



COMMONWEALTH *of* LEARNING

Transforming Education for Climate Action:

REPORT TO
COMMONWEALTH
MINISTERS OF
EDUCATION



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The Commonwealth of Learning (COL) is an intergovernmental organisation created by Commonwealth Heads of Government to promote the development and sharing of open learning and distance education knowledge, resources and technologies.

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Foreword

The climate crisis is one of the defining issues of our times. The report of the UN Intergovernmental Panel on Climate Change has highlighted the unprecedented rise in global temperatures and found that humans are the primary cause for the adverse changes to the planet's ecosystem. The impact of this increase is already being felt in severe weather events, including heatwaves, fires, flooding, and rising sea levels. It is time for every government, organisation and individual to make a co-ordinated effort to prevent future climate-related disasters. Collaboration will be key if the magnitude of the challenge is to be addressed.



The education sector, too, is responsible for a growing environmental footprint, attributable to both institutional and learner-generated emissions. To increase access to quality education and training, the Commonwealth of Learning (COL) promotes open and distance learning (ODL), which has been found to reduce carbon emissions. A COL study in Botswana shows that the average carbon footprint of the distance learner is nearly three times less than that of their campus counterparts. This suggests that ODL or blended learning modes can decrease emissions by reducing face-to-face contact hours.

COL has initiated several activities to promote environmental conservation through education and training by leveraging appropriate technologies. COL's work promotes the four Rs: reducing carbon emissions, raising awareness about climate change, reskilling for a greener future, and building resilience in the education sector.

This is also an important issue for COL because it serves 32 small states and numerous vulnerable communities that are disproportionately affected by climate change. Recognising the need to raise awareness and build the capacity of Commonwealth citizens for adapting to and mitigating climate change, COL engaged with key stakeholders to identify their priorities and concerns. This was followed by the creation of a high-level Panel on Climate Change and Education, comprising ministers of education as well as representatives of UNESCO and the Commonwealth Secretariat, to guide the development and finalisation of the present report. I am grateful to each member for giving generously of their expertise and time.

It gives me great pleasure to present *Transforming Education for Climate Action: Report to Commonwealth Ministers of Education*, an important document that will help shape the education agenda in the coming years. This report provides a road map for how ministers of education can climate-proof education systems, implement a green learning agenda that builds skills for blue and green economies, and promote education for climate action through policy development, resource allocation and effective implementation. The recommendations also focus on the important issues of quality, equity and justice. Here is a valuable opportunity for ministers of education to provide the leadership needed to support all Commonwealth countries in building resilient systems that can provide equitable quality education for all.

The time is ripe, and the time is now!

Professor Asha Kanwar
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Executive Summary

The climate crisis presents an unprecedented global challenge, which can also be an opportunity for Commonwealth ministers of education to demonstrate what science-driven, justice-centred, and civic-minded climate leadership can do to help put small island developing states and climate-vulnerable countries on a path to climate resilience and climate justice. However, key climate strategies among Commonwealth countries suggest that such leadership may need to be given a boost.

To guide such leadership, this report provides practical recommendations and sets priorities for Commonwealth ministers of education to climate-proof their education systems, transform learning for a blue and green economy, and mainstream education for climate action across the whole of government.

Part 1 provides an overview of the five recommendations for Commonwealth ministers of education to “green” their education systems. These recommendations are to strengthen the climate resilience of their (1) education infrastructure, (2) operational procedures, (3) organisational structures, (4) delivery approaches and (5) human resources in the face of local climate-change realities, all while foregrounding issues of justice and equity.

Part 2 introduces three approaches Commonwealth ministers of education can pursue to build the breadth of green (and blue¹) skills among learners across their lifetime. These skills will help to (1) facilitate growth in the green and blue economy, (2) orient individual behaviours towards sustainability, and (3) achieve systems transformation that targets root drivers of climate vulnerability among Commonwealth countries. This “New Green Learning Agenda” should be localised to Commonwealth country contexts in partnership with local universities and education specialists.

Part 3 lays out three recommendations to help address key challenges to scale, continuity and impact by mainstreaming education for climate action across Commonwealth governments. These recommendations are to (1) strengthen policy coherence and co-ordination around education for climate action, (2) build climate consciousness among all Commonwealth government personnel, and (3) mobilise financing for strengthening education systems.

By implementing this system of education solutions, Commonwealth ministries of education can set their education systems on a path to climate adaptation and decarbonisation, strengthen individual and collective responses to the climate crisis, and pursue sustainable economic development within planetary boundaries while transforming social and socioecological relationships to achieve human rights and gender equality.

¹ The term “green” is used liberally here to denote an orientation to sustainability that is positioned above the necessary social foundations for human well-being and below planetary boundaries. “Green” does not exclude the priorities, mindsets and logics of those countries for whom a “blue” economy — one centred on marine lands rather than green lands — takes precedence. “Green” includes “blue.”

Introduction: Climate Change and the Commonwealth

Commonwealth countries reflect the diversity and complexity of both the underlying drivers of the climate crisis and the system of transformative solutions, including education, needed to address climate change and its impacts.

No other group of states in the world holds such an array of climate narratives as the Commonwealth. Four of the top 20 carbon-emitting countries in the world are Member States, as are some of the world's lowest carbon-emitting small island developing states. There are countries experiencing the detrimental effects of melting ice (from tropical glaciers in Kenya, Tanzania and Uganda), as well as countries dealing with the loss of their ancestral homes due to warming oceans and rising sea levels. There are countries experiencing desertification, more frequent record-setting heatwaves and drought, more frequent destructive cyclones and wildfires, as well as saltwater intrusion and devastating flooding.

These climate shocks pose an exceptionally high risk for historically marginalised groups. These include women and girls, indigenous populations, people with disabilities, and minority populations for whom existing systems of discrimination and structures of inequality not only exacerbate their own vulnerabilities but also reduce the capacity of the state to adapt effectively. The Commonwealth includes countries with some of the highest rates of out-of-school girls and youths in the world. It is also home to a very young population, with over 60 per cent of its collective population under the age of 29. As such, it includes more than a quarter of the world's top 50 countries where children bear a high or extremely high risk of exposure and vulnerability to the impacts of climate change (UNICEF, 2021). Empowering these groups with transformative education for climate action and climate justice will make all the difference in the face of humanity's worst existential crisis.

However, at present, few countries in the world are adequately preparing present and future generations with the knowledge, skills, attitudes and behaviours required to mitigate against and adapt to the impacts of climate change — much less recalibrate our social and economic systems to fall within planetary boundaries.



Many Commonwealth countries, from Canada to Seychelles, have begun to develop low-carbon or net-zero development strategies or green Covid-recovery plans — all of which will ultimately fall short if children, youths and adults are not given the opportunity to build the sustainability mindsets and breadth of green skills needed to implement these policies today or to carry these forward tomorrow as the next-generation workforce.

If Covid-19 was any indication of the ripple effect that environmental shocks can have on educational disruption and the path toward the Sustainable Development Goals, the climate crisis threatens to magnify this tenfold. But unlike the educational disruptions experienced during Covid-19 lockdowns — which, at their peak, impacted more than one billion learners² — the climate crisis will pair school closures with the destruction of school buildings by extreme weather events, with economic shocks brought on by the nonviability of rain-fed agriculture-based livelihoods, with the migration and displacement of families due to sea-level rise or prolonged drought, and so on.

