climate-related social and policy dialogue

Defining social and policy dialogue

Regular social and policy dialogue in education refers to structured discussions and negotiations among governments, teacher organizations (including unions) and other stakeholders to shape education policies, ensure equitable governance and promote quality education systems. A key component of this dialogue is collective bargaining, which enables teachers and their unions to negotiate terms and conditions of employment.

Educators possess valuable front-line knowledge derived from daily interactions with learners and communities, offering insights that are essential for designing effective education policies. Their experiences enable them to identify emerging issues, practical challenges and opportunities that policymakers might otherwise miss. Yet ministries of education often face practical limitations – such as resource scarcity, insufficient capacity and fragmented sectoral coordination – that limit meaningful educator involvement. Without this educator input, however, policies risk losing relevance and become challenging to implement, generating higher costs, inefficiencies and diminished effectiveness.

In the context of climate change, educators' involvement in policy and planning becomes even more essential. They are often better positioned to observe the more subtle – yet equally meaningful – impacts of climate change on the learners and communities they serve, such as shifting student attendance linked to altered seasonal cycles, livelihood disruptions affecting student participation, emerging health and nutrition challenges, gender-differentiated impacts and intensified equity issues among vulnerable groups.

Indigenous educators represent a particularly vital voice in this dialogue as knowledge holders with distinct perspectives rooted in generations of environmental stewardship and climate understanding. Their participation as equal partners in climate education policy development contributes essential insights that enhance the relevance, effectiveness and cultural responsiveness of educational approaches and community resilience strategies.

Moreover, when educators are truly involved in shaping climate change-responsive education, one of the key advantages is that the resulting strategies become more grounded, context-specific and responsive to real-time needs. Their input helps weave disaster resilience into the curriculum and school culture in ways that are locally meaningful, practically applicable and widely understood by learners and communities. This inclusive approach fosters greater collective agency, making climate education not only more relevant, but more actionable and sustainable over time.

When ministries exclude educators from climate-policy discussions – even unintentionally – they risk developing policies that lack critical front-line insights and fail to address the real needs of learners and communities—particularly those already heavily impacted by climate change.

Structured and meaningful engagement with educators through social and policy dialogue ensures that policies reflect local realities and lead to climate strategies that are targeted, culturally relevant and equitable. This inclusive approach accelerates policy implementation, enhances resource efficiency, builds community trust, and measurably improves educational outcomes, continuity, and resilience in the face of escalating climate disruptions.[70]

70 World Bank. (2023). *Making Teacher Policy Work*. http://hdl.handle.net/10986/40579

2.5.1. Guiding questions for ministries

Ministries of education should consider the following questions to increase educator participation in climate change-related social and policy dialogue:

Institutionalized dialogue:

- **Are there regular and institutionalized mechanisms (e.g., local education groups, advisory committees, consultation forums, social dialogue) that systematically involve educators – especially those who have historically been excluded from decision-making – and their representative unions meaningfully and early on in developing and refining climate change-related education and disaster response policies?** If not, could the ministry establish a small advisory group of educators already known for their engagement on climate issues as a structured starting point for broader, regular involvement? If such mechanisms are already in place, are there opportunities to reflect how inclusive they are (e.g., diversity in age groups [including youth], gender, geographical areas and backgrounds, and teaching levels directly affected by climate change-related disasters)? Does the ministry ensure that social dialogue with democratically elected representatives of the profession takes precedent over ad hoc consultations with individual teachers?
- **Are educator insights and feedback consistently documented, explicitly used to improve climate and education policies, and transparently communicated back to educators to demonstrate their impact?** If not, does the ministry currently have a process (e.g., short summaries or briefings) to transparently demonstrate how educator feedback directly influences policy decisions?

