



United Nations
Educational, Scientific and
Cultural Organization

UNESCO's 2010 Contribution to the Report of the United Nations Secretary-General for the 2010 Substantive Session of the Economic and Social Council and for the Sixty-Fifth Session of the General Assembly on the "Implementation of the Programme of Action for the Least Developed Countries for the Decade 2001-2010".

Introduction

1. The present report, prepared by the United Nations Educational, Scientific and Cultural Organization (UNESCO), provides an analytical assessment of UNESCO's action to assist the LDCs in implementing the goals and commitments of the Brussels Programme of Action in UNESCO's areas of competence. It identifies some of the emerging or outstanding challenges for the sustainable development of LDCs and UNESCO's key initiatives to assist the LDCs in tackling these challenges. It also provides information on best practices and innovative strategies on delivering on the goals and targets relevant to UNESCO's work contained in the Brussels Programme of Action.

Commitment 3: Building human and institutional capacities

Goal 7: Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality

2. The Brussels Programme for Action aims to significantly improve the human conditions of more than 800 million people living in 49 Least Developed Countries (LDCs) during the present decade. To this end, a set of 30 time-bound goals was identified covering issues such as poverty reduction, health, education, gender equity, sustainable infrastructure and communication.

3. The programme for action¹, which was based on the principles and objectives of the Millennium Declaration, called for ensuring universal primary education (UPE) by the year 2015 in these countries. This goal, in common with the Millennium Development Goals (MDG) and Education for All (EFA) goals, aims to ensure that all primary school-aged children have access and complete a full cycle of primary education by 2015.

4. The adjusted net enrolment rate (ANER)², which measures the coverage of primary school aged children, increased in the LDCs from 60% to 79% during the last ten years. In spite of this achievement, more than 20% of the children of primary education age in LDCs were still excluded from education in 2008.

5. Many LDCs have made remarkable progress between 1999 and 2008. Sao Tome and Principe, United Republic of Tanzania, Burundi, Uganda, Zambia, Maldives and Rwanda have achieved universal primary education or have moved nearer to it (ANER>95%). Considerable progress was also made in Bhutan, Mozambique, Ethiopia,

¹ Programme of Action for the Least Developed Countries for the Decade 2001-2010

² Number of pupils of the intended school-age group for primary education, enrolled either in primary or in secondary education, expressed as a percentage of the total population of the same age-group.

Mali, Guinea and Burkina Faso where the ANER increased by more than 25 percentage points during this period.

6. The total number of out-of-school children of primary-school age in least developed countries dropped from 40 million to 25 million since 1999 despite relatively high population growth. Girls represent 56% of the total number of out-of-school children.

7. Extraordinary progress was reported in Burundi, Sao Tome and Principe and United Republic of Tanzania where the ANER tripled. Other countries, such as Bhutan, Ethiopia and Zambia, were able to increase this figure by more than 50%. The abolition of school fees was considered as an important driver of this rapid progress.

8. Depending on the intended duration of primary education, all children at the official entry age should begin school in 2009 and progress towards completing the full cycle in order to achieve the UPE goal by 2015. In 16 of 32 LDCs with available data on new entrants by age, at least half of the children at the appropriate age did not enter school in 2008. Furthermore, at least one in every three students, in half of the countries with available data on retention, had dropped out before reaching last grade of primary education.

9. In order to assess disparities in primary school attendance in LDCs, household survey data from 23 countries³ were analyzed: The data were collected through Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) between 2000 and 2007.

10. In these countries there were large disparities linked to location and household wealth. In urban areas, 19% of children were out of school, compared to 39% in rural areas. Among children from the poorest wealth quintile, nearly half (48%) were out of school, compared to 14% of children from the richest household wealth quintile.

11. The combination of gender with other characteristics reveals even greater disparities. Rural females were much more likely to be out of school (41%) than urban males (18%). The biggest gap existed between girls from the poorest households (50% out of school) and boys from the richest households (13% out of school).

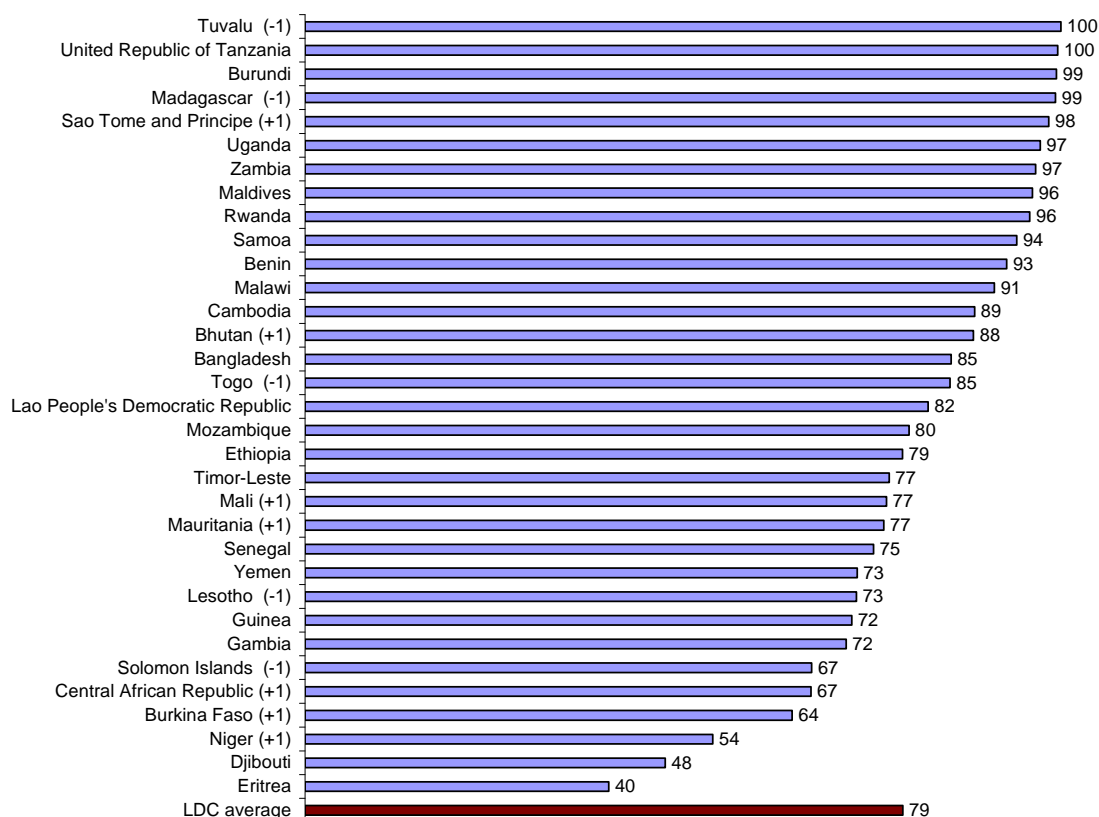
Box 1. Strengthening national statistical capacity

Education indicators are gathered through a complex data collection, which the UNESCO Institute for Statistics (UIS) conducts globally in all six UN official languages. The data collection is based on a set of statistical frameworks that organise international concepts, standards, classifications and measures, which are regularly reviewed and modified by the Institute in order to address emerging statistical issues and to improve data quality (see www.uis.unesco.org/surveys/education).

³ Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic, Eritrea, Ethiopia, Guinea, Lao People's Democratic Republic, Lesotho, Liberia, Malawi, Mali, Mozambique, Nepal, Niger, Senegal, United Republic of Tanzania, Togo, Uganda, Yemen, and Zambia.

To strengthen the monitoring and evaluation process, the Institute provides technical services and capacity building to Member States on data collection and analysis. To this end, the UIS has widened its presence in the field. Statistical advisors have been placed in UNESCO cluster offices in Africa, South and West Asia and the Arab States, in order to provide technical and advisory services. In addition, the UIS helps to develop national statistical capacity through regular training workshops and ongoing support.

