

2018 High-level Political Forum

UNESCO

Contribution from the SDG-Education 2030 Steering Committee

23 April 2018

ECOSOC invited intergovernmental bodies, including the SDG-Education 2030 Steering Committee, to contribute to the 2018 High-level Political Forum. This contribution is based on the HLPF mandated structure for all submissions, and suggested focus areas from the perspective of SDG4 based on discussions held during the last SDG-Education 2030 Steering Committee meeting (Paris, 28 February – 2 March 2018).

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SDG-Education 2030 Steering Committee input to the 2018 High-Level Political Forum

under the theme *Transformation towards sustainable and resilient societies*

Education plays a key role in building sustainable and resilient societies. Education also serves as the foundation for the achievement of all other SDGs: it increases the productivity of individuals and strengthens the potential for economic growth; develops skills needed for decent work; develops professional skills needed for sustainable development, including water and sanitation, green energy or the conservation of our natural resources; helps eradicate poverty and hunger; contributes to improved health; promotes gender equality and can reduce inequality; and promotes peace, the rule of law and respect for human rights.

a. Assessment of situation regarding the principle of “ensuring that no one is left behind” at the global level

Universal access to pre-primary is far from being achieved

Pre-primary education establishes the foundations for lifelong learning but the global gross enrolment ratio – the number of enrolled children relative to the population of official pre-primary age – was only 49% in 2016. In Southern Asia, Northern Africa and Western Asia, sub-Saharan Africa, and Central Asia, participation in pre-primary education is below the global average.

Global out-of-school rates and numbers have fallen since 2000 but remain high

In 2016, 263 million children, adolescents and youth were out of school, representing nearly one-fifth of the global population of this age group.¹ 63 million (24% of the total out-of-school population) are children of primary school age, 61 million (23% of the total) are adolescents of lower secondary school age, and 139 million (53% of the total), are youth of upper secondary school age.²

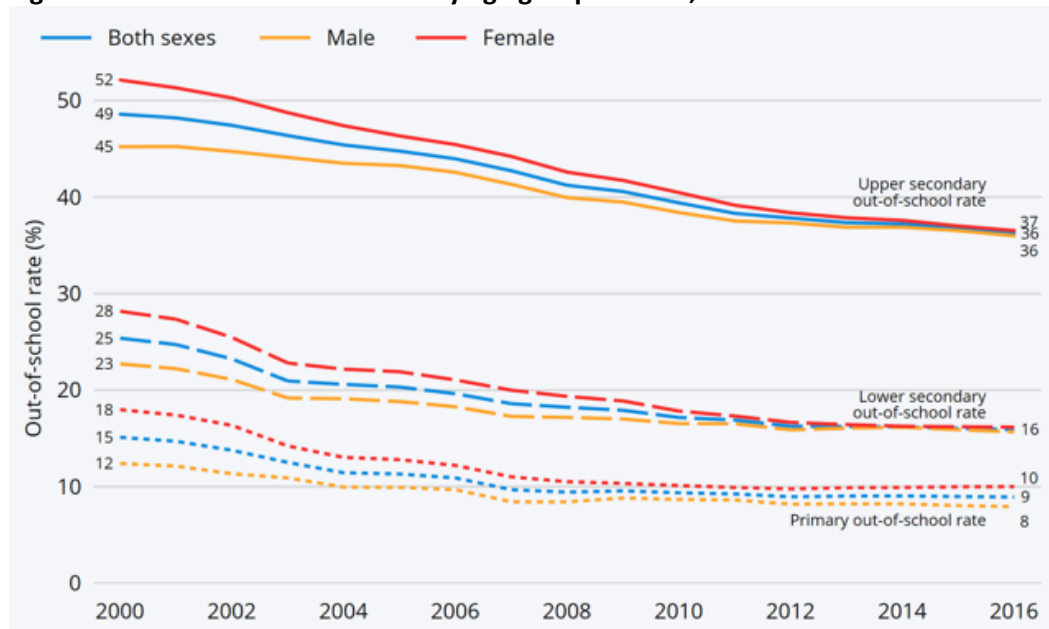
The number of children, adolescents and youth who are excluded from education fell steadily in the decade following 2000, but this progress essentially stopped in recent years. The primary out-of-school rate has barely moved from around 9% since 2008, and the lower secondary out-of-school rate has been at 16% since 2012. The

¹ UNESCO Institute for Statistics (UIS). 2018. “One in Five Children, Adolescents and Youth Is out of School.” Fact sheet no. 48, UIS/FS/2018/ED/48. Montreal: UIS. <http://uis.unesco.org/sites/default/files/documents/fs48-one-five-children-adolescents-youth-out-school-2018-en.pdf>

² The official ages for each level of education vary by country. Primary school age is on average about 6 to 11 years, lower secondary school age about 12 to 14 years, and upper secondary school age about 15 to 17 years.

upper secondary out-of-school rate has fallen more steadily since 2000, but this trend is flattening out, with the most recent estimate at 36% (**Figure 1**).

Figure 1. Global out-of-school rate by age group and sex, 2000-2016



Source: UNESCO Institute for Statistics database.

The gap between male and female out-of-school rates has narrowed over the years but among children of primary age, girls are still more likely to be out of school. Among adolescents and youth of secondary school age, there are no gender disparities at the global level; however, regional data show that girls are disadvantaged in sub-Saharan Africa, Oceania, and Northern Africa and Western Asia, while boys are disadvantaged in Latin America and the Caribbean. At the national level, many countries have significant disparities in enrolment linked not only to sex, but also location, household wealth, disability, ethnic or linguistic minority status, exposure to armed conflict, and other personal and household characteristics.³