Capacity development

- **Do ministries offer training, professional development and incentives to equip educators to effectively contribute to policy dialogue – especially related to climate-responsive planning – with a specific focus on those facing barriers to participation?** If not, could the ministry leverage existing partnerships with NGOs, tertiary education entities or educator representative groups (e.g., unions), or adapt existing professional development and consultation processes to provide interested educators with capacity-building opportunities in advocacy, enabling them to participate confidently and meaningfully in policy discussions?

Communication channels

- **Are there established communication channels ensuring that educators regularly receive policy updates and have opportunities for timely feedback? Are these communication channels accessible for all (i.e., available through both digital and non-digital formats, easy to understand, offered in multiple languages and accessible to individuals with special needs and with visible and invisible disabilities)?** If not, is there at least one existing communication method (e.g., educator meetings, messaging services, school networks) that could be used for sharing climate change-related policy updates and soliciting educator input?

Incentives and support

- **Does the ministry enhance educator voice by providing structured recognition, incentives or formal leadership roles for all educators leading community-based climate initiatives and advocacy, especially those under-represented in leadership positions?** If not, does the ministry have the capacity to pilot a programme recognizing educators through an intersectional lens, for example, by subsidizing

employee representatives drawn from educators with existing leadership roles, or by organizing structured peer networks of educators already leading community-based climate initiatives, to facilitate coordination, peer learning and collective engagement with communities, local authorities and civil society actors?

Box 7. Saint Vincent and the Grenadines: Amplifying educators' voices through a collaborative approach to climate-change education

When the Ministry of Education of Saint Vincent and the Grenadines, began developing a Climate Change Mitigation, Adaptation and Disaster Risk Reduction (CCMA/DRR) curriculum for lower secondary in 2019 and 2020, teachers were engaged from the very beginning through structured consultations, workshops and pilot testing that directly shaped the curriculum's content and classroom approach. Understanding that educator engagement directly impacts policy effectiveness, the Ministry ensured educator involvement in developing, refining and implementing the curriculum through systematic stakeholder consultations, workshops and pilot testing.

To ensure meaningful educator participation in curriculum rollout, the Ministry provided extensive capacity-building through pre-service and in-service training programmes. Teachers in training at St. Vincent and the Grenadines Community College received early exposure to the curriculum, which prepared them for entry into the profession with climate-responsive teaching skills, while in-service teachers took part in nationwide professional development to strengthen confidence and practical application.

In response to teachers' identified needs, the Ministry is planning to commission detailed manuals, facilitation guides and post-disaster teaching resources—materials co-shaped by educator experience and designed to help maintain learning during climate-related disruptions.

3. Conclusions

It has never been more urgent for countries to enhance the resilience, preparedness and recovery of education systems in the face of climate change. Education systems are already grappling with significant challenges, including teacher shortages and educational inequities, and the escalating impacts of climate change undermine their capacity to ensure continuous, equitable, inclusive and quality education—further deepening existing inequalities.

Educators – including teachers, school leaders and education support personnel – are central to the resilience and preparedness of education systems—and society more broadly. Their working conditions and well-being directly affect education quality, student safety and the system's ability to withstand and adapt to crises.

This policy tool responds to the urgent need for a structured, practical approach to strengthening the climate resilience and preparedness of education systems by placing educators at the centre of policy planning and implementation.

By guiding ministries of education through a reflective and participatory process – featuring guiding questions, checklists and examples – the tool facilitates dialogue and collaboration not only between ministries, teacher unions and other important stakeholders, but also across ministries involved in addressing the broader impacts of climate change and the compounding crises countries face.

Ultimately, education systems that empower and protect their educators are not only more prepared for and resilient to climate change—they are also better positioned to lead transformational change across society.

