

FCDO POSITION PAPER

Addressing the climate, environment, and biodiversity crises in and through girls' education





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FOREWORD

Amongst the many challenges facing the world today, two are high on my priority list: the future of our young people and the future of our planet. Too often these issues are viewed in isolation, when in fact they are inextricably linked.

The climate and environment crisis threatens the very survival of our planet and ultimately of the human race. For communities living on the frontlines of climate and environmental change, this threat is a daily reality.

In addition to imperilling lives and livelihoods, these events are disrupting the education of 40 million children a year. And we know all too well that the most marginalised in the poorest places are the hardest hit. For every step we take forward on education, climate change takes us two steps back.

Much attention has focused on physical and financial capital as tools to help us fight climate change. But I believe that human capital is our greatest untapped resource.

I have had the privilege of seeing the power and potential of young people across the world to change things for the better. Given the chance, girls, boys, and young men and women in all their diversity do extraordinary things. And we are dearly in need of the extraordinary now, to save our unique planet.

However, this potential is being thwarted by the very crisis we need it to solve. In the summer of 2022 alone, we have seen devastating floods in Pakistan and the worst drought in the Horn of Africa for 40 years.

We cannot let this continue.



Time is running out to ensure every child has the opportunity to fulfil their extraordinary potential. The fate of our children and our planet are one and the same. Now is the time to ensure the future is bright for both.

Rt Hon Andrew Mitchell MP Minister of State (Development and Africa)

We cannot achieve a sustainable future without education and sadly, without a sustainable future, there will be no education.

Education can empower and build resilience, support adaptation, and help to mitigate the climate and environment crisis.

Which is why the UK Department for Education (DfE) has developed a Sustainability and Climate Change Strategy to prepare children and young people for this changing world. The strategy includes a new Natural History GCSE, the National Education Nature Park Scheme, an international green skills conference in 2023 and all new school and college buildings delivered by DfE to be net zero in operation. It offers a range of learning opportunities in the classroom and further afield to give young people hope and a future.

Baroness Barran

Minister for the School System and Finance, UK Department for Education



EXECUTIVE SUMMARY

Climate change and girls' education are two of the UK's primary international development priorities:

- » Addressing climate change and biodiversity loss is the UK's number one international priority¹. We used our COP26 Presidency to accelerate action. COP26 concluded in November 2021 with 197 Parties agreeing the Glasgow Climate Pact. We put gender equality front and centre, taking an inclusive approach, and prioritising the advancement of gender equality within our climate action and finance.
- Securing 12 years of quality education for every girl remains a cornerstone of the UK's international development offer². We are committed to tackling the education crisis through our policy *Get Children Learning* (2018)³, the *Girls' Education Action Plan* (2021), the *Disability Inclusion and Rights Strategy* (2022)⁴ and two G7 endorsed Global Objectives: to get 40 million more girls in school and 20 million more girls reading by the age of ten or the end of primary school; both by 2026⁵.

Too often climate and environmental change is viewed in isolation from education. If

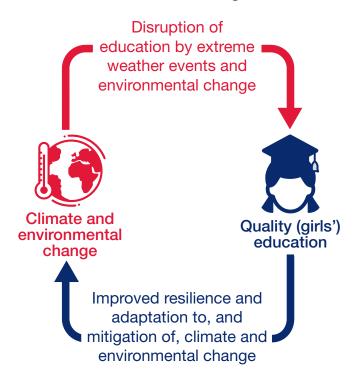
we want to effectively tackle these priority issues, we must better understand how they are linked and find integrated solutions.

Disasters are increasing in severity and occurring almost five times as frequently as 40 years ago, disrupting the education of 40 million children a year⁶, predominantly in low and lower middle-income countries. Even when children stay in school, climate and environmental changes such as rising temperatures affect their ability to learn. Climate and environmental change exacerbates poverty and inequality and drives conflict for increasingly scarce natural resources. Girls and marginalised groups are worst affected. Without urgently adapting education systems to extreme weather events and slower-onset climate and environmental change, education goals will continue to slip further out of reach.

Without harnessing the power of education, the likelihood of communities on the frontlines of the climate crisis being able to adapt to increasingly hostile environments becomes increasingly slim. Education is an assumed, but hugely undervalued, component of responses to climate change impacts, and efforts to mitigate and adapt to them. It is essential for reducing

vulnerability, improving communities' resilience and adaptive capacity, identifying innovations, and for empowering individuals to be part of the solution to climate and environmental change.

Figure A: Two-way relationship between education and climate change



Currently there is little attention paid to this relationship. We need a paradigm shift in how education is viewed in relation to the climate and environment crisis.

Developed in consultation with young people, educators, academics, leaders, governing bodies, and climate and environment experts, this paper sets out the UK Foreign, Commonwealth and Development Office (FCDO) vision for bringing the relationship between education and climate and environmental change into sharper focus. We hope it will stimulate enhanced efforts from a broad range of partners to combat the threat that climate and environmental change poses

to education and maximise the potential of educated populations in addressing the climate and environment crisis.

We will continue to work with relevant UK government departments, such as the Department for Education and the Department for Business, Energy and Industrial Strategy to achieve our goals.

This paper:

- Makes the case for action, articulating the interdependencies between education, particularly girls' education, and climate and environmental change and establishing the need for a more integrated approach.
- 2. Provides a framework of priority actions to deliver climate-smart education systems, particularly in low and lower middle-income countries, based around two critical pathways of change to:
 - Build more resilient and inclusive education systems to mitigate the impact of climate and environmental change on education.
 - ii. Build knowledge, skills, and agency for climate adaptation and mitigation to maximise the potential of educated populations for addressing the climate and environment crisis.
- 3. Sets out how FCDO will operate differently, utilising the levers of finance, people, and partnerships. It shares indicative asks of national governments; bilateral, multilateral, and private sector donors; and civil society organisations, youth, and academia to join a coalition of the willing to effect change.
- Makes a call for action for an urgent, integrated, and concerted response from across the education and climate and environment sectors.