Commonwealth ministers of education need a system of education solutions and responses not only to tackle the climate crisis but also to transform societies for the better. These include (1) actions to green the education system and strengthen its climate resilience — both its tangible and its intangible assets — and (2) steps to implement a New Green Learning Agenda for a blue and green economy. Both systems of solutions are the subject of this report, which offers concrete recommendations for Commonwealth ministers of education to jumpstart this green and blue transformation.

Commonwealth ministers of education need a system of education solutions and responses not only to tackle the climate crisis but also to transform societies for the better.

² See the UNESCO Global Monitoring of School Closures, <https://en.unesco.org/covid19/educationresponse#schoolclosures>.

In the sections that follow, the report will survey the present level of climate change education ambition as indicated by Commonwealth countries' Nationally Determined Contributions. The report then provides recommendations for Commonwealth education ministers to make their education systems more climate resilient and introduces the core tenets of a New Green Learning Agenda, or a way of educating that aims to align our social and economic systems within planetary boundaries. While its principles are universal, Commonwealth stakeholders should contextualise the translation and implementation of such a learning agenda to individual Commonwealth countries' contexts. Finally, the report outlines cross-cutting recommendations to create the necessary enabling environment for education for climate action in a post-Covid world.

Climate Change Education in Commonwealth Climate Strategies

While the status quo in Commonwealth countries, like the rest of the world, is dismal, it offers a temperature check to help diagnose the problem and to identify a course of action.

A Nationally Determined Contribution (NDC) is a country's strategy to reduce greenhouse gas emissions and adapt to the impacts of climate change. NDCs are often developed by countries' ministries of environment (or climate change) and are submitted to the United Nations Framework Convention on Climate Change (UNFCCC) every five years as part of each country's commitment to the Paris Agreement. Countries were expected to submit their second NDC in 2020.

An analysis of Commonwealth countries' NDCs offers a temporal glimpse of their climate change education ambition. As such, caution must be exercised when drawing conclusions or generalisations about how specific Commonwealth countries have or have not prioritised education for climate action. Nonetheless, on the whole, such analysis provides an important indication of how Commonwealth countries have positioned education solutions amidst the larger system of climate solutions.³ With greater awareness, Commonwealth ministers of education can more proactively identify linkages with other sectors' climate action strategies, take bolder steps to sit at climate decision-making tables (or pull up an extra chair, if needed), and initiate the capacity building and leadership development required across the whole of government to raise climate change education policy ambition and mobilise resources to follow.

³ In contrast, UNESCO (2021) conducted an analysis of 46 countries' education sector plans and national curriculum frameworks, including those from 17 Commonwealth countries, to understand how climate change is being treated in education policy. Like the analysis of NDCs (climate policies), UNESCO found that countries' education policies are not paying enough attention to climate change.



At the time of writing, 42 of 54 Commonwealth countries have submitted an updated, revised or new NDC to the UNFCCC. An analysis of these NDCs published by Education International found that over 75 per cent of Commonwealth countries' NDCs scored failing grades on the Education International Climate Change Education Ambition Report Card.⁴ While 33 (or 79 per cent) of Commonwealth countries reference education in some way in their NDC, only 12 NDCs (or 29 per cent) actually reference *climate change education* as a climate strategy.

Gambia had the highest NDC of the Commonwealth countries, scoring a B (on a 42-point curve) for satisfying key indicators of quality climate change education for all, including calling for climate change education across all levels of education and across all subject areas and pointing out the need for teacher training to deliver climate change education.

Notably, the Commonwealth's most climate-vulnerable countries were more likely to reference climate change education in their NDC than countries with greater capacity to adapt — although there were alarming exceptions, such as Bangladesh, Kenya, Maldives, Nigeria, Tanzania, Uganda and Zambia, countries with intersecting vulnerabilities yet no reference to climate change education.⁵ Seven NDCs (Barbados, Fiji, Kenya, Malawi, Mozambique, Nauru and Solomon Islands) discussed education as collateral damage of the climate crisis, citing damage to school buildings caused by extreme storms and flooding. Yet, only two NDCs (Antigua and Barbuda and Saint Lucia) referenced the need to green school buildings and to make school infrastructure more climate resilient as a climate adaptation strategy.

⁴ The findings discussed in this section were developed from the author's calculations using the Education International Climate Change Education Ambition Report Card (Kwauk, 2022).

⁵ Climate vulnerability is defined here in terms of a country's vulnerability to climate change and its readiness to adapt, as measured by the ND-GAIN Country Index (University of Notre Dame, 2022), as well as the vulnerability borne by a country's children to climate and environmental shocks, as measured by the UNICEF Children's Climate Risk Index.

In reference to building “green” (or “blue”) human capital, 52 per cent of NDCs from the Commonwealth referenced a range of green skills required to enhance the capacity of Commonwealth countries to address the climate crisis. However, of these general references, only six NDCs did so in the context of creating pathways to jobs in the green (or blue) economy (Antigua and Barbuda, Cameroon, Namibia, Nigeria, Sierra Leone, and St Kitts and Nevis), and only two (the United Kingdom and Vanuatu) did so with reference to developing such skills through climate-change education.

Similarly, with respect to attention to marginalised and vulnerable groups, Commonwealth countries’ NDCs vary in their attention to the populations that experience the impacts of climate change most acutely. Using women and children as a proxy for vulnerable groups, the same Education International analysis found that 88 per cent of Commonwealth NDCs refer to gender and women, and 83 per cent refer to children and youths. Yet only 55 per cent mention the need to achieve gender equality, and 26 per cent mention the need to achieve intergenerational equity and/or refer to future generations. Furthermore, of the 14 Commonwealth countries ranked highest by UNICEF in terms of the vulnerability and risks borne by the country’s children to climate and environmental shocks, none draws attention to the need to ensure that children’s right to education is uninterrupted by climate-related events (UNICEF, 2021). Finally, of the 30 countries identified by the Malala Fund as ones where climate change is anticipated to disrupt the education of girls the most, ten are Commonwealth countries and none have NDCs that mention girls (Malala Fund, 2021). Indeed, only nine Commonwealth countries’ NDCs mention girls at all, and only one (the United Kingdom) does so in the context of their education.

Again, while this analysis of NDCs is indicative of policy ambition around climate change education, it should be interpreted cautiously, as NDCs are only one type of policy document — and are often prepared by ministries of environment (or the equivalent) without consulting ministry of education stakeholders. As such, these policy documents also often miss the work happening “on the ground,” like the “Green Schools” (or Fehi Madharusa) initiative in Maldives developed in collaboration between Soneva Namoonaa (an NGO), the Ministry of Education, and the National Institute of Education to nurture a generation of young leaders who will guide their communities to a climate-resilient future. Another such example is the work spearheaded by the Guyana Environmental Protection Agency to mainstream climate change education into the country’s technical and vocational training institutions to help prepare the next-generation workforce for understanding how climate change impacts their industry and what they can do to adapt their industry practices to these impacts or mitigate against further emissions.

PART 1: Pathways to Climate-Resilient Commonwealth Education Systems

To strengthen the climate resilience of Commonwealth education systems, Commonwealth countries should have policies and implementation plans (including financing) to adapt and fortify their physical infrastructure (including technology), their operating procedures, their organisational structures, their delivery and assessment approaches, and their human resources to local climate-change realities, all while centring issues of justice and equity.

1. Climate-proof the education infrastructure to local climate realities

The news media is dotted with reports on the number of schools destroyed by super typhoons and cyclones or temporarily closed because of excessive heat or air pollution. Such climate-related events are expected to become more frequent and prolonged, threatening to further disrupt learning and normalcy for children already struggling from Covid disruptions. Moreover, climate-related events threaten to exacerbate poverty and inequality, trigger more public health outbreaks and epidemics, and place an increasing financial strain on governments, as communities and households must work to rebuild after each disaster — sometimes not long after the previous one.