Figure 1: Adjusted net enrolment rate in primary education in Least Developed Countries, 2008

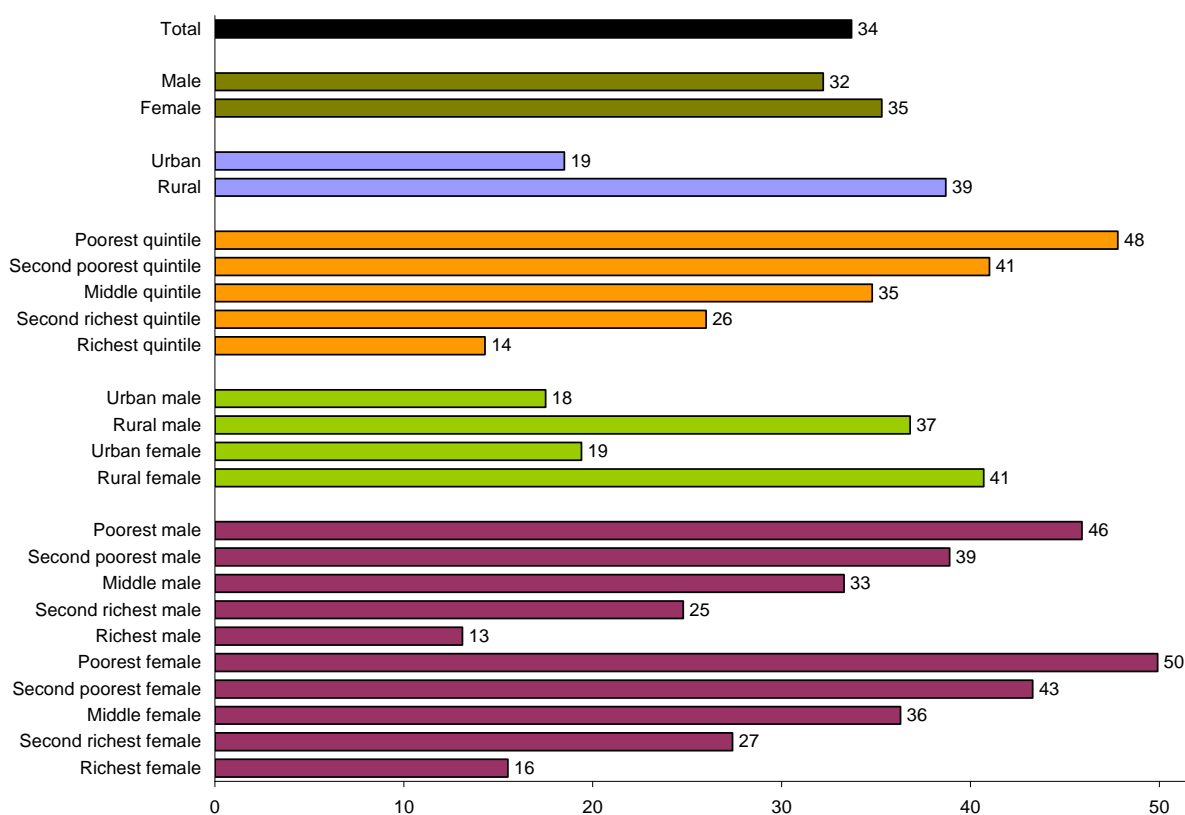


Notes: +n: data are referred to +n year from 2008; -n: data are referred to -n year from 2008.

No data by age were available for Afghanistan, Angola, Chad, Comoros, Democratic Republic of the Congo, Equatorial Guinea, Guinea-Bissau, Haiti, Kiribati, Liberia, Myanmar, Nepal, Sierra Leone, Somalia, Sudan and Vanuatu.

Source: UNESCO Institute for Statistics, 2010.

Figure 2: Share of children of primary school age out of school (%)



Note: The attendance rates from survey data are meant to illustrate disparities in access to primary education and are not necessarily comparable with the enrolment rates based on administrative records. For example, the attendance data cover only a sub-group of LDCs with high out-of-school rates, cover a different period, and the mean values are not weighted by each country's population.

Source: Based on DHS and MICS surveys conducted in 23 LDCs between 2000 and 2007.

Commitment 3: Building human and institutional capacities

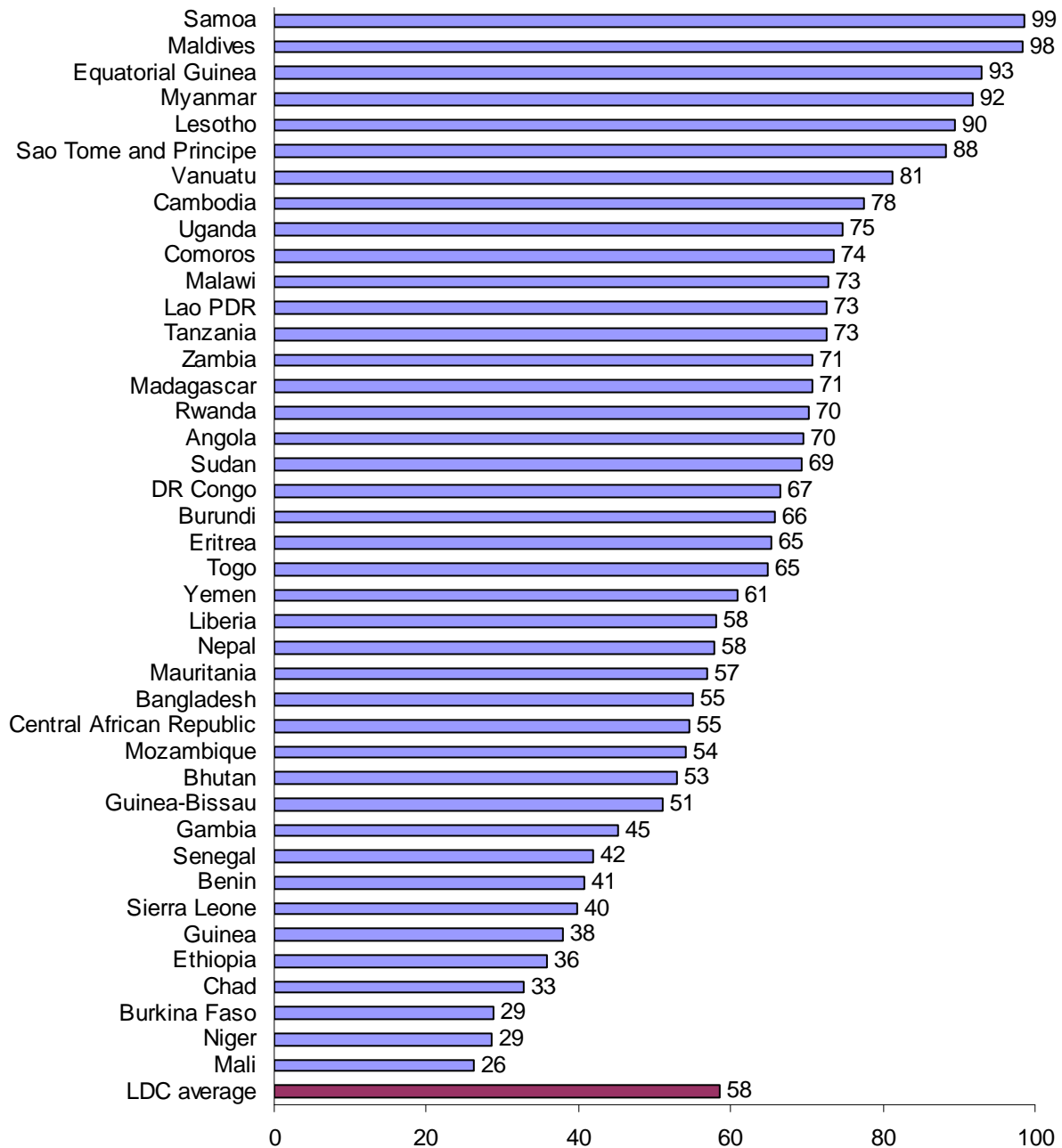
Goal 8: Achieving a 50% improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults

12. LDCs are characterized by a wide range of self-reported adult literacy rates. The latest data from the UNESCO Institute for Statistics, for the period 2005 to 2008, show a range from 26% adult literates in Mali to 99% in Samoa (see Figure 3 and Table 1).⁴ The average adult literacy rate for all LDCs was 58%. Gender disparity was high, with a literacy rate of 67% for men and 50% for women.

13. Compared to the previous census decade, 1995-2004, progress in terms of a reduction of adult illiteracy was slower. The average adult literacy rate increased from 54% in the previous census decade to 58% in the current decade. Some countries exhibited larger than average growth in literacy. In Niger, the adult literacy rate increased from 9% to 29%, and in both Eritrea and Togo the adult literacy rate increased from 53% to 65%.

⁴ No recent data were available for Afghanistan, Djibouti, Haiti, Kiribati, Solomon Islands, Somalia, Timor-Leste and Tuvalu.

Figure 3: Adult literacy rate in the Least Developed Countries, 2005-2008



Data source: UNESCO Institute for Statistics, 2010.