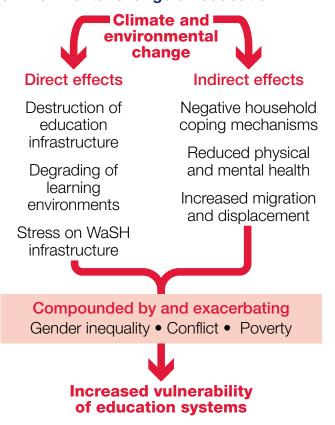
1. CASE FOR ACTION

1.1 The devastating impact of climate and environmental change on education

Climate and environmental change poses an accelerating threat to education, particularly for girls, the poorest and most marginalised children⁷. Disasters are increasing in severity and occurring almost five times as frequently as 40 years ago, already disrupting the education of nearly 40 million children a year8. Effects are both direct and indirect (see Figure B and Annex A): Flooding destroys schools, storms force people to flee their homes; droughts result in children having to go further to collect water or look after animals, leaving less time available for education; and financial impacts of climate shocks mean families cannot afford to keep children in school. Time spent away from school due to disasters has been shown to have severe consequences for learning, lasting years after the disruption has ended9.

Even when children stay in school, environmental changes such as temperature increases and high levels of pollution make learning difficult, as children's physical wellbeing and ability to concentrate are compromised¹⁰. For every step we take forward on education, climate and environmental change takes us two steps back.

Figure B: Effects of climate and environmental change on education¹¹



Girls and marginalised groups are disproportionately affected by climate and environmental change due to existing gender and other inequalities¹². Girls and women are much more likely to die in extreme weather events¹³. The majority of those displaced by climate change are female and this leads to increased risk of violence and exploitation¹⁴. Climate shocks reduce incomes, exacerbating a major barrier to education especially for the poorest, girls and children with disabilities. Resources are used to survive instead of learn, trapping girls in conditions of poverty, marginalisation, and vulnerability, facing school drop-out, child



labour and early marriage as families use negative coping mechanisms to survive¹⁵. Reduced access to sexual and reproductive health services during disasters and displacement negatively impacts girls, and destruction of infrastructure reduces access to safe water, sanitation and hygiene (WaSH), making pregnancy more life threatening for both mother and baby. The impacts of climate shocks affect the most marginalised the worst, and have long-lasting effects on wellbeing and learning outcomes, which can be transmitted across generations¹⁶.

Climate and environmental change compounds, and is compounded by, other threats to education and development:

- when the majority of children. 70% of children in low and middle-income countries will not be able to read a simple text by the age of ten¹⁷. This is also known as learning poverty¹⁸. Huge numbers of children are out of school at secondary level: an average of only 40% in low-income countries attend secondary school¹⁹. COVID-19 was the biggest disruption to education in history and will have long-lasting effects on access and learning²⁰.
- » Conflict and crises keep children out of school. Approximately 222 million girls and boys are either already out of school due to conflict or crisis or are at risk of dropping out²¹. Climate and environmental change exacerbates conflict for increasingly scarce natural resources²².

» Education inequalities persist. While gender parity has almost been achieved on average, this hides huge disparities. Marginalised children remain left behind, unable to reap the rewards of education. Of the 65 million primary and secondary school age children with disabilities, over half are out of school²³. Climate and environmental change intensifies these inequalities and can lead to reversals in gains made.

Box 1: Why does terminology matter?

Climate change exacerbates environmental degradation and biodiversity loss, and vice versa. All have wide-ranging impacts most acutely felt in lower-income countries which rely on natural ecosystems for food, fuel, and livelihoods and which have rapidly growing populations and levels of urbanisation. A singular focus on climate change-independent of environment degradation and biodiversity loss-risks obscuring the complexity of the crises facing communities and prioritising interventions that do not address the most pressing needs. The phrase 'climate and environmental change' is used in this paper to capture the wider concerns facing affected populations.

Box 2: Why does the FCDO prioritise girls' education?

Educating girls is one of the most costeffective development investments, positively impacting a wide range of indicators and with intergenerational benefits. This does not mean that FCDO does not care about boys' education. Focusing on the most marginalised girls is an effective entry point for improving education outcomes for all children. If we can reach the girl who is most marginalised; born into poverty; who lives in a remote rural area, in a refugee camp, or caught up in conflict; disabled, or malnourished, and make sure that she is learning and thriving in school, then we can do the same for all children.

In relation to climate and environmental change, a focus on girls' education is needed because existing gender inequalities exacerbate girls' vulnerability to many climate impacts. There are also specific benefits that come from educating and empowering girls and women to participate in climate action, beyond the benefits of education for all.

1.2 Girls' education as part of the solution to climate and environmental change

Girls' education is a human right and a game changer for driving poverty reduction, and building prosperous, resilient economies and peaceful, stable societies²⁴. It has huge, undervalued, potential to contribute to tackling climate and environmental change. A good-quality education can improve resilience to climate impacts now, enable adaptation to current and future changes, and mitigate future climate change (see

Figure C). Girls' secondary education has been identified as the most important socioeconomic determinant in reducing vulnerability to climate change²⁵.

Figure C: Relationship between quality education and improved resilience and adaptive capacity²⁶

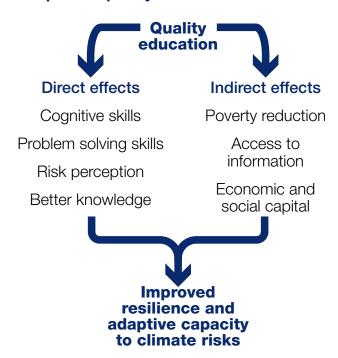


Figure D summarises the multi-faceted relationship between quality education and climate and environmental change.