Given such forecasts, governments should shift from reacting to climate-related shocks to proactively reducing the education system's climate vulnerabilities while designing schools to be more climate resilient. As part of their disaster risk reduction strategies and commitment to climate action, Commonwealth countries could conduct a climate risk assessment of their national education systems



and then embark on country-wide campaigns to climate-proof their education infrastructure to local climate realities, be these rising temperatures or heat waves, floods or landslides, storm surges or rising sea levels, droughts or wildfires, increased allergens and migrating pests, or crop failure and food insecurity.

Governments should shift from reacting to climate-related shocks to proactively reducing the education system's climate vulnerabilities while designing schools to be more climate resilient.

Communities that are historically marginalised, most vulnerable to climate impacts, and least equipped to cope should be prioritised when it comes to climate-proofing school infrastructure. To ensure the risks borne by the most vulnerable communities and members of society are taken into account, climate risk assessments should be conducted at the community level, in consultation with local community leaders and education stakeholders, including women and girls, youths, and children with disabilities. Such a microlevel analysis will enable

Commonwealth ministries of education together with ministries of environment to identify present and future community-specific climate risks and environmental hazards. Different climate risks and environmental hazards require different adaptations for school buildings, school yards, and even access roads. In some cases, climate-proofing may require relocating schools to less vulnerable places in the community, or ensuring schools are designed for multiple purposes, including serving as shelters and disaster recovery centres.

Regardless of the adaptation, cross-sectoral collaborations will be key to climate-proofing school infrastructure. Tools and guidelines for resilience in schools may be developed. Commonwealth ministers of education will need to assemble the right climate resilience teams to retrofit or construct new climate-ready schools. Such teams might include environmental and civil engineers, transportation engineers, sustainable design architects, materials engineers, and specialists in

Cross-sectoral collaborations will be key to climate-proofing school infrastructure.

public health, the learning sciences, IT, gender, and civil society — not to mention youths as key agents of change. In short, it will take a village to redesign what safe and healthy schools look like in different communities in Commonwealth countries amidst a worsening climate crisis.

2. Develop operating procedures for sustaining education in climate emergencies

In addition to climate-proofing education facilities and built environments, Commonwealth ministers of education should also consider climate-proofing other key *intangible* aspects of education systems.

These include processes and procedures for helping to sustain the learning and essential social services that education systems provide to learners and their communities during climate-related emergencies. This is especially critical once it becomes safe to do so after an extreme weather event, as schools often serve as evacuation centres, recovery shelters, and distribution sites for humanitarian assistance. Although a vital community-serving function, such multifunctionality has a side effect of delaying students' return to in-person school. With school buildings likely to be occupied after disaster, it is vital that Commonwealth ministries of education have a plan for how to resume learning as soon as possible.

Disaster-ready operating procedures — including, for example, e-learning or distance learning strategies — allow school leaders, educators, students, and their families to have a clear plan (or set of plans) for returning to “school” as soon as possible — be it in person or temporarily through radio, television broadcast, or other distance or virtual learning platforms. Studies from school disruptions — whether due to weather-related disasters or to public health outbreaks like Ebola or Covid-19 — demonstrate the short- and long-term impact that prolonged school disruptions can have on re-enrolment, learning, mental and physical health, and eventually earnings, especially for adolescent girls (Azevedo et al., 2021). An important part of building a climate-resilient education system is being ready — in the spirit of the Sendai Framework for Disaster Risk Reduction (United Nations, 2015) — for and minimising the length and effects of such disruptions.

Most recently, Covid-related school closures forced many countries to test-run distance learning, generating context-specific lessons learned and practices that could be improved upon for future climate-related disruptions (Munoz-Najar et al., 2022). For instance, many countries used television and radio to provide some continuity of learning during school shutdowns, and this could be replicated for use during climate-related school disruptions or even adapted into a climate change learning platform for the broader public during

Amidst a worsening climate crisis, it will take a village to redesign what safe and healthy schools look like in different communities in Commonwealth countries.



times of normalcy. Such preparedness, including among teachers, is especially critical when it comes to serving learners without access to the Internet or Internet-capable devices, and learners for whom gender norms and/or economic circumstances may limit their opportunity to participate in lengthy distance learning activities at home or, especially, in temporary shelters. Of course, such disaster-ready operating procedures for sustaining education in climate emergencies have direct implications for ensuring that the infrastructure of learning-adjacent systems — including but not limited to ICT infrastructure, school nutrition, and social protection programmes — are also climate-ready and climate-proofed. Covid taught us that partnerships between ministries of education and community-based organisations, as well as school management committees, became an important educational lifeline for the hardest to reach learners, especially adolescent girls, and their households (Oulo et al., 2021). Identifying such partnerships prior to a climate-related disaster is vital for establishing the networks to be activated during and after a disaster. And such interconnected systems of response further demonstrate the need for a systems-wide approach — and a whole-of-government approach — to strengthening the climate resilience of Commonwealth countries.

Other intangible aspects of education systems include the role that schools play in the socialisation, mental health, and well-being of children and youths, as well as the adults around them. As such, disaster-ready operating procedures need to be trauma-informed. Not only does this mean considering how trauma may impact children's and teachers' behaviour and their ability to learn and teach. It also means designing curricula for and training educators to recognise climate-related trauma and climate anxiety, and providing tools to support students and adults experiencing such trauma to cope in a culture of care and trust.

3. Orient education organisational structures towards mitigating climate risk and achieving climate resilience

Commonwealth ministers of education should orient their entire education systems towards addressing the existential nature of the climate crisis. This will require retooling the organisational structures and functions of and within ministries of education to the priorities, practices and processes that promote sustainability and reduce climate risk and vulnerabilities.

Such orientation may require creating new departmental entities and co-ordinating bodies within ministries of education that are dedicated to climate change. For instance, the monitoring and assessment department may require a new sub-unit that works closely with the ministry of climate and is dedicated to collecting data — perhaps from the climate risk assessments discussed earlier — to identify and monitor the nature of climate risks to school infrastructure, human resources, and/or other critical public (e.g., water), health (e.g., nutrition) and social (e.g., child protection) services provided at schools. This sub-unit might need to be connected to another new unit whose responsibility is to identify and deploy the right climate resilience teams to communities to identify and implement solutions that reduce these risks. Yet another sub-unit may need to be created whose responsibility is to track the extent of environmental damage to education infrastructure or to monitor and respond to the needs of vulnerable learner populations. This sub-unit might collect data for monitoring and response purposes, including tracking the number of school facilities needing repairs and the climate-related causes of destruction, or the number of students impacted — disaggregated by gender and location — and the number of days of learning lost as a result.

Orienting organisational structures to the climate crisis will also require mainstreaming climate change into existing organisational functions and feedback mechanisms. For instance, climate change specialists will be needed within curriculum development units to help integrate climate topics into different subject area textbooks or into pre- and in-service teacher training programmes. The procurement department may need new policies to ensure education expenditures are spent on sustainable or reusable materials, environmentally friendly products, local school food sources, and low-carbon options in the school's purchasing supply chain. And the student assessment and teacher evaluation units may need to update their assessments, monitoring tools, and evaluation forms to include green teaching and learning outcomes. Doing so would enable Commonwealth ministries of education to better track the effectiveness of education programmes on climate outcomes, as well as the impact of climate change education programmes on climate action targets, including green workforce development.