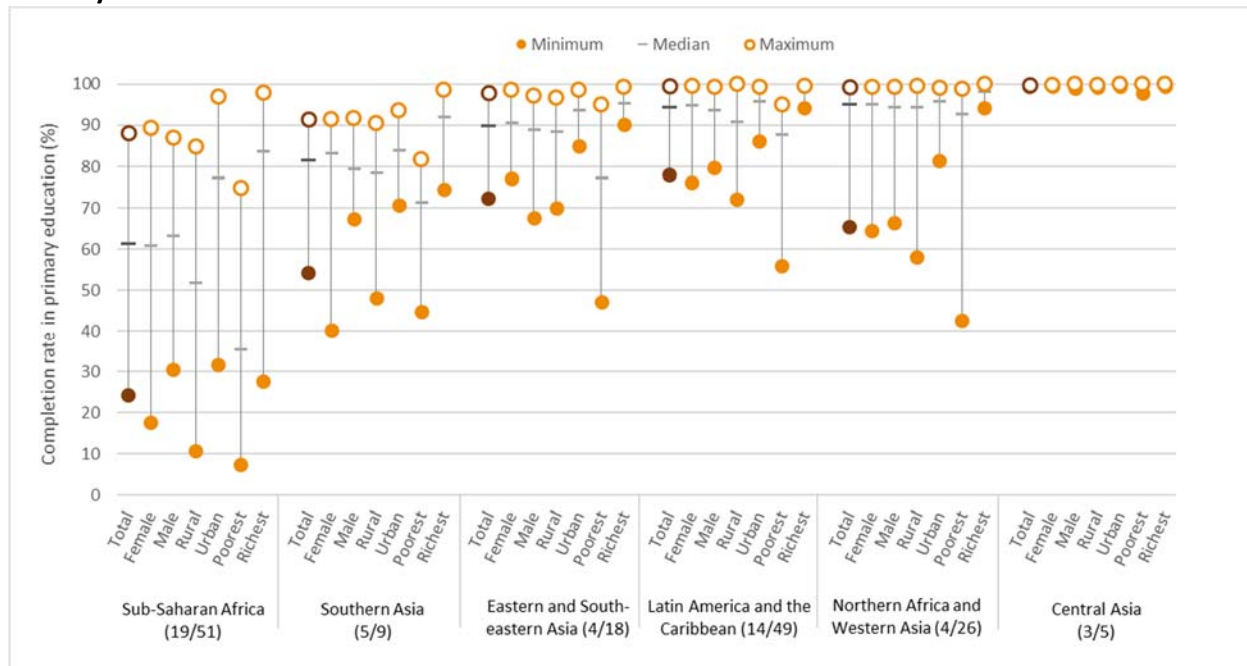
Children from rural areas and the poorest households are least likely to complete primary education

Primary completion rates vary considerably by SDG region, sex, location and household wealth. Data coverage is insufficient for the calculation of regional and global averages but a review of national completion rates in each region yields important insights.

Sub-Saharan Africa has the largest gaps between rural and urban areas and between the poorest and richest household quintiles (**Figure 2**). This region also has the largest gaps between the lowest and highest national values, followed by Southern Asia, Eastern and South-Eastern Asia, Latin America and the Caribbean, and Northern Africa and Western Asia. Across all regions, gender disparities in primary completion are smaller than disparities associated with location and wealth.

³ See the UIS.Stat database at <http://data.uis.unesco.org>.

Figure 2. Completion rate of primary education, by region, sex, location and household wealth, 2016 or most recent year available



Note: The figures in parentheses indicate the number of countries in a region with data out of the total number of countries in a region.

Source: UNESCO Institute for Statistics database.

Three in every five children and adolescents are not learning the basics in reading and mathematics

Globally, more than 617 million children and adolescents – including 387 million children of primary school age (58% of the population in this age group) and 230 million adolescents of lower secondary school age (56% of the population in this age group) – do not achieve minimum proficiency levels in reading and in mathematics.⁴ About two-thirds of these children and adolescents are in school but will not become proficient, either because they drop out or because they do not learn the basics, frequently due to poor quality of education and inadequately trained teachers.

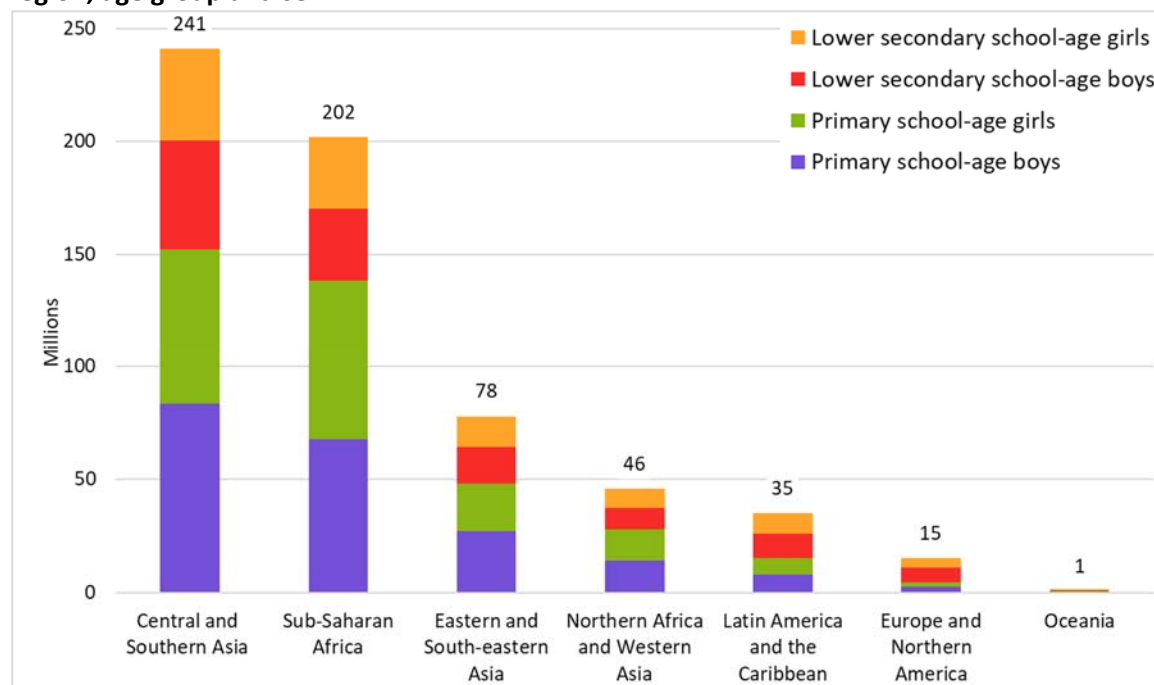
In sub-Saharan Africa, 88% and 84% of all children and adolescents will not be proficient in reading and in mathematics respectively by the time they are of age to complete primary and lower secondary education. Central and Southern Asia has the second highest rates of non-learners, 81% and 76% respectively, despite years of steady growth in enrolment rates. The proportions of children and adolescents not reaching minimum proficiency level in reading and in mathematics respectively are 57% in both learning domains in Northern Africa and Western Asia, 36% and 52% in Latin America and the Caribbean, and 31% and 28% in Eastern and South-Eastern Asia. In Europe and Northern America (14% in both reading and mathematics) and in Oceania (22% in both reading and mathematics) the rates are lower but still too high, especially among the population of lower secondary age.