- » The red boxes outline the negative impacts of climate and environmental change on girls' education at individual, household and community, school, and systems level.
- » The blue boxes signify the potential impacts of education, particularly of girls, in responding to the climate crisis.

- » The evidence base regarding the impacts of climate and environmental change on education is relatively strong. For the impacts of (girls') education on climate and environmental change, available evidence is strong in some areas, suggestive in others, and growing fast.
- » In reality these relationships are highly context specific, not linear, and there are interdependencies between different impacts.

Table 1 describes some of the positive impacts of girls' education in responding to the climate crisis in more detail.



Figure D: Relationship between girls' education and climate and environmental change²⁷

- Disruptions caused by climate and environmental change
- Mitigations/adaptations provided by quality (girls') education

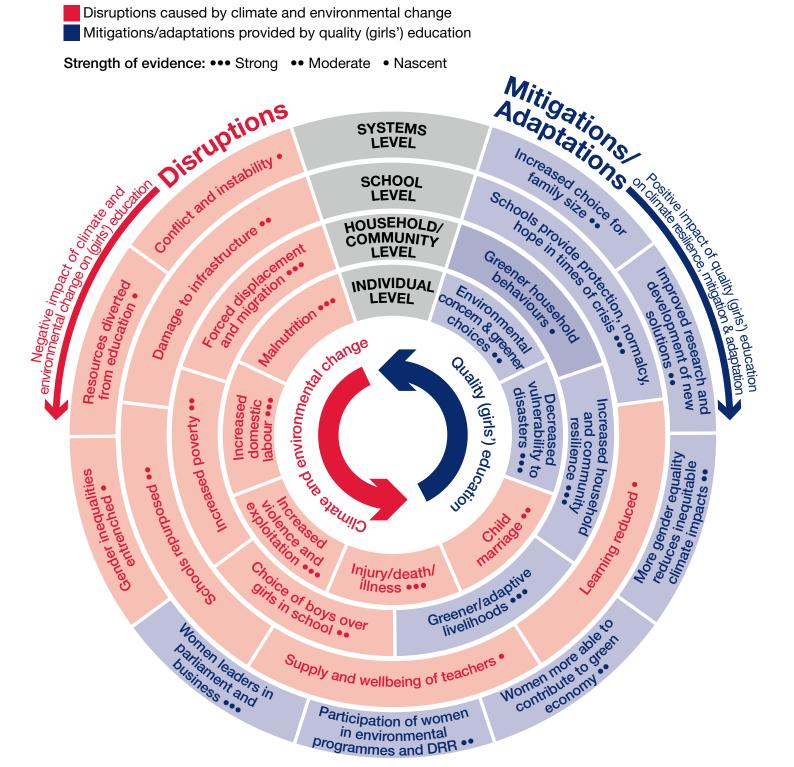


Table 1: Benefits of (girls') education for climate and environment

Benefit	Description	
Reduced vulnerability to disasters	Studies show that quality education dramatically reduces vulnerability to death from weather-related disasters ²⁸ . During times of crisis, continuity of access to education can be lifesaving if it offers protection, access to health services, normality, and hope.	
Increased resilience and adaptive capacity	e Children with foundational skills (literacy, numeracy, critical thinking, and problem-solving) help families better process and act on information about risk. ²⁹ Educated populations are healthier, more financially secure, and better able to recover from climate shocks. ³⁰	
Behaviour change	While knowledge transfer is not sufficient, education could play a role in supporting behaviour change of individuals for better climate adaptation and future mitigation. ³¹	
Shift to green economies	Inclusive, quality education is needed to power an equitable transition to a green economy, providing girls and boys with the transferable skills needed to do jobs that have not even been imagined yet. ³² Education is key for research and innovation, which will be needed to identify future solutions to the climate and environment crisis.	
Empowerment and leadership	t and Where education opens leadership opportunities for girls as adults, emerging evidence suggests that their participation in national politics can lead countries to adopt environment-friendly policies. ³³	
Reduced inequalities	Quality education can tackle discrimination, including gender discrimination, because schools reach children at an age before norms are internalised. Reducing inequalities in society is critical to limiting the inequitable effects of climate and environmental change.	

Girls' education has intergenerational benefits (see Annex B). Educated mothers are less likely to die in childbirth and their children are 50% more likely to live past age five. On average, women with secondary education earn twice as much as those with no education at all³⁴. Educated mothers can insulate their children's learning loss from shocks³⁵. Girls' education is a major determinant of lifetime fertility³⁶.

Educating girls can therefore contribute to stabilising population growth and lead to smaller, healthier, better educated families with increased resilience to climate and environmental change³⁷.



Box 3: What is the relationship between girls education and climate change mitigation?

Some economists have modelled that the impact of education in lowering fertility rates would reduce pressure on natural resources and lower emissions. However, this simplistic causal chain is problematic because higher levels of education are typically accompanied by higher levels of consumption and emissions. There are also critiques from an equity and justice perspective. Education is a universal human right. Empowering girls' and women to realise their right to education and to have families of the size and spacing that they choose must remain the priority, above preferencing climate and environment benefits.

Most benefits of education rely upon children learning what they need in order to live lives they value. For protection from extreme weather events, girls and boys need to be able to understand and act on risk information. To build resilience, children and youth need literacy, numeracy and transferable socio-emotional skills that will enable them to pursue their education, enter the job market and support their families to make informed choices. To enable behaviour change, students need to understand climate and environmental change and be guided in practical ways to address it. Powering the shift to the green economy requires science, technical, engineering and mathematics education (STEM), and access to higher education.

However, education systems are currently failing the majority of the world's children: 70% of ten-year-olds in low and middle income countries will not be able to read a simple sentence. That jumps to 90% for sub-Saharan Africa³⁸. Access to quality secondary and higher education remains a pressing challenge, especially for girls in sub-Saharan Africa³⁹.



Box 4: Why does foundational learning matter?