4. Build climate literacy and capacity across the education workforce to address the climate crisis

Building organisational capacity within Commonwealth ministries of education to orient to the climate crisis could begin with the appointment of climate focal points within ministry units, or climate change specialists in education resource centres and outposts in remote parts of Commonwealth countries. But it should not end here. One person cannot address the scale and urgency of the climate crisis, nor should one person bear the burden of climate-proofing an education system while the rest of it continues business as usual. Rather, there is a need to build climate literacy and personal leadership across every member of the education workforce, from the bottom up and middle out, from entry level to senior management, from now and for the foreseeable future.

Indeed, the climate crisis demands that all personnel be sensitised and attuned to climate change. They do not need to become climate scientists, but they do need to become climate literate. And they need to be made aware of how climate change impacts their area of work and/or how their area of work may even contribute to the crisis.

To facilitate the capacity building of the adults in the education system, Commonwealth ministries of education should engage all personnel in lifelong learning and continued professional development in both the technical and sociological dimensions of the climate crisis. These efforts should at a minimum build a breadth of green skills (to be discussed further below) and an understanding of mitigation, adaptation, and disaster risk reduction to plan and respond effectively and equitably.

Commonwealth ministries of education should also intentionally position themselves as learning organisations and engage in activities that support them to become more nimble, responsive and adaptive to the climate crisis. This could include sponsoring learning exchanges between curriculum development units

There is a need to build climate literacy and personal leadership across every member of the education workforce.

from one Commonwealth country to another, with the goal of learning how each may be designing problem-based learning experiences to enable students to engage in climate action. Or it could be running capacity-building workshops between in-country climate resilience teams to strengthen internal systems for climate risk identification, communication, and mitigation. Or it could be

creating dashboards and channels for sharing data and lessons learned, not only with decision makers and policy makers but across all ministry personnel.

In short, Commonwealth ministries of education should become system-aware of the ways in which climate change shapes new vulnerabilities, creates the need for new solutions, and/or necessitates alternative actions in education. But ministries of education, as complex systems of organisations of people, can only accomplish this if every person within the system is self-aware of the effects of climate change on the education system and their individual role in strengthening the system's collective resilience.

Empower teachers to teach climate change education

Teachers are among the key personnel that Commonwealth countries should target for building climate literacy and adaptive capacity. Global and regional surveys consistently demonstrate a strong interest and desire among teachers to teach climate change, often well over three-quarters of teachers surveyed (UNESCO & Education International, 2021). These surveys also consistently demonstrate that many teachers do not feel they have the appropriate background and training to teach about climate, nor do they feel confident teaching the interrelated scientific or social concepts (UNESCO & Education International, 2021). As key agents of change in the education system, teachers need to be empowered to integrate climate change into whatever subject they teach.

Teachers need to be empowered to integrate climate change into whatever subject they teach.

Commonwealth ministries of education can support this by developing a minimum set of standards for the incorporation of basic environmental science and climate change education — in all of its cognitive and affective dimensions — into all pre-service teacher training programmes and courses. Building these foundations early will mean later in-service teacher training does not need to fill in these basic knowledge gaps but can instead focus on, for instance, upskilling teachers' use of green pedagogies oriented to climate action (including project-based learning) and/or new digital learning tools to enhance the learning and application of green skills. Again, the point is not to turn every teacher into a climate scientist or climate activist, but to have teachers grasp the basics so they can make curricular connections to climate change themselves and identify ways of teaching climate change and climate justice issues to learners in trauma-informed and developmentally appropriate ways.

To support and empower existing teachers in the education workforce, Commonwealth ministries of education should co-develop with teachers and



educators a set of minimum standards that mixes climate change education content and a breadth of green skills development into teacher training, leadership development and professional development. Such programmes can and should leverage a blend of asynchronous self-paced digital training modules, synchronous virtual seminars and discussions, and in-person trainings and workshops that take advantage of outdoor learning spaces as much as possible.

On a practical level, teacher training programmes should also be focused on helping teachers integrate climate change connections into existing lessons plans, rather than positioning climate change as an additional topic they need to master and then add to an already packed syllabus. Indeed, encouraging practices like team teaching — for example, between language arts and science teachers — and teacher support networks can help fill short-term knowledge and capacity gaps while building teachers' confidence to integrate multidisciplinary aspects of and interdisciplinary connections to climate change into their own teaching practice.

And because climate change is a global systems issue between humans and the environment, teacher training programmes should build teachers' awareness of and capacity to touch upon the deeply relational aspects of climate change. This includes recognising and bringing to the attention of learners how human activity is causing climate change and how more sustainable behaviours and healthier relationships with the environment can stop it. It also includes building teachers' awareness of how social inequality and structures of discrimination contribute to heightened vulnerabilities to climate change for some groups more than others, and how they and their students can work to empower vulnerable groups by eliminating such inequities. Finally, it also includes strengthening teacher-student relationships, especially when it comes to building trust among students to engage in critical inquiry about an existential crisis that may evoke strong socioemotional experiences and psychological responses among learners, including trauma, eco-anxiety, and grief at the loss of biodiversity, human life, and culture due to the impacts of climate change.

Clearing time for and providing support to Commonwealth teachers to engage in such training is essential to strengthening the climate resilience and adaptive capacities of Commonwealth education systems and future generations in Commonwealth countries. Importantly, however, Commonwealth ministries of education should not stop at orienting teachers' hearts (affective), minds (cognitive) and hands (skills) to climate action, but should view teachers as key stakeholders among whom to build climate literacy.

5. Decarbonise the education system, including the delivery of education

Although most Commonwealth Member States are low carbon-emitting countries, climate-proofing and building climate resilience within Commonwealth education systems will also require simultaneously “greening” and decarbonising education systems to the greatest extent possible. This includes Commonwealth education systems’ consumption of energy, water and other natural resources for regular school and ministry operations; their supply chains for procuring things like school food, textbooks, digital technologies, sanitary pads and other materials; their production and disposal of organic (i.e., food) and nonorganic waste (e.g., plastic bottles) versus reusables; and their associated greenhouse gas emissions from school-related travel and transportation. The latter is especially the case for students studying internationally within the Commonwealth.

Critical to monitoring and tracking progress to decarbonisation is conducting regular audits of the education system’s energy usage by energy type (e.g., coal, natural gas, renewable energy, etc.), its consumption of water, petrol, paper, single-use plastics, and other resources, as well as their associated financial and environmental costs, including greenhouse gas emissions. This step can be most closely aligned with existing processes in Commonwealth ministries of environment that may already be conducting regular greenhouse gas inventories of different sectors and tracking their progress toward national emissions reduction targets.

Transitioning schools and ministry of education offices to renewable energies, encouraging their adoption of energy-efficient technologies and sustainable materials, and reducing their consumption and waste production practices (including reuse and disposal of e-waste) are just the beginning steps to decarbonising Commonwealth education systems. Another important step is to decarbonise the very delivery of education by adopting zero-emission or low-emission activities. This includes but is not limited to the adoption of distance learning and digital learning technologies in Commonwealth institutions of higher education.

