# Regional overview: Central and Eastern Europe and Central Asia





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Since the early 1990s, countries in the EFA regions of Central and Eastern Europe and Central Asia<sup>1</sup> have faced profound political, socio-economic and demographic disruptions that have affected their education systems. Overall, enrolment in primary education has decreased since Dakar, partly because of demographic trends (e.g. declining fertility levels and emigration). The number of out-ofschool children, especially girls, remains high (it was 2.4 million, of whom 1.3 million were girls, in 2004). Poor school progression and completion are also important concerns in some countries. Key aspects of the EFA agenda are lagging: quality of education, gender parity - particularly at higher education levels - and early childhood care and education (ECCE).

ECCE, the main theme of the 2007 EFA Global Monitoring Report, has demonstrated its potential to offset disadvantage caused by poverty or marginalization, provided it is offered in the form of a holistic package that includes nutrition and health along with care and education. In Central and Eastern Europe (CEE) and Central Asia (CA), the transition from planned to market economies led to the breakdown of ECCE institutions, but by the late 1990s most countries had recovered, although not always to previous levels. However, in CA, the gross enrolment ratios (GERs) in pre-primary education remain among the lowest in developing and transition countries.



# ECCE: a strong foundation, but still rare in certain countries

ECCE, like EFA more generally, is first of all a right as recognized by the 1989 Convention on the Rights of the Child, which focuses on guaranteeing the rights of young children to survive, develop, and be protected. Good programmes can significantly enhance young children's well-being in the formative years and complement the *care* received at home and in community-based centres. Yet despite the rising demand for more organized ECCE programmes – which is linked to migration, urbanization and women's participation in the labour market<sup>2</sup> – many children in CEE and CA are denied access to quality care programmes, suffer from inadequate nutrition and lack the stimulation they need for normal growth and development.

Children in the two regions have drastically different survival rates. In Central and Eastern Europe, on average, nineteen of every 1,000 children born in recent years will not reach age 5. This is well below the averages observed in Central Asia (79) and worldwide (86). Turkey has made great strides since 1990, reducing the under-5 mortality rate by about half, to 49 per 1,000 live births, by the early 2000s. In contrast, the rate has increased in Kazakhstan and Turkmenistan since 1990.

In Albania and Tajikistan, more than one third of children under age 5 suffer from moderate or severe stunting, which has negative repercussions on school performance.

<sup>1.</sup> This is according to the EFA classification. See the tables for countries in the region. Although Central and Eastern Europe and Central Asia have typically been examined as two separate regions, this overview addresses both regions together, noting important differences when relevant.

<sup>2.</sup> In 2003 the median labour force participation rates for women were about 51% in CEE and 56% in CA. Most countries with data available report that they offer statutory maternity leave, lasting between sixteen weeks and (in Albania) one year.

#### The benefits of ECCE

Implementing measures to reduce mortality and morbidity are a first step towards establishing comprehensive care and education programmes for young children. *Education* should be considered an integral part of programmes designed to address young children's health and nutrition problems. Good-quality ECCE not only enhances children's physical well-being, cognitive and language skills, and social and emotional development, but also contributes to the realization of other EFA goals by laying the foundations for subsequent education.

The benefits derived from learning opportunities in early chilhood promote later achievement in school and further lifelong learning.

Studies in several countries point to positive links between participation in early childhood programmes, primary school enrolment and better academic results over at least three to four years, particularly for disadvantaged children. The Turkish Early Enrichment Project, combining parenting skills and pre-school in low-income, low-education areas of Istanbul, resulted in 86% of children still being in school after seven years, compared to 67% for non-participants. Over the long run, participant children had higher school attainment, were more likely to attend university, began working at a later age and had higher occupational status.

#### Provision for children under 3

Programmes for the youngest children are relatively common in Central Asia<sup>3</sup> but less so in Central and Eastern Europe, where the education of under-3s is increasingly seen as the responsibility of parents, private bodies or non-governmental institutions. Romania, for example, has no national education policies or guidelines for institutions serving this age group. Information is limited regarding the duration (in hours per day/week) of programmes targeting under-3s in the two regions. Some are full time and others accommodate children on flexible hours.<sup>4</sup>

There is a need to develop more comprehensive ECCE programmes for the youngest children, covering not only custodial care, but also parent education and children's health needs, physical development and learning potential. In Kyrgyzstan, Mongolia, the Russian Federation and Tajikistan, most ECCE programmes seek to promote and support family and community-based initiatives or health awareness efforts.

#### Provision for children aged 3 and older

Governments play a more active role in providing and supervising programmes for children aged 3 or older than for younger ones. A look at **pre-primary education** in the former and current transition countries shows diverse trends. In Central Asia, despite indications of recovery after the decline in the 1990s, the regional pre-primary GER was 27% in 2004 – still significantly below the world average of 37% – and no country had a GER greater than 50%. Between 1991 and 2004, pre-primary GERs actually declined in Armenia, Georgia, Kazakhstan, Kyrgyzstan and Tajikistan. The decreases took place despite government initiatives and policies meant to increase the role of private providers or institutions.<sup>5</sup>

In Central and Eastern Europe, pre-primary enrolment levels initially dropped – sometimes precipitously – but had recovered by the end of the 1990s, and by 2004 the average regional GER was 57%. In Albania, Bosnia and Herzegovina, Serbia and Montenegro and the former Yugoslav Republic of Macedonia, all of which had relatively low enrolment rates in the early 1990s, governments introduced various measures to increase access to kindergarten and other ECCE programmes.

The duration of pre-primary programmes (in weekly hours) is irregular in these regions, ranging from four hours a day in Bulgaria to twelve hours a day in Georgia or, for exceptional care needs, twenty-four hours a day in Belarus and Latvia.

#### Private enrolment

With the collapse of the former Soviet Union and the communist bloc, comprehensive, state-run ECCE services and provision disintegrated, in various degrees depending on the nature and severity of the external and internal shocks the countries experienced. Since

<sup>3.</sup> Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Turkmenistan and Uzbekistan all have at least one programme for children under age 3, although these are mainly centre-based and located in cities.

<sup>4.</sup> In **Belarus**, under-3s can attend day care that meets the needs of working parents. Care can range from two to six times per week, and from two to twenty-four hours per day. In **Kazakhstan**, where programmes are designed to accommodate part-time work schedules, the under 3 group can attend day care for as much as ten to twelve hours per weekday. In **Slovenia**, flexible hours in child care centres accommodate children under age 6 between four and eight-plus hours a week.

<sup>5.</sup> Kazakhstan, for instance, introduced new forms of ECCE, including complexes of 'kindergartens schools' as well as kindergartens and other pre-school institutions funded privately or by local government. The governments of Kyrgyzstan and Uzbekistan opened many community-based kindergartens to increase enrolment.

1999, signs of economic recovery and stability, especially in Central and Eastