

Sustainability and resilience: Can education deliver?

19–23 February 2018, Suva, Fiji



The Commonwealth



20th CONFERENCE OF COMMONWEALTH EDUCATION MINISTERS

Sustainability and resilience: Can education deliver?

Thematic Issues Paper

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Suva, Fiji**



The Commonwealth

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Executive summary

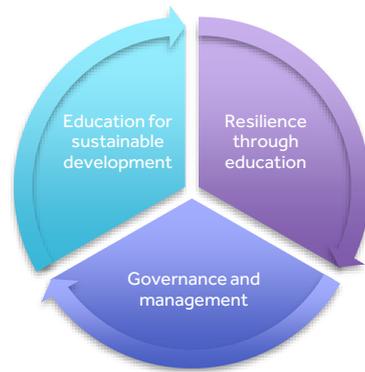
The Commonwealth is facing many challenges in the twenty-first century. These include burgeoning youth populations, climate change and environmental uncertainty, high rates of out-of-school youth, persistent illiteracy and poverty, increasing cybercrime and ethnic and religious tensions. Educational investment lies at the heart of public policy responses to these challenges and is a primary mechanism to meet the shifting needs of societies in transition.

There is a new agenda for educational development across the Commonwealth that has benefited from inputs made under 18CCEM and 19CCEM. Commonwealth ministers have emphasized the key role of education for sustainable development (ESD) while reaffirming the Commonwealth values of equity, access and development (Commonwealth Secretariat, 2015). The Nassau Declaration (2015) noted a range of challenges facing Commonwealth member countries, relating to participation in early childhood care and education (ECCE), out-of-school children, adult illiteracy, gender disparities in primary and secondary schooling and funding gaps. It mandated a number of actions, including establishment of the Education Ministers Action Group and the Commonwealth Accelerated Development Mechanism for Education Technical Working Group. It also developed the Commonwealth Education Policy Framework and the Commonwealth Curriculum Framework to enable and set up the Commonwealth Scholarship and Fellowship Plan Task Force.

The overarching theme of the 20CCEM, *'Sustainability and resilience: Can education deliver?'*, raises important questions. These include, how can education systems deliver high-quality learning for all children, youth and adults at affordable costs? How should education systems change to promote sustainable development that does not deplete the economic, cultural and social resources of the planet? What kind of resilience should be encouraged to prepare new generations to meet the demands of the future? How can sustainable educational development be financed? How can equity, efficiency and effectiveness be promoted to deliver rights to education to all that include ESD?

Three inter-related sets of issues stand out and are the themes of the 20CCEM. They are:

1. **Developing ESD** - education as a key enabler for sustainable development, skills development and transitions from education to work;
2. **Building resilience through education** - education as a response to twenty-first century crises in the environment and in social development, including the implications of climate change and migration for ESD and the curriculum, especially for the peoples of small and atoll islands and for citizens displaced by conflict and political instability, whose right to education needs protecting;
3. **Enhancing educational governance and management** - strengthening the teaching profession and school management to improve quality, and developing equitable methods of financing universal access to ESD.



Diversity characterises the Commonwealth countries, which are home to nearly 2.5 billion people. The biggest country is India, with over 1.3 billion people; the smallest island states have fewer than 50,000 inhabitants. Gross domestic product (GDP) per capita varies by more than 100 times, covering a range from US\$500 to over \$50,000, which demonstrates countries' extreme differences in wealth and financial resources.

The richest countries have population growth below 1 per cent and are likely to have fewer children than adults in the population, and declining enrolment in schools. The poorest countries have population growth over 2.5 per cent, with a doubling of the number of children every 25 years or so. They have many more children than working adults. More than half of those in the poorest Commonwealth countries are below national poverty lines. In these countries, under-five mortality can be over 65 per cent, and up to 40 per cent of children are stunted. In contrast, middle- and high-income countries have very good social indicators across the Commonwealth.

This diversity is one of the Commonwealth's strength. At the same time, it means that sustainable development, resilience and governance issues will be very different, and that solutions to development problems will be embedded in context.

This report develops insights into the three thematic priorities of the 20CCEM to stimulate policy dialogue and encourage the sharing of Commonwealth experiences.

Developing education for sustainable development

Member countries must give meaning to the core ideas of sustainable development and translate these into different languages and cultural and economic literacies. The commonalities and differences should be reflected in the curriculum and in infrastructural investment for ESD. The implication is that:

- National and regional groups should be convened to promote ESD across the curriculum;
- Criteria and norms and standards for sustainable development are needed for school systems, taking into account environmental impacts and the need to reduce the net carbon burden;
- There is a need to implement the Nassau Declaration Action Plan and share insights and better practice and increase research collaborations.

Equitable access to education is very uneven across the Commonwealth. Poverty remains the main cause of exclusion from quality education and from the competition for jobs linked to educational qualifications. The 20CCEM should:

- Identify, diagnose and devise interventions to remove sources of inequality in participation and achievement attributable to household income, location, gender and other forms of disadvantage;

- Provide Commonwealth recognition for public policy that succeeds in promoting equity in a sustainable way;
- Publish Commonwealth data participation and achievement disaggregated by wealth, location, gender and disability, civic status and language/ethnic group.

ECCE and pre-schooling are critical to mental and physical development. Children who go to pre-school are more likely to enrol at the right age and experience faster cognitive development. ECCE can create circles of support around vulnerable children. The needs are to:

- Develop curricula for ECCE and pre-school for teachers and parents with free learning materials;
- Pilot the extension of pre-school availability and fund free provision for those below the poverty line;
- Provide advice and guidance to establish legal frameworks for pre-school and for the employment of qualified educators.

Primary and secondary education have to lead, not lag, on ESD, through good designs and ecological practices that reduce carbon footprints, protect biodiversity and challenge inefficient pedagogies. Every child should leave primary school with a basic set of values and knowledge of the natural and built environment that encourages sustainable development. ESD has yet to permeate most school subjects and much teacher education. Actions needed include the following:

- Use the Secretariat's convening power to complete the tasks of Education For All and ensure all children's right to education is honoured at all levels;
- Provide incentives to deploy teachers and other resources efficiently and effectively;
- Develop policy and plans for hard and soft educational infrastructure that is energy-efficient, ecologically sound and beneficial to social cohesion.

Technical and vocational education and training (TVET) remains a second-best choice for students in many Commonwealth countries. The best solutions may be to technologise and pre-vocationalise parts of the secondary school curriculum, rather than developing more specialised secondary-level institutions with weak demand and high costs. TVET systems should begin to value sustainable development, changed production technologies, reduced waste and socially efficient service industries.

- Expand access to lower and upper secondary school and promote generic pre-vocational skills of value in livelihoods and jobs that enhance social mobility and social cohesion and recognise civic responsibilities for sustainable development;
- Encourage environmentally friendly technologies in TVET and invest in incentives to replace inefficient and environmentally damaging education technologies.

Tertiary education is very expensive in poor countries in the Commonwealth relative to GDP per capita. Higher education partnerships can expand access and reduce costs. More opportunities are needed for students from poor Commonwealth countries to study in richer ones, and for educators with special expertise in richer countries to share this with institutions in poor countries. These things can be achieved by:

- Developing Commonwealth partnerships to encourage split-site courses, staff exchange and virtual and massive open online course collaborations with low environmental burdens;
- Mobilising Commonwealth expertise across biosphere zones to exploit comparative advantages in relation to small states, oceanography, fishing and remote sensing;
- Investing in ESD using new technologies to increase awareness, change consumption patterns and gain first-mover advantages in eco-technologies.

Resilience

Educational quality is inextricably linked to resilience. Secure learning creates confidence and competence to manage crisis and adversity. It implies openness to discussion and cross-cultural consensus about the meanings of development. It also depends on informed and motivated teachers who share the values of ESD. Interventions include:

- Devising enrichment material for learning and teaching that promotes ESD across different subjects in the curriculum;
- Revisiting Commonwealth protocols on teachers and teacher education to ensure all teachers have ESD awareness, and encourage teacher union engagement with ESD;
- Developing methods for tracking the progress of all children through continuous records maintained by teachers to ensure no child falls far behind.

Inclusivity seeks to reduce inequalities and ensure that those suffering disadvantage have access and opportunity equivalent to or better than those without disadvantage.

Inclusivity is central to resilience both for those who suffer disadvantage and for those who can ameliorate marginalisation. It is necessary to:

- Devise educational programmes that promote ESD for marginalised groups and those with vulnerabilities, especially in small states, and map exclusions;
- Mainstream curriculum content that raises awareness of inclusivity issues in a country-specific way linked to individual and education system resilience.

Indigenous knowledge rights have to be protected by legislation and actively promoted by countries committed to building resilience among all citizens. This can contribute to awareness of sustainable development and increase social cohesion. Preservation of language remains central to identity and the use of mother tongue in schools is important and should be supported by countries as appropriate to context.

- Enact legislation to ensure indigenous peoples' languages and cultural practices are protected where this is needed;
- Develop dynamic archives of indigenous knowledge of sustainable development that can be translated into curriculum material.

Employable skills that enhance employability and livelihoods in the informal sector are at the core of resilience. This is what allows individuals to adjust to changing opportunities for productive work and to reskill as occupations modernise and technologies of production change. Investment in human capital increases the probability that national economies will be able to ride out recessions and adjust to new market situations by:

- Investing in curriculum development for ESD targeted at pre-vocational skills in mainstream schooling and new technologies relevant to sustainable development;
- Developing partnerships with employers to identify skill deficits to assess supply and demand in relation to economic sectors critical to sustainable development.

Adult learning is critical because illiteracy limits understanding of sustainable development and contributes to vulnerability and lack of resilience. The right to education of illiterate persons has not been delivered, and it should remain priority to support interventions that reduce illiteracy by:

- Reviewing literacy in relation to sustainable development messaging and investing in developing strategies to link literacy initiatives to ESD;
- Generating literacy learning materials on sustainable development topics.

Resilience has to be nurtured and valued. It is important for individuals, communities and countries. ESD has to develop consensus within different education systems on how to achieve this in curricula, pedagogy and assessment, through:

- Identifying and promoting learning experiences relevant to an individual's resilience;
- At the community level, identifying and developing safety nets for vulnerable learners;
- At the national level, developing fail-safe systems of educational administration.

Governance and management

Good governance and educational management are the institutional mechanisms that transform policy into practice and generate learning outcomes relevant to personal and community-level development. The need is for:

- Reviews across the Commonwealth to develop legal and regulatory frameworks in countries that do not have adequate legislation and norms and standards;
- Evaluation and development of the Commonwealth Education Policy Framework in selected countries with support from the Secretariat.