Consider the carbon footprint advantage of distance and digital learning

Research estimates that the carbon footprint of a distance learner is much less than that of their on-campus counterpart (Campbell & Campbell, 2011; Carr et al., 2019). The majority of this difference is attributable to transportation — mainly because distance learners do not need to travel to campus daily, reducing their carbon footprints by almost six times (Carr et al., 2019). One study in Botswana

suggests that the remaining difference can be accounted for by distance learners' total lower energy usage, including at-home and on-campus energy use, as well as their total lower use of paper and textbooks, which create more emissions to produce and distribute than digital learning materials such as CDs. This study also found that distance learners are more likely to be conservative in their ICT purchases — that is, they are more likely to use existing ICT equipment or to purchase lower-emission devices like tablets than high-emission devices like laptops, which in-person learners purchase at a higher rate per capita (Carr et al., 2019). While additional research is needed to understand more fully the carbon implications of distance learning in different contexts, it appears to offer one pathway to decarbonising the education system.

Distance learning also helps Commonwealth ministries of education to expand access to learning opportunities, for both teachers and students — an important equity consideration. For instance, Commonwealth ministries of education are able to increase the outreach of their training programmes to teachers at very little cost by removing the time required to travel to different schools and the cost of transportation, including its consequent emissions. For teachers, such distance learning options open access to professional development and certification opportunities that would otherwise have been inaccessible due to cost (both financial and opportunity). Similarly, distance learning creates access to educational opportunities for learners who may not have the opportunity in their own community and/or do not have the means to travel, either domestically to another part of the country or internationally.⁶

Commonwealth countries should consider three additional factors when assessing the carbon footprint advantage of online and distance learning. First, if implemented systematically and with equity considerations in mind, distance learning can include the hardest to reach if their needs are taken into account. For example, blended approaches, including distance learning with in-person tutorials, have worked well in developing country contexts (Baggaley, 2007). However, distance education may not always be appropriate for very young learners, for whom peer-to-peer social learning is critical in their cognitive and social development. And it is clear from Covid research that gender norms, poverty and/or geographic isolation can turn into significant barriers to accessing distance learning, especially for girls in socially conservative societies and learners in low-income and/or remote areas (Presidential Policy and Strategy Unit & Population Council, 2021).

⁶ See, for example, the One UN Climate Change Learning Partnership (UN CC:Learn), a collaborative initiative involving 34 multi-lateral organisations and providing online lessons on climate change: <https://www.uncclearn.org/>.

Second, the quality of distance learning is highly dependent on a number of factors. Key among these is the degree to which teachers are trained in and feel confident about using digital pedagogies and e-learning platforms and technologies. Also important is whether teachers are supported by their schools and institutions to deliver such instruction, especially when technology malfunctions.

Finally, the reach and continuity that distance learning affords is constrained by a country's existing ICT infrastructure. Blackouts, power disruptions, and poor Internet connectivity can be real barriers to effective teaching and learning. This has equity implications if distance learning is employed for the purpose of reaching hard-to-reach communities that tend also to be poorer, have uneven access to electronic learning devices, and be less connected to the digital world. And it has implications for building climate resilience among communities that cannot quickly get reconnected to electricity and the Internet after a climate-related disaster. Therefore, the technology deployed needs to be appropriate, affordable and accessible. The publication *Guidelines for Distance Education During COVID-19* (Commonwealth of Learning, 2020) provides several suggestions for appropriate use of distance and online provision to suit the needs of various stakeholders.





PART 2: Three Approaches to a New Green Learning Agenda for the Commonwealth

To strengthen the climate resilience and adaptive capacity of children, youths and adults, Commonwealth countries should adopt a New Green Learning Agenda — an approach to quality education for climate action that transforms society’s relationship with its life-supporting socioecological systems.

Building climate literacy is neither a competing priority nor an additional learning objective that teachers need to find time to teach. Rather, building climate literacy is fundamental to achieving foundational literacy and numeracy on a planet in crisis. Education under a “business as usual” approach has become part of the underlying system of problems driving the climate crisis, churning out graduates who do not understand the basic principles of planetary boundaries and, as a result, contribute to the growth of unsustainable economies.

Commonwealth ministers of education should ask themselves what the purpose of education is if not to prepare present and future generations to secure jobs and livelihoods that sustain life on this planet.

To help chart humanity on this course, Commonwealth ministers of education should adopt a New Green Learning Agenda that aims to build in learners a breadth of green skills (see Figure 1) required to mitigate against further greenhouse gas emissions, support just transitions to a green (and blue) economy, adapt to the impacts of climate change, and transform inequitable

Building climate literacy is fundamental to achieving foundational literacy and numeracy on a planet in crisis.

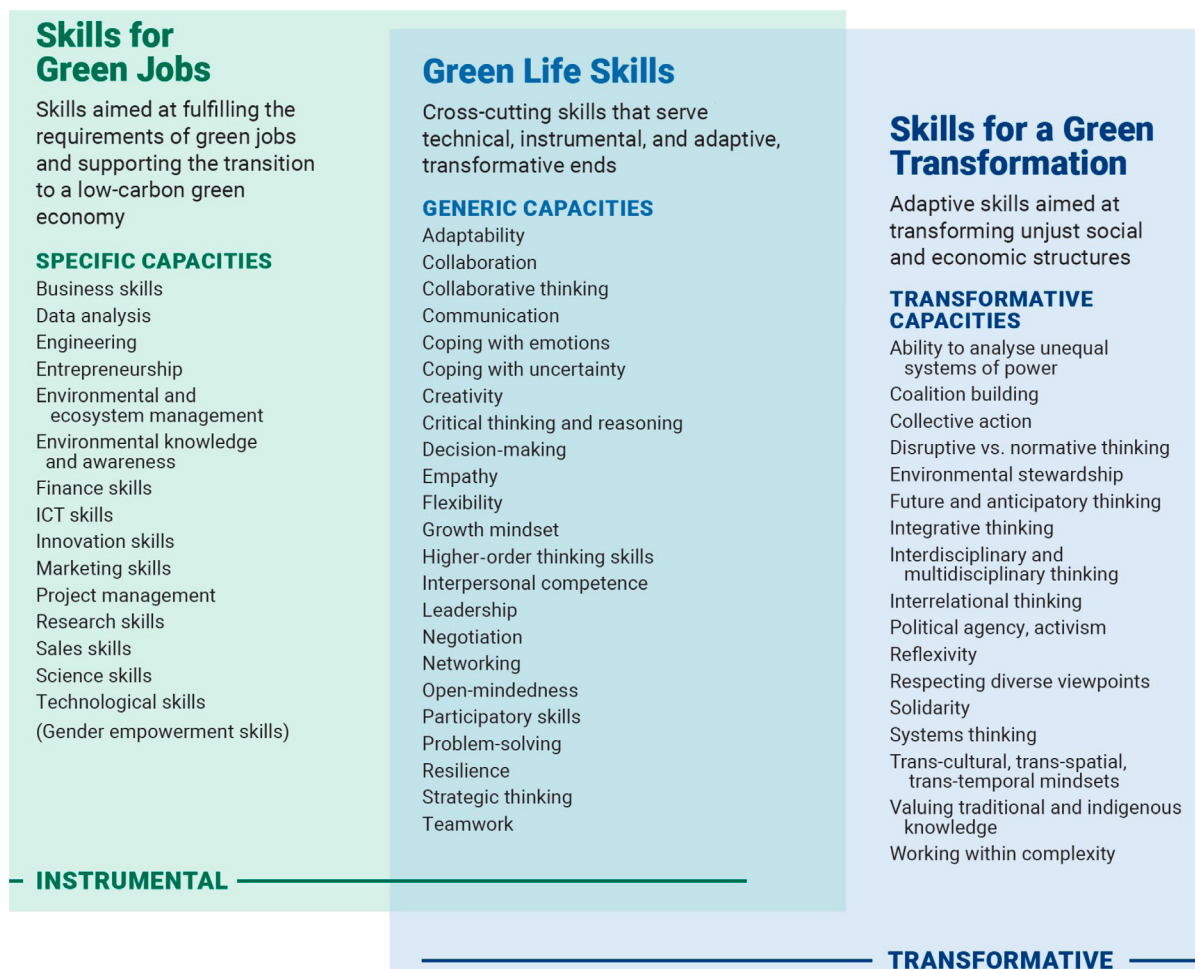


Figure 1. The breadth of green skills (Kwauk & Casey, 2021).

and unsustainable systems that both drive the climate crisis and unequally structure climate vulnerabilities (Kwauk & Casey, 2021, 2022). Here, the term “green” is used liberally to denote an orientation to sustainability that builds the necessary social foundations for human well-being and achieves a vision of development within planetary boundaries (Raworth, 2017). “Green” does not exclude the priorities, mindsets and logics of those countries for whom a “blue” economy — one centred on marine lands rather than green lands — takes precedence. “Green” includes “blue.”