Figure 3 displays the absolute number of children and adolescents who do not achieve minimum proficiency in reading, including 241 million in Central and Southern Asia and 202 million in sub-Saharan Africa. For

⁴ UNESCO Institute for Statistics (UIS). 2017. “More than One-Half of Children and Adolescents Are Not Learning Worldwide.” UIS fact sheet no. 46. Montreal: UIS. <http://uis.unesco.org/sites/default/files/documents/fs46-more-than-half-children-not-learning-en-2017.pdf>

mathematics, the regional numbers of children and adolescents who do not achieve minimum proficiency are similar.

Figure 3. Number of children and adolescents who do not achieve the minimum proficiency level in reading by region, age group and sex



Source: UNESCO Institute for Statistics database.

Literacy rates and educational attainment rates are increasing, but remain low in some regions

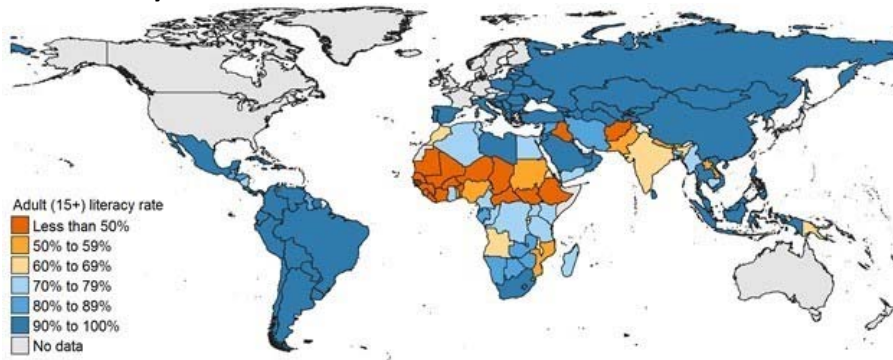
There have been remarkable improvements in terms of reading and writing skills and a steady reduction in gender gaps over the past decades but 750 million adults – two-thirds of whom are women – remained illiterate in 2016.⁵ The global adult literacy rate (for the population 15 years and older) was 86% in 2016, while the youth literacy rate (for the population aged 15 to 24 years) was 91%.

Southern Asia is home to almost one-half of the global illiterate population (49%). 27% of all illiterate adults live in sub-Saharan Africa, 10% in Eastern and South-Eastern Asia, 9% in Northern Africa and Western Asia, and 4% in Latin America and the Caribbean. Less than 2% of the global illiterate population live in the remaining regions combined (Central Asia, Europe and Northern America, and Oceania).

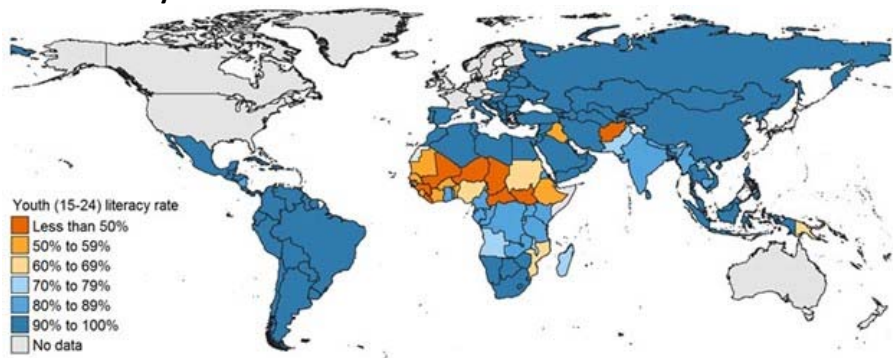
Literacy rates are lowest in sub-Saharan Africa and Southern Asia (**Figure 4**). Youth literacy rates are generally higher than adult literacy rates, reflecting increased access to schooling among younger generations, but remain low in several countries, most of them in sub-Saharan Africa.

⁵ UNESCO Institute for Statistics (UIS). 2017. "Literacy Rates Continue to Rise from One Generation to the Next." UIS fact sheet no. 45. Montreal: UIS. <http://uis.unesco.org/sites/default/files/documents/fs45-literacy-rates-continue-rise-generation-to-next-en-2017.pdf>

Figure 4. Adult and youth literacy rate by country, 2016
Adult literacy rate



Youth literacy rate



Source: UNESCO Institute for Statistics database.

Information about the highest level of education completed by adults 25 years and older provides insights about the qualifications of the labour force in each country but data coverage for this indicator in the UIS database is relatively low and regional values are therefore not available. Moreover, data on educational attainment give a general picture of the state of education in individual countries but provide little information about specific skills, including the skills needed for sustainable development.

In most countries with data, the proportion of adults who completed at least primary education is higher than 60%, except for some countries in Latin America and the Caribbean, Southern Asia, and sub-Saharan Africa. For countries in Oceania, Central Asia, and Europe and Northern America, this proportion is 80% or higher. The lowest proportions of individuals with at least secondary education are found in sub-Saharan Africa, where two in every three countries have a proportion lower than 30%. The proportions of individuals who completed tertiary education are highest in parts of Central Asia and Europe and Northern America and lowest in sub-Saharan Africa and Southern Asia.⁶