Management capacity-building links teachers' skills, curricula, infrastructure and accreditation in the Commonwealth Education Policy Framework to ESD, and can make use of real-world on-the-job mentored experiences and case studies of successes and failures. The Commonwealth should take ownership of the Sustainable Development Goals (SDGs) it wishes to promote thorough:

- Support to the development of nationally specific goals consistent with the global SDGs but owned by national governments, educational administrators and teachers, with a close relationship between target-setters and target-getters;
- Develop Commonwealth Secretariat education technical assistance groups (ETAGs) to provide independent technical advice on policy and planning for ESD drawing on Commonwealth experience.

Assessment and data collection systems of assessment are well established and executed by a range of existing agencies. These national assessments are usually summative, however, restricted to some subjects and grades, and not readily interpretable at school and classroom level. Moreover, high-stakes national examinations are sometimes of questionable quality and unknown content and predictive validity. There are several unmet needs:

- Provide inter-Commonwealth technical assistance to enhance the quality and content and predictive validity of high-stakes examinations that assess ESD outcomes;
- Develop formative assessment instruments related to core subjects at different grade levels linked to the national curriculum and ESD that can be used by teachers;
- Develop data protection protocols and legal frameworks for all data stored on children, and identify intellectual property rights to determine who owns the data.

Educational financing gaps vary greatly across Commonwealth countries. Countries with low income and high fertility need to spend at least 6 per cent of GDP and much more than 20 per cent of the government budget to universalise primary and secondary school and finance some higher education. Households contribute between 10 per cent and more than 50 per cent of the costs of education - and this excludes the poorest. High- and middle-income countries do not need to spend as high a percentage of GDP, as they have fewer children per adult. No high-income country reaches the targets, or needs to do so. A one-size-fits-all approach to financing makes little sense. The Secretariat can assist by:

- Reviewing educational expenditure by government and households and establishing where there are gaps between what is needed and what is available from government;
- Supporting inputs from ETAGs on efficiency gains and fiscal reforms that are sustainable;
- Commissioning studies to identify incentives to manage resources more efficiently in a sustainable way at different levels of education systems.

At the 19CCEM, Commonwealth ministers highlighted the Commonwealth values of equity, access and development, stressing the key role of ESD as a priority for future planning and a driver of the SDGs globally and nationally. The Commonwealth has a special role to play in shifting the focus of development from unsustainable patterns of consumption, dangerous depletions of natural resources and unstable social and economic systems that undermine social cohesion within and across nations. It can act as an honest broker. Its member countries reflect most kinds of development trajectory that have occurred, and their common language and literacies and shared values provide unique opportunities to demonstrate how new approaches to investment in education can work into the indefinite future.

The 20CCEM has the opportunity to build on its influential contribution to the development of the SDGs, and feed new thinking into the Commonwealth Heads of Government Meeting and the High Level Political Forum on Sustainable Development in 2018. It can demonstrate how global initiatives can complement national and regional redefinitions of sustainable development that suit very diverse circumstances. Resilience will be well served by diversity. Sustainable development depends on governance that cares for and protects the future. The 20CCEM has the opportunity to value the future and invest in education for sustainable development for the benefit of the Commonwealth's children, and their children's children.

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List of abbreviations

ALE	Adult Learning and Education
CCEM	Conference of Commonwealth Education Ministers
DESD	Decade of Education for Sustainable Development
ECCE	Early Childhood Care and Education
EMIS	Education Management Information System
ESD	Education for Sustainable Development
ETAG	Education Technical Assistance Group
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
HLPF	High Level Political Forum on Sustainable Development
MDG	Millennium Development Goal
NER	Net Enrolment Rate
PTR	Pupil-Teacher Ratio
SDG	Sustainable Development Goal
SPC	Secretariat of the Pacific Community
TVET	Technical and Vocational Education and Training
UIS	UNESCO Institute of Statistics
UN	United Nations
UNESCO	United Nations, Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund

1. Introduction

1.1 The Commonwealth faces many challenges in the twenty-first century. These include burgeoning youth populations, climate change and environmental uncertainty, high rates of out-of-school youth, persistent illiteracy and poverty, increasing cybercrime and ethnic and religious tensions. Educational investment lies at the heart of public policy responses to these challenges and is a primary mechanism to meet the shifting needs of societies in transition. Education is a basic human right, and is critical for the exercise of all other human rights (UNESCO, 2016a). Though educational contexts and policy priorities vary widely across the Commonwealth, there are many common challenges that benefit from sharing of experience, collaborative problem-solving and collective action.

1.2 There is a new agenda for educational development across the Commonwealth that has been influenced by previous Conferences of Commonwealth Education Ministers (CCEMs). At the 18CCEM in Mauritius in August 2012, ministers established a working group to develop recommendations for the global post-2015 development framework for education. Their recommendations reflected Commonwealth priorities for education and were fed into the UN processes for replacing the Millennium Development Goals (MDGs) for education and Education For All (EFA) goals. The recommendations were presented to the UN High Level Panel on the Post-2015 Development Agenda and to the Global Consultation on Education in the Post-2015 Development Agenda in March 2013, in Dakar, Senegal. Subsequently, the Sustainable Development Goals (SDGs) were agreed and their education component (SDG 4) confirmed at the World Education Forum convened in Incheon, South Korea, in May 2015.

1.3 At the 19CCEM in June 2015, Commonwealth ministers emphasised the key role of education for sustainable development (ESD) while reaffirming the Commonwealth values of equity, access and development. The Nassau Declaration noted a range of challenges faced by Commonwealth member countries (Commonwealth Secretariat, 2015b). These included:

- Low participation in early childhood education: Although provision is expanding, only one third of children in developing Commonwealth countries access early childhood education.
- Out-of-school children: Approximately 13 million primary-age children and 20 million lower secondary-age youth remain out of school in the Commonwealth.
- High adult illiteracy: Over 400 million adults in the Commonwealth are illiterate.
- Gender disparities in primary and secondary schooling: Gender discrimination has diminished and girls now comprise 48 per cent of primary school children, 49 per cent of secondary pupils and over 65 per cent of higher education students.
- Funding gaps: Despite the Nassau Declaration and commitments to education financing of 4-6 per cent of gross domestic product (GDP) and 15-20 per cent of total public expenditure, most countries are at the lower range of these bands and this is not enough to finance universal access to primary and secondary schools.

1.4 The Declaration agreed a number of initiatives to promote ESD and enhance progress towards the SDGs. These included:

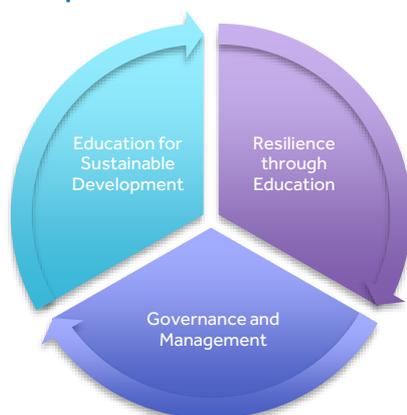
- Establishment of the Education Ministers Action Group;
- Establishment of the Commonwealth Accelerated Development Mechanism for Education Technical Working Group;
- Development of the Commonwealth Education Policy Framework and the Commonwealth Curriculum Framework for enabling the SDGs;
- Establishment of the Commonwealth Scholarship and Fellowship Plan Task Force.

1.5 The 20CCEM provides an opportunity to review these initiatives, identify progress and promising pathways to respond to changing circumstances and address key thematic concerns that run across Commonwealth countries. Three inter-related sets of issues stand out that are the three themes of the 20CCEM.

1.6 These are:

1. **Developing education for sustainable development**—education as a key enabler for sustainable development, skills development and transitions from education to work;
2. **Building resilience through education**—education as a response to twenty-first century crises in the environment and in social development, including the implications of climate change and migration for ESD and the curriculum, especially for peoples of small and atoll islands, and for citizens displaced by conflict and political instability whose right to education needs protecting;
3. **Enhancing educational governance and management**—strengthening the teaching profession and school management to improve quality and developing equitable methods of financing universal access to ESD.

Figure 1. 20CCEM thematic priorities



1.7 The overarching theme of the 20CCEM, ‘*Sustainability and resilience: Can education deliver?*’ raises important questions. These include, how can education systems deliver high-quality learning for all children, youth and adults at affordable costs? How should education systems change to promote sustainable development that does not deplete the economic, cultural and social resources of the planet? What kind of resilience should be encouraged to prepare new generations to meet the demands of the future? How can sustainable educational development be financed? How can equity, efficiency and effectiveness be promoted to deliver rights to education to all that include ESD?

1.8 The 20CCEM theme anticipates the High Level Political Forum on Sustainable Development (HLPF) for 2018 that will promote transformation towards sustainable and resilient societies.¹ It resonates with the seven target areas of SDGs. These are:

1. Free, equitable and quality primary and secondary education (4.1);
2. Quality early childhood development, care and pre-primary education (4.2);
3. Quality technical, vocational and tertiary education (4.3);
4. Employable skills (4.4);
5. Inclusivity (4.5);
6. Adult literacy and numeracy (4.6);

¹ See more at: <https://sustainabledevelopment.un.org/hlpf>

7. Sustainable development competencies (4.7).

1.9 20CCEM is the first to be held after the global adoption of the Education 2030 Agenda for Sustainable Development related to Goal 4 of the protocol (UNESCO 2015). It is an opportunity to take stock of how well the road map provided by the SDG process reflects Commonwealth priorities and widely different starting points, education system organisation and economic and labour market conditions. The SDGs were always intended to be interpreted at different levels and to be adapted to country context. The 20CCEM is an opportunity to develop diverse strategies for the implementation of the SDGs at national and regional levels, imprint a Commonwealth identity on ESD and harmonise national aspirations with global goals and targets.

1.10 This report is organised in five sections. The first introduces the main concerns. Section 2 explores ESD under six sub-headings: meanings; equity; early childhood development, care and pre-primary education; primary and secondary school; technical and vocational education and training (TVET) and tertiary education. Section 3 discusses resilience in relation to its definition, quality, inclusivity, indigenous knowledge, employable skills, adult learning and building resilience. Section 4 develops insights into educational governance and management and includes discussion of good governance, management capacity-building, assessment and financing. Section 5 presents recommendations by theme. Section 6 reaches conclusions.

2. Sub-theme 1: Education for sustainable development

2.1 Meanings and mechanisms

2.1.1 The most commonly used definition for sustainable development is that of the 1987 Brundtland Report, which states sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This valuing of the future over the present is essential to environmental protection and the ability of humanity to manage its planetary burden so that it does not irreversibly deplete geological, agricultural, maritime and atmospheric resources. This requires fundamental shifts in patterns of consumption, and a new economics of production, pollution and recycling. It needs an understanding that sustainable solutions require global consensus and cooperation. The Commonwealth is an organisation well placed to play a key role in catalysing sustainable educational development and configuring the kinds of curricula that make a reality of ESD.

2.1.2 The UN Decade of Education for Sustainable Development (DESD) ran from 2005 to 2014. DESD provided a global agenda that attempted to reframe education to meet the changing needs of a world in multiple crises. DESD emphasised the three pillars of sustainable development. These are economic, ecological and social.

2.1.3 Emphasis over the lifetime of DESD shifted from nationally defined initiatives to locally relevant and culturally appropriate approaches to ESD emphasising consensus around a range of key principles covering the scope, purpose and practice of ESD. ESD discourse argued for learning to emphasise the need for continuous engagement in sustainability in formal, non-formal and informal settings, and simultaneously the need for capacity-building, participation and self-determination for sustainable development (UNESCO, 2009).

2.1.4 If ESD is to be realised, it has to be accompanied by policies, strategies and programmes to develop curriculum and teaching resources, relevant teacher education and professional development, school- and classroom-based pedagogic initiatives and

appropriate learning environments. Assessment of learning outcomes has to reflect changed educational objectives and outcomes (UNESCO, 2017b).

2.1.5 It is important to recognise the starting points for discussion on how ESD may evolve in different countries. Table 1 presents some basic data on Commonwealth countries grouped by GDP per capita.

Table 1. Key facts on Commonwealth countries

Country income	Population ('000)	Population growth (% p.a.)	GDP per capita (\$)	GDP per capita (PPP) (\$)	Poverty (%)	Under-5 mortality (%)	Stunting (%)
Low-income	165,260	2.72	639	1,705	56	68	38
Lower-middle-income	2,051,022	1.64	2,362	5,059	26	51	30
Middle-income	95,959	0.73	8,005	14,034	7	21	10
High-income	141,131	0.85	30,944	41,377	1	8	8

Note: This table divides the Commonwealth into four groups of countries: GDP per capita less than US\$1,000, \$1,000-4,000, \$4,000-15,000 and above \$15,000. The same categories are repeated in the tables below.

Source: Own calculations based on data from UIS data (2017).

2.1.6 Nearly 2.5 billion people reside in Commonwealth countries. The richest countries have population growth below 1 per cent and are likely to have fewer children than adults in the population and declining enrolment in schools. The poorest countries have population growth over 2.5 per cent, with a doubling of the number of children every 25 years or so. They have many more children than working adults. Average GDP per capita within the country group varies by more than 50 times, showing extreme differences in wealth and financial resources. More than half those in the poorest countries are below national poverty lines. Under-five mortality can be over 65 per cent, and up to 40 per cent of children are stunted. This is true only in a small number of the poorest Commonwealth countries. Middle- and high-income countries have very good social indicators.

2.1.7 Actions are needed across the education sector to promote ESD. To keep this discussion manageable, the issues have been grouped under the following categories: equitable access, early childhood care and pre-primary education, primary and secondary education, TVET and tertiary education.

2.2 Equitable access

2.2.1 Universal access to basic education and equitable access to other levels is built on commitments to education as a human right. Without equitable access economic growth will be hampered, social mobility impaired and social cohesion placed at risk.

2.2.2 Human rights are universal and entail a non-negotiable commitment that all individuals should have access to educational opportunities. This access must be irrespective of any form of disadvantage or discrimination and extend beyond basic education, UNESCO, 2017a). Access may be understood within a four-pronged frame capturing availability, accessibility, acceptability and adaptability (Tomasevski, 2001). In this perspective, an inclusive education strategy ensures:

1. Free, government-funded education with adequate infrastructure, resourcing and trained teachers (availability);
2. Non-discriminatory systems that include the most vulnerable and are accessible to all (accessibility);

3. Educational content that is relevant (non-discriminatory, culturally appropriate and of good quality) provided in safe schools staffed with trained teachers (acceptability);
4. Contextualised curriculum that is continuously reviewed and evolves with the changing needs of society taking into consideration emerging inequalities (adaptability).

2.2.3 Additional elements that contribute to equitable access include:

- Recognition that access, retention and achievement interact and are complementary;
- Narrowing the gap between policy and practice of ‘no child left behind’ policies;
- Identification of barriers to access, equity and inclusion at different levels;
- Greater investment in areas of need with inferior educational indicators;
- Monitoring, evaluation and review of policy and legislative commitment;
- Sensitive and effective approaches in addressing cultural and societal norms and attitudes that generate inequalities (Commonwealth Secretariat, 2017a).

2.2.4 Knowledge and skill lie at the heart of development. The 20CCEM has the chance to couple the right to education with knowledge, skills and capabilities related to sustainable development. This has not yet been achieved at the global level. The greatest educational inequalities are to be denied access to school and to have access to poor-quality schools that fail to achieve national curriculum goals (Lewin, 2015). The right to education is now a right to an education that promotes sustainable development.

2.2.5 In modern states, economic growth depends on making full use of all the human capitals embedded in the population. Equitable access to education that builds economic and cultural capital increases the probability of realising rights to education. Investment in education must be spread across all those in the labour market. In the absence of educational equity, elites will tend to capture public and private benefits in disproportionate amounts and will gain social and employment privileges as a result. Social mobility depends on opportunities allocated more by capability than by the intergenerational transmission of social status. Countries that give opportunities to all their young people are more likely to grow fast economically and be able to deliver on human rights to education. They are less likely to experience the kind of social conflict that has at its core educational and social exclusion.

2.2.6 Sustainable development depends on economic growth driven by knowledge and skill linked to technologies of production that do not deplete the environment and strategies of investment that value the future over the present. All members of the labour force need to understand that fundamental shifts are taking place in the global economy, which are stressing the capacity of the planet to support its future population in the absence of changes in production and consumption and in their impact on the environment. Polar ice is melting, some fish stocks have collapsed, the sea level is rising, ocean temperatures are increasing, arid areas are expanding and urban air pollution is sufficient to shorten lives. Basic education has to enable skills and attitudes related to sustainable development.

2.2.7 Commitments to equity require that all citizens have opportunities to acquire the capabilities in critical and creative thinking and problem-solving that are at the heart of ESD. All citizens need access to the knowledge and reasoning powers that will allow for engagement in social, cultural, economic, political and ecological decision-making through many different channels of communication and participatory mechanisms.

2.2.8 The question for the 20CCEM is how the commitments that all countries have made to equitable access to ESD are realised and how to ensure this means ESD is an integral part of the curriculum.

2.3 Early childhood development, care and pre-primary education

2.3.1 Early childhood care and Education (ECCE) lays the foundations for behaviour and attitudes that underpin sustainable development. Effective pre-schools kick-start the journey of child development, which evolves from egocentric worldviews to empathy, from selfish to collaborative behaviour and from concrete to abstract reasoning. Universally effective early childhood development is recognised as a vital first step in realising the right to education and promoting equitable educational outcomes. However, despite a general understanding of the benefits of ECCE, provision is far from universal in Commonwealth countries, many pre-school teachers are untrained, regulatory systems are weak and much provision is privatised and rationed by price (Commonwealth Secretariat, 2017a).

2.3.2 Increasing enrolment and participation in ECCE and pre-primary education is critical to accelerate child development and compensate for household disadvantage. Pre-school access is growing fast across Commonwealth countries and is near universal in high-income countries. Children who experience quality pre-school tend to develop faster and retain an advantage in cognitive development throughout their school careers. In contrast, children from low-income households in low-income countries rarely have the benefit of well-founded pre-school and ECCE support. Any commitment to equity and narrowing gaps in achievement between the highest- and lowest-scoring students must find ways of providing universal access and methods of sustainable financing that do not exclude low-income households.

2.3.3 Equitable access to education requires an understanding of the links between educated mothers, income and a child's participation in pre-primary school. In Nepal, for example, children whose mothers have had some secondary education are more than twice as likely to have access to ECCE than those whose mothers do not. Children who attend pre-school have access to circles of support that promote early childhood health and nutrition, identify developmental delays and diagnose disabilities and prevalence of stunting that can be symptomatic of cognitive disadvantage (UNESCO, 2016a).

2.3.4 Laws mandating compulsory pre-primary education and fee-free provision and the introduction of incentives have been found to make a difference in levels of provision. Enrolments appear to have increased by almost two thirds in pre-primary education worldwide between 1999 and 2012. By 2014, 40 countries had laws in place mandating compulsory pre-primary education. Across the Commonwealth, however, many countries still need support in expanding pre-primary enrolment and developing curricula and teacher education programmes.

2.3.5 Efforts to improve access to ECCE and pre-primary education must take into consideration social, cultural, economic, environmental and political contexts and factors that may fuel inequity and vulnerabilities, which act as barriers to learning opportunities in the early years. The content and process of ECCE should reflect the principles of ESD and promote its values.

2.4 Primary and secondary education

2.4.1 Primary education across the Commonwealth is designed to embed literacy and numeracy among all school-age children and to open doors to cognitive development and encourage transitions from sensorimotor responses to concrete reasoning to the beginnings of abstract thinking. Primary school occurs during a period of great plasticity in brain

development. Secondary schools cover the ages of development most critical to identity and the consolidation of formal reasoning, problem-solving and independent action.

2.4.2 The seeds of ESD can be sown at primary school, with an ESD-oriented curriculum that introduces basic ideas about the natural world—for example weather and climate, the food cycle, sanitation, waste disposal and clean air and water—and about social and collaborative behaviour. Secondary schools provide the opportunity for students to acquire critical thinking skills, develop moral judgment and systematically study academic and pre-vocational subjects in depth. Young adults establish preferences for consumption and investment during their teenage years and form attitudes to sustainable development and responsible national and global citizenship. They can also acquire an understanding of earth sciences, physics, chemistry and biology that sensitises them to the limits of economic growth and to planetary husbandry.

2.4.3 Commonwealth countries have high enrolment rates at primary level, with average gross enrolment rates (GERs) well over 100 per cent (Table 2). A GER over 100 per cent means more children are enrolled than are of primary school age.