Adopting a New Green Learning Agenda does not need to entail a complete overhaul or reform of the national curriculum, although Commonwealth ministers of education should nonetheless promote the integration of climate change education throughout all subject areas and across all levels of the education system, and they should ensure climate change education is grounded in science, is gender-responsive, and fosters civic engagement, climate action and an awareness of climate justice (Kwauk, 2022).⁷ Rather, adopting a New Green Learning Agenda is about improving the quality of education through place-based learning that makes learning relevant to local contexts and to learners’ experiences. There is no one-size-fits-all New Green Learning Agenda.

⁷ See also the Education International Manifesto for Quality Climate Change Education for All, <https://www.ei-ie.org/en/item/24244:education-international-manifesto-on-quality-climate-change-education-for-all>.

Again, the goal is not to turn learners into climate scientists or climate activists, but to build foundational awareness within learners of their relationship to their environment and to its life-supporting systems. Commonwealth ministries of education can help do this by ensuring education develops learners' ability to see and think in systems, drawing important connections between cause and effect. The next three sections elaborate further on the three approaches to education that, together, constitute such an agenda.

There is no one-size-fits-all New Green Learning Agenda.

1. Build green skills for jobs in the green and blue economy

To support Commonwealth countries in further mitigating greenhouse gas emissions and to achieve a just transition to a low-carbon economy, Commonwealth ministries of education should build a green (and blue) workforce with the specific skills and capacities required for decent, sustainable, well-paying and empowering green and blue jobs aligned with national development policies and priorities.⁸ These skills include science, technology, engineering and mathematics (STEM) skills but, importantly, also include a range of other specific capacities, like ecosystem management, data analysis, entrepreneurship, and project management, among others. These are skills required by specific jobs in the green and blue economy today and tomorrow.⁹ Importantly, skills like the ability to self-advocate and to advocate for others, or the ability to act upon one's social environment in empowering ways are also specific gender empowerment skills required for green and blue jobs that build women's and men's sense of autonomy, agency and self-efficacy (Kwauk & Casey, 2022).

To build such a green (and blue) workforce, Commonwealth ministries of education should develop and implement gender-transformative technical and vocational education and training (TVET) that provides clear career pathways to the green and blue economy. Here, gender-transformative TVET is defined as TVET programmes that seek to address the underlying causes of gender inequality and that actively work to transform harmful relations of power, gender roles, norms and stereotypes (UNFPA, UNICEF, & UN Women, 2020).

TVET programmes in Commonwealth countries should tackle their “gender problem” when it comes to highly gendered enrolments in certain fields.

⁸ Green (and blue) jobs are defined here as “any job that contributes to the well-being and flourishing of present and future generations; upholds human rights, including women's rights and the rights of indigenous populations and peoples of color; and supports the regeneration of the natural world, its resources, and its interdependent socio-ecological systems on which our human economies rely” (Kwauk & Casey, 2021, p. 38).

⁹ While a New Green Learning Agenda was conceptualised with the “green economy” in mind, its underlying principles can also be applied to the “blue economy” — defined here as a sustainable marine-based economy.



This means TVET programmes in Commonwealth countries should tackle their “gender problem” when it comes to highly gendered enrolments in certain fields, which ultimately prevent gender-equitable access to green or blue job opportunities.

To create clearer pathways to the green and blue economy, Commonwealth ministries of education, in close collaboration with their workforce development counterparts, could begin by introducing and exposing learners to green and blue jobs early on — as early as pre-primary and primary — and by ensuring gender diversity. These include jobs that need to be made more sustainable by adopting greener technologies and practices (e.g., climate-smart agriculturalist), “dirty” jobs that will be replaced by “cleaner,” more sustainable versions (e.g., electric vehicle mechanic instead of car mechanic), and new jobs that are emerging or will emerge to facilitate low-carbon transitions or to respond to climate necessities (e.g., wind turbine technician, climate risk analyst, etc.). Importantly, such job exposure should also include green and blue entrepreneurs who are creating new jobs out of necessity and innovation.

The next major steps are to audit Commonwealth TVET curricula and build linkages (and train TVET educators to make these linkages) to issues in environmental conservation, preservation and restoration, and to the sustainability solutions that are related to each field of training. For example, engineering students may need to be made aware of the environmental impacts of improper disposal of harmful materials and chemicals and build knowledge and skills — through the use of digital learning tools and platforms, where appropriate and possible — for how to properly dispose of them or even how to reduce their reliance on them in the first place. At the same time, Commonwealth ministries of education should also ensure there are opportunities for learners to participate in

hands-on “green” apprenticeships (both virtual and in-person) to develop more of their applied green skills, and to receive “green” scholarships that sponsor learners’ further education and training (including online and distance learning options) in relevant green and blue careers. As green industries develop their distance training capacities, virtual platforms should be explored further to aid the development of green skills. Practical hands-on training for students should be a fundamental part of these strategies.

In short, Commonwealth ministries of education should consider the human resources and the knowledge, skills and mindsets they need to develop to transform their economies into climate adapted ones.

2. Build green life skills

From pre-primary through to tertiary education, Commonwealth ministries of education should nurture and build among all learners of all ages important cross-cutting life skills (also known as 21st-century skills, soft skills, or socioemotional skills) that can strengthen their adaptive capacity and climate resilience through the adoption of sustainable behaviours and low-carbon mindsets (Kwauk & Casey, 2022). This means schools and other places of learning should build knowledge and awareness about climate change while orienting learners’ generic capacities — such as critical thinking, problem solving, communication, decision making, and empathy — toward thinking, being and doing in “greener” ways. In other words, life-skills education needs to become “green life-skills” education if climate change is to become a fundamental orienting compass in people’s worldviews, lifestyles and behaviours. Such green life-skills education can and should draw on indigenous knowledge, where possible.

Life-skills education needs to become “green life-skills” education.

What does green life-skills education look like? First, it begins with a *cognitive* entry point — understanding the scientific and social scientific dimensions, including indigenous ways of knowing, that underly a local example of how climate change or environmental destruction is impacting one’s own community: frequent saltwater intrusion into the local water supply due to storm surges and sea level rise; local crop failure due to prolonged drought; the destruction of historic and cultural landmarks due to a super typhoon; an increasingly erratic monsoon season that has caused excessive flooding and landslides; clearing of indigenous lands for large-scale commercial agriculture, and so forth. Part of the cognitive entry point is to develop, through critical and intersectional inquiry, a greater capacity for consequential thinking, including understanding intended and unintended impacts.