Annex 1. Assessments for implementation

Objective 1. Enabling educators to deliver quality climate-change education

Strategic Actions	Not Yet	In Progress	Completed
1.1 Climate change education is systematically embedded across national curricula in age-appropriate, racially- and gender-responsive, culturally and contextually meaningful ways.	☐	☐	☐
1.2 Climate change education is systematically integrated into initial teacher education and training programmes with contextually relevant and sustainable approaches.	☐	☐	☐
1.3 Structured professional development in climate-responsive teaching is accessible to educators and can be adapted to meet learners' specific and unique needs, reflecting local contexts and diverse knowledge systems.	☐	☐	☐
1.4 Preparedness for climate change education is included in professional standards.	☐	☐	☐
1.5 Contextually relevant and high-quality instructional materials for climate education are consistently available to educators, particularly in climate-vulnerable and resource-constrained areas.	☐	☐	☐
1.6 Educators' fundamental right to freedom of expression is respected and their professional autonomy is ensured.	☐	☐	☐
1.7 Professional incentives and recognition mechanisms are in place to encourage educators' active engagement in climate-responsive teaching, leadership roles and cross-curricular climate-action projects.	☐	☐	☐
1.8 Educator feedback is regularly sought and meaningfully used to guide decisions about climate change-related curricula, training and resources, with clear processes for collection, analysis and monitored action.	☐	☐	☐
1.9 Structured opportunities for educator collaboration, reflection and practice exchange related to climate-responsive teaching and resilience-building are provided through peer meetings, workshops or communities of practice.	☐	☐	☐

Objective 2. Strengthening educators' capacity to maintain inclusive, equitable and quality education during climate-related disruptions

Strategic Actions	Not Yet	In Progress	Completed
2.1 Flexible curricular frameworks and learning objectives are established that maintain educational quality during climate change-related disruptions.	☐	☐	☐
2.2 Educators have access to practical reference materials and training on teaching during climate-related disruptions.	☐	☐	☐
2.3 Alternative instructional delivery methods and resources (low-tech, digital, mobile) are systematically developed and accessible to all educators.	☐	☐	☐
2.4 Equity-focused approaches ensure that marginalized communities receive priority support during educational disruptions.	☐	☐	☐
2.5 In areas with limited internet access during climate disruptions, the ministry supports alternative learning spaces and promotes low-tech teaching methods in teacher training programmes.	☐	☐	☐
2.6 Education infrastructure policies and emergency response plans ensure safe, climate-resilient and gender-responsive permanent and alternative learning spaces for learners and educators.	☐	☐	☐
2.7 Emergency teaching resources and flexible learning environments are pre-positioned and rapidly deployable during crises.	☐	☐	☐
2.8 Professional development on adaptive teaching methods and crisis pedagogy is systematically provided to educators.	☐	☐	☐
2.9 The ministry regularly tracks how climate disruptions affect educators' ability to teach.	☐	☐	☐

Objective 3. Ensuring educator and student safety and well-being during climate emergencies

Strategic Actions	Not Yet	In Progress	Completed
3.1 Educator roles and responsibilities in climate emergencies are clearly defined and documented at national and local levels.	☐	☐	☐
3.2 Systematic, regular training on climate emergency management is provided to all educators, including evacuation protocols and psychosocial support.	☐	☐	☐
3.3 Robust and reliable communication systems ensure that educators receive timely and accurate crisis information and guidance.	☐	☐	☐
3.4 Community awareness strategies clearly communicate educators' emergency roles and build public support for their crisis-response functions.	☐	☐	☐
3.5 Educational facilities consistently meet infrastructure safety standards and demonstrate resilience against climate hazards.	☐	☐	☐
3.6 The impact of climate change-related disasters on educator safety and educational infrastructure has been assessed.	☐	☐	☐
3.7 Indigenous communities and traditional knowledge holders are actively engaged in climate risk assessment and emergency preparedness planning.	☐	☐	☐
3.8 Regular assessment and refinement of educator preparedness is conducted based on structured feedback and lessons learned.	☐	☐	☐
3.9 The ministry actively coordinates disaster preparedness, health and food systems to ensure that schools are integrated into broader resilience plans.	☐	☐	☐