Many teachers lack training, many schools lack basic infrastructure

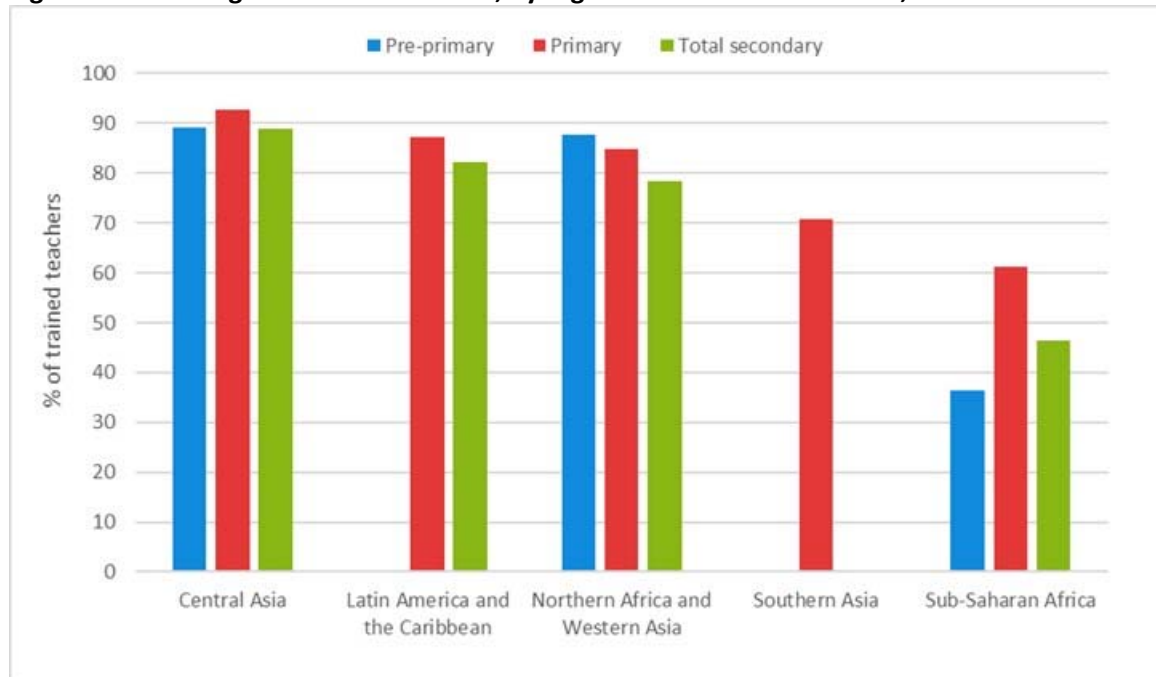
SDG target 4.c recognizes teachers as key for progress in education quality and learning. UIS data show that recruitment of teachers has increased and the average pupil-teacher ratio has fallen, yet millions of young people continue to be taught by unqualified personnel or in overcrowded and ill-equipped classrooms.

There are about 10 million pre-primary school teachers, 31 million primary school teachers and 34 million secondary school teachers around the world, but newly recruited teachers do not always receive the minimum

⁶ See the UIS.Stat database at <http://data.uis.unesco.org>.

pedagogical training according to national standards. Due to lack of comprehensive data, global estimates on trained teachers only exist for primary education. Globally, 86% of teachers are trained but the proportion is lower in Northern Africa and Western Asia (85%), Southern Asia (71%), and sub-Saharan Africa (62%) (**Figure 5**). At pre-primary and secondary levels, the lowest and highest proportions of trained teachers are found in sub-Saharan Africa and Central Asia, respectively.

Figure 5. Percentage of trained teachers, by region and level of education, 2016 or most recent year available

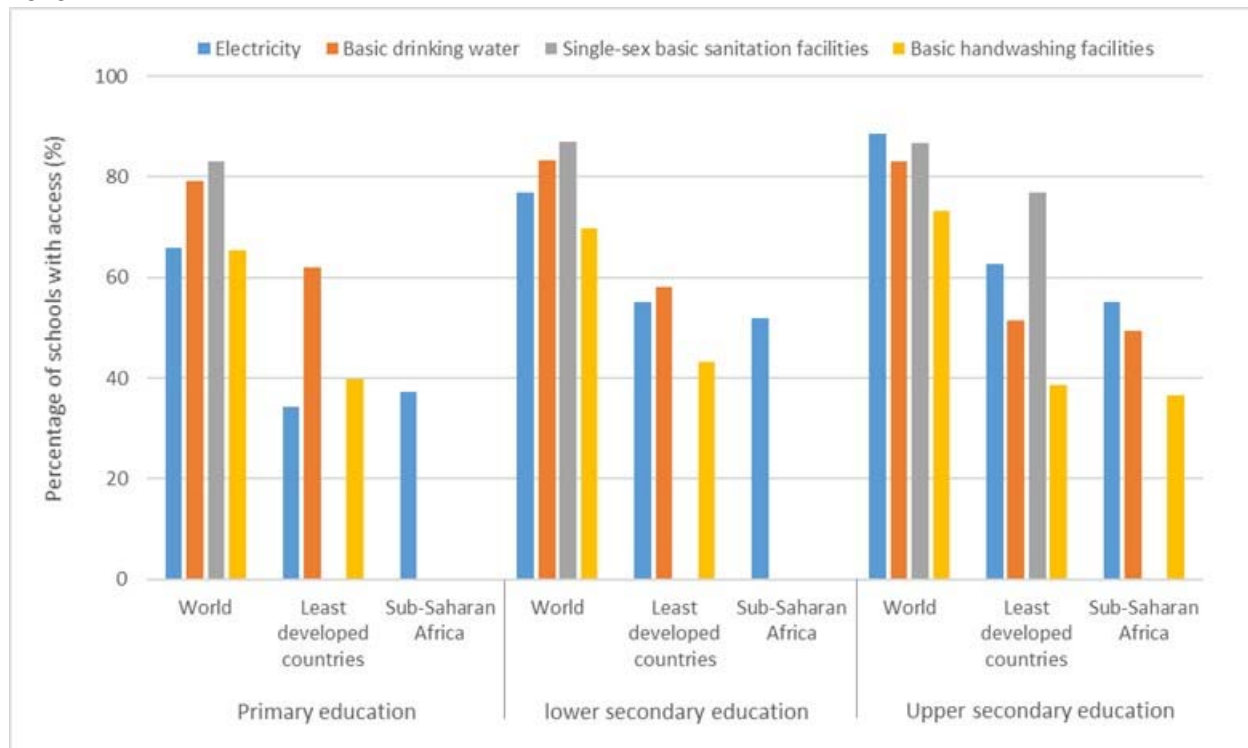


Note: For Latin America and the Caribbean and for Southern Asia, regional averages are not available for certain levels of education because of insufficient national data.

Source: UNESCO Institute for Statistics database.

Least developed countries face the biggest challenges in providing basic infrastructure to students, including electricity, basic drinking water, and single-sex basic sanitation and handwashing facilities. Only 34% of primary schools in least developed countries have access to electricity and less than half of primary and secondary schools are equipped with basic handwashing facilities. The situation is especially severe in sub-Saharan Africa, where only 37% of primary schools, 52% of lower secondary schools and 55% of upper secondary schools have access to electricity (**Figure 6**). 8 countries in the region reported data on basic handwashing facilities; in 5 of these countries, less than one third of schools have such facilities.

Figure 6. Percentage of schools with access to basic infrastructure in selected regions, by level of education, 2016



Note: For least developed countries and sub-Saharan Africa, some regional averages are missing because of insufficient national data.