Table 1: Adult literacy rate in Least Developed Countries (%), 1995-2004 and 2005-2008

Country	1995-2004	2005-2008	%point change 1995-2004 to 2005-2008
Angola	67.4	69.6	2.2
Bangladesh	47.5	55.0	7.5
Benin	34.7	40.8	6.1
Bhutan		52.8	
Burkina Faso	21.8	28.7	6.9
Burundi	59.3	65.9	6.6
Cambodia	73.6	77.6	4.0
Central African Republic	50.6	54.6	4.0
Chad	28.4	32.7	4.3
Comoros	68.5	73.6	5.1
Democratic Republic of the Congo	67.2	66.6	-0.6
Equatorial Guinea	88.3	93.0	4.7
Eritrea	52.5	65.3	12.8
Ethiopia	35.9	35.9	0.0
Gambia	36.8	45.3	8.5
Guinea	29.7	38.0	8.3
Guinea-Bissau	41.4	51.0	9.6
Lao People's Democratic Republic	68.7	72.7	4.0
Lesotho	86.3	89.5	3.2
Liberia	53.9	58.1	4.2
Madagascar	70.7	70.7	0.0
Malawi	64.1	72.8	8.7
Maldives	96.3	98.4	2.1
Mali	24.0	26.2	2.2
Mauritania	51.2	56.8	5.6
Mozambique	48.2	54.0	5.8
Myanmar	89.9	91.9	2.0
Nepal	48.6	57.9	9.3
Niger	9.4	28.7	19.3
Rwanda	64.9	70.3	5.4
Samoa	98.6	98.7	0.1
Sao Tome and Principe	84.9	88.3	3.4
Senegal	39.3	41.9	2.6
Sierra Leone	34.8	39.8	5.0
Solomon Islands	76.6		
Sudan	61.3	69.3	8.0
Togo	53.2	64.9	11.7
Uganda	68.1	74.6	6.5
United Republic of Tanzania	69.4	72.6	3.2
Vanuatu	78.2	81.3	3.1
Yemen	54.8	60.9	6.1
Zambia	69.1	70.7	1.6
Total	53.7	58.4	4.8

Source: UNESCO Institute for Statistics, 2010.

Commitment 3: Building human and institutional capacities

Goal 9: Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to education and achievement in basic education of good quality

14. The target is for all countries to eliminate gender disparities in primary and secondary education by 2005 and at all levels of education by 2015.

15. One of the main indicators used to monitor gender parity is the ratio of female to male enrolment by level of education weighted by the corresponding population. This is referred to as the gender parity index (GPI)⁵ of the gross enrolment ratio for the relevant level of education (e.g., primary, secondary or tertiary).

Primary Education

16. In the LDCs as whole, there were 92 girls enrolled in primary education for every 100 boys in 2008. This compares to 85 girls per 100 boys in 1999. The gender parity index is slowly and steadily increasing. Among the 46 countries with data available, only 15 countries have achieved gender parity ($0.97 < \text{GPI} < 1.03$) in primary education. These countries are Bhutan, Kiribati, Lesotho, Madagascar, Malawi, Myanmar, Rwanda, Samoa, Sao Tome and Principe, Senegal, Solomon Islands, Tuvalu, Uganda, United Republic of Tanzania and Zambia.

17. The participation of boys was higher than the participation of girls in 28 countries. The most extreme situations were found in Somalia, Afghanistan and Chad where the GPI is 0.7 and lower. On the other hand, the participation of girls is higher than the participation of boys in Gambia, Bangladesh and Mauritania with almost 106 girls enrolled in schools for every 100 boys.

18. Low overall rates of participation in education typically result in lower participation of girls compared to boys. Out of 10 countries with low participation in education (Gross enrolment ratio below 90%) girl's participation is lower than boys in 8 countries.

19. Many countries have made good progress towards gender parity in access to primary education during the last decade. In Afghanistan, the GPI in primary education increased from less than 0.07 in 1999 to 0.66 in 2008. During the same period Ethiopia, Yemen and Guinea improved their girls' participation in primary education by 29, 24 and 21 percentage points respectively.

Secondary education

⁵ Parity is reached when A GPI value approaches 1.00 (due to margins of error in surveys and administrative data, a range between 0.97 and 1.03 is commonly considered to reflect parity). A GPI below this range indicate more participation rates among boys, and a GPI above this range indicates higher participation rates among girls.

20. The gender gap in education widens in secondary education. The overall gender parity index in the LDCs was 0.81 in 2008, slightly above the 1999 value of 0.77 in 1999.

21. There is considerable variation among countries reflected by a gender parity index in secondary education that ranges from 0.38 in Afghanistan to 1.32 in Lesotho. Only two countries, Bhutan and Myanmar, have reached gender parity at this level with GPI of 0.99 and 1.01 respectively. Out of 38 countries with available data, 30 countries have higher participation rates among boys as compared to girls. On the other hand, higher participation rates for girls in secondary education were observed in Bangladesh, Kiribati, Lesotho, Maldives, Samoa and Sao Tome and Principe.

22. Many countries though have made good progress between 1999 and 2008. Cambodia, Gambia and Guinea increased their girls' participation in secondary education by more than 20 percentage points during this period reaching a GPI of 0.82, 0.94 and 0.59 respectively. On the other hand, the situation is barely improved in the Democratic Republic of the Congo, Djibouti, Eritrea, Niger, Togo and Zambia or even deteriorated in Rwanda.

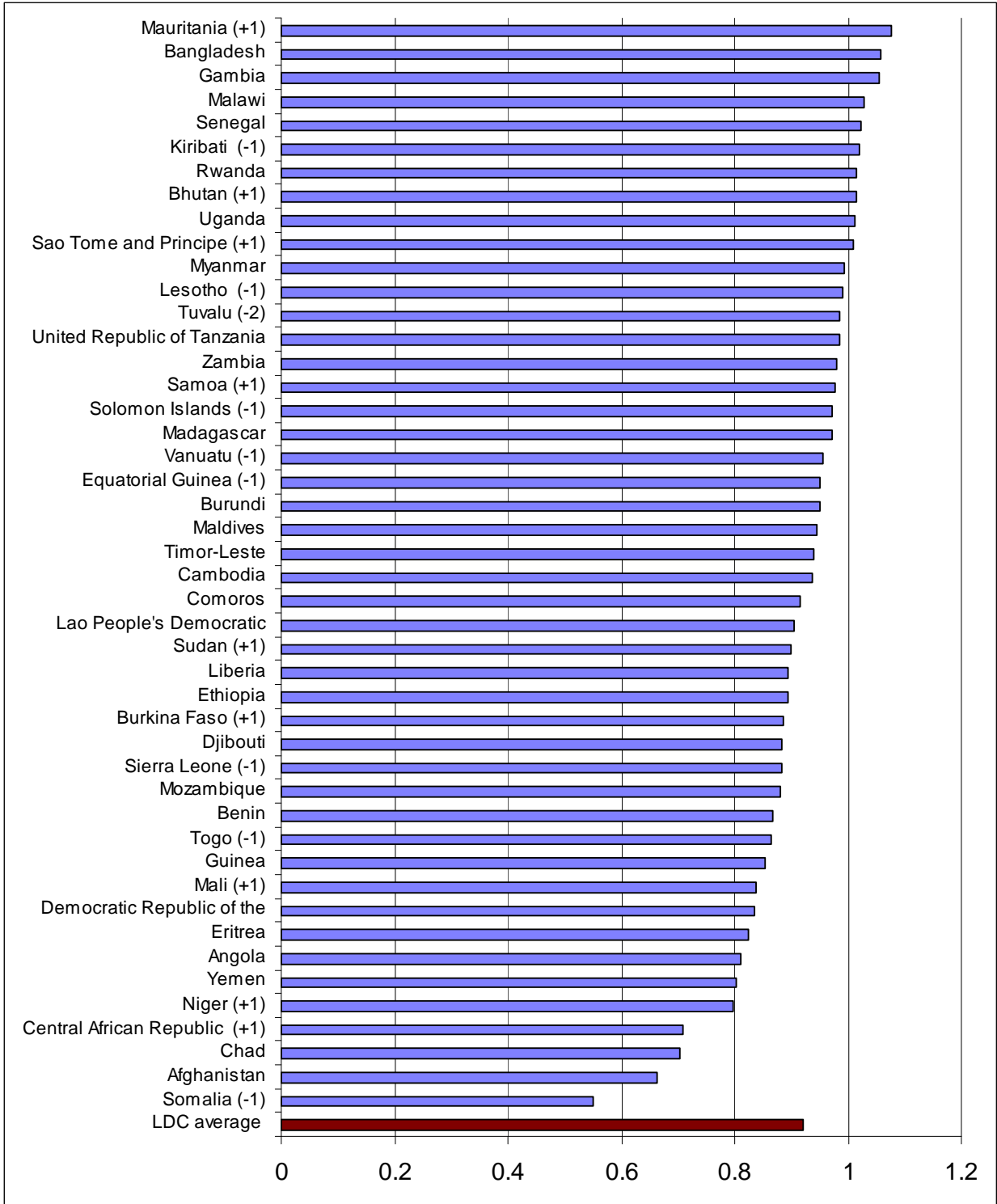
Tertiary education

23. The greatest gender gap in education exists at the tertiary level for LDCs. The overall gender parity index was 0.58 in 2008, which is slightly less than in 1999 (0.60). These countries have the lowest participation rates at the tertiary level in the world, with a gross enrolment ratio (GER) of about 5% compared to 26% at the global level, which is an important context for interpreting differences in participation rates.