Table 2. Overage, enrolment, gender and GER at primary level

Country income	Overage (%)	Female (%)	Primary GER (%)
Low-income	29	50	117
Lower-middle-income	22	48	108
Middle-income	4	49	104
High-income	0	49	101

Source: Own calculations based on data from UIS data (2017).

2.4.4 In low- and lower-middle-income countries, between 20 and 30 per cent of primary school children are overage by two years or more. This compromises their learning and disadvantages them in high stakes selection examinations for further study and academic qualifications. Children are overage either because of late entry or because of grade repetition. Although most countries have automatic promotion policies, in practice these may not be consistently applied, especially outside urban areas and in schools serving populations with low socio-economic status. Middle- and high-income countries do not have overage children in any quantity. Sustainable educational development depends on managing entry to school and learning so no children are overage in class.

2.4.5 Most children in primary school in the Commonwealth are in lower-middle-income countries. They total about 226 million, compared with 30 million in low-income countries. About 20 million are enrolled in middle- and high-income countries. Clearly, if the messages of sustainable development are to reach the next generation of Commonwealth children, the need is to focus on those in low- and lower-middle-income countries where the largest numbers are to be found.

2.4.6 Across all the Commonwealth countries, gender parity in enrolment has largely been achieved at primary level. The percentage of females averages between 48 and 50 per cent, with more girls enrolled in richer countries. Only one country—Pakistan at 45 per cent—has a gender ratio below 47 per cent according to UNESCO Institute for Statistics (UIS) data (UIS, 2017). This is an encouraging story and shows how historic disadvantages have been overcome in enrolment imbalances. In every country in Africa taking Southern African Consortium for Measuring Educational Quality assessments, girls are on average now younger than boys, suggesting they enter earlier and progress faster.

2.4.7 Enrolments at secondary level are yet to reach universal levels in the poorest Commonwealth countries (Table 3). In low-income countries, the GER is only 36 per cent, and in lower-middle-income countries it is 69 per cent. GERs in middle-income countries exceed 93 per cent and those in high-income countries are over 100 per cent.

Table 3. Overage, enrolment, gender and GER and NER at secondary level

Country income	Overage (%)	Female (%)	Secondary GER (%)	Lower secondary NER (%)
Low-income	45	48	36	69
Lower-middle-income	29	49	69	84
Middle-income	13	50	93	92
High-income	1	49	106	97

Note: NER = net enrolment rate.

Source: Own calculations based on data from UIS data (2017).

2.4.8 Considerably more children appear overage in secondary than in primary, with between 45 and 29 per cent overage in low- and lower-middle-income countries. The problem is non-existent in high-income countries. Overall gross enrolment rates (GERs) average 36 per cent for the whole secondary cycle in low-income countries and 69 per cent for lower-middle-income countries. Net enrolment rate for lower secondary average 69 per cent and 84 percent in low- and lower-middle-income countries, indicating that many students fail to make the transition from lower to upper secondary.

2.4.9 Gender issues persist but now take many nuanced forms. Generally, while the poorest girls face many barriers to accessing education, once in school their retention is better than that of their male counterparts (UNESCO, 2016a). High- and middle-income girls are more likely to be enrolled than poor girls and high- and middle-income boys. Residence in rural areas and informal settlements and cultural preferences are often identified as the most common barriers to girls' education. In parts of Nigeria, less than 30 per cent of the poorest girls have access to primary school (UNESCO, 2015)

2.4.10 Upper secondary participation averages about 37 per cent in terms of the NER in low-income countries, and 53 per cent in lower-middle-income countries (Table 4). The gross intake rate to secondary in low-income countries is only a third (32 per cent) of the rate in middle-income countries (88 per cent), indicating the size of the enrolment challenge at this level. Poor countries in the Commonwealth have lower and upper secondary completion rates of only 26 per cent and 14 per cent, and lower-middle-income countries of only 52 per cent and 30 per cent, respectively.

Table 4. NER, gross intake to secondary and completion rates at secondary

Country income	Upper secondary NER (%)	Lower secondary gross intake rate (%)	Lower secondary completion rate (%)	Upper secondary completion rate (%)
Low-income	37	32	26	14
Lower-middle income	53	71	52	30
Middle-income	72	88	84	62
High-income	90	101	99	84

Source: Own calculations based on data from UIS data (2017).

2.4.11 Many children remain out of school in low-income Commonwealth countries. Out-of-school children are disproportionately poor, from indigenous, low-caste or tribal backgrounds. Calculating the numbers is not an exact science, and estimates vary widely. United Nations, Educational, Scientific and Cultural Organization (UNESCO) Institute of Statistics (UIS) data indicate that about 13 million Commonwealth children of primary education age, and 22 million of secondary age, are out of school. If this is true, this represents about 10 per cent of all Commonwealth children below the age of 15 years. If those in school and not learning are included, the numbers will be much larger. Whatever the numbers are, they represent a population of citizens whose right to education needs to be realised and who have to share in strategies to promote sustainable development.

2.4.12 Expanded access to school should respect concerns for sustainable development. School location has large-scale implications for energy use and pollution. Children are increasingly transported to and from school, especially in urban areas in lower-middle- and middle-income countries. In some countries, the largest source of urban traffic growth has been the ‘school run’. This gridlocks traffic, with all its opportunity costs, and releases huge amounts of particulates into the atmosphere, with consequences related to respiratory diseases. School provision is generally not planned with its environmental burden in mind. Commitment to sustainable development means that the Commonwealth should consider how this could be encouraged through school mapping, energy audits of infrastructure and learning activity.

2.4.13 ESD has to reach out and enrol all children through to at least the end of lower secondary school. This may mean there is a need for different approaches to delivering services, especially to small and multi-graded schools necessary to reaching out to unserved populations (Little, 2004). Across the Commonwealth, much progress has been made on enhancing access to education at all levels, but more effort is needed to reach those still left behind at different levels. The 20CCEM can discuss the most effective strategies.

2.5 Technical and vocational education and training

2.5.1 TVET is important to ESD for several reasons. First, it can help translate school knowledge into employable skills that promote economic growth. If these are acquired with an awareness of sustainable use of resources and disposal of waste, this can be reflected in more environmentally friendly production. Second, effective pre-career education and training can help students identify occupations and livelihoods that are attractive and available. Third, a balanced national curriculum will include knowledge and skill directly related to common vocations and to the importance of sustainable development.

2.5.2 In most Commonwealth countries, only a minority of students take TVET courses at secondary level (Table 5). Participation in low- and lower-middle-income countries is

often not much more than 10 per cent of the age group. These estimates are uncertain, since definitions of TVET vary and classification is carried out in different ways across countries. More TVET is available post-school at non-degree further education level, where the data available suggest the majority of programmes are TVET-related—though this is dependent on the definitions used. Formal TVET often attracts more boys than girls, and some programmes are strongly gendered.

Table 5. Enrolment as a proportion of the total in TVET at secondary level

Country income	Total (%)	Male (%)	Female (%)
Low-income	11.5	13.1	10.0
Lower-middle income	4.7	5.8	3.6
Middle-income	6.5	7.9	5.1
High-income	14.6	16.0	13.1

Source: Own calculations based on data from UIS data (2017).

2.5.3 Quality TVET and tertiary education are critical to meeting workforce needs. Despite evidence to show the relevance of TVET in terms of providing essential work and life skills, and the correlation between high-quality provision and returns on investment, TVET remains a second-best choice for many students and their parents. It is often seen as suited to less able students, unlikely to lead to degree-level qualification and expensive to provide. Moreover, some TVET has been more supply-driven than demand-led, especially where commercial interests exaggerate the employment benefits of training programmes.

2.5.4 Globally, statistical data for TVET enrolment are patchy. This owes partly to the complexities of TVET, which can be delivered in many different ways at different levels in different locations. Some is public and some private and for-profit; qualifications are awarded by many different institutions; and courses vary in length considerably (Commonwealth Secretariat, 2017a).

2.5.5 ESD has to concern itself with the integration of youth into labour markets. Weak integration raises dual questions about the quality of education systems and their alignment with labour market needs. Mismatches between qualifications and market needs can result either in highly qualified unemployed TVET graduates or in underemployed TVET graduates possessing knowledge and skills that do not correlate with employers' needs. If TVET is supply-led rather than demand-driven, mismatches are more likely. Demand for ESD TVET is yet to appear as important in most countries; the Commonwealth could take a lead by piloting new approaches.

2.5.6 About 1.5 billion people, more than half of all workers in developing countries, find themselves in “insecure, low-productivity and low-income occupations and [with] limited ability to invest in their families’ health and education” (Latham ,2017 p 6). Sustainable development needs coherent policy on TVET that manages the transition from school and college to work in a sustainable way.

2.6 Tertiary education

2.6.1 Investment in expanded access to tertiary-level programmes is happening across the Commonwealth. About 45 million students are registered in tertiary institutions in the bloc. Participation rates are growing faster than at other levels (Table 6). Low-income countries have a tertiary GER of about 6 per cent and lower-middle-income countries a tertiary GER of 15 per cent. About a third of young people in middle-income countries and nearly 60 per cent in high-income countries now access tertiary programmes. In all Commonwealth countries except the poorest, more girls than boys are now enrolled.

Table 6. Participation in tertiary education

Country income	Total ('000)	Female (%)	GER (%)	Male GER (%)	Female GER (%)
Low-income	580.4	41.4	5.7	6.7	4.7
Lower-middle income	37,194.5	58.3	14.9	15.1	22.0
Middle-income	2,020.7	59.2	33.0	27.7	38.5
High-income	4,397.7	58.4	57.9	46.6	69.6

Source: Own calculations based on data from UIS data (2017).

2.6.2 Challenges to tertiary education for sustainable development include those related to programme quality, funding, staff development and regulation, comparability of degrees and employability of graduates (Commonwealth Secretariat, 2017a).

2.6.3 Finding the right balance between tertiary education and TVET will be crucial to achieving ESD. In some parts of Africa, 60 per cent of the working-age population are unemployed, and many young people queue in labour markets waiting for modern sector jobs. Some reports indicate that only half of those who graduate (10 million) per year will secure graduate-level employment. In contrast, graduate tracking at the Singapore Institute of Technical Education shows that over 80 per cent of all graduates are able to secure employment within 12 months of graduation. This is attributed to effective alignment of graduate skills with labour market needs (Commonwealth Secretariat, 2015a).