Second, there should be an *affective* or emotional connection to this cognitive entry point — how has this climate-related event impacted me and my community, or how could this disrupt one community more than another and why? Key here, and leading to the third, *existential*, dimension, is the teacher’s preparedness to identify and respond with care and support to any potential trauma or anxiety that learners, including climate refugees, may have experienced directly or indirectly from the example. Part of dealing with existential threats is being confronted with one’s vulnerabilities or the precarity of one’s way of living and being. In addition, learners should be guided through such existential reflections by teachers who are prepared to help them centre their learning journey in values that respect and uphold human rights while fighting against racism, sexism, homophobia, xenophobia and other harmful worldviews. A sense of social and self-awareness grounded in human rights can lead learners to see the incompleteness of their and others’ worldviews, and to critically question things they and others in their community may have taken for granted.

Combining the cognitive understanding, the affective connection, and the existential reflection helps to build the impetus for action and behavioural change. Here, the fourth and fifth aspects of green life-skills education, *ownership* and *empowered action*, help guide learners from greener thinking and greener being to greener “doing.” Green life-skills education helps learners develop a sense of personal responsibility and personal leadership by developing a strong personal connection to the issues and the solutions. And when such educational opportunities are linked with opportunities to engage in empowered action or even dissent, ownership transforms into self-efficacy and a sense of agency. In this regard, green life-skills education can be an important pathway not only to more sustainable behaviours but to empowered climate action (Kwauk & Casey, 2022).

To get here, Commonwealth ministries of education should work with their universities and education research facilities to develop, in consultation with young people and indigenous peoples, critical climate change education teaching and

learning materials that reflect local climate realities, indigenous knowledge, and local climate solutions. Just as there is no one-size-fits-all solution to building the climate resilience of education infrastructure, there is no one-size-fits-all green life-skills curriculum for Commonwealth countries. Instead, Commonwealth ministries of education will need to work in tandem with their local education specialists, communities, and young people, tapping into international experts on evidenced-based best practices in green pedagogies where gaps may exist.

Critically, digital learning tools can help to facilitate the different dimensions of green (and blue) life-skills education. For instance, carbon footprint calculators can aid in building learners' awareness of their own or their family's energy usage, creating a greater sense of ownership over new sustainable behaviours they and their families may need to adopt. Videos documenting indigenous knowledge and environmental conservation practices can help build cognitive knowledge of solutions. Or online discussion forums can enable students in one location to share their experiences with students from another location, building empathy, solidarity, social awareness and other affective connections to climate change that could otherwise be abstract and distant. Of course, ensuring teacher readiness to engage digital learning tools will be vital to the success of such learning aids.

3. Build green skills for systems transformation

While the previous approach builds important foundations for more sustainable, greener individual behaviours and actions, this final and third approach builds green (and blue) skills that foster more equitable and sustainable social and economic systems through collective action and civic engagement. It promotes transformative learning for climate action by fostering social and ecological awareness that expands learners' orientation from individual behavioural change to achieving wider social and systems change, targeting root drivers of climate vulnerability and risk.

Building green skills for systems transformation is a lifelong endeavour.

This approach focuses on building transformative capacities like systems thinking, future thinking, solidarity, and coalition building. It moves negotiation skills into activism and leadership into political agency — all key to empowering learners to become change agents, whether from secondary to tertiary education, from business management schools to technical training programmes, or from civil society to Commonwealth country negotiators at international climate negotiations.



Here, often in spaces of critical dialogue and critical and reflexive inquiry, learners become equipped with the green skills needed to identify and interrogate unjust social and economic structures and unequal power relations. The vision of this transformative approach to learning for climate action is that by valuing indigenous and traditional knowledge, upholding environmental stewardship rather the exploitation of natural resources, and recognising that the health of society is intricately tied to the health of the planet, learners can begin to replace the underlying and unsustainable logics, assumptions and rules of our present extractive systems with ones that aim to achieve human well-being within planetary boundaries.

Commonwealth ministers of education should move to implement transformative learning for climate action and climate justice in their countries — many of which did little to contribute to the climate crisis yet bear a disproportionate burden of climate risks and vulnerabilities and have few resources and little capacity to adapt to its impacts. Indeed, many communities across the most climate-vulnerable Commonwealth countries will confront, over the next few decades, the existential decision of having to abandon their ancestral lands due to rising sea levels, excessive flooding, or unending drought. In this context, building green skills for systems transformation is a lifelong endeavour to be implemented in both formal and nonformal learning environments by Commonwealth ministries of education and their counterparts in social welfare or community development, and in partnership with community-based organisations familiar with the underlying root causes of the inequalities and inequities that structure their community's climate vulnerability and risk.

And to ensure learners have the opportunity to build pathways to “green” decision making, policy making, and leadership, Commonwealth ministries of education should also organise “green” fellowship, sabbatical or secondment opportunities that place junior and mid-level green or blue practitioners into government units at the sub-national and national levels to build green skills for systems transformation by learning directly from the realities of the system. Green “incubators” and “accelerators” co-hosted by Commonwealth governments and universities could also help to engage local youths while facilitating local innovations that address local needs and catalyse local transformations.

Together, all three approaches discussed above — (1) green skills for jobs in the green and blue economy, (2) green life skills for greener ways of thinking, being and doing, and (3) green skills for equitable system transformation — constitute a New Green Learning Agenda (see Figure 2). All three approaches need to be pursued simultaneously by Commonwealth ministries of education and their lifelong learning counterparts, with the goal that all educational institution types will target the development of a breadth of green skills.

Approaches to quality education for climate action			
Problem frame for the climate crisis	Technical challenge	Adaptive challenge	
Source of the problem	CO ₂	Unsustainable individual behaviours	Unjust social and economic systems
Vision of the solution	Just transition to green economy	Sustainable pro-environmental behaviours	Sustainable, equitable systems
Education objective	Specific capacities	Generic capacities	Transformative capacity
Green skills framework	Green jobs	Green life skills	Green transformation
Green learning agenda	Gender-transformative green TVET	Critical climate change education	Transformative learning for climate action

Figure 2. A New Green Learning Agenda (Kwauk & Casey, 2021).

PART 3: Leadership for Climate Action in the Commonwealth

To climate-proof education systems and implement a New Green Learning Agenda, Commonwealth countries need to orient decision makers and policy mechanisms across the whole of government toward enabling a system of education solutions for climate action.

1. Build greater policy coherence and co-ordination around a system of education solutions for climate action

A strong approach to mainstreaming education for climate action in the Commonwealth starts with a clear mandate by Commonwealth governments and their ministries of education to implement a system of education solutions for climate action. Such a mandate — aligned with other policies and frameworks, like the Commonwealth Blue Charter or UNESCO’s Education for Sustainable Development for 2030 Framework — should include but is not limited to taking comprehensive actions to strengthen the overall climate resilience of the education system and to implement a New Green Learning Agenda. The former includes greening the education system’s physical infrastructure, as well as its operating procedures, organisational structures, delivery approaches and human resources. The latter includes integrating climate change, climate action and climate justice through gender-transformative green TVET, climate change education across all levels of education and training, and transformative learning across the lifetime.

Without such a clear mandate, scale and continuity remain some of the biggest hurdles to implementation and impact. Too often, there are exemplar concept schools — green schools or eco-schools — that have low carbon footprints and/or cutting-edge approaches to integrating environmental and climate literacy into their curriculum. In other cases, a grant might give a Commonwealth ministry of education the funding to develop climate change teaching and learning materials



and to pilot the curriculum in a few schools and train a handful of teachers. In yet other cases, meaningful climate change education might be taking place at a specific school because of the endless passion and tireless efforts of a lone climate champion. But the impacts of these small islands of success, pilot projects, and passionate initiatives remain limited because their underlying model cannot be scaled, due largely to cost, the cessation of project funding, the lack of a critical mass, or all of the above.