24. The difference by sex in access to higher education differs dramatically among LDCs. The GPI varies from 0.15 in Chad to 1.37 in Myanmar. Among the 26 countries with data available not a single one has reached equal participation for men and women at tertiary level in 2008. However, two countries – Lesotho and Myanmar - reported higher participation for women compared to men with GPI at 1.18 and 1.37 respectively. In all other countries the participation of women in higher education was considerably less than that of men.

25. During the last decade some countries have made progress towards bridging the gap in access to tertiary education. Cambodia, Lao People's Democratic Republic, Uganda and the United Republic of Tanzania were able to increase their GPI at tertiary level by more than 50% between 1999 and 2008. Nevertheless, the situation worsened in Chad, Djibouti and Mali.

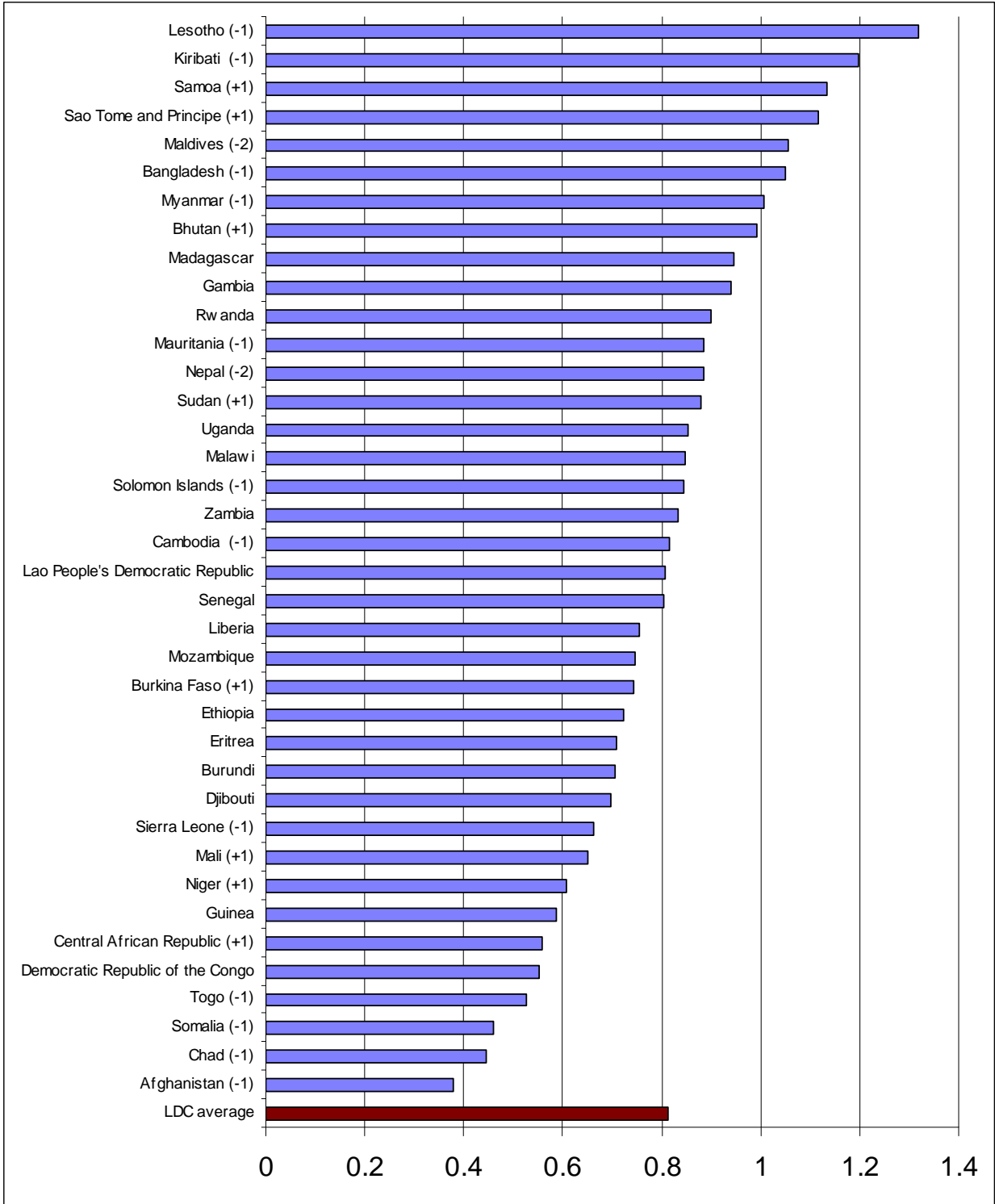
Figure 4: Gender parity index in primary education, 2008



Data source: UNESCO Institute for Statistics, 2010.

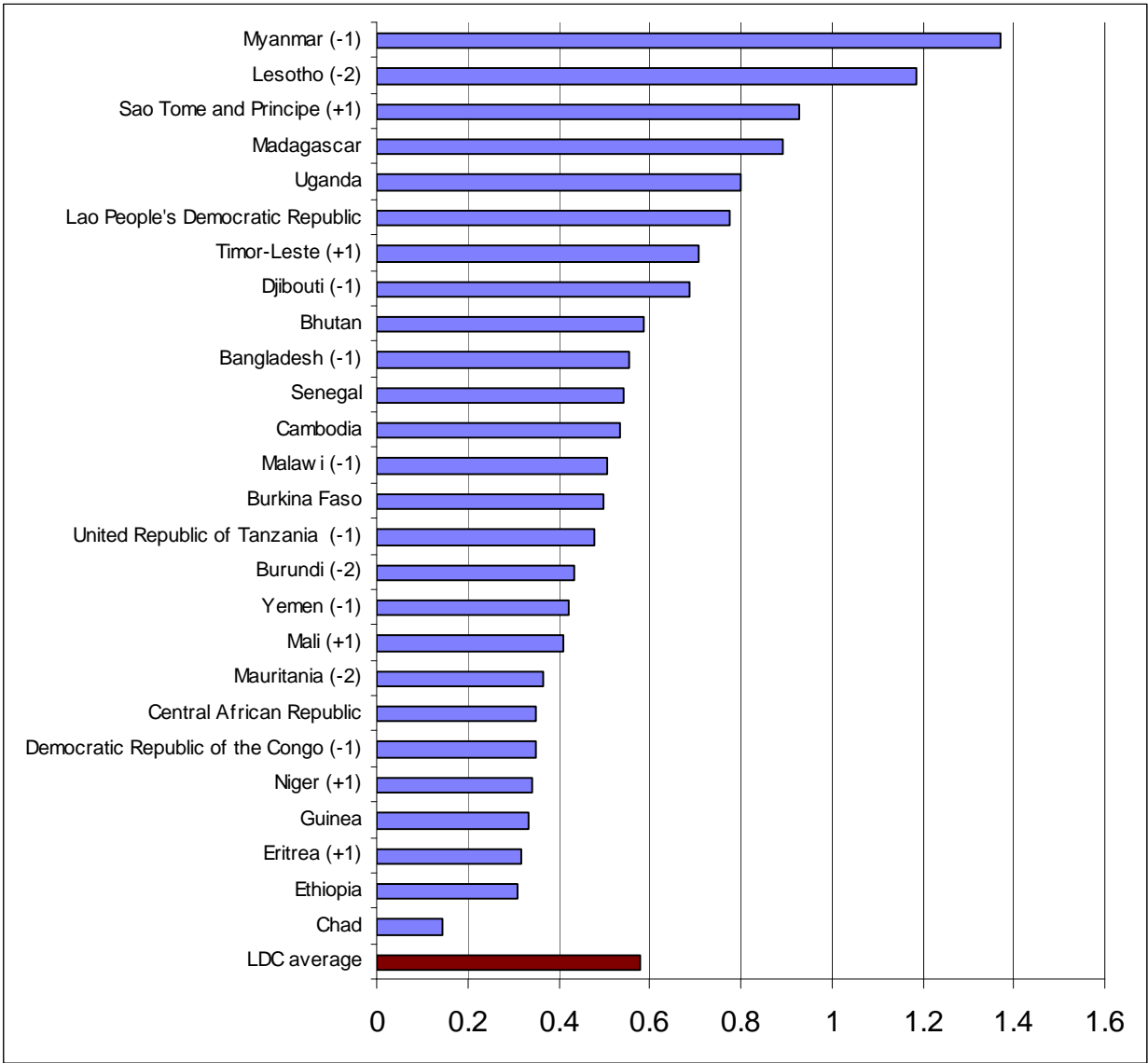
Notes: +n: data are referred to +n year from 2008; -n: data are referred to -n year from 2008.