2.6.4 Achieving the SDGs will need to entail taking on a balanced range of context-specific learning opportunities for basic education, TVET and tertiary education, and for upskilling and professional development. As always, context is important (Crossley and Watson, 2003). In low-income Commonwealth countries, the difficulties will lie in re-imagining how tertiary-level education with the flavour of ESD can be made available to more than a small number of students from high-income households. In higher-income countries with higher enrolment rates, the central issue will be the curriculum as it relates to ESD, and the energy footprint of residential away-from-home higher education within country or in other countries (as foreign students).

3. Sub-theme 2: Building resilience through education

3.1 Resilience

3.1.1 Resilience can be defined in many ways. One definition is that it refers to those attributes that enable an individual, community or system to respond to change and to recover from adversity. In ecological terms, resilience refers to the ability of a system to manage change within its ecosystem; in biological terms, it is similar to homeostasis. In the social sciences, resilience refers to those attributes that enable an individual or community to respond to and recover from unfavourable situations of crisis in any dimension of life (Brand and Jax, 2007; Norris et al., 2007; Cooper, 2010;). One purpose of schooling is to promote the attributes of resilience both for individual survival and to contribute to the collective good. .

3.1.2 The Nassau Declaration promoted resilience as a key factor in combating issues of vulnerability, particularly those facing small states, such as climate change, migration, mobility and financing (Commonwealth Secretariat, 2015b). The expectation is that education will help instil and nurture resilient learners and individuals who are capable of making sound choices in the face of uncertainty and complexity in the future (Scott and

Vare 2008, in Sterling, 2010). This intrinsic view sees education as a means by which to instil certain values, attitudes, behaviours, knowledge and skills in order to build adaptive capacity in the learner in the face of uncertainty. An alternative but complementary view presents an instrumental perspective in which it is assumed that raising awareness about environmental issues will, rationally and causally, lead to personal behaviour change, and, if followed in great enough numbers, lead to social change (Sterling, 2010).

3.1.3 Safeguarding the future of the environment is not the only long-term concern in the wider context of climate change. Related issues include food security, health, land, culture and language loss owing to relocation, potential climate change, migration and/or refugee status of those needing to relocate as a result of increasingly uninhabitable environments. Immediate and short-term concerns include those related to damage to infrastructure, school attendance, participation and achievement, conflict and migration. These immediate and short-term concerns will have direct bearing on equitable access to and quality and relevance in education, where the former will be affected by climate change and extreme weather patterns and the latter will need to continue to adapt to meet changing learning needs over time.

3.1.4 Resilience can be discussed within many frames of reference. We have chosen six dimensions to frame the discussion: quality, inclusivity, indigenous knowledge, employable skills, adult learning and education (ALE) and building resilience

3.2 Quality

3.2.1 Good quality in education has to promote resilience as an outcome if the challenges of sustainable development are to be met. Outcomes of an e-discussion with 750 participants from 11 countries across the Commonwealth suggest that understandings of quality are context-specific. Quality in education occurs at two levels: micro and macro (Commonwealth Education Hub, 2015). At the micro level, quality is measurable by means of student learning outcomes and credentials complemented by values, beliefs, knowledge, attitudes, skills (soft and hard), critical thinking, awareness and tolerance. These are all related to resilience.

3.2.2 Quality at the macro level has been described as the ability of the system to produce productive and participatory citizens who support sustainable development and the common good. Linkages have been made to economic development, eradication of poverty, political stability, global citizenship, resilience, environment, health and empowerment of women (Commonwealth Education Hub, 2015). Resilience must capture:

- Sustainable development competencies, sustainable lifestyles and human rights;
- Contextual understanding of “quality” and “success” in education;
- Safe and inclusive learning spaces;
- Role of education in promoting individual, community and national resilience;
- Well-trained educators, support staff and managers;
- Appropriate resourcing of equipment, learning spaces and learning materials;
- Effective use of information and communication technology;
- Processes of quality assessment and improvement including external inspections;
- Cost effectiveness and sustainability of financial and political investments (Commonwealth Secretariat, 2017a).

3.2.3 Across the Commonwealth, educational quality has been more or less adversely affected by an inadequate supply of trained teachers; out-dated, irrelevant or crowded curricula; limited learning resources; barriers to access and equity; absence of quality assurance; large pupil-teacher ratios (PTRs); poor working conditions for teachers;

misalignment of laws, policies and practice; weak monitoring systems; no data capture; and weak stakeholder engagement (ibid)

3.2.4 In the Commonwealth, most teachers are qualified, but between 5 and 30 per cent remain unqualified, with higher rates in the poorest countries. PTRs in primary vary from around 50:1 to less than 15:1. At secondary, the range is from nearly 30:1 to only 10:1. Qualified teacher ratios are greater and range from 60:1 to 14:1 in primary and 40:1 to 10:1 in secondary (Table 7 and Table 8).

Table 7. Primary teachers and qualifications

Country income	No. of teachers ('000)	Qualified (%)	PTR	Qualified teacher ratio
Low-income	668	77	48	61
Lower-middle income	6,037	72	31	44
Middle-income	524	78	20	35
High-income	309	95	14	14

Source: Own calculations based on data from UIS data (2017).

Table 8. Secondary teachers and qualifications

Country income	No. of teachers ('000)	Qualified (%)	PTR	Qualified teacher ratio
Low-income	186	77	28	40
Lower-middle income	5,512	80	20	24
Middle-income	278	70	14	32
High-income	463	98	10	10

Source: Own calculations based on data from UIS data (2017).

3.2.5 These differences in teacher provision have implications for costs and for resilience. High PTRs mean that cover for absences will be difficult, crisis management cannot be individualised and collective responsibility for learning will be difficult to generate.

3.3 Inclusivity

3.3.1 Reducing and eliminating disparities in education in the pursuit of inclusion is not an easy task. Parity indices must be considered to track gender disparity, discriminatory regulations and inequalities between rural and urban areas and between the wealthy and the poor, and facing those in indigenous and minority communities, those in conflict areas and those living with disabilities. Children from lower-income families have limited access to schooling. They are also more likely to be disadvantaged in resource allocation and to drop out of school early, especially if they are in rural and remote areas. These children are also more likely to underperform in literacy and numeracy when compared with their urban counterparts. Sanitation and health are additional factors that prevent access to education.

3.3.2 Vulnerable children make up about 20 per cent of the world's primary school-age population and comprise half of out-of-school numbers (World Bank, 2017). Commonwealth countries have their share of marginalised populations. Children in fragile states are up to three times more likely to be out of school and to drop out early than their counterparts in non-conflict states. A refugee child is five times more likely than the average child to be out of school (ibid.). Other challenges to the education of vulnerable or disadvantaged children/students include lack of teachers, limited resources, trauma

from violence, stereotypical curriculum content and discriminatory practices. The use of non-indigenous languages of instruction and denial of education to marginalised groups are added challenges.

3.4 Indigenous knowledge

3.4.1 Agenda 21 called for governments to recognise ‘the rights of indigenous peoples, by legislation if necessary, to use their experience and understanding of sustainable development to play a part in education and training’ (UNCED, 1992, p.323). Over 370 million indigenous people need protection of their rights. Agenda 21 emphasises the significance of indigenous peoples and their knowledge systems to human and environmental sustainability. This is based on understanding that indigenous peoples continue to have a special relationship with the earth. Indigenous cultural practices, epistemologies and methodologies are based on social, cultural, economic and political systems that are underpinned by a spiritual philosophy of connectedness with nature. This special relationship needs to be captured for the promotion of indigenous peoples’ rights and for the good of mankind. Moreover, indigenous understandings and framings of sustainability, resilience and adaptation, mitigation and climate justice can complement and enhance twenty-first century approaches. Issues of ownership of indigenous knowledge, intellectual property rights and indigenous rights will need to be addressed in these important conversations.

3.4.2 Many of the world’s indigenous languages are at risk and many more endangered. The second international expert group meeting on indigenous languages, held in January 2016, reported that 96 per cent of the world’s languages (6,700) were spoken by 3 per cent of the global population. It also estimated that more than half of the world’s languages would become extinct by 2100 (UN, 2016). The use of mother tongue as a medium of instruction has implications for improved learning outcomes, strengthening student understanding. Indigenous methods may also inform new pedagogies to cater for vulnerable groups of indigenous students who are currently struggling to meet basic learning standards and complete schooling.

3.4.3 Building resilience for all draws from the philosophy of inclusion inherent in Education 2030 (UNESCO, 2015) and requires prioritisation of the most vulnerable. It demands a birds-eye view of access, equity and quality of education that is delivered to the most vulnerable. This means countries must engage in continuous demographic mapping to understand gender differentials and needs and, where necessary, to prioritise opportunities for girls and women. In those contexts where boys and men are disadvantaged, emphasis will be required to ensure equity in education. In the Pacific Islands, for example, the 2013 Pacific Islands Literacy and Numeracy Report suggests boys are more likely to underperform than girls (SPC, 2014; Belisle et al., 2016). Education for resilience must include those living with disabilities/special needs, the economically and geographically disadvantaged, minority groups and indigenous communities.

3.5 Employable skills

3.5.1 Sustainable livelihoods require resilience. This is true especially in the informal sector, which is inherently insecure. It is also true in private sector employment, which can be irregular and capricious as well as frequently affected by market volatility. Entrepreneurship requires resilience to work through difficult times and seize opportunities in a timely way. The demand is therefore high for pathways through pre-primary school to secondary school and TVET that equip students with relevant market skills that blend knowledge and technical knowhow with soft and hard skills. Employers want workers who have technical expertise and communication skills, who can work

collaboratively in teams and who know how to analyse problems by thinking critically (ibid.).

3.5.2 Winthrop and McGivney (2016) suggest that technology, the changing world of work and globalisation are three primary issues to consider when looking at quality and relevance in education. Not only does technological advancement present the need for constant upskilling of the workforce, but also smart technology now offers the opportunity to automate tasks and replace human agents. For the low-skilled workforce, this presents a threat to livelihoods, with interventions required to address potential employment losses.

3.5.3 Globalisation has transformed the flow of goods and services around the world, and provides opportunities for more the efficient coordination and delivery of educational services. The internet provides a cyber-highway to opportunity, but it also comes with very uneven access, limited by price and location. Climate change is a real threat to existing technologies of production and is foreshadowed by unusual weather patterns, coastal flooding, oceanic warming and littoral vulnerability.