Source: UNESCO Institute for Statistics database.

For poor households the cost of education can be prohibitive

The lack of sufficient funding for the education sector is a persistent problem in many countries and a particular challenge for low-income countries. UIS data confirm that in many developing countries, where government funding of education is low, households spend a far greater proportion of average GDP per capita on education than those in developed countries. This heavy burden raises concerns about the prospects of achieving the global education goal because the poorest and most marginalised children and youth are often denied their right to free primary and secondary education, which reinforces existing patterns of exclusion. For example, household expenses on secondary education amount to 20-25% of average GDP per capita in Benin, Chad, Côte d’Ivoire, Guinea, and Niger, and more than 30% in Togo. By contrast, in almost all rich countries this share does not exceed 5%.⁷

Inclusion of sustainable development principles is inconsistent across national education systems

According to the reports submitted by 83 countries as part of the sixth consultation on the implementation of the 1974 Recommendation concerning Education for International Understanding, Cooperation and Peace and Education relating to Human Rights and Fundamental Freedoms for the period 2012-2015, 56% of countries have education policies and frameworks in place that reflect the principles of SDG target 4.7, which includes key concepts of Education for Sustainable Development and Global Citizenship Education.⁸ This global average

⁷ Huebler, Friedrich, and Elise Legault. 2017. “The World’s Families: Hidden Funders of Education.” Global Partnership for Education (blog). 2 June 2017. <http://www.globalpartnership.org/blog/worlds-families-hidden-funders-education>

⁸ UNESCO 202 EX/24 (III), Implementation of the 1974 Recommendation concerning education for international understanding, co-operation and peace and education relating to human rights and fundamental freedoms.

indicates that there is general openness to recognize the principles as notions that are compatible with the general ethos of national education systems. A closer look at the data from a regional perspective shows, however, that there are differences between regions in the extent to which the Guiding Principles are de-facto reflected in national policy instruments pertaining to education.

Gaps in monitoring of SDG 4 pose challenges for progress towards other SDGs

The preceding analysis is based on currently available data by the UNESCO Institute for Statistics but there are considerable gaps in national and regional coverage among the global and thematic indicators for SDG 4. For some indicators, no data are available, sometimes because there is no established methodology, which impedes the monitoring of progress. An assessment by the UIS shows that in 2017, fewer than one-half (47%) of all countries had sufficient data for the 11 global indicators, and nearly two-thirds (63%) had the data needed for calculation of the 32 thematic indicators. Coverage is especially low for knowledge, skills, learning and school readiness; for these areas, only 43% of countries had data. No national data were available for 10 of the 43 indicators for SDG 4, including 1 global and 9 thematic indicators. For 19 indicators (8 global and 11 thematic), 50% or fewer of all countries reported data. Only 7 indicators (1 global and 6 thematic), had more than 75% national coverage in the UIS database.⁹ Without reliable data, policy makers cannot make informed decisions about interventions in the education sector. As targets for SDG 4 continue to be missed, the world is also at risk of also not reaching the other SDG targets.

b. Identification of gaps, areas requiring urgent attention, risks and challenges

The potential of education to promote the sustainable development agenda depends on the equitable expansion of education opportunities. But it also depends on less easily measurable aspects of quality and inclusion. Education systems still have significant unfulfilled potential to contribute to achieving sustainable and resilient societies although there are examples of excellent education systems from which we can learn what is possible for others that are following behind.

Education systems do not sufficiently address challenges such as sustainable consumption or segregation

While consumerism continues to dominate modern economies and societies, the prevention of unsustainable production and consumption patterns is yet to become a central feature of education systems. An analysis of 78 national curricula by the Global Education Monitoring (GEM) Report showed that topics that associated with sustainable development were found to some degree in most frameworks. For example, 73% of countries mention 'sustainable development', 55% use the term 'ecology' and 47% the term 'environmental education' in their curricula.¹⁰ However, in India, environmental education was mandated by the Supreme Court in 1991, and in 2003 the government directed the National Council of Educational Research and Training to produce extensive content on environmental education. As a result, over 300 million students in the 1.3 million schools were receiving some environmental education training in 2015.¹¹

Overconsumption of natural resources and waste are part and parcel of economic systems that are decoupled from nature. The global economic system is built on a culture of consumption and the world's wealthiest

⁹ UNESCO Institute for Statistics (UIS). 2017. *The Quality Factor: Strengthening National Data to Monitor Sustainable Development Goal 4 - SDG 4 Data Digest 2017*. Montreal: UIS. <http://uis.unesco.org/sites/default/files/documents/quality-factor-strengthening-national-data-2017-en.pdf>

¹⁰ 2016 Global Education Monitoring Report *Education for people and planet: creating sustainable futures for all* <http://unesdoc.unesco.org/images/0024/002457/245752e.pdf>.

¹¹ Gardiner, B. 2015. How India is Teaching 300 Million Kids to Be Environmentalists. www.smithsonianmag.com/arts-culture/india-teaching-300-million-kids-sustainability-180956494.

populations consume the lion's share of its resources. Modern education systems can learn from best practices in indigenous communities and traditional indigenous knowledge systems that teach the importance of reciprocity and balance between humanity and nature. Current discussions to move towards a more sustainable economic model, such as steady-state economies/de-growth or sharing/circular economic strategies, remain relatively fringe ideas and are far from being taught through formal education systems. The Ellen MacArthur Foundation is working to build a global teaching and learning platform based on the circular economy framework, including online higher education programmes, professional development, and curricular interventions through the International Baccalaureate and United World Colleges.¹²

Cities in many parts of the world remain segregated and education systems often exacerbate segregation. Various spatial and social patterns in most major cities – gentrification, urban sprawl, housing discrimination, immigrant enclaves, slums – separate residents in terms of wealth, access and privilege. Segregation by ethnicity, social class and race are well-documented features of the socio-economic and education landscape in cities in the United States and much of Europe; countries with legacies of troubled race relations, such as South Africa; historically unequal Latin American societies; and emerging middle income countries in Asia.