Figure 5: Gender parity index in secondary education, 2008



Data source: UNESCO Institute for Statistics, 2010.
 Notes: +n: data are referred to +n year from 2008; -n: data are referred to -n year from 2008.

Figure 5: Gender parity index in tertiary education, 2008



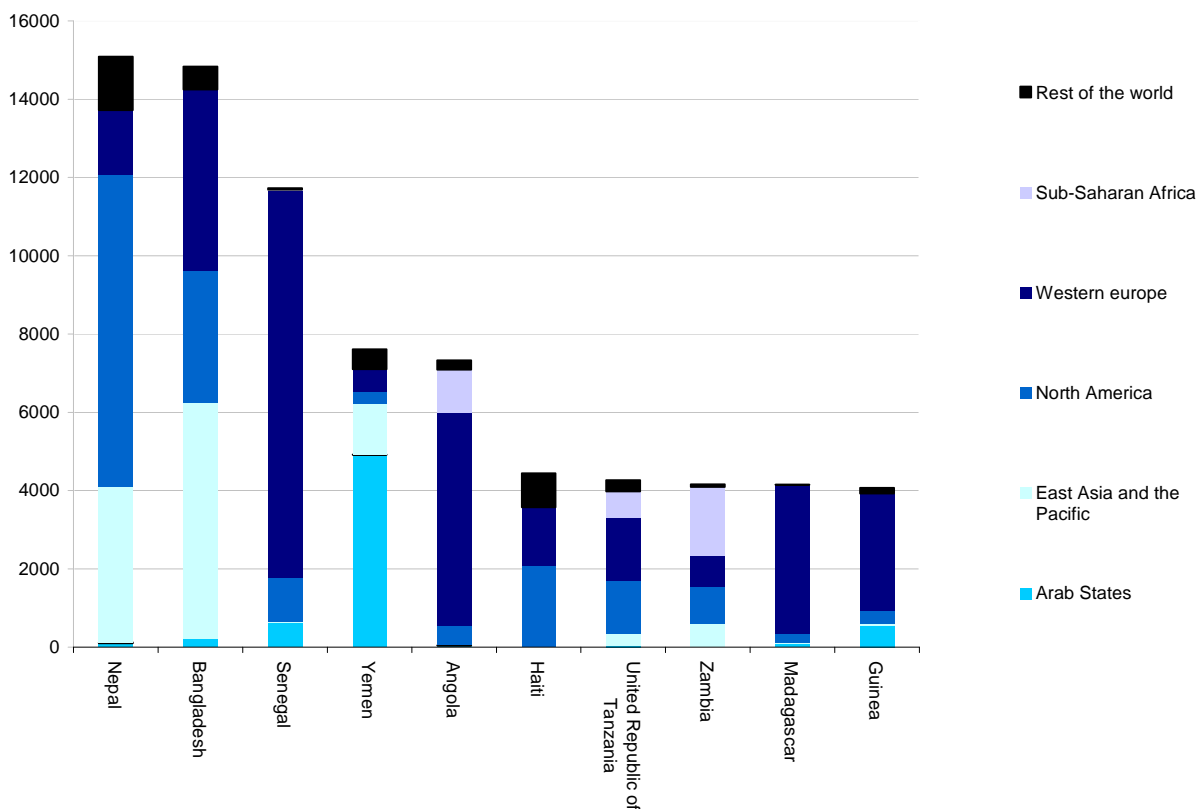
Data source: UNESCO Institute for Statistics, 2010.
 Notes: +n: data are referred to +n year from 2008; -n: data are referred to -n year from 2008.

Tertiary student mobility

26. Many students in tertiary education from LDCs pursue their education abroad. For some of them, it is a chance to broaden cultural and intellectual horizons. Others go abroad to avoid the frustrations of under-resourced universities at home. Many have no choice but to go abroad in order to pursue a particular field of education or type of academic programme.

27. Based on data reported to UIS by host countries, there were around 157,000 students from LDC's studying outside their home countries in 2007, about 4% of the total number of tertiary education students. This number increased by 68% compared to 1999 (93,000 mobile students). Yet, it should be noted that the increase in domestic tertiary education enrolment in the LDCs was even stronger (94%), meaning the share of students studying abroad is actually growing more slowly than the domestic sector. 39% of these mobile students from LDCs were enrolled in universities in Western Europe, 20% in East Asia and the Pacific and 18% in North America. France was the most favourite destination for mobile students from LDCs in 2007 with a share of 21%, followed by United States (15%) and South Africa (6%).

Figure 6: Regional distribution of mobile students by country of origin (countries with more than 4000 mobile students), 2007.



Data source: UNESCO Institute for Statistics, 2010

28. Bangladesh and Nepal had the highest number of outbound mobile students among the LDCs in 2007 with around 15,000 students each followed by Senegal with 12,000 students. Australia was the main destination for the Bengali students (20%) followed by the United Kingdom (18%) and the United States (17%). The United States was the chief destination for the Nepali students with a share of 53% followed by Australia with 16% and India with a share of 9%.

Demand for teachers

29. In 2006, the UNESCO Institute for Statistics (UIS) introduced projections to quantify the primary teacher gap and to assess the scope of the challenges facing countries (UIS, 2006). In 2009, the UIS updated these projections⁶ and provided a transparent description of the model used to project the global need for primary teachers between 2007 and 2015, the end-year of the time-bound goals.

30. Based on this update, least developed countries need to recruit at least 800,000 additional teachers by the year 2015 to provide universal primary education of good quality. Moreover, in order to overcome attrition some more 900,000 teachers also need to be recruited. The total needs for primary teacher recruitment in the period 2007- 2015 totals 1.7 million teachers. This figures is almost as high as the number of teachers currently teaching in these countries.

31. For 8 countries (out of 38 LDCs with available data) need to increase the number of teachers in the classroom by less than 0.25% annually in order to achieve UPE by 2015. And another 6 countries face a moderate gap, requiring an annual growth of 0.25 to 3% (see Table 2).

32. Finally, 24 countries are faced with severe primary teacher gaps. They need to expand the number of teachers in classrooms every year by 3% to 18% in order to meet the goal of UPE. This does not include the regular recruitment to compensate for attrition (due to teacher retirement, for example). Assuming 5% attrition, this group of countries would have to annually recruit the equivalent of 8% to 23% of their current teaching force.

Education Ministers from around the world, in drafting the communiqué for the 2008 High- Level Group meeting on EFA, recognised the importance of teachers in meeting national education goals:

Without adequate numbers of professionally qualified teachers, including female teachers, who are deployed in the right places, well-remunerated and motivated, adequately supported and proficient in local languages, we cannot offer the world's children quality education.

Table 2. Countries with moderate or severe teacher gaps,

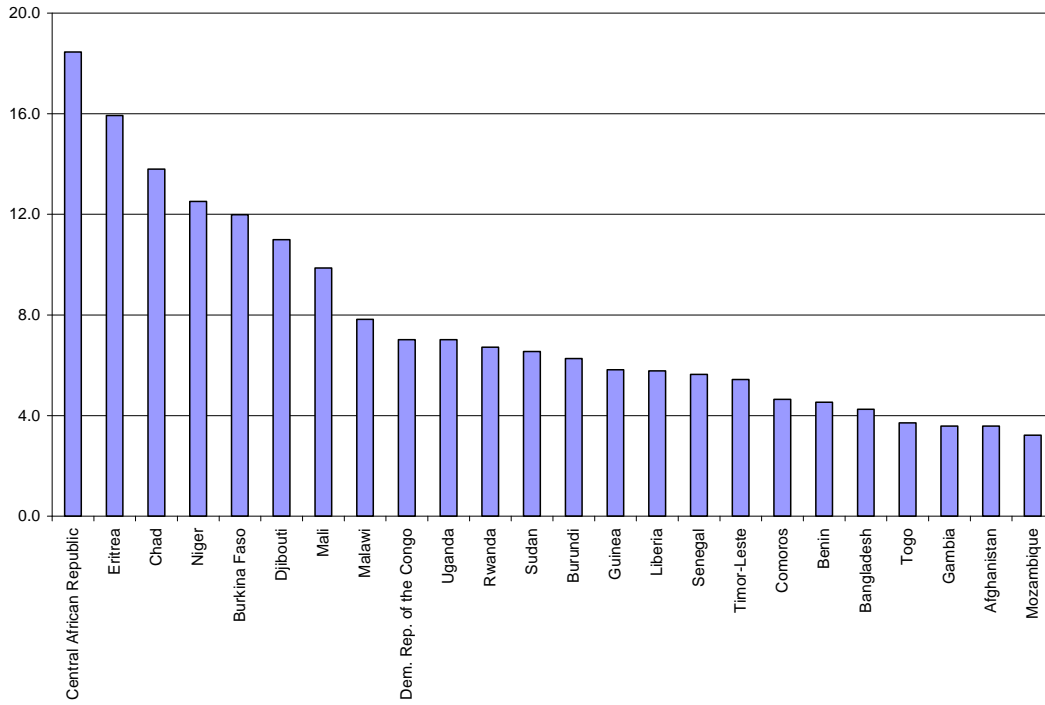
Moderate (0.25%-2.9%)	Severe (3%-18%)
Cambodia, Equat. Guinea, Estonia, Madagascar, Mauritania and Zambia	Afghanistan, Bangladesh, Benin, Burkina Faso. Burundi, Central African Republic, Chad, Comoros, Congo Dem. Rep., Djibouti, Eritrea, Gambia, Guinea, Liberia, Malawi, Mali, Mozambique, Niger, Rwanda, Senegal, Sudan, Timor-Leste, Togo and Uganda.