3.5.4 Both ESD and sustainable educational development are at risk. Many biological systems are resilient and display homeostasis. If they did not, then evolution would not take place. Education systems must be resilient not only to the vagaries of short-term political preferences but also to the effects of changes in the social and economic environment that allows ESD to flourish.

3.6 Adult learning and education

3.6.1 About 400 million adults in the Commonwealth are illiterate (Commonwealth Secretariat, 2017a), comprising just over half of the global total of 758 million adults (UNESCO Institute for Lifelong Learning, 2016). It is estimated that 63 per cent, or two thirds, of adults with low literacy are women. Given the correlation between literacy and numeracy and access to opportunities, the exercise of human rights and general health and well-being, this is a serious problem. This is especially the case in light of global statistics indicating that at least 15 per cent of young people between the ages of 15 and 24 'cannot read or write a simple sentence' (ibid., p.14).

3.6.2 Literacy is 'one of those mischievous concepts, like virtuousness and craftsmanship, that appear to denote capacities but that actually convey value judgments' (Knoblauch 2007). The complexity of literacy in the twenty-first century context is addressed in the 2006 EFA Global Monitoring Report, which describes it as four distinct sets of skills or competencies. These are literacy as an autonomous set of skills, literacy as applied; practised and situated; literacy as a learning process; and, finally, literacy as text (UNESCO, 2006, p.148). These four competencies need mapping onto ESD as components of resilience.

3.6.3 The Third Global Report on Adult Learning and Education highlights significant improvements in ALE in 75 per cent of countries worldwide since 2009. Policy achievements in the Belém Framework for Action (2009) include the enactment of new policies (70 per cent of countries) and rating of literacy and basic skills as a top policy priority area (85 per cent). Development in ALE policy has, however, not translated into public funding investment, and 42 per cent of countries report spending less than 1 per cent of government budgets, with only 23 per cent of countries spending more than 4 per cent (UNESCO Institute for Lifelong Learning, 2016). Reported benefits of ALE include

higher levels of political participation as a result of civic education programmes in Africa (ibid.), which could contribute to resilience.

3.7 Building resilience

3.7.1 A key challenge for ESD is the development and delivery of formal and non-formal education opportunities to build resilient individuals and communities. This is true across the diversity that exists within the Commonwealth. Small and atoll islands are confronted with the reality of climate change and rising ocean levels and temperatures, and with economically driven out-migration and depopulation. Large countries suffer from overcrowding, unsustainable urban migration, fossil fuel pollution and energy scarcity. Social cohesion is threatened by old ideologies and the new technologies of the social media.

3.7.2 Efforts to integrate climate change into the curriculum are critical, as is the sympathetic treatment of indigenous and traditional knowledge and local culture where it is consistent with sustainable development. Effective community approaches to adaptation to adversity have a history that can be shared. One approach to environment education has been to emphasise the science of climate change and environmental change. A social ecological perspective on resilience draws a broader canvas of human-environment systems that includes socio-cultural constructs of resilience (Stokols et al., 2013).

3.7.3 A resilient member of society in the twenty-first century is a literate citizen who is able to meaningfully engage in different spheres of life to achieve well-being; negotiate relationships in diverse contexts; make informed decisions; earn a sustainable livelihood; live a healthy and prosperous life; understand and participate in national discourse through local media; understand international affairs and access information using international media; possess technological knowhow; and value sustainable development in an environmentally conscious way.

3.7.4 As a long-term goal, sustainability is the capstone of the SDGs and Education 2030. SDG 4.7 encapsulates these competencies as ‘the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development’ (UNESCO, 2016b). Sustainability is at the core of the global education agenda. It is also a cornerstone of the Commonwealth’s approach.

4. Sub-theme 3: Education governance and management

4.1 Good governance

4.1.1 Good governance and effective educational management practices are central to realising equitable access to quality education. Governance in education systems promotes effective delivery of education services and encompasses governmental processes of developing and implementing educational policy (Lewis and Pettersson, 2009). Good governance is the ‘ideal in which political processes translate the will of the people into public policies and establish the rules that efficiently and effectively deliver services to all members of society’ (Crouch and Winkler, 2008, p.3). It implies value judgments that may differ across Commonwealth countries about what is good, but these are more likely to reflect divergence of goals and system-level aims and objectives than different assessments of the mechanisms that translate aspirations in actions.

4.1.2 The Commonwealth Education Policy Framework (Commonwealth Secretariat, 2017a) can be visualised as inter-relating governance and capacity-building, and knowledge of good practice leading to advocacy. Sustainability is reinforced by investments in quality, relevance and equity. Education systems need to be framed by actions in all these fields adjusted to different education sub-sectors.

Figure 2. Commonwealth Education Policy Framework



Source: Commonwealth Secretariat (2017).

4.1.3 The provision of quality education for all requires alignment of policy and practice within a legal framework and normative practices that are seen to be transparent and accountable, and that are efficient and effective in delivery and outreach. Educational management translates the ambitions of the governance system, and its accountabilities, into capacities to deliver educational services through national, district and school leadership.

4.1.4 Good governance in education thus has many elements that together increase the probability that policy is implemented and that it reflects the needs and the wants of all the stakeholders in education systems. It should be a mechanism that manages trade-offs and conflicts of interest between different partners. It is at the heart of policy that promotes public goods and that can monitor and intervene when markets fail to deliver services at affordable costs. Good governance ensures there is always a provider of last resort to ensure rights to education are realised. It may also mean that public provision is the provider of first resort where rights-based issues are critical for marginalised groups with little economic or political power.

4.1.5 Good governance is important for resilience. Education systems need to be designed not to fail and to be resistant to disruption and arbitrary fluctuations in performance that determine the life chances of every generation of students. This is true at every level from the classroom, to the school, through higher levels of administration and management. Key questions include:

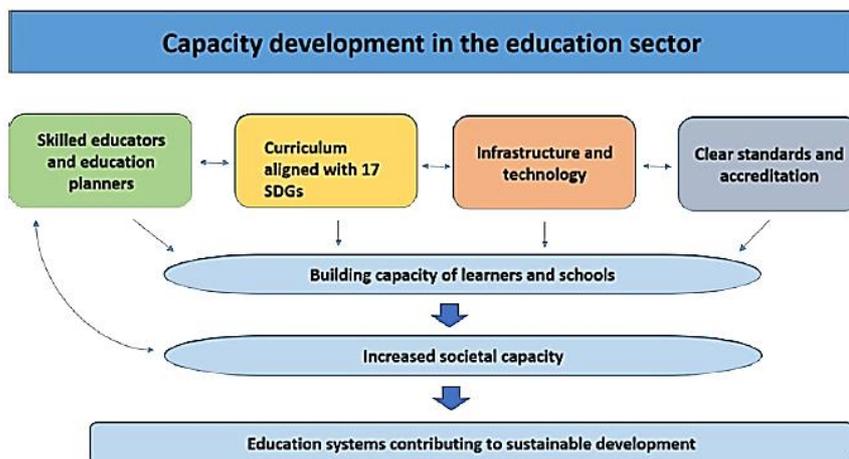
- Who ensures that all children of school age register and enrol at the right age?
- Where is the locus of accountability for children out of school?
- Who acts and how do they act when a child fails to attend regularly?
- Whose responsibility is it to cover for absent teachers?
- How is the quality of learning managed at classroom and school level?
- How is staff turnover managed to minimise discontinuities in learning?

- What data are available above the level of the school on how well learning is being managed?
- What is the appropriate balance in policy dialogue between the political system and the permanent civil servants who administer resources and implement policy?

4.2 Management capacity-building

4.2.1 The Commonwealth Education Policy Framework provides an overview of the capacity-building needs of the education workforce that highlights the outreach of management structures for strengthening the education sector. The framework highlights the importance of seeing good governance and effective management as a seamless web that inter-relates the competencies of teachers, planners and policy-makers with curriculum developers and pedagogic innovators, supported by adequate infrastructure and mature and new education technologies (Figure 3). Building capacity is a long-term enterprise that requires consistency of purpose and adequate procurement and investment in teachers and other staffing.

Figure 3. Capacity-building in the education workforce



Source: Commonwealth Secretariat (2017).

4.2.2 Management related to the objectives identified by countries and the SDGs requires the adaptation of goals and targets to reflect changing circumstances and progress towards valued outcomes. This is because plans never fully reflect the realities of implementation. Mutual adaptation of policy-makers, planners and implementation agencies makes more sense than sticking to plans that no longer reflect events on the ground. It is also because the diversity of the Commonwealth means there is a need to adopt a flexible attitude to global goals, so they can be adapted to suit the circumstances of different member countries.

4.2.3 The range of capacity and variations in the stock of assets between the richest and the poorest members of the Commonwealth mean there are different potentialities and starting points. Also contributing are differences in size, in political and financial commitment to public investment and in prospects for economic growth and social stability. Good governance rejects one-size-fits-all approaches grounded in globalised diagnoses aggregated across countries in favour of national and sub-national prioritisation of goals and targets that have national authenticity, ownership and ambition linked to political will embedded in democratic accountabilities.

4.2.4 The Commonwealth is well placed to share its experience and collaborate through various forms of technical assistance groups that can make accessible in a disinterested

way. This could help in avoiding the conflicts of interest that arise when strategic and tactical advice is sought from educational service providers who subsequently benefit from the implementation of programmes based on that advice. This is particularly important for small states with limited analytic capacity. It is one way to increase resilience because it could discourage the kind of single-source policy advice that can develop in small and fragile states. This represents a way in which more South-South collaboration could take place within the Commonwealth.

4.3 Assessment and data collection

4.3.1 Effective management requires cumulative improvements in data collection, collation and analysis that can provide evidence for decision-making. The Education 2030 agenda promotes international tracking of progress towards the SDGs. Commonwealth education ministers have recognised the need for enhanced data availability as a priority for educational planning for ESD (Commonwealth Secretariat, 2015b). Many challenges persist, especially in the most fragile states, which lack reliable data on which to base systematic interventions.

4.3.2 The UN system, and UIS, has been tasked with developing key indicators for the SDGs and integrating these into its global data collection systems. These indicators suit the UN's purposes of high-level aggregate proxy indicators of progress on selected aspects of educational development SDG 4.2 (UN, 2017b). The international effort to devise and implement an extensive and common global SDG monitoring system is fit for its own purposes and can contribute to the supply of data that shapes educational programmes for sustainable development.