Foundational learning includes literacy, numeracy, and other transferable skills such as socio-emotional skills, critical thinking and problem solving. These skills are foundational in the literal sense as they are the building blocks needed to make progress in school, attain higher order skills, and reap the full rewards of education. Without foundational learning, other benefits of education are severely undermined. Ensuring girls gain basic literacy by the end of primary school leads to impacts on fertility, child mortality, empowerment, and financial practices that are three to five times greater than completion of primary alone (e.g., 36% reduction in fertility rate, compared with 9.7%).

Learning poverty poses a major threat to our ability to adapt to and mitigate climate and environmental change. Addressing it will determine whether countries have populations with the knowledge, skills, and agency to have an impact as leaders of tomorrow, or who remain disempowered in the face of worsening impacts.

Box 5: What are the barriers to girls' transition to secondary and higher education?

Girls' transition from primary to secondary school, particularly upper-secondary, remains poor across sub-Saharan Africa. Girls face additional challenges from adolescence as harmful norms start to shape freedoms and risks of gender-based violence, early marriage, and pregnancy increase. Climate and environmental change exacerbates these challenges and intensifies existing gender inequalities.

Even when girls complete secondary education, gender barriers persist. STEM capabilities are essential for green jobs, but gender gaps persist at every level of education in access to and uptake of STEM.

Without quality secondary education many direct benefits of education (such as powering the transition to green economies, political leadership, and population dynamics) will not be realised.

1.3 Moving towards an integrated approach

Currently little attention is paid to the relationship between climate and environmental change and education⁴⁰. Analysis of countries' Nationally Determined Contributions (NDCs)⁴¹ submitted ahead of COP26 found that few meaningfully addressed the impact of climate change on education or positioned education as a tool to combat climate change⁴². Education is conspicuously absent from the major climate financing mechanisms, meaning a tiny proportion, at most 0.03%, of all climate finance is spent on education⁴³.

Failing to address this relationship poses a risk to both education and climate goals. Without making education systems more resilient to the impacts of climate and environmental change on education, we will not achieve SDG4. Investments in education will continue to be undermined by climate shocks, with resources diverted to respond to crises instead of being focussed on quality. Without building girls' and boys' knowledge, skills and agency for climate action, we will not achieve resilience and adaptation to climate and environmental change or mitigation of future impacts.

Box 6: What countries are the focus of this position paper?

All countries have a role to play in responding to the climate and environment crisis through education, as enshrined in SDG4.7 which states that "all learners must acquire the knowledge and skills needed to promote sustainable development". However, priorities and resources are very different in different parts of the world. The diagram below provides a simple overview of the most urgent priorities for different income categories and the table in Annex C outlines this in more detail. While the UK will continue to work with countries from all income categories to address climate and environmental change, this Position Paper focuses primarily on low- and lowermiddle-income contexts, which are worst affected and have limited resources and capacities to respond.

		Mitigation
Adaptation		
Low-	Middle-	High-
income	income	income
countries	countries	countries



2. PATHWAYS OF CHANGE

The framework below outlines two pathways to address climate and environmental change in and through education: 1) More resilient and inclusive education systems; and 2) Knowledge, skills and agency for climate resilience and action.

The box on the left outlines the two pathways, including priority intervention areas. These are expected to lead to education outcomes of increased, sustained access to education (particularly for girls) and improved learning outcomes relevant to children's realities. Securing these education outcomes in turn unlocks climate and environment benefits, contributing to improved resilience and adaptation to, and mitigation of, climate and environmental change.

Box 7: What do we mean by a 'climate-smart education system'?

Climate-smart education systems must protect children, teachers, and communities from climate-related hazards through building resilience and adaptation to changing circumstances, and contribute to mitigation and environmental sustainability. There is a common set of elements to every climate-smart education system, but how each country approaches those elements should vary from context to context. This depends upon the type of climate and environment hazards they face, what resources and capacities are available, and what the available evidence suggests is the most impactful course of action, as well as their current starting point.



Figure E: Pathways of Change Framework

Reducing barriers to ensure all children are in education



Climate-smart education system:

PATHWAY ONE

More resilient and inclusive education systems

- Comprehensive approach to school safety
- Education in emergencies and protracted crises
- Sufficient, climate-smart education infrastructure

PATHWAY TWO

Knowledge, skills and agency for climate resilience and action

- Focus on foundational learning
- Education for sustainable development

Leads to



Increased, sustained access to education (particularly for girls) and improved learning outcomes relevant to children's realities



Contributes to

Climate and environment benefits:

- Improved resilience and adaptability
- Environmental stewardship and greener behaviours
- Empowerment and leadership
- Greener jobs, research and innovation
- Increased choice for family size
- Reduced inequalities

Improved resilience and adaptation to, and mitigation of, climate and environmental change

Enabling environment

Gender equality and inclusion
Systems strengthening, including coordination and financing
Teacher supply and support
Community engagement and empowerment

2.1 Pathway One: Resilient and inclusive education systems

Ensuring access to safe and inclusive learning facilities for all girls and boys is the right and smart thing to do. Children and teachers deserve to be protected from harm, and without access to education no other benefits of education can be realised. There is a strong economic case, as ensuring all new school infrastructure is climate-smart could lead to savings in terms of rebuilding schools after disasters strike and reducing learning loss. A climate-smart education system must prioritise protecting children and teachers from the impacts of extreme weather events and environmental change and provide continuity of education in the face of shocks.



Comprehensive approach to school safety

The Comprehensive School Safety Framework (CSSF)⁴⁴ sets out three pillars to improve safety at school in the face of all hazards and promote child rights and resilience in the education sector:

- Safer learning facilities: Where schools are built, from what materials, and using which construction methods are all critical to determining whether schools are resilient to hazards and inclusive or represent a risk to safety.
- 2. Education continuity management:
 The education sector must be part of national and sub-national approaches to disaster risk reduction (DRR) to protect schools at times of disaster and to ensure contingency for continuity of education.
- 3. Risk reduction and resilience education: In countries at risk of extreme weather events, incorporating DRR and resilience education into curricula has practical and life-saving benefits. Violence prevention and psychosocial support are also included within this pillar.