Objective 4. Ensuring quality working conditions before, during and after climate-related crises

Strategic Actions	Not Yet	In Progress	Completed
4.1 Explicit educator job and salary protections are documented and guaranteed during climate disruptions.	☐	☐	☐
4.2 Targeted incentives (hazard pay, housing, hardship allowances) are systematically provided for educators in climate-vulnerable areas.	☐	☐	☐
4.3 Educators' contracts protect them from unmanageable workloads.	☐	☐	☐
4.4 Dedicated contingency funds are established and maintained specifically for educator salary continuity during emergencies.	☐	☐	☐
4.5 Educators are supported by strong social protection schemes.	☐	☐	☐
4.6 Professional and psychosocial support services are formally integrated into crisis preparedness and recovery plans for educators.	☐	☐	☐
4.7 Adequate rest periods and recovery time are explicitly acknowledged and recommended in emergency response guidelines.	☐	☐	☐
4.8 Clear, efficient redeployment protocols are operational through streamlined administrative processes for climate-displaced educators.	☐	☐	☐
4.9 Structured dialogue mechanisms with teacher unions and educator associations address climate change-related working conditions and concerns.	☐	☐	☐

Objective 5. Strengthening educator participation in climate-related social and policy dialogue

Strategic Actions	Not Yet	In Progress	Completed
5.1 Regular, institutionalized mechanisms (advisory committees, consultation forums, social dialogue) systematically involve educators in climate change-related education policy development.	☐	☐	☐
5.2 Educator insights and feedback are systematically integrated into broader national climate policies and strategies (National Adaptation Plans, DRR strategies).	☐	☐	☐
If **In Progress** or **Completed** is selected for 5.2, then **5.2.1**: Educator insights and feedback are transparently communicated back to educators to demonstrate impact.	☐	☐	☐
5.3 Training, professional development and capacity-building opportunities enable educators to effectively contribute to climate policy dialogue and advocacy.	☐	☐	☐
5.4 Established communication channels ensure that educators regularly receive policy updates and have structured opportunities for timely feedback.	☐	☐	☐
5.5 Structured recognition, incentives and formal leadership roles are provided for educators leading community-based climate initiatives and advocacy.	☐	☐	☐
5.6 Indigenous educators are meaningfully included as equal partners in climate education policy development, contributing traditional knowledge and perspectives.	☐	☐	☐

Annex 2. Suggested process options to use the tool

Purpose: To provide suggested practical process tracks to engage with the tool across different planning and delivery moments. Start with the quick-selection table below, then use the detailed sections that follow for stakeholders, resources, steps, outputs and rationale.

How to choose

Pick the option that matches your time window, decision moment and level of certainty. All options assume the existence of a small core team overseeing policy planning, curriculum, teacher professional development, infrastructure or emergency management, and finance, with structured input from educators or their unions.

If you need	Use this option
Momentum and a minimum viable plan	Option 1. Quick-start 2-Day Sprint
To embed into a sector plan or budget cycle	Option 2. Planning-Cycle Track
To learn quickly after a climate or hazard disruption	Option 3. Post-Disruption After-Action Review
Evidence before national scale-up	Option 4. Regional Pilot to Scale
Buy-in, contextual relevance and durability	Option 5. Social Dialogue and Co-design Track

Option 1. Quick-start 2-Day Sprint

When: You need momentum or a minimum viable plan in 48 hours.

Stakeholders to engage:

- Core: policy planning, curriculum, teacher professional development, school leadership, emergency management or DRR, finance or budgeting.
- Representation: teacher unions or associations, a small sample of principals and teachers from different risk profiles, data or Education Management Information Systems (EMIS) team.
- Optional: climate or environment focal points, communications.

Potential resources needed:

- Facilitator, meeting room or virtual platform, projector or shared workspace.
- Annex 1 checklist printouts or digital forms, sticky notes or whiteboard.
- Two half-days of staff time, light refreshments, note-taker.