4.3.3 Global tracking systems for global goals have a history—not least that stemming from promulgation of the EFA Dakar targets for education in 2000. UIS and others have noted there is a disproportionate emphasis on data at some levels rather than others. Most data relate to primary education, with very little on pre-primary, secondary, TVET and tertiary education. Gender issues are widely addressed in the databases but there are few data on children with disabilities, orphans and those in conflict areas and other vulnerable contexts. There is also limited emphasis on the distribution of education resources. The lack of quality data is attributed to gaps in national systems posed by insufficient funding for statistical activities, weak technical capacity, the use of out-dated technologies, limited capability to manage big data and data from multiple sources and lack of training on the framework behind the SDG agenda. UIS cautions against donor-driven agendas that lead to unsustainable statistical practices. The Tanzania example of 'recent parallel EMIS [education management information system]-related initiatives have entailed the duplication of efforts and significant resource waste' is used to demonstrate how 'externally-driven capacity building projects often focus on developing new systems rather than building on what exists' (UIS, 2017, p. 26).

4.3.4 The most important point for good governance and educational management is that international summative monitoring systems are of limited use to Commonwealth ministers in tracking and monitoring the specificities of their own national educational development. As currently configured, the indicators have limited reach into curriculum reform for ESD, and there is no real assessment of resilience. Nor is there much point in repeating them frequently, since they are likely to show the same results. Commonwealth ministers need indicators grounded in national curricula and national goals, which may overlap with the SDGs but are not the same thing. Such indicators have a clear pathway to influence the high-stakes selection examinations that determine what is actually taught, especially at secondary level.

4.3.5 Good governance is inseparable from the effective management of learning, and requires flows of data from formative assessment. Global assessment data are essentially summative rather than formative and therefore not likely to provide useful information at classroom and school level for use in managing learning. Investment in curriculum development is needed that can drive new forms of assessment shaped by educational objectives rather than the exigencies of high stakes selection. Resilience should not be about surviving the ‘diploma disease’ that drives excessive levels of private tuition, examination-led teaching and test questions selected mainly to discriminate between students rather than to have real world relevance. ESD requires more emphasis on assessing relevant technical understanding, valuing more cooperative approaches to planetary and community level well-being and challenging the limits of utility of international league tables of performance not linked to national curricula.

4.3.6 Data security and data protection are uneven and often sub-standard. Schools collect many kinds of data: bio-data, health and attendance records, assessment scores, behavioural logs, etc. There is a need to adopt data protocols and legal frameworks to control the use of these data as more and more schools go online. The datasets being created have commercial value and the intellectual property rights should not necessarily reside with the service providers that collect the data.

4.4 Education financing

4.4.1 The final aspect of good governance and school management concerns finance and educational funding. This is always a central concern for the CCEM and for ministers, and is taking new forms across the Commonwealth as different financing gaps become clear. The appetite for aid to education is softening; new donors (sovereign wealth funds, philanthropists, corporate interests) have new priorities and self-interests; and aid dependence stubbornly persists, bringing into question the efficacy of some types of aid.

4.4.2 The basic dilemma of public education financing of recurrent costs of education systems and the challenge they present can be explained briefly. Low- and lower-middle-income countries in the Commonwealth collect on average 17 per cent of GDP in domestic revenue, from which all public expenditure funding comes. At the same time, they allocate on average 17 per cent of total public expenditure to education (16 per cent in low-income countries, 17 per cent in lower-middle-income countries and middle-income countries and 15 per cent in high-income countries). The result is that about 4 per cent of GDP in low-income Commonwealth countries and 5 per cent of GDP in richer countries is spent on education (Table 9).

Table 9. Education finance in Commonwealth countries

Country income	Expenditure as % of GDP	Expenditure as % of government budget
Low-income	4.0	16.2
Lower-middle-income	4.2	16.7
Middle-income	5.1	17.1
High-income	5.2	14.9

Source: Own calculations based on data from UIS data (2017).

4.4.3 Financial modelling undertaken for the Global Partnership for Education shows that at least 6 per cent of GDP would need to be allocated to education in low- and lower-middle-income countries to achieve the goals set by national governments and under the SDGs (Lewin, 2017). This requires a substantial increase in domestic revenue, and an increase in the proportion of this allocated to the education budget. In order to allocate 6 per cent of GDP to education, domestic revenue would need to be about 24 per cent of

GDP and educational expenditure would have to be 25 per cent of total government spending. This is well above current levels. Achieving such large increases in domestic revenue will not be easy and requires substantial fiscal reform. It would also require governments to increase their own spending on average by as much as 50 per cent, especially in low-income countries.

4.4.4 Three other mechanisms are available to reduce funding gaps. First, gains from educational reforms that promote greater efficiency and effectiveness could be substantial. This may be the most cost-efficient way of generating more resources. There are many possibilities and there is much experience across the Commonwealth that can be shared.

4.4.5 Second, more aid could help raise spending towards 6 per cent of GDP. However, higher levels of external support may create aid dependence and distort domestic decision-making. High levels of aid dependence may make sustainable development financed from domestic revenue more elusive. Over time, aid should decrease rather than increase.

4.4.6 Third, innovative finance initiatives are widely discussed. They are a welcome additional method to add to the resources available providing they do not increase debt or deepen dependence. To date, none of the proposed mechanisms has been used to fund recurrent costs on a large scale across Commonwealth countries. All the mechanisms have costs, and some generate new debt that has to be paid off in the future.

4.4.7 In the medium term, both resilience and sustainable development mean that education systems must be financed from domestic revenues. This includes both income from taxation on individuals and corporate entities, and investment from the private sector and contributions from philanthropists. Fiscal reform to enable provision of the core of public financing is the only method high-income countries use to fund mass education systems and their public goods aspects. Such reforms are at the heart of the next generation of educational financing. Commonwealth organisations can share the mechanisms that have most potential to close financial gaps and contribute to fiscal reform.

5. Thematic recommendations

The 20CCEM has three thematic priorities. These are:

1. Developing education for sustainable development;
2. Building resilience through education;
3. Enhancing education governance and management.

Taking each in turn, we can reach some conclusions to inform the deliberations of the 20CCEM.

5.1 Developing education for sustainable development

5.1.1 Education is a key component of sustainable development. It can help promote the attitudes and values that change consumption patterns, reward parsimony rather than profligacy and enhance social cohesion. It can also transmit knowledge and skill that can increase employability and ease the transition of youth from school to work. Education is part of the definition of sustainable development as well as a means to achieve it. Our discussion of sustainable development issues has been organised under broad themes, each of which leads to suggested interventions and actions.

Meanings and mechanisms

5.1.2 Member countries must consider how to give meaning to the core ideas of sustainable development and how to translate these into different languages and cultural and economic literacies. Sustainable development in the low-income Commonwealth countries may not look the same as it does in the rich Commonwealth. The commonalities and differences should be reflected in the curriculum and infrastructural investment for ESD.

Actions:

- Convene national and regional groups to promote ESD across the curriculum and within different school subjects and to encourage collaborative projects across countries with wide stakeholder consultation and participation to achieve broad understandings.
- Develop criteria and norms and standards for sustainable development for school systems, taking into account likely energy consumption, carbon costs of travel, waste generation and disposal, including of food, and reuse of learning materials.
- Invest and commit to implementation of the Nassau Declaration Action Plan (2017b) with any necessary mechanisms to promote sharing of insights and better practice, and increase research collaborations across clusters of countries with similar characteristics.

Equitable access

5.1.3 Access to education is very uneven across the Commonwealth. Poverty remains the main cause of exclusion from quality education and from competition for jobs linked to educational qualifications. Countries with inequitable access to education at different levels are not fair societies, nor do they make efficient use of the pool of talent embedded in their young people.

Actions:

- Identify, diagnose and devise interventions to remove sources of inequality in participation and achievement attributable to household income, location, gender and other recognised forms of disadvantage.
- Provide Commonwealth recognition for public policy that succeeds in promoting equity in a sustainable way.
- Publish Commonwealth data on participation and achievement disaggregated by wealth, location, gender, disability, civic status and language/ethnic group.

ECCE and pre-school

5.1.4 ECCE is critical to mental and physical development. As many as half of children in low-income countries are stunted, and infant mortality remains over 50 per 1,000 live births. Children who complete pre-school are more likely to enrol at the right age and experience faster cognitive development. ECCE can create circles of support around vulnerable children. Pre-school is the first opportunity to compensate for educational disadvantage and diminish its consequences.

Actions:

- Develop curricula for ECCE and pre-school for teachers and parents with free learning materials with insights from child development and cognitive neuroscience.
- Pilot ways to make use of school facilities to extend pre-school availability and ways to fund free pre-schools for households below the poverty line.
- Provide advice and guidance to establish legal frameworks for pre-school and for the employment of qualified educators.

Primary and secondary education

5.1.5 ESD is both a concern for the curriculum and a consideration in constructing school infrastructure. Ministries of education and schools should lead, not lag, on good design and ecological practices that protect biodiversity, reduce carbon footprints related to energy consumption and travel to school and challenge inefficient pedagogies. Every child should leave primary school with a basic set of values and knowledge of the natural and built environment that encourages sustainable development. Every secondary school child should acquire enough understanding of geoscience, physics, chemistry and biology to appreciate the unique characteristics of life on earth and the importance of nurturing its future. Sustainable development has yet to permeate most school subjects or much teacher education.

Actions:

- Use the Secretariat's convening power to encourage countries to complete the tasks of EFA and ensure all children's right to education is honoured from pre-school up to tertiary education and that all children enter and progress at the right age.
- Promote management methods that provide incentives to deploy teachers and other resources efficiently and effectively.
- Develop policy and planning methods for hard and soft educational infrastructure that are energy-efficient, ecologically sound and beneficial to social cohesion.

TVET

5.1.6 TVET remains a second-best choice for students in many Commonwealth countries. The best solutions may be to technologise and pre-vocationalise parts of the secondary school curriculum rather than developing more specialised secondary-level institutions with weak demand and high costs. TVET is a complex area, and one that is very different in different labour markets in terms of skill demand and balances between the costs of training and the productivity gains that justify the costs. Few TVET systems value sustainable development over immediate employment or changed production technologies.

Actions:

- Expand access to lower and upper secondary school in ways that promote generic pre-vocational skills of value in livelihoods and jobs, that enhance social mobility and social cohesion and that recognise civic responsibilities for sustainable development.
- Encourage environmentally friendly technologies in TVET and invest in incentives to replace inefficient and environmentally damaging education technologies.