- » Geo-spatial mapping to identify areas and schools at risk of flooding or landslide.
- » Hazard-specific school design and construction adhering to codes and standards.
- » Maintenance and retrofitting existing schools.
- » Innovations such as floating schools.
- » Contingency plans and inclusive remote learning approaches.
- » Including education in disaster management plans.
- » Parental engagement and mobilisation of community.
- » Incorporating risk reduction and resilience into curricula and teacher training.

Education in emergencies and protracted crises

Emergency education will continue to be needed in the face of extreme weather events and climate shocks, particularly for displaced children. In 2021 alone, 22.3 million people were internally displaced by weather-related disasters, with devastating implications for their wellbeing and education⁴⁵.

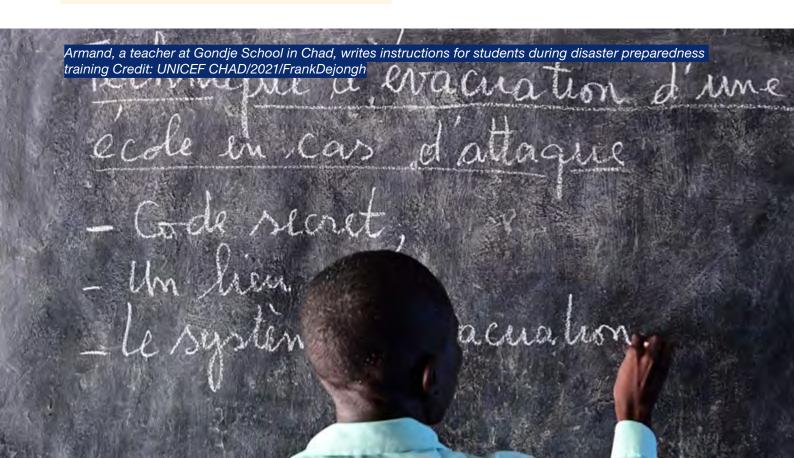
Possible actions

- » Contingency built into national education budgets and systems to accommodate displaced children.
- » Inclusive provision of quality emergency education outside of formal national systems to plug gaps, accessible to all girls and boys that need it.
- » Social protection, school feeding, and mental health, violence prevention, and psychosocial support.

Climate-smart infrastructure

Climate-smart infrastructure offers benefits beyond safety and can be much more conducive environments for student wellbeing and learning, while mitigating impact on the local environment.⁴⁶ Climatesmart infrastructure will look different in different contexts, depending on specific environmental hazards.

- » Building or retrofitting school buildings to optimise natural heat, light and ventilation, ensuring they are accessible to all children including those with disabilities.
- » Approaches such as painting school roofs white; school gardens; rainwater harvesting; planting trees.
- » Identifying clean energy sources.



2.2 Pathway Two: Building knowledge, skills, and agency for climate resilience and action

Education has a critical role to play in reducing vulnerability, improving communities' resilience and adaptive capacity, identifying innovations, and empowering individuals to be part of the solution to—rather than victims of—climate and environmental change. A climate-smart education system must prepare young people to not only survive but thrive in our rapidly changing world.

Focus on foundational learning for all

In the face of disasters, foundational skills can be lifesaving as they enable children to understand risk information. They are necessary for analysing questions, thinking critically, and communicating better to bring about behaviour change for adaptation and mitigation. Improving foundational learning outcomes for all children in early years makes strong economic sense as it represents efficiency savings in terms of grade repetition and drop-out, paves the way for more effective education systems, and has clear benefits for driving climate resilience.

Possible actions

- » Applying the RAPID approach⁴⁷:
 - Reach every child and keep them in school
 - Assess learning levels regularly
 - Prioritise the fundamentals
 - Increase efficiency of instruction, including catch-up learning
 - Develop psychosocial health and well-being
- » Structured pedagogy programmes to support teachers through lesson plans, books, and training.
- » Targeting instruction to a child's learning level and need.

Education for sustainable development (ESD)

Climate and environmental change are an increasing part of children's reality and education needs to prepare them to deal with this. A range of 'green skills⁴⁸ are needed, from softer skills to enhance adaptive and mitigative capacity to technical skills to support young people into green jobs. One of the barriers to education quality is that both curricula and teachers are overloaded. To avoid exacerbating this, climate and environment content needs to be mainstreamed.

There is limited evidence that knowledge transfer alone leads to behaviour change but we do know that curricula that leave children feeling helpless leads to apathy and eco-anxiety. The concept of 'global' climate change curricula should thus be treated with caution. Content should be accessible, actionable, and contextually relevant; be taught at an appropriate age; encourage problem solving; and be centred around hope to awaken students' agency to effect change.⁴⁹

- » DRR and resilience education.
- » Whole school approaches such as school gardens, rainwater harvesting, installing solar panels, bee-keeping, and tree planting.
- » Mainstreaming relevant green skills into curricula reform.
- » Recruitment and training of teachers at all levels, including with subject specialist knowledge.
- » Developing assessment approaches to determine the success of climate education in supporting more resilient, adaptive and mitigative behaviours.

Box 8: ESD for what?

UNESCO defines ESD as giving "learners of all ages the knowledge, skills, values and agency to address interconnected global challenges including climate change, loss of biodiversity, unsustainable use of resources, and inequality." For ESD to be effective, it must equip children and their communities to deal with the realities of climate and environmental change. This means that in lower-income contexts climate education should support behaviour change for resilience and adaptation, with some attention to mitigation through sustainable local environmental practices.