Education reflects but can also exacerbate inequality in cities. While urban areas provide greater access to education, the urban poor have worse primary completion rates than the average rural household in 26 out of 35 countries with available data. Discriminatory policies and practices exacerbate inequality in education. District-level analysis in Sao Paulo, Brazil, found that public services and utilities, including education, were more intensively allocated to districts with higher levels of human development.¹³

Within schools, teachers may routinely exhibit discriminatory attitudes towards children of migrants and minorities, which deepen their social marginalization. In India, a randomized evaluation which assigned children's characteristics to examination cover sheets in India found that teachers gave worse scores to lower caste children, and that 20% of the performance gap between high and low caste students was linked to caste-based discrimination.¹⁴ In the United States, legislation in the early 2000s released hundreds of US school districts from court-enforced integration. As a result, by 2011, in districts released from the desegregation order, 53% of black students attended so-called 'apartheid schools', where less than 1% of the student body was white.¹⁵

Continuing challenges in water, energy and sustainable consumption also hamper education progress

The lack of access to water, sanitation and energy can impede educational progress. Reducing the time it takes to collect water and firewood can improve educational outcomes by freeing time for educational activities, especially for women and girls. An analysis of 24 sub-Saharan African countries estimated that 13.5 million women and 3.4 million children spent more than 30 minutes each day collecting water for household use; in all countries, girls were more likely than boys to have the responsibility of fetching water.¹⁶ The lack of adequate sanitary care in schools for menstrual hygiene management has added consequences for girls' education. In

¹² <https://www.ellenmacarthurfoundation.org/programmes/education>

¹³ Haddad, M. and Nedovic-Budic, Z. 2006. Using spatial statistics to analyze intra-urban inequalities and public intervention in São Paulo, Brazil. *Journal of Human Development*, Vol. 7, No. 1, pp. 85–109.

¹⁴ Hanna, R. N. and Linden, L. L. 2012. Discrimination in grading. *American Economic Journal: Economic Policy*, Vol. 4, No. 4, pp. 146–68.

¹⁵ Hannah-Jones, N. 2014. Segregation Now: Investigating America's Racial Divide. New York, ProPublica. www.propublica.org/article/segregation-now-full-text.

¹⁶ Graham, J. P., Hirai, M. and Kim, S.-S. 2016. An analysis of water collection labor among women and children in 24 sub-Saharan African countries. *PloS one*, Vol. 11, No. 6, e0155981.

Bangladesh, a nationally representative study from 2013 found that 41% of schoolgirls aged 11 to 17 in Bangladesh reported missing 2.8 days of school per menstrual cycle.¹⁷

Human consumption needs and poor management of natural resources are responsible for causing irreversible damage to species and biodiversity loss, land degradation and pollution of water, air or soil. When people lose their ability to maintain their livelihoods due to these environmental challenges, they are compelled to migrate. Environmental migrants and refugees due to climate change, such as those afflicted by the dramatic droughts and desertification in arid and semi-arid regions in East Africa and Western Asian countries, can land up in burgeoning urban slums. Such population movements will continue to stress urban education systems and their ability to absorb population changes; and also increase rural challenges.

c. Valuable lessons learned on transformation towards sustainable and resilient societies

Imparting knowledge through education is necessary but not sufficient to change behaviours that promote sustainability and resilience. Deeper transformations of education systems are needed to deliver changes that will support sustainability and resilience.

An altogether different pedagogical approach for youth and adults is needed to address sustainable consumption and inequality

Knowledge drawn from textbooks is not sufficient to yield behavioural changes. Learning by doing is a key need in school curricula. In India, the concept of ‘handprint’ was developed to emphasize practice-based learning and positive actions in support of sustainability, instead of just a focus on environmental footprints. The Paryavaran Mitra nationwide initiative, which incorporates this methodology, aims to create a network of young environmental leaders across the country. It focuses on environmental understanding, critical thinking skills, engagement with communities, and learning by doing, and includes activities on water and energy conservation. The program has reached over 220,000 schools and government and civil society partners.¹⁸

The whole-school approach to environmental education is another related focus going beyond textbook learning to make schools safe, climate-compatible and sustainable. The approach requires reconsidering and redesigning schools’ operations and environmental management, pedagogy and learning, and community relationships. In the United Kingdom, whole school approaches have helped improve schools’ ethos and student health and learning, and reduced schools’ ecological footprints.¹⁹

Attention also needs to be paid to education activities beyond school, recognizing the importance of lifelong learning to fulfil the sustainable development goals of improving management of terrestrial ecosystems, water/energy use and behaviours, and urban inclusion. After all, decisions to address the challenges of sustainable development need to be taken by people who have left school.

In some promising initiatives in poorer countries, education is found to be critical to empowering smallholders to preserve rapidly diminishing agricultural biodiversity and to changing mainstream practices dominated by agribusiness. In India, Navdanya (Nine Seeds) is a network across 18 states that seeks to conserve seeds by

¹⁷ Alam, M.-U., Luby, S. P., Halder, A. K., Islam, K., Opel, A., Shoab, A. K., Ghosh, P. K., Rahman, M., Mahon, T. and Unicomb, L. 2017. Menstrual hygiene management among Bangladeshi adolescent schoolgirls and risk factors affecting school absence: results from a cross-sectional survey. *BMJ Open*, Vol. 7, No. 7, e015508.

¹⁸ Centre for Environmental Education. 2015. Paryavaran Mitrya: Actions that Count. Ahmedabad, India, Centre for Environmental Education.

¹⁹ Hacking, E. B., Scott, W. and Lee, E. 2010. Evidence of Impact of Sustainable Schools. Nottingham, UK, Department for Children, Schools and Families.

preserving knowledge about them and their use. It has trained over 500,000 farmers in seed sovereignty and sustainable agriculture over the past two decades. In Uttarakhand state, it has helped record folk knowledge of medicinal and other herbs and has documented farming patterns to provide advice that routinely goes against government policy, which favours use of chemicals. In Kheti Virasat (Heritage of Farming) in Punjab state, extension workers use documentaries and educational films instead of written material to educate farmers about the environmental and health problems of conventional farming, the geopolitics of agriculture and organic farming practices.²⁰

More generally, paying close attention to skills and the occupation requirements of green economy strategies is crucial since the shift to greener economies brings about structural changes in national labour markets. While the green transition mostly affects existing occupations, new job profiles also emerge, mostly at higher skill levels. This poses a considerable challenge of retraining those workers who may lose their jobs, upgrading the skills of the current workforce and providing the right skills to those entering the changing labour market. Social partners and governments at all levels should collaborate in a broad effort to adapt TVET to changing skill needs, with particular attention to the local level, where different stakeholders representing both supply and demand come into direct contact.