Note: For more detail please refer to table 3

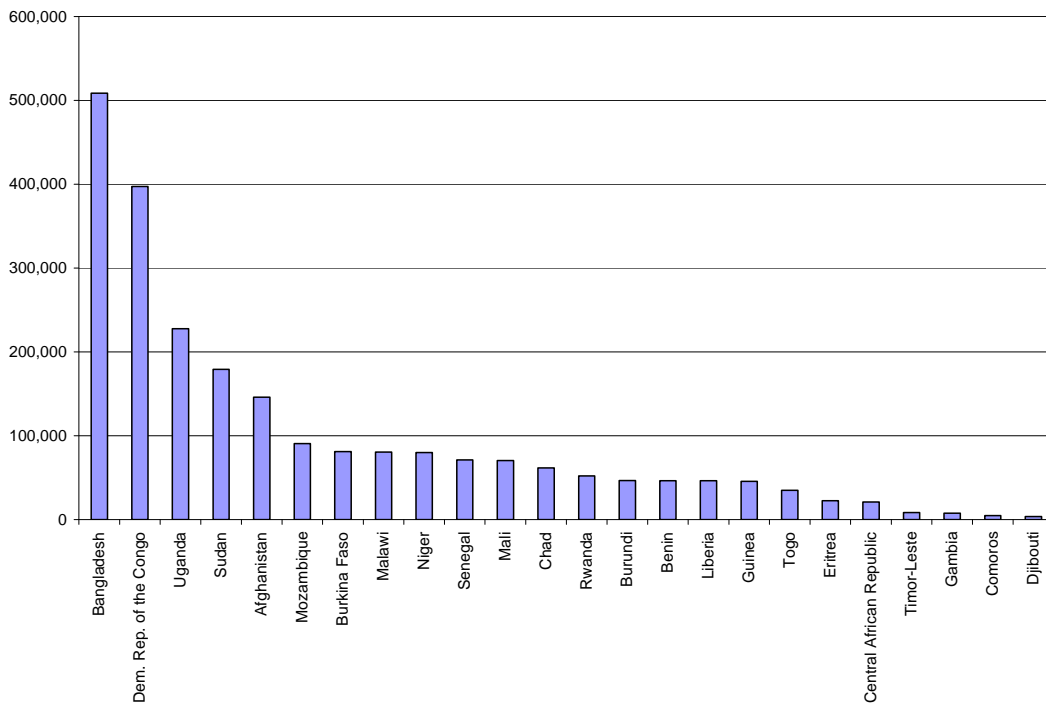
⁶ UNESCO Institute for Statistics (2009), Projecting the global demand for teachers: meeting the goal of Universal Primary Education by 2015. Technical paper no. 3. <http://www.uis.unesco.org/publications/teachers2009>.

Figure 7: Countries with severe teacher gaps

A) Annual growth rate needed to close the teacher gap by 2015



B) Absolute number of teachers needed by 2015



UNESCO Institute for Statistics (2009), Projecting the global demand for teachers: meeting the goal of Universal Primary Education by 2015. Technical paper no. 3. <http://www.uis.unesco.org/publications/teachers2009>.

Table 3: Teachers projections for the period 2007 - 2015

Country	Teacher stock (2007)	Stock needed in 2015 and change in stock 2007 to 2015				Total recruitment needed by 2015
		Teacher stock needed in 2015	Absolute change in teacher stock (2007 to 2015)	Average annual growth needed (%)	Teachers to fill vacancies based on a 5% attrition	
Afghanistan	110,312	146,192	35,880	3.6	50,073	85,952
Bangladesh	364,494	508,565	144,071	4.3	155,703	299,774
Benin	32,513 ⁻¹	46,354	13,841	4.5	14,771	28,612
Bhutan	3,431 ⁻¹	2,903	-527	-2.1	696	696
Burkina Faso	32,760	81,021	48,261	12.0	15,596	63,857
Burundi	28,671	46,647	17,976	6.3	14,328	32,304
Cambodia	48,736	55,672	6,936	1.7	20,678	27,613
Central African Republic	5,436	21,066	15,630	18.5	3,353	18,982
Chad	21,933	61,680	39,747	13.8	11,789	51,536
Comoros	3,340 ⁻²	4,803	1,463	4.6	1,435	2,898
Dem. Rep. of the Congo	230,834	397,300	166,466	7.0	105,028	271,494
Djibouti	1,597	3,678	2,081	11.0	646	2,727
Equat. Guinea	2,936	3,086	150	0.6	1,200	1,350
Eritrea	6,933	22,628	15,695	15.9	3,468	19,163
Gambia	5,341	7,757	2,416	3.6	2,334	4,750
Guinea	29,049	45,670	16,621	5.8	13,372	29,993
Lao PDR	29,604	26,213	-3,391	-1.5	7,844	7,844
Lesotho	10,463 ⁻¹	10,072	-391	-0.5	3,725	3,725
Liberia	29,561 ⁻¹	46,342	16,782	5.8	13,822	30,604
Madagascar	78,743	86,205	7,462	1.1	32,781	40,242
Malawi	44,048	80,489	36,441	7.8	23,280	59,721
Maldives	3,463	3,182	-281	-1.1	1,054	1,054
Mali	33,230	70,579	37,349	9.9	16,500	53,849
Mauritania	11,379	13,823	2,444	2.5	4,964	7,408
Mozambique	70,389	90,692	20,303	3.2	31,540	51,843
Nepal	112,827	101,173	-11,654	-1.4	31,396	31,396
Niger	31,131	79,933	48,802	12.5	14,188	62,990
Rwanda	31,037	52,200	21,163	6.7	15,759	36,922
Samoa	1,269	1,128	-141	-1.5	272	272
Sao Tome & Principe	1,004 ⁻¹	965	-39	-0.5	356	356
Senegal	45,957	71,279	25,322	5.6	19,770	45,092
Sierra Leone	30,239	28,378	-1,861	-0.8	9,905	9,905
Sudan	107,933	179,251	71,318	6.5	44,789	116,107
Timor-Leste	5,640	8,610	2,970	5.4	2,503	5,473
Togo	26,103	34,937	8,834	3.7	11,244	20,078
Uganda	132,325	227,701	95,376	7.0	67,931	163,307
Zambia	56,557	68,594	12,037	2.4	24,653	36,690
Total	1,821,217	2,736,768	933,837		792,745	1,726,582

Notes: +n: data are referred to +n year from 2007; -n: data are referred to -n year from 2007.

UNESCO Institute for Statistics (2009), Projecting the global demand for teachers: meeting the goal of Universal Primary Education by 2015. Technical paper no. 3. <http://www.uis.unesco.org/publications/teachers2009>.

Commitment 3: Building human and institutional capacities

GOAL: 14. Reducing by half by 2015 the proportion of people who are unable to reach or to afford safe drinking water

33. UNESCO's International Hydrological Programme (IHP), including the UNESCO-IHE Institute for Water Education and the numerous centres and institutes under the auspices of UNESCO that focus on regional water issues, has provided education, training and capacity building in the sustainable management of freshwater resources in the context of global changes in the LDCs in Asia/Pacific (e.g. Afghanistan, Cambodia, Kiribati, Lao People's Democratic Republic, Myanmar and Timor Leste) and in the Africa region (e.g. Angola, Benin, Djibouti, Ethiopia, Lesotho, Mozambique, Rwanda, Sudan, Togo, Benin and Uganda). Training focused on linking indigenous knowledge and modern science in order to develop a holistic approach to Integrated Water Resource Management (IWRM), on water and climate risk management, on Remote Sensing for IWRM, on geophysics applications for groundwater management and on conducting hydrological surveys. In addition to organizing technical trainings at the national level, IHP developed educational activities for children and youth and promoted capacity building at the regional level to enhance the management of transboundary water resources.