In higher-income contexts, focus should be given to mitigation in terms of consumption, emissions, and the global drivers of climate change. The purpose of climate education should be changing behaviours and instilling citizens with the ability and desire to implement change in their own lives and advocate for increased ambition from governments and businesses in addressing the drivers of climate and environmental change.

2.3 Enabling environment

The pathways of change are underpinned by the enabling environment. Four areas are considered: gender equality and inclusion, systems strengthening, teacher supply and support, and community engagement and mobilisation.

Gender equality and inclusion

Climate and environmental change amplifies inequalities. The poorest families in the poorest regions are hardest hit, with women and girls, Indigenous Peoples, and those with disabilities disproportionately affected. Advancing gender equality and inclusion offers positive climate and environmental impacts. Tackling barriers to participation and retention can help ensure marginalised children access the education needed to build resilience to climate and environmental change, and that climate initiatives benefit from diverse skills, knowledge, and leadership.

- » Education must be inclusive and reach the furthest behind including through accessible educational facilities.
- Empower those worst affected by the impacts of climate change and centre their voices as leaders and agents of change.
- » Reforms to promote gendertransformative education systems.
- » Complementary programming that promotes more equal access to education, particularly social protection programmes.

Systems strengthening

Large-scale change is needed in the systems that govern both education and environmental policy. There is poor integration of education in climate change plans and policies or vice versa, leading to worse outcomes for both sectors. Yet better leveraging linkages in data, evidence and coordination could provide important benefits to interventions.

Financing for education has increased over the last 15 years but remains far from the level needed. Within this context of scarce resources, Ministries of Education have difficult decisions to make about allocating funding. Climate change funding and policies should in every instance, however, be a cross-government approach.

Possible actions

- » Mainstream education throughout countries' Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs).
- » Include climate and environmental risk analyses and responses in education sector plans and strategies.
- » Take a multi-sectoral approach to bring together education, improved health and wellbeing, including sexual and reproductive health and rights, and wider (economic) development measures.
- » Secure additional financing for climatesmart education systems, particularly from climate finance.

Teacher supply and support

Teachers are the most important factor affecting learning and are crucial actors in combatting the climate crisis. However, lack of knowledge, confidence, training, and resources prevent teachers from being effective conduits for change. Teachers are at the frontline of the climate crisis and in times of climate shock their lives and livelihoods are put at risk, leading to physical and psychological hardship.

Possible actions

- » Support teacher safety and wellbeing.
- » Strengthen teacher workforce planning, recruitment, and management, especially at secondary level.
- » Specific training to teach climate concepts, science or support adaptation measures.



Dorcas studied agriculture at EARTH University, Costa Rica. Today she is a climate-smart expert passionate about improving food security and nutrition for rural communities like her own in Zambia Credit: CAMFED

Community engagement and empowerment

Schools do not exist in isolation. They are influenced by, and have influence on, the communities they serve. It is important to recognise the knowledge, skills, values, and agency that already exists within communities to tackle climate and environmental change and identify leaders who can support this work. Youth advocates and activists are an important part of this picture, locally, nationally and internationally.

- » Support girls and boys to effect change in their communities through raising awareness of DRR or sustainable practices.
- » Whole school approaches that have multiple benefits: Schools become more resilient and self-sufficient for nutrition, water and health, driving up wellbeing and learning; communities benefit from income-generation; and impact on local environments is reduced.
- » Engage communities to enhance the participation of girls and marginalised children in education.



3. DELIVERY

FCDO will use three levers of financing, people, and partnerships to deliver.

3.1 Financing

Financing for this agenda remains extremely limited. The proportion of climate finance internationally spent through education interventions has thus far been negligible, with one estimate suggesting that in 2018 a maximum of 0.03% of all climate finance (including from the private sector) was spent on education⁵⁰. This may suggest a lack of understanding of the proven and potential benefits of education for climate resilience, adaptation, and mitigation. FCDO recommends that more global climate finance be allocated to education as an essential part of the response over coming years⁵¹.

Funding is an important part of FCDO's development toolkit. In 2019, the Prime Minister announced that the UK will double its ICF spend to at least £11.6 billion. The UK has bilateral education programmes in approximately 20 countries across Africa, Asia and the Middle East and is a major supporter of the global education funds⁵². We also have a strong focus on education research.

A recent review of FCDO's education portfolio found that more could be done to mainstream climate and environment change policy considerations. The same is true of

mainstreaming education across FCDO's climate and environment programmes.

We will integrate climate and environment co-benefits into existing and new programmes across FCDO's education portfolio, making our investments more climate-smart. As set out in our education policy *Get Children Learning*⁵³, education programmes will prioritise securing improvement of learning for all. However, we will also drive a shift to better deliver the two pathways of change set out⁵⁴. This includes ensuring all programmes are compliant with the Paris Agreement⁵⁵.

We will better mainstream education across FCDO's climate and environment programming. This will require awareness raising and capacity building within FCDO to identify and capitalise on risks and opportunities.

The evidence base regarding the relationship between girls' education and climate change is nascent and limits our ability to act in the most effective way. Strengthening this to better inform policy and funding decisions is essential. We will flex our education and climate and environment research portfolios to identify opportunities to improve our understanding of the relationship and possible solutions.

Aside from UK funding, we will advocate for an increase in international climate finance to be spent on education. We will make the case for better recognition

of education as critical for climate action, calling for an increase in climate finance for already eligible education activities as well as strengthening the evidence base to enable expansion of eligibility in the future. We will seek to make climate finance mechanisms more accessible to education partners.

We will push for better integration of climate and environment considerations across education financing. All education funding must become more climate-smart, particularly where this represents better value for money for education outcomes.

Box 9: What education activities are eligible for climate finance?