Changing ingrained behaviours, such as sanitation practices in rural communities, require shifting community norms. The community-led total sanitation programme, implemented in over 60 countries, and incorporated into more than 20 national plans, has helped change sanitation practices. It has relied on key community facilitators with minimal specialized training who have become embedded into local governments.²¹

Education can influence how cities are planned. Urban planners need multidisciplinary training, enabling them to work effectively across disciplines and sectors. In most countries, there are few urban planning programs – for instance, India has about 1 planner for every 100,000 urban residents compared to 1 for every 5,000 in Canada.²² Education-led participatory approaches that recognize the needs of the disadvantaged also help improve urban planning and decision-making. The Shack/Slum Dwellers International network has worked in partnership with the Association of African Planning Schools to ensure that university training includes components that are more relevant for urban planning, especially in informal settlements.²³

Infrastructure investment projects improve education outcomes of marginalized populations

Improvements in other sectors bring benefits on education outcomes. In Nepal, a community-based water supply and sanitation project targeted access to latrines to provide a safer environment for women and reduce the time it takes to manage household water supply. The average time for fetching water was reduced from 3.8 to 2 hours per day, which freed up time for education activities.²⁴ In Ghana, an analysis of four rounds of data from the Demographic and Health Surveys between 1993 and 2008 found that reducing the time to fetch water by half increased girls' school attendance by about 7 percentage points.²⁵ In rural Peru, electricity

²⁰ Nicolaysen, A. M. 2012. Empowering small farmers in India through organic agriculture and biodiversity conservation. Ph.D. dissertation, University of Connecticut.

²¹ World Bank. 2015 World Development Report 2015: 2015a. Mind, Society and Behavior. Washington, DC, World Bank.

²² Ramanathan, S. 2013. Where are the Planners? Bangalore, India, Jana Urban Space Foundation.

²³ Watson, V. and Odendaal, N. 2012. Changing planning education in Africa: the role of the Association of African Planning Schools. *Journal of Planning Education and Research*, Vol. 33, No. 1, pp. 96–107.

²⁴ Asian Development Bank. 2015. Gender Equality Results Case Study: Nepal – Community-Based Water Supply and Sanitation Sector Project. Manila, Asian Development Bank.

²⁵ Nauges, C. 2017. Water hauling and girls' school attendance: some new evidence from Ghana. *Environmental and Resource Economics*, Vol. 66, No. 1, pp. 65–88.

expansion from 8% in 1993 to 70% in 2013 meant that children were able to study an extra 93 minutes a day.²⁶ In Brazil, an increase in electrification between 1960 and 2000 meant that counties that went from no electricity to full electrification saw a two-year increase in education attainment.²⁷

However, in most contexts, water, sanitation, energy or urban development projects do not take education needs into their account. Overall, education is often viewed as a second order priority and one that needs to be incorporated in local interventions. For instance, education as a sector is largely absent in discussions of implementing SDG 11 on cities and human settlements; the focus is primarily on housing security and tenure, water and sanitation infrastructure, and transport. Education provision for the urban poor in slums has not been a government priority, which has led to the proliferation of ‘private schools for the poor’ and non-state provision. For instance, large-scale data collection in slum areas found that only 35% of low income children in Hyderabad, India and 25% of slum children in Lagos, Nigeria attended government schools.²⁸

Sustained improvements in inclusion require integrated efforts across sectors, which also recognize the importance of education. In Harlem, New York City, United States, the Harlem Children’s Zone is a community-based initiative focused on providing children with comprehensive educational assistance from early childhood to college graduation, with the aim to break intergenerational cycles of poverty.²⁹ In Medellin, Colombia, successive mayors have focused on reducing inequality and violence by improving public education by allocating a higher share of the municipal budget to education, investing in transport systems that reach the poor, and innovative learning spaces and libraries. The city has transformed from one of the world’s most violent cities to one of its most innovative through an explicit education-led social change strategy.³⁰

From a finance perspective, multisector interventions can also provide arguments for investments in interventions that do not appear cost-effective if evaluated from the perspective of only one sector. Nigeria used conditional grants to prioritize health, education and water and sanitation investments at the local level – project priorities were discussed in joint meetings of the planning unit and other sectors; and local officials had to develop proposals that identified priority local needs using the Nigeria MDG system of indicators and inputs. The use of data-driven decision-making eventually led to the first common database on health and education facilities.³¹

d. Emerging issues likely to affect building sustainable and resilient societies

Two issues merit attention in education systems called upon to strengthen social responses to sustainability and resilience risks. First, education systems are ramping up their focus on learning outcomes, with stronger emphasis on individual performance, market-driven aspirations and competition, which hampers recognition of collective risks and challenges.

²⁶ Aguirre, J. 2014. Impact of Rural Electrification on Education: a Case Study from Peru. Lima/Buenos Aires, Research Center, Universidad del Pacifico/Department of Economics, Universidad de San Andrés.

²⁷ Lipscomb, M., Mobarak, M. A. and Barham, T. 2013. Development effects of electrification: evidence from the topographic placement of hydropower plants in Brazil. *American Economic Journal: Applied Economics*, Vol. 5, No. 2, pp. 200–31.

²⁸ 2016 Global Education Monitoring Report *Education for all 2000-2015: achievements and challenges* <http://unesdoc.unesco.org/images/0023/002322/232205e.pdf>.

²⁹ Hanson, D. 2013. Assessing the Harlem Children’s Zone. Washington, DC, Center for Policy Innovation, The Heritage Foundation. (Discussion Paper 8.)

³⁰ 2016 Global Education Monitoring Report *Education for people and planet: creating sustainable futures for all* <http://unesdoc.unesco.org/images/0024/002457/245752e.pdf>.

³¹ Iyengar, R., Mahal, A. R., Aklilu, L., Sweetland, A., Karim, A., Shin, H., Aliyu, B., Park, J. E., Modi, V. and Berg, M. 2014. The use of technology for large-scale education planning and decision-making. *Information Technology for Development*, Vol. 22, No. 3.

A related development is the rise of private provision. There is a growing shift away from supporting education as a good that may be largely private but one that has to be publicly provided on the basis of equity and of major, yet underestimated, social returns. In many education systems, a mix of private and public schools, whether loosely or heavily regulated, leads to stratification and segregation. The real danger in a decreased role for the public sector is perhaps an acceptance of education inequality. If populations are increasingly going to be segregated, by the communities they live in, the transport they use and the schools they go to, then the risk of major social unrest increases.

Looking at the reverse direction, unsustainable development pathways also have an impact on education. For instance, burgeoning slum areas around the world lack access to water and sanitation facilities, energy and appropriate housing. Such conditions reduce the time available for schooling, including through increased health-related absences from class.