Nonetheless, the urgency of the climate crisis requires a whole-of-government approach to education systems transformation. Within this approach, it is important to develop multistakeholder partnerships, to hold consultations with and involve teachers and teacher unions, and to engage broader legislative processes outside the education sector for cross-sectoral linkages. A clear mandate from the top would create an enabling environment for all necessary downstream and cross-stream activities and resources to be allocated. This includes developing strategic sector

The urgency of the climate crisis requires a whole-of-government approach to education systems transformation.

plans and aligning cross-sectoral strategies (especially between Commonwealth ministries of education and environment), creating intra- and inter-ministerial co-ordination mechanisms and cross-sectoral teams (e.g., climate resilience teams), integrating climate and education priorities into annual budgets and agency and inter-agency workplans, changing school governance and policies, creating indicators and metrics to monitor progress, and so on.

All of these are the organisational and operational ingredients vital to achieving scale and continuity. Wherever possible, incentives could be provided to help nudge behavioural change in the short term.

2. Create more climate change education champions within governments

The patchwork presence of climate change education champions across all levels and all ministries within Commonwealth governments is a related hurdle to achieving the scale of implementation, continuity of activities, and degree of impact necessary to address climate risks and vulnerabilities borne by Commonwealth countries, especially the most vulnerable. If leadership at the highest policy level does not recognise the importance of a resilient education system in the face of the climate crisis or the importance of climate change education to the adaptive capacity of any and all sectors, all the downstream cross-sectoral policies and mechanisms for co-ordinating the implementation of education and training will be weakened.

But just as high-level leadership is important to signalling the prioritisation of education for climate action, if climate leadership at the individual level across all levels of civil society is absent, the continuity of that prioritisation is at the mercy of changes in leadership and government. To minimise disruptions to climate actions and consequent time lost to the climate crisis, Commonwealth countries need everyone in every occupation thinking about climate change and championing climate change education for the youngest of learners at school all the way to the eldest learners in the workforce. This means creating climate change education champions out of accountants who see the need to learn how to align budgets in support of greener procurement options, tax policy specialists who see the need to learn how to align tax incentives to the well-being of people and the planet, drivers who see the need to learn how to use new technologies to optimise their delivery routes to minimise emissions, nurses who see the need to learn how climate risks put their community's health at risk and how, in turn, to educate their most vulnerable populations about mitigating these risks, not to mention school leaders who see the need to learn how to monitor their school's climate vulnerabilities and the students most likely to be impacted.

As such, Commonwealth ministries of education and their lifelong learning counterparts should work to strengthen people's capacity to see these connections and to strengthen their response to the climate crisis through their day-to-day work and activities. Instead of treating climate change as an external or ancillary topic, Commonwealth ministries of education should identify ways to fully integrate it into the DNA of their goals and operations — much like advocates of gender equality in education have done with gender mainstreaming. In this way, a New Green Learning Agenda is not just for children and youths in school settings. It is also for the workforce, civil society, leaders and policy makers, whose activities and decision making will make all the difference to the quality of life of future generations on this planet.

3. Mobilise climate financing and partnerships towards strengthening education systems

Even if Commonwealth ministries of education are fully willing to green their education systems and adopt a New Green Learning Agenda, at the end of the day, they need the budget to support implementation. Until market mechanisms bring down the cost of “doing green,” transforming education for climate action will likely cost more than most Commonwealth ministries of education have at their disposal. This is especially the case for those Commonwealth countries struggling to deliver quality basic education even before Covid-19 austerity measures threatened the size of their education budgets.

Nonetheless, competing priorities for financing should not be the reason that Commonwealth ministers of education delay action. Strengthening inputs to Commonwealth education systems, especially for small island developing states and climate-vulnerable countries in the Commonwealth, is mission critical for the survival of many communities over the next century. Outside of new inputs that require financial and technical support from the international community, there are also transformations to the “education-as-usual” model that Commonwealth countries can begin to implement, especially actions that simply require reorienting approaches to education policy and planning and to teaching and learning that foreground planetary health and human well-being and promote climate justice.

Meanwhile, Commonwealth ministries of education could begin to signal to international and multilateral donors as well as to climate financing facilities and the private sector that Commonwealth countries are ready to address the climate crisis through the education and training of present and future generations. Indeed, Commonwealth ministries of education should make a unified call to raise awareness among donors that financing the system of education solutions as an investment in sustainable development is vital to tackling climate change. This includes, at a minimum, achieving the recommended education financing level of four to six per cent of GDP or 20 per cent of total government expenditure. Not only do these investments and solutions build the breadth of green skills to power green recoveries and just transitions to low-carbon economies; they also build the adaptive capacity and climate resilience of those communities most vulnerable to the impacts of climate change, yet least responsible for it.



Conclusion

The impacts of climate change on Commonwealth education systems are not hypothetical. Indeed, many Commonwealth education systems — and the learners, educators, staff and administrators who are part of them — are already feeling the impacts of extreme weather events and prolonged environmental hazards exacerbated by climate change. Commonwealth ministers of education should ask themselves what good “education as usual” will do for present and future generations on this planet if it does not build a breadth of green skills and strengthen their resilience to survive and thrive in a climate-impacted world.

Commonwealth countries have an unprecedented opportunity to set an example for the rest of the world. They have the opportunity to demonstrate what education leadership looks like in a time of climate crisis. They have the opportunity to build a strong, unified coalition of countries that acts in solidarity and partnership to transform systems of discrimination and challenge unequal power relations. And they have the opportunity to demonstrate how to transform their education systems to promote human well-being in balance with Earth’s ecosystems, without sacrificing sustainable economic development that falls within planetary boundaries.

To step up to these opportunities, this report provides three major sets of recommendations for Commonwealth ministers of education: (1) climate-proof the whole of Commonwealth education systems, from their physical infrastructure to their organisational structures and operating procedures, their human resources, and their modes of delivery; (2) localise and implement a New Green Learning Agenda that builds a breadth of green skills for jobs in the green and blue economy, green life skills, and green skills for systems transformation; and (3) mainstream education for climate action through policy, personnel and finance.

Overall, Commonwealth ministers of education should prioritise these actions:

- **Fill monitoring and planning data gaps.** Begin with community-based climate risk assessments to identify climate vulnerabilities and risk. Aggregate these to inform national and sub-national responses to strengthen climate resilience. Conduct system-wide audits to identify pathways to decarbonisation. Monitor green learning outcomes and their climate impacts. Share lessons learned, best practices, and failures for the rapid diffusion of knowledge and know-how.
- **Increase the climate literacy, breadth of green skills, and personal leadership of personnel, from top to bottom and the middle out,** to build climate change education champions throughout government and to enable a whole-of-government approach to education for climate action.
- **Strengthen policy ambition, coherence and continuity** by aligning budgets to ambition and implementation, while centring justice, equity, inclusion and the contextualisation of responses to local climate realities. This also includes raising the climate change education ambition in NDCs and converting these into national strategies.
- **Mainstream climate risk perception, decarbonisation goals and environmental sustainability into Commonwealth ministries of education's operations, procedures, processes and strategies** to formalise “green” thinking, being and doing in the day-to-day.
- **Mobilise climate finance toward implementing a system of education solutions for climate action,** and put education for climate action at the centre of all international collaborations and partnerships.

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