As set out in this position paper, education in its entirety is essential for addressing climate and environmental change. However, current OECD guidance means that only a small subset of education activities with direct impacts upon the climate crisis are eligible for climate finance including technical higher education, green infrastructure, and climate curriculum development. While these activities are important, education funding should not be disproportionately skewed towards them. A three-pronged approach should be taken:

- Education activities already eligible should be funded through and recorded as climate finance accordingly. Activities to build more resilient education systems in the face of climate hazards are a clear starting point.
- Education activities focused on improving access to and quality of education for all must be prioritised,

- including where there is no immediate opportunity to access additional climate finance. Modifications to existing activity could enhance the climate and environment outcomes set out in the pathways of change framework, which could mean more education activities become eligible for climate finance in the short term.
- 3. In the medium term, more research is needed to better understand less direct impacts of education upon climate and environment outcomes—such as improving foundational learning—to support expansion of climate finance education spend. It is also important to understand the counterfactual of an absence of quality education for all in the face of increasing climate hazards.

3.2 People

People are pivotal to FCOD's development offer. Beyond designing and delivering UK aid funded programmes, UK technical experts work with national governments and development partners to support and influence their priorities, policies, budget allocations, and spending. As a diplomatic force, FCDO already promotes ambitious approaches to both education and climate change—but we will identify opportunities to bring these together for greater impact.

Sectors such as health have succeeded in securing a seat at climate negotiations where education has so far been slow to act. Climate stakeholders must recognise the imperative to include education. Specifically, education should feature meaningfully in

Nationally Determined Contributions (NDCs) and National Action Plans (NAPs).

We will build our capacity to deliver this agenda, including by providing technical support, advice, and training through two new faculties for Development and Climate and Environment.

We will foster better connections across technical disciplines within FCDO, such as education, climate and environment, infrastructure, social development, and health to develop the best possible, multisectoral approaches.

We will raise the profile of education in climate fora. Working closely with the UK Department for Education, we hope to increase the focus on education in NDCs and NAPs, through the United Nations Framework Convention on Climate Change (UNFCCC) and capitalise on the opportunity of annual climate Conferences of the Parties (COPs) to ensure education is part of the debates.

Box 10: What is the UK's domestic approach?

The UK Department for Education launched a Sustainability and Climate Change Strategy in 2022, which sets out how the UK education system will address climate change, including through a commitment to making school infrastructure resilient and net zero, building skills for a changing world, and enhancing the natural environment around school facilities. The strategy commits the UK to working with and learning from others to accelerate progress.

3.3 Partnerships

The UK's financial contribution to this agenda will remain a fraction of the financing required. Furthermore, our prioritisation of improving learning outcomes means that the bulk of UK funding will be spent on basic education, which is not the whole picture. To achieve the transformation set out in the pathways of change framework, we must build partnerships towards a common goal.

We will convene a coalition of the willing between education and climate partners to build momentum and consensus and support mutual learning. The table below sets out indicative asks of different types of partners, but we will remain open as opportunities arise.

We will advocate for better consideration of girls' education through the UNFCCC process. This would sit underneath the established gender equality pillar.

We will identify allies and partners to build specific partnerships with, both nationally and internationally. For instance, we will:

- » Develop a strategic partnership with USAID to advance climate action in and through education.
- » Expand the National Education Nature Park so that children across the globe can connect virtually, broaden their understanding of global challenges and amplify work happening in their communities⁵⁶.
- » Develop an international climate leaders award by 2027 ⁵⁷.

Table 2: Indicative asks of climate and education partners

Partners	Asks	
National governments	Make education systems climate-smart, including by mainstreaming climate considerations across education sector plans and allocating additional funding.	
	Urgently address the learning crisis by providing quality education for all which prepares children for the realities of changing climates.	
	Expand secondary provision and ensure sufficient subject specialist teachers with appropriate gender balance.	
	Provide a seat for education stakeholders at climate decision-making tables to identify meaningful opportunities to include education in the UNFCCC, including through NDCs and NAPs, as well as climate/environment programmes and projects. Consider developing sector-specific Education National Adaptation Plans.	
Bilateral donors	Mainstream climate change in and through education programmes and vice versa, prioritising win-wins for education and climate outcomes.	
	Explore opportunities for increasing the proportion of International Climate Finance (ICF) allocated to education in order to better reflect the role of education as a tool to foster climate resilience, adaptation and mitigation.	
Multilaterals	Review all climate and education financing strategies to identify and promote stronger co-benefits and joint interventions.	
	Enhance GPE's role in fostering resilient and climate-smart education systems in the face of climate risks and hazards.	
	Strengthen Education Cannot Wait (ECW)'s role in ensuring continuity of education for all in the face of increasing extreme weather events and emergencies.	
Civil Society Organisations and youth	Mobilise young people to advance climate solutions in their homes, schools and communities.	
	Empower young people to hold governments and others to account for policy and budgetary decisions.	
	Continue to advocate for climate-smart education systems, keeping a firm focus on the needs of the most marginalised.	
	Implement projects in line with the pathways for change, pioneering innovation, complementing, informing and supplementing action led by other actors.	
Academics and research partners	Continue to strengthen the evidence base by conducting research to understand what works to address climate change in and through education.	
Private sector and philanthropies	Fund programmes and research to strengthen innovation, action, and knowledge towards climate-smart education systems.	

Box 11: How can we maximise existing partnerships to find new opportunities?

FCDO has worked with the Global Partnership for Education (GPE) to strengthen its offer to countries in making education systems climate-smart. We co-hosted a conference in June 2022 to explore GPE partner countries' needs, opportunities and promising approaches, which have informed design of a new partnership. This will provide dedicated funding to support countries to mainstream climate change mitigation and adaptation into education sector plans, budgets and strategies as well as to enhance education ministry capacity for cross-sectoral coordination on climate-related policy and programming.