Steps:

Preparation

1. Assign one objective to each core member and share the tool summary along with Annex 1.
2. Collect recent disruption notes, hazard maps and staffing data.

Day 1: Diagnose

3. Run a timed self-rating using Annex 1 across the five objectives, capture evidence and gaps.
4. Cluster gaps into themes such as training, safety, communications, materials, staffing.

Day 2: Decide

5. Prioritize three actions using the following criteria: impact on safety and continuity, feasibility this quarter, equity.
6. Name owners, define 90-day deliverables and simple indicators, align a light budget and approvals path.

Outputs:

- 90-day action plan with owners and dates.
- Risk and assumptions register for the three priority actions.
- One-page budget ask and approvals map.

Why it works:

- Compresses the process from analysis to decision into two days to build momentum and early wins.
- Anchors choices in the tool objectives and Annex 1 for traceable actions.
- Creates accountability by naming owners and immediate indicators.

Option 2. Planning-Cycle Track (6 to 8 weeks)

When: Sector plan update, annual review or budget cycle where integration is required.

Stakeholders to engage:

- Core: planning, finance, curriculum, teacher professional development, Education Management Information Systems (EMIS) or statistics, DRR or emergency management.
- Allied: environment or climate authority, public works or infrastructure, teacher service commission, procurement.
- External: development partners, CSOs, teacher unions.

Potential resources needed:

- Work sessions across six to eight weeks, facilitation, costing templates, Theory of Change or results framework template.
- Budget and programme data, national adaptation or climate strategy references.
- Approval windows and sector working group calendar.

Steps:

Weeks 1 to 2: Baseline

1. Apply Annex 1 system-wide to create a **Not yet**, **In progress**, or **Completed** profile by objective.
2. Map existing projects, budgets and indicators to avoid duplication.

Week 3: Prioritize and Design

3. Select one or two objectives for the year, with desired results and indicators.
4. Draft activities, roles and sequencing with a simple Gantt view.

Weeks 4 to 5: Cost and Align

5. Estimate unit costs and total needs, align with climate or DRR funds and partner pipelines.
6. Identify quick wins for current envelopes and larger reforms for next year.

Weeks 6 to 8: Integrate and Approve

7. Embed actions and indicators into the sector plan and annual work plans.
8. Finalize Monitoring and Evaluation entries and secure approvals through sector coordination.

Outputs:

- Updated sector plan entries and annual work plan lines.
- Costed activity matrix and budget notes.
- Indicator pack integrated with EMIS or routine reporting.

Why it works:

- Aligns the tool with routine planning, financing and reporting so work continues beyond a pilot.
- Creates transparency on trade-offs and costs, which improves approval chances.
- Links indicators to EMIS to make progress measurable without parallel systems.

Option 3. Post-Disruption After-Action Review (2 to 3 weeks)

When: Immediately after a climate or hazard event that disrupted schooling.

Stakeholders to engage:

- Core: school leadership, district officials, emergency management, curriculum and teacher professional development leads.
- Front-line voices: affected teachers, counselors, parent representatives and student leaders, where appropriate.
- Support: communications, logistics, facilities, psychosocial support.

Potential resources needed:

- Incident logs, attendance and staffing records, simple survey or debrief forms.
- One or two facilitated workshops, transport for site visits if needed.
- Template for After Action Review note and protocol updates.

Steps:

Week 1: Document

1. Compile an event timeline and impact snapshot on educators, students, facilities and services.
2. List what worked and what failed in communications, materials, safety and staffing.

Week 2: Diagnose with the tool

3. Use the guiding questions from Objectives 2 and 3 to identify gaps in continuity, roles, training and safety.
4. Rate each gap using Annex 1 and tag fixes as **immediate**, **before next season** or **structural**.