Tertiary education

5.1.7 Tertiary education is very expensive in poor countries in the Commonwealth relative to GDP. This cost may be justified where expensive equipment is essential but in other cases the reasons for this are less clear. Higher education partnerships can expand access and reduce costs. More opportunities are needed to make it possible for students from poor Commonwealth countries to study in richer ones, and for educators with special expertise in richer countries to share this with institutions in poor countries. Split-site courses, exchange programmes and joint appointments may diminish the incentives for

talented individuals to migrate within the Commonwealth from poor to rich countries, which creates human capital lacunae.

Actions:

- Develop partnerships across the Commonwealth to encourage split-site courses, staff exchange and virtual and massive open online course collaborations that lower environmental burdens.
- Mobilise expertise across biosphere zones to contribute to ESD and the management of the environment, exploiting Commonwealth comparative advantages in relation to small states, oceanography, fishing and remote sensing of natural resources.
- Invest in ESD using new technologies to increase awareness, change consumption patterns and gain first-mover advantages in eco-technologies.

5.2 Resilience

We present conclusions on resilience based on six dimensions.

Quality

5.2.1 Resilience is inextricably linked to educational quality. Secure learning creates confidence and competence to manage crisis and adversity. It implies openness to discussion and cross-cultural consensus about the meanings of development. It also depends on informed and motivated teachers who share the values of ESD and can inspire students to commit to patterns of consumption and evidence-based protection of the natural and social environment that enhance sustainability.

Actions:

- Devise enrichment material for learning and teaching that promotes ESD across different subjects in the curriculum and that enhances resilience.
- Revisit Commonwealth protocols on teachers and teacher education to ensure all teachers have ESD awareness, and encourage teacher union engagement with ESD.
- Develop methods for tracking the progress of all children through continuous records maintained by teachers to ensure no child falls far behind.

Inclusivity

5.2.2 Inclusivity seeks to reduce inequalities and ensure that people suffering disadvantage have access and opportunity that are equivalent to or better than those available to people without disadvantage. Inclusivity is central to resilience both for those who suffer disadvantage and for those who can ameliorate marginalisation.

Actions:

- Devise educational programmes that promote ESD for marginalised groups and those with vulnerabilities, especially in small states, and map exclusions.
- Mainstream curricula content that raises awareness of inclusivity issues in a country-specific way linked to individual and education-system resilience.

Indigenous knowledge

5.2.3 The rights of indigenous peoples have to be protected by legislation and actively promoted by states committed to building resilience among citizens. This can contribute to awareness of sustainable development and increase social cohesion. The preservation of language remains central to identity, and the use of mother tongue in schools is important and should be supported by states as appropriate to context.

Actions:

- Enact legislation to ensure indigenous peoples' languages and cultural practices are protected where this is needed.
- Maintain and develop dynamic archives of indigenous knowledge of sustainable development that can be translated into curriculum material.

Employable skills

5.2.4 Skills that enhance employability and livelihoods in the informal sector are at the core of resilience. These are what allow individuals to adjust to changing opportunities for productive work and to reskill as occupations modernise and technologies of production change. Investment in human capital increases the probability that national economies will be able to ride out recessions and adjust to new market situations.

Actions:

- Invest in curriculum development for ESD targeted at pre-vocational skills in mainstream schooling and new technologies relevant to sustainable development.
- Develop partnerships with employers to identify skill deficits and to assess supply and demand in relation to economic sectors critical to sustainable development.

Adult learning

5.2.5 Illiterate adults number around 400 million in the Commonwealth. Illiteracy limits understanding of sustainable development and contributes to vulnerability and lack of resilience. The right to education of illiterate populations has not been delivered, and it should remain a priority to support interventions that reduce the number of those who are illiterate.

Actions:

- Review literacy in relation to sustainable development messaging and invest in developing strategies to link literacy initiatives to ESD.
- Generate literacy learning materials on sustainable development topics.

Building resilience

5.2.6 Resilience has to be nurtured and valued. It is important for individuals, communities and countries. ESD must develop consensus within different education systems as to how to achieve this in curricula, pedagogy and assessment.

Actions:

- At the individual level, identify and include learning experiences relevant to resilience.
- At the community level, identify and develop safety nets for vulnerable learners.
- At the national level, develop fail-safe systems of educational administration.

5.3 Governance and management

Four areas emerge from our consideration of governance and management.

Good governance

5.3.1 Good governance and effective educational management are the institutional mechanisms that transform policy into practice and generate learning outcomes relevant to personal and community-level development.

Actions:

- Review good governance and effective educational management across the Commonwealth, and develop legal and regulatory frameworks for good governance in countries that do not have adequate legislation, norms and standards.

- Evaluate and implement the Commonwealth Education Policy Framework in selected countries with support from the Secretariat.

Management capacity-building

5.3.2 Capacity-building links teachers' skills, curricula, infrastructure and accreditation in the Commonwealth Education Policy Framework. Most professional development models promote the acquisition of management capabilities through real-world on-the-job mentored experiences and case studies of successes and failures. Shared goals and teamwork are critical to impact. This implies that the Commonwealth should take ownership of the SDGs it wishes to promote and find ways of generating commitment to country-specific capabilities in ESD.

Actions:

- Support the development of nationally specific SDGs consistent with the global SDGs but owned by national governments, educational administrators and teachers with a close relationship between target-setters and target-getters.
- Develop Commonwealth Secretariat education technical assistance groups (ETAGs) to provide independent technical advice on policy and planning for ESD drawing on Commonwealth experience.

Assessment and data collection

5.3.3 International systems of assessment are well established and executed by a range of existing agencies. These national assessments are usually summative, restricted to some subjects and grades, and not readily interpretable at school and classroom level. Moreover, high-stakes national examinations are sometimes of questionable quality and unknown content and predictive validity. They rarely include assessment of knowledge and skill explicitly associated with sustainable development.

Actions:

- Provide inter-Commonwealth technical assistance to enhance the quality and content and predictive validity of high-stakes examinations that assess ESD outcomes.
- Develop formative assessment instruments related to core subjects at different grade levels linked to the national curriculum and ESD that can be used by teachers.
- Develop data protection protocols and legal frameworks for all data collected and stored by schools on children, identify intellectual property rights related to datasets on children and determine who should own the data.

Educational financing

5.3.4 Commonwealth countries have very different financial circumstances, which are reflected in a range of educational financing issues. Countries with low income and high fertility need to spend at least 6 per cent of GDP and much more than 20 per cent of the government budget to universalise primary and secondary school and finance some higher education. High- and middle-income countries do not need to spend as high a percentage of GDP as they have fewer children per adult. They may choose to invest more per child and still spend less than 6 per cent of GDP and 20 per cent of the government budget. No rich country reaches these targets, or needs to do so. A one-size-fits-all approach to financing makes little sense.

5.3.5 Financing problems in low-income countries are heavily conditioned by low rates of revenue through taxation. This is what finances government and education systems. Domestic revenue can be less than 15 per cent of GDP in low-income countries. Aid can fill gaps but this is a temporary solution. If aid is needed year after year, it may not be

achieving its goals. Fiscal reform is a priority, as is a concerted effort to collect the taxes that are already due. There is no other way to generate recurrent finance for a mass education system.

Actions:

- Review patterns of education expenditure by government and households and establish where gaps arise between what is needed and what is available from domestic revenue.
- Support inputs from ETAGs on efficiency gains and fiscal reforms that are sustainable.
- Commission studies to identify incentives to manage resources efficiently in a sustainable way at different levels of education systems.

6. Concluding remarks: Can education deliver?

6.1 This report is entitled ‘Sustainability and resilience: Can education deliver?’ The answer is a qualified ‘yes’. If there is political commitment and resource mobilisation, and these are coupled to the persistent promotion of sustainable development, the transformative potential of education systems can be realised.

6.2 The Commonwealth shares with Education 2030 a vision of a world where all children have access to quality early childhood development and pre-primary education; free, equitable and quality primary and secondary education; and quality TVET and tertiary education (Commonwealth Secretariat, 2012). Competencies related to sustainable development are the capstones of quality EFA and the SDGs.

6.3 The three sub-themes of the 20CCEM provide a bedrock for the development of Commonwealth programmes going forward. The Secretariat can help strengthen education systems and improve capacities to deliver ESD. Investment in resilient systems and curricula that promote resilience is a new challenge. Enhanced governance and better management are old challenges with a new urgency. The Secretariat can develop its work on policy frameworks and consider how it can develop ETAGs. It can lead on making sure no child falls behind and universal rights to education are honoured. It can trade on its comparative advantages in supporting partnerships and institutional links that promote ESD.

6.4 At the 19CCEM, Commonwealth ministers highlighted the Commonwealth values of equity, access and development, stressing the key role of ESD as a priority for future planning and a driver of the SDGs globally and nationally (Commonwealth Secretariat, 2015b). The aim of ESD is to realise learning outcomes that equip the individual with those competencies—attitudes, values, behaviours, soft and hard skills and knowledge—required to appreciate and engage in decision-making that promotes sustainable development and the valuing of the future over the present.

6.5 The Commonwealth has a special role to play in shifting the focus of development from unsustainable patterns of consumption, dangerous depletions of natural resources and unstable social and economic systems that undermine social cohesion within and across nations. It is not an economic organisation, nor does it seek hegemonic power in the geopolitics of the twenty-first century. It can act as an honest broker. Its member countries reflect most kinds of development trajectory that have occurred, and their common language and literacies and shared values provide unique opportunities to demonstrate how new approaches to investment in education can work into the indefinite future.

6.6 The 20CCEM can build on its influential contributions to the development of the SDGs. The Commonwealth Education Ministers Action Group (EMAG) was established to take

forward the actions agreed at the 19CCEM (Nassau Declaration). It can now look towards feeding new thinking from 20CCEM into the HLPF on its 2018 theme of 'Transformation towards sustainable and resilient societies'. Simultaneously, it can demonstrate how global initiatives can complement national and regional redefinitions of sustainable development that suit very diverse circumstances. The Commonwealth can lead on demonstrating how various constituencies e.g. small island states, low income countries, large South Asian nations, and high income countries can develop their own sustainable development goals for education that are consistent with the SDGs but fit for purpose for Commonwealth aspirations and capabilities. Resilience will be well served by a diversity of goals and targets. Sustainable development depends on governance that cares about and protects the future in different ways in different circumstances. The 20CCEM can chart a new pathway towards both resilience and good governance and towards sharing the benefits globally. The 20CCEM has the opportunity to value the future and invest in education for sustainable development for the benefit of the Commonwealth's children, and their children's children.

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