4. CALL TO ACTION

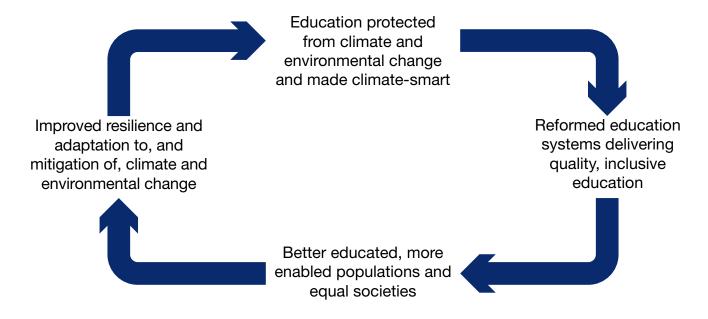
Without urgent action, we risk failing to provide a generation of young people with the skills they need to survive and thrive in our rapidly changing world, and we risk that world becoming an increasingly difficult place for them to grow up.

Currently a vicious cycle exists. Climate and environmental change cause major disruption to education, exacerbating existing challenges to securing SDG4. This disruption is accelerating. Climate change could reverse development gains hard won in recent decades, and erode education achievements in access and learning. This will have a disproportionate impact on girls and women,

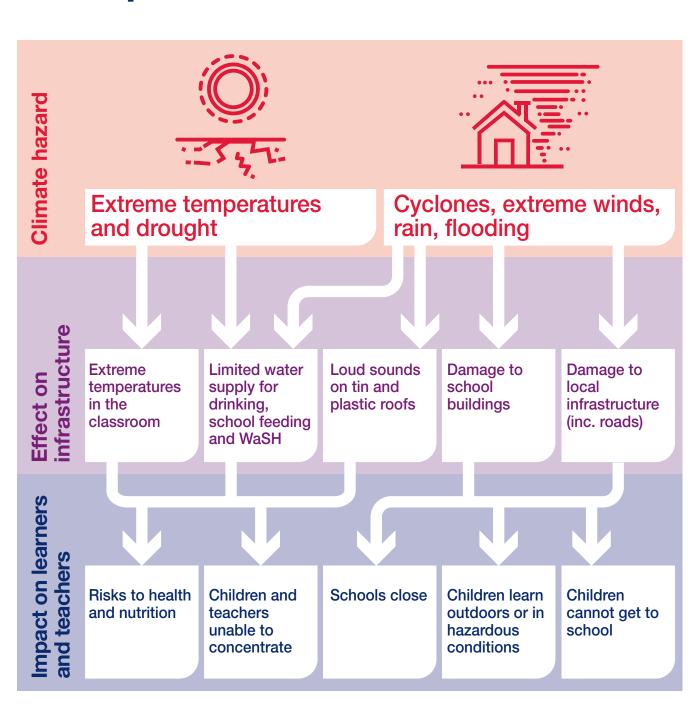
the poorest and most marginalised. Poorly educated populations are less resilient and able to adapt to the existing crisis and have limited opportunities to mitigate further change.

There is still time to develop a virtuous cycle. Protecting education from climate and environmental change and delivering quality education for all would have a multitude of benefits. The world depends upon current generations of children and young people gaining the knowledge, skills, and agency they need, to have an impact as the engaged citizens and leaders of tomorrow.

Figure F: A virtuous cycle for education and climate change



ANNEX A: Relationship between climate hazards, infrastructure, and impact on children⁵⁸



ANNEX B: The intergenerational benefits of girls' secondary education⁵⁹



Girls with a secondary education are...

Reproductive choice

Less likely to suffer early marriage

More likely to access contraception & practise reproductive choice

Economic participation & empowerment

Would likely have up to 50% higher earnings than those with no education

More likely to have expanded work opportunities and social mobility

Maternal and child health

More likely to have fewer but healthier children who are more likely to be inoculated, well nourished and less likely to die in childhood

More likely to have their first child later and less likely to die in childbirth

Agency & political engagement

Better equipped and more likely to engage in familial, societal & political change

More likely to be empowered and experience less violence due to greater autonomy and self worth

Society benefits from educated girls and women because...

Economic empowerment & social mobility

Education increases women's access to the workplace

Wage earning women have greater economic independence at home and in society

Demographic transition

More women in the workplace can increase the tax base

Reduced student cohorts enable increases in per capita education spending, raising quality Improved population health status reduces health costs/ enables positive shifts in health investment

Addressing the climate emergency

Girls' education through linkage to reproductive choice and health gains provides positive environmental benefits.

Better educated populations are more engaged and better equipped in addressing the climate emergency

Improved health & learning

Educated mothers are more likely to adopt preventative health such as inoculation and have better nourished children

Improved nutrition leads to better child learning

Better mother and child health improves productivity

More and stronger voices for equity & diversity

Increasing the number of educated girls leads to greater representation of women in influential positions, e.g., teaching and politics

After Bangay, 2022. Education, anthropogenic environmental change, and sustainable development: A rudimentary framework and reflections on proposed causal pathways for positive change in low- and lower-middle income countries. Development Policy Review

ANNEX C: Country typology approach to addressing climate and environmental change in and through education

	LICs and LMICs	UMICs	HICs
Primary focus	Resilience and adaptation to existing and future climate change. Imperative to ensure development objectives can continue in the face of climate change.	Resilience, adaptation, and mitigation. Imperative to avoid path dependency and secure equitable development.	Mitigation and adaptation of primary importance as well as funding for other countries' resilience and adaptation under loss and damage agenda.
Resources and capacities to act	Comparatively low. Learning crisis acute and education systems weak, including due to limited budgets and lack of trained teachers and learning materials. Climate and environmental change already posing major disruption.	Comparatively moderate. Areas of strength in education systems, but with persistent challenges of inequality. Climate and environmental change already posing major disruption.	Comparatively high. Strong education systems (although still with inequalities) furnished with trained teachers and learning materials. Increasing disruption from climate and environmental change.
Funding	From national budgets From Multilaterals From Bilateral donors	From national budgets From Multilaterals	From national budgets To Multilaterals To LICs and LMICs

ENDNOTES

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