34. The IHP is assisting LDCs in climate change mitigation and adaptation through two IHP cross-cutting programmes FRIEND and HELP. Within the two FRIEND regional groups AOC FRIEND (West and Central Africa FRIEND and HKH FRIEND (The Hindu-Kush Himalayas FRIEND) climate change impacts and adaptation is of concern for most research topics like: floods and low flows under climate change conditions, as well as the rainfall-runoff modelling. The HKH region has experienced climatic extremes in recent years. Flash floods are particularly common in this region. The FRIEND programme intends to promote and mobilize in-depth knowledge of the flow regimes of this highly energized and fragile environment in order to reduce vulnerability to hydrological extremes.

35. The IHP's HELP programme is translating ecologically sustainable development policies to mitigate climate change into the concrete actions at the river basin level. HELP has achieved such a mitigation strategy within the LDCs through the HELP basin network, particularly in Asia and Africa.

36. Within the International Flood Initiative (IFI) the focus is also given to climate change impact and adaptation. UNESCO-IHP Jakarta Office, ICHARM and the Regional Humid Tropics Hydrology and Water Resources Centre for South-East Asia and the Pacific are partnering in a project on the assessment of flood forecasting and warning systems under the expected climate change in the humid tropics. The system will be established in Indonesia, Malaysia, the Philippines, Thailand and Vietnam. UNESCO-IHP Accra Office together with ICHARM has written a proposal on flood disasters. The project will contribute to enhance the flood disaster resilience of West Africa countries under the current impact of climate change. In general, a major focus is on the LDCs, such as those selected for the first phase, namely Benin, Burkina Faso, Ghana, Mali, Niger and

Togo. The priorities considered in the project are among those identified within the ECOWAS disaster reduction policy adopted in 2008 and during the Niamey workshop (July 2009). The findings will be used to shape or revisit national policies and legislation concerning flood disaster risk reduction and management under a changing climate.

37. In addition, within the IHP Theme 1 on adapting to the impacts of global changes a comprehensive summary of global change (including climate change) impact on water resources is done with the major focus on climate change impacts on sediments, hydrological extremes, irrigation, groundwater and water quality in the LDCs. This comprehensive summary will serve as a basis for development of climate change adaptation strategies within these countries.

38. The IHP has also assisted with the preparation of national policies regarding freshwater in several LDCs, including Kiribati and Sudan, and has provided training for those responsible for the implementation of such policies. An example of a best practice is the project that IHP has been involved in to develop a National Water Resource Policy and Implementation Plan in Kiribati. This new policy and its implementation plan is designed to provide safe, adequate, and affordable water services to all communities in Kiribati. It also addresses the conservation, sustainable use and efficient management of Kiribati's water resources and will improve the welfare and livelihood of the people despite the threats of climate variability and change. The policy and plan is currently being implemented by the Government.

39. The UNESCO-hosted World Water Assessment Programme (WWAP) has successfully coordinated three editions of the World Water Development Report (WWDR), including the most recent one launched at the Fifth World Water Forum in March 2009. The WWDR uses the most recent data to provide a snapshot of the status of freshwater globally, once every three years. The study projects initiated in participating countries served as a platform bringing relevant national stakeholders together to identify the gaps in knowledge, the shortcomings in legislative systems and the aspects of institutional capacity that need to be enhanced. Case study development has provided an impetus for the national agencies responsible for water management to organize their data collection and reporting efforts more efficiently. It has also helped raise public awareness of the global water crisis and the visibility of IWRM on national agendas. Most importantly, in the process, the skills and experience of both local water professionals and policy-makers are engaged and enhanced. WWAP activities have also influenced action elsewhere, thanks to research on the protection and sustainable use of water resources. The case studies complement and compound the analyses provided in the WWDR series by taking a critical look at the state of water resources, varying conditions and the resilience of national mechanisms for coping with change. The case study volume of the WWDR3 examines these and other elements in 20 case studies from four regional settings involving 23 countries and numerous SIDS. National level WWAP case studies have been initiated in the following countries: Sudan and Zambia (in addition Ethiopia, Mali and Uganda were covered in the previous phase of the WWAP); Bangladesh, Samoa, Solomon Islands, Tuvalu and Vanuatu.

Commitment 3: Building human and institutional capacities

GOAL 15: Reducing HIV infection rates in persons 15-24 years of age by 2005 in all countries and by 25 per cent in the most affected countries.

40. UNESCO continued to support LDCs in their efforts to implement comprehensive, scaled-up, educational programmes on HIV and AIDS through its dedicated EDUCAIDS initiative. EDUCAIDS has two main objectives which inform its response largely through formal education systems: (i) To prevent the spread of HIV through education; (ii) To protect the core functions of the education system from the worst effects of the epidemic. EDUCAIDS promotes responses across a number of components that together constitute a comprehensive education sector response to HIV and AIDS.

41. EDUCAIDS responses in all LDCs target both upstream and downstream initiatives, from policy development to curriculum design and implementation in schools and colleges. In all of the LDCs where EDUCAIDS has a presence, strong partnerships with the Ministry of Education have been established in order to ensure that the two main EDUCAIDS objectives are met.

42. In the period under review, EDUCAIDS has continued to support 20 LDCs in their efforts to implement gender sensitive, comprehensive, scaled-up educational programmes on HIV and AIDS. The countries include: 15 of the 33 least developed African countries; 5 of the 15 least developed Asia / Pacific countries, and Haiti.

43. In addition to EDUCAIDS, UNESCO is also working to reduce HIV infection rates in persons 15-24 years of age through its Youth Visioning for Island Living initiative. Through this initiative youth-led, youth-centred projects that focus on building awareness of HIV-AIDS among youth in SIDS have been financed and administered grants. More than half of the projects were in LDCs, notably in Tanzania, Haiti, Samoa, Guinea-Bissau, Madagascar and Tanzania. Projects spanned a wide range of topics – HIV-AIDS and life skills, prevention, youth empowerment, and more. Methodologies were similarly diverse, delivering their message through discussions, film production, creative arts, theatre, and sports. In all cases, the projects helped build capacity, confidence and experience among youth groups for project development, implementation, assessment and reporting. All projects were successfully completed, and a new call for proposals is due to be issued in early 2010.

Commitment 3 – building human and institutional capacities

- in the field of ethics of science and technology, in particular bioethics and in the field of social and human sciences by providing spaces for research-policy dialogues at the regional and national levels, and by supporting the development of national policies for the social and human sciences and strengthening the contribution of national research systems to social development

44. Through UNESCO's Bioethics Programme, the Organization has been working to build the capacities of LDCs to develop the principles, practices and ethical norms relevant for scientific and technological by supporting the establishment of national bioethics committees (NBC) from the least developing countries.

45. UNESCO has also been working to address the social impacts of the economic, food, climate change and environmental crises through its Management of Social Transformations (MOST) Programme, particularly through the organization of Ministerial Policy Dialogues and the implementation of Joint UN initiatives in LDCs. In this context, the Government of Bangladesh will organize, in cooperation with the MOST Programme, a Forum of Ministers of Social Development for South Asia in May 2010, focusing on "Social Protection and Social Safety Nets". Other LDCs will participate, including in principle Afghanistan, Bhutan, Maldives and Nepal. It is expected that the Government of Burkina Faso will in 2010 be the host country for the third Forum of Ministers of Social Development for the ECOWAS region in which in principle other LDCs will participate, including Senegal, Mali, Benin and Sierra Leone. The main theme to be proposed for the Forum is "Social Protection". Each Forum will adopt a Ministerial Declaration with policy recommendations. MOST will also prepare a Policy Brief following each Forum.

Commitment 3 – building human and institutional capacities

- to promote cultural diversity through the safeguarding of tangible and intangible cultural heritage, by enhancing cultural expressions and by promoting intercultural dialogue

46. During the reporting period, UNESCO focused its activities on enhancing the role of culture in development processes. 4 joint programmes were funded under the "culture and development" thematic window of the UNDP-Spain MDG Achievement Fund, in the following LDCs: Ethiopia, Cambodia, Mauritania, Mozambique, and Senegal. In addition, national capacities for the management and conservation of immovable cultural and natural properties, notably through the effective implementation of the World Heritage Convention, were strengthened through conservation and training activities for a number of LDCs in all regions, and the setting up of a network of category 2 centres dedicated to World Heritage activities in a number of LDCs.