Population movements across borders also are another cause of concern. Increased intolerance in some societies towards migrants and refugees hold back progress. It calls for re-orienting the content of education curricula and textbooks as well as for strengthening teacher preparedness for diversity.

This is particularly important given that trained and qualified teachers are a precondition for quality education, and, thus, for the ability of education systems to respond to and overcome the challenges identified within the SDGs. Education systems will not be able to foster sustainable development unless teachers and education support personnel are provided with adequate training, continuous professional development and support. Improving the educators' working conditions is of utmost importance if countries are to attract the best candidates into the teaching profession and keep them there.

Our world today is characterised by rapidly changing economies and labour markets. This unprecedented change is due to technological developments, demographic trends, new modes of work, and massive migration. At the same time, the digital revolution is also disrupting all aspects of life and work and causing upheaval. New technologies are transforming the lives of people across the world. They have immense potential to facilitate dramatic changes in learning and education systems, and they place new demands on the knowledge and skills that people need to acquire throughout their lives. There are, though, significant challenges in ensuring that everyone can benefit from this potential and use these technologies effectively in their lives. It is therefore important to place particular importance on equity and learning, to ensure that the poorest, most marginalised and vulnerable, including the forcibly displaced, are not left behind at a time of rapid technological change, and to make sure that technology investments genuinely contribute to improved learning and skills. When used appropriately technology can help education systems in some of the poorest countries leapfrog some of the current infrastructural challenges. However, this requires accelerating investment in energy so that marginalized communities can benefit.

e. Areas where political guidance by the High-Level Political Forum is required

Agenda 2030 focuses on sustainability and the resilience of systems, processes and people especially those in vulnerable situations. Education is a necessary part of the response for sustainable and resilient societies. It can help reduce exposure to economic, social and environmental shocks and disasters.

It is therefore important for the High-Level Political Forum to reemphasize the indelible two-way reinforcing relationship between education and the cluster of goals (water, energy, cities, sustainable production and consumption and life on land together with partnerships) under review in 2018 on the theme of "Transformation towards sustainable and resilient societies", noting:

- Education is a key factor for initiating change by helping to develop useful life skills on **water, sanitation and hygiene**. Children are often eager to learn and willing to absorb new ideas. New hygiene behaviour learned at school can lead to life-long positive habits for the children and the community, as school children can influence the behaviour of other family members. At the same time, factors related to water, sanitation and hygiene affect children's right to education. For example, 400 million school-aged children a year are infected by intestinal worms, which, research shows, sap their learning abilities.
- **Urbanization** is frequently regarded as accounting for the bulk of the impact of human activities on the environment. Education for sustainable development is necessary to influence urban dwellers' behaviour. Education for citizenship is the basis for people's equal participation in civic and democratic life in cities and is needed to increase the currently low level of involvement of the inhabitants, especially the poorest, the illiterate and women, in community activities. At the same time, urban planning does not yet sufficiently emphasize inclusive development of services, including education.
- Achieving **sustainable consumption and production** patterns, including the generation of clean and renewable **energy**, will secure productive efficiency and ensure that human activities remain within the carrying capacity of the planet, especially **life on land**, respecting the rights of future generations. The importance of education for sustainable development including through the provision of clear information to consumers and producers is critical, but, the development of green skills is not yet sufficiently emphasized in education and training systems.
- **Partnerships** for growth call for infrastructure investments that do not disregard or underestimate the education implications. The High-Level Political Forum should call on political leaders to joint action between sectors on investment for sustainable and resilient societies.

f. Policy recommendations on ways to accelerate progress in establishing sustainable and resilient societies

At the beginning of the implementation of Agenda 2030 for Sustainable Development, it is a sobering fact that millions of children grow up in deprivation during the period from birth to 36 months of age when the foundations of learning are developed. Neuroscience research shows how strong, early, and multisectoral interventions in early childhood care and education are critical to prevent low rates of learning in school.

One of the consequences of not having a strong start in learning is that, subsequently, currently, 617 million children and adolescents are estimated to not even master basic skills by the age of graduation from primary and lower secondary school graduation. The acquisition of at least minimum basic skills by every child and adolescent is a foundation for accelerating progress in establishing sustainable and resilient societies.

However, the world is off course with respect to the pillars of sustainable development even in countries with high educational achievement. For that reason, Agenda 2030 for Sustainable Development recognizes the need to look beyond basic skills and to improve the quality of education. For example, inserting elements of global citizenship and sustainable development in education, as contemplated in SDG target 4.7, will empower learners of all ages to understand that these are global, not local issues and to become active promoters of more peaceful, tolerant, inclusive, secure and sustainable societies.

Sustainability and resilience urgently require action on multiple fronts with respect to education:

- Create space in **national curricula, pedagogic approaches, learning materials and teacher education** to discuss issues related to the **three pillars of sustainable development**. This includes coverage of issues such as energy generation from affordable and non-polluting sources, responsible consumption and production with respect to ecosystem conservation, or tolerance towards others.
- More **peer learning opportunities** need to be provided for countries to exchange lessons with each other on these issues.

- Education systems need to invest in learning by doing and scaling up **whole school approaches** that help draw attention to the ties between environment, economy and culture.
- **Skills gaps** pose a major barrier for transitions to green economies. Good practices to address this challenge include effective social dialogue among all stakeholders to define skills and education policies; a combination of top-down and bottom-up approaches to better reflect training provision needs; the revision of curricula to increase individuals' adaptability; and support to trainers and teachers to keep skills for green jobs up to date.
- **Water, sanitation and energy infrastructure investments** need to be designed to also help accelerate access to equitable and inclusive education. Political leaders should spearhead efforts to invest in projects with multi-sectoral impact, such as WASH facilities in schools or school feeding.
- Likewise, **school-based infrastructure interventions** should take a broader perspective. Water, sanitation and hygiene projects have evolved from primarily infrastructural interventions towards more interventions incorporating elements of hygiene education, awareness and promotion.
- There needs to be far more appreciation of **education's role in transformative urban development**, regarding both formal schooling and beyond. Urban development needs to take into account the need of poor households living in slums and peri-urban areas to access education opportunities of good quality. The education sector needs to be better integrated in urban development discussions on social inclusion and environmental sustainability.
- **Cities need to equitably distribute educational expenditure** for the poor to have similar opportunities to access quality schooling, including through lowering transport costs.