Week 3: Patch and Pre-position

5. Update protocols, checklists, kits and contact trees; assign owners and deadlines.
6. Brief leadership and communities on changes; schedule drills or refreshers.

Outputs:

- After Action Review note with decisions and owner list.
- Updated school or district protocols and contact trees.
- Pre-positioned materials and communications assets.

Why it works:

- Captures lessons while memories are fresh, which improves accuracy and speed.
- Turns lived experience into specific fixes that reduce future downtime.
- Focusing on continuity and safety builds trust with educators and families.

Option 4. Regional Pilot to Scale (12 to 24 weeks)

When: You need proof of concept and cost before national rollout.

Stakeholders to engage:

- Core: pilot region officials, curriculum and teacher professional development teams, school leaders, Education Management Information Systems (EMIS).
- Participants: selected teachers and schools across different risk profiles.
- Support: procurement, finance, partner technical advisors, independent evaluator if available.

Potential resources needed:

- Pilot plan and playbook, training materials, simple fidelity tools, data collection forms.
- Budget for training, mentoring, materials, travel and monitoring.
- Simplified evaluation design for outcomes and implementation fidelity.

Steps:

Design

1. Select two or three regions with distinct risk profiles and criteria for school selection.
2. Choose one objective to pilot; co-design materials and training with educators.

Implement

3. Run training and classroom application over one term with mentoring touchpoints.
4. Track implementation with brief check-ins and troubleshoot barriers quickly.

Measure and Decide

5. Use Annex 1 items and simple fidelity checks to assess progress and capture costs.
6. Codify what to scale and what to drop; update standards and budgets for national adoption.

Outputs:

- Pilot playbook and training package with adaptations.
- Cost per teacher or school and a scale plan with timelines.
- Short evaluation brief with outcomes and fidelity insights.

Why it works:

- Reduces risk by testing in varied contexts before committing national resources.
- Builds an evidence path that convinces finance and leadership.
- Codification accelerates national rollout and consistency.

Option 5. Social Dialogue and Co-design Track (4 to 6 weeks, recurring)

When: You need buy-in, contextual relevance and durable uptake.

Stakeholders to engage:

- Core: teacher unions or associations, teacher champions, school leaders, curriculum and teacher professional development leads.
- Inclusion: representatives from rural, urban and high-risk areas, and early-career and experienced teachers.
- Allies: parent associations, youth voices, communications.

Potential resources needed:

- Terms of Reference for an educator advisory group and meeting cadence.
- Small facilitation budget, recognition plan for educator leaders.
- Accessible drafts and feedback tools such as surveys or annotated documents.

Steps:

Set up

1. Constitute a diverse educator advisory group and publish Terms of Reference and schedule.
2. Agree on principles for participation, feedback ownership and transparency.

Co-design

3. Walk through the five objectives using guiding questions to reveal classroom realities.
4. Co-create solutions and policy text; track decisions in a change log.

Close the loop

5. Publish how input shaped the final policy or programme; recognize contributors.
6. Establish ongoing feedback loops and a schedule to revisit after implementation.

Outputs:

- Advisory Terms of Reference, meeting notes and a public change log.
- Contextualized solutions and implementation guidance.
- Recognition plan that builds teacher leadership.

Why it works:

- Centres educator voice, which improves practicality and uptake.
- Creates legitimacy and reduces resistance during rollout.
- Builds a standing mechanism for continuous improvement.

Cross-cutting practices for all options

- Anchor diagnostics, decisions and reporting in the five objectives.
- Use Annex 1 as a living tracker. Carry forward items classified as Not yet, In progress, and Completed each quarter to show movement.
- Name owners early. Map each action to a lead unit and supporting units, including curriculum, teacher professional development, infrastructure or emergency management, and finance.
- Set a revisit cadence of at least every two to three years. In higher-risk settings, review annually and feed updates into sector plans and interministerial climate work.
- Document lessons learned and publish a one-page change log after each cycle.