47. The safeguarding of living heritage, particularly through the promotion and implementation of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage, was also promoted in LDCs. Capacities in LDCs have been strengthened thanks to the development and implementation of safeguarding plans, the sharing of good practices and the training of governmental and non-governmental stakeholders

48. UNESCO also assisted LDCs in building human and institutional capacities to enhance the protection of cultural objects, the fight against illicit trafficking in them, and the development of museums. Capacity building activities focused on training museum

staff in collections management and museums management, including a strong focus on developing inventories of museum collections in order to help fight illicit trafficking and support the 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property.

Commitment 3 – building human and institutional capacities

- ***to build the capacities of media professional in LDCs through enhancing the quality of media training institutions, and by fostering community access to information to increase opportunities for non-formal education and inclusive participation in development***

49. During the reporting period, the development of free, independent and pluralistic media was supported in number of LDCs through the International Programme for the Development of Communication (IPDC). The IPDC is the only multilateral forum in the UN system designed to mobilize the international community to discuss and promote media development in developing countries. The programme not only finances media projects that produce significant change using relatively small amounts of money; it also integrates these projects into a long-term strategy of human rights-based support aimed at expanding the space for freedom of expression and media pluralism in developing and post-conflict countries.

50. Journalism schools institutions in a number of LDCs were also bolstered and opportunities for community access and participation in LDCs were expanded through the setting up of community radio and Community Multimedia Centres. In addition, the capacities of media trainers in LDCs were strengthened through UNESCO's capacity building programmes.

Commitment 3 – building human and institutional capacities

- in science, technology and innovation

51. During the reporting period, special attention was given to responding to the needs of LDCs in Africa, notably through support provided to the implementation of the recommendations of the African Union on science and technology for development (Addis Ababa Summit). The capacities of a number of LDCs were supported in the Africa region in the areas of STI policy formulation, implementation and monitoring.

Commitment 3 – building human and institutional capacities

- for disaster preparedness and mitigation, by enhancing national and regional coping capacities, including through support for the development of risk reduction networks and monitoring and assessment measures, such as tsunami early warning systems

52. The development of early warning systems for tsunami and other ocean-related hazards was expanded to the West coast of Africa, the South Pacific, the Mediterranean Sea, the North-East Atlantic and the Caribbean. In addition, interim regional tsunami advisory services were provided for the Caribbean and the Indian Ocean, which are

scheduled to have in place regional warning centres by 2010-2011. Networking and partnerships on the assessment of natural hazards and on risk reduction approaches were also promoted in the LDCs the context of the International Strategy for Disaster Reduction (ISDR), and support was also provided to build the capacities of LDCs for earthquake risk reduction.

Commitment 6: Reducing vulnerability and protecting the environment

53. UNESCO's Intersectoral Platform on Climate Change coordinates the Director-General's Climate Change Initiative to build and maintain the climate change knowledge base for science, assessment, monitoring, and early warning and to promote mitigation of and adaptation to climate change, including through enhanced education and public awareness, with strong emphasis on Africa and gender empowerment. LDCs are particularly vulnerable to the negative effects of climate change, and as such they are a special priority of UNESCO's Strategy for Action on Climate Change.

54. In line with UNESCO's Climate Change Strategy and its focus on LDCs, UNESCO's Man and the Biosphere (MAB) Programme and the World Heritage Centre support monitoring and management of climate change, biodiversity loss, and sustainable development in biosphere reserves and World Heritage sites, as well as mobilization of UNESCO sites for field learning on climate change impacts and solutions.

55. UNESCO's Man and the Biosphere Programme (MAB) and the World Heritage Centre have contributed to reducing vulnerability and protecting the environment in LDCs through the following initiatives:

A. Supporting monitoring and management of climate change, biodiversity loss, and sustainable development in biosphere reserves and World Heritage sites.

- The second phase of the Sustainable Management of Marginal Drylands (SUMAMAD) project has been launched in order to help scientists develop climate change scenarios in dryland areas of Africa, Arab States, Asia and Latin America.

B. Mobilizing UNESCO sites for field learning on climate change impacts and solutions

- A number of activities aimed at establishing the WNBR as an observatory and learning platform for climate change monitoring, mitigation and adaptation are currently being explored. Notable examples Sustainable Futures of the Congo Basin and South-South cooperation on climate change in tropical forest basins, which all target LDCs in Africa, particularly the Congo Basin region.
- In August 2009, UNESCO, UNDP and the United Nations Volunteers signed an MoU to establish the UN Collaborative Programme on Community-Based Adaptation to Climate Change in Developing Countries (UN-CBA). The programme will fund community based organizations in and around biosphere reserves, indigenous and community conserved areas and other important ecosystems to develop and implement climate change adaptation projects.

- Biosphere Reserves for Environmental and Economic Security (BREES): A Climate Change and Poverty Alleviation Programme in Asia and the Pacific (2010-2017) has been established. BREES is a long-term regional climate change and poverty alleviation program that will work with communities, micro-finance institutions, educational institutions, government, and donor agencies to use biosphere reserves as learning centres for environmental and human adaptability to climate change effects and to improve economic conditions for the rural poor in and near biosphere reserves. BREES will work with donors and micro-finance institutions to establish micro-financing and grant networks in communities surrounding the nearly 150 biosphere reserves in Asia-Pacific. The BREES Programme will invest heavily in community-based efforts to alleviate poverty, and establish a critical mass of resources and people to effectively safeguard important carbon sinks, and develop innovative solutions to enhance the livelihoods of the rural poor. LDCs initially targeted by the programme include Cambodia, Timor-Leste, Nepal, and Bhutan.
- The World Heritage Centre, through the UNESCO Office in Jakarta, is implementing a climate change risk assessment and adaptation response project in the Tropical Rainforest Heritage of the Sumatra World Heritage site, with support from the German Ministry of the Environment. A similar project, for Madagascar's Rainforests of the Atsinanana World Heritage site is on hold, pending a resolution of the political situation there.

56. With support from the Government of Denmark, UNESCO also organized an International Seminar on Climate Change Education in July 2009 at which priority areas for action on climate change education were identified including: undertaking a review of existing educational policies and curricula; a comprehensive review and inventory of existing tools and practices; quality assurance and standard setting; and developing ways to support a "community of practice" around climate change education. Discussions paid particular attention to the most vulnerable countries such as SIDS and LDCs. Representing all regions and a number of LDCs – including Kiribati, Cambodia, Sao Tome & Principe, Haiti, Maldives and Samoa – participants recommended the creation of a climate change education knowledge hub to be coordinated by UNESCO in close cooperation with the UNFCCC as the first step to address these concerns.

57. The Sandwatch programme seeks to modify the lifestyle and habits of children, youth and adults on a community-wide basis and to develop awareness of the fragile nature of the marine and coastal environment and the need to use it wisely. It is an educational process through which school students and community members learn and work together to critically evaluate the problems and conflicts facing their beach environments and to develop sustainable approaches to address these issues. With particular focus on climate change observations and adaptation and a strong field monitoring component, Sandwatch tries to make science 'live' yet remains interdisciplinary with applications ranging from biology to woodwork and from poetry to mathematics. Sandwatch is active in over 40 countries, including a number of LDCs.

58. Many small island, rural and indigenous communities are already facing the first impacts of climate change. Their high vulnerability relates to their reliance upon resource-based livelihoods and the locations and configurations of their lands and territories. In response to this outcry, the grassroots Internet forum, "On the Frontlines of Climate Change" was launched by UNESCO, in partnership with the Secretariat of the Convention on Biological Diversity, the Secretariat of the UN Permanent Forum on Indigenous Issue and the Office of the High Commissioner on Human Rights. The goals of the Frontlines forum are to:

- Draw international attention to the knowledge and experiences of indigenous communities and peoples living in small islands, the Arctic and other vulnerable environments;
- Seek community-level observations on climate change impacts, as well as local efforts to cope with and adapt to these changes;
- Provide an opportunity for communities to voice their observations, experiences and concerns, and to share and exchange them with other communities;
- Build up a global database of local observations, experiences, practices and coping strategies;
- Support community-based research and educational activities related to climate change;
- Heighten the profile and impact of indigenous peoples and their knowledge in international climate change debates.

59. With its focus on particularly vulnerable countries and communities, Climate Frontlines receives numerous contributions from LDCs. Particularly active have been Kenya, Uganda, Tanzania, Nepal, and Bangladesh. At present time, community-level field research projects are in the process of initiation in Africa and the Asia-Pacific, with other regions to follow. Recipient LDCs include Nepal, Tanzania, Zambia, and Kenya with others to follow in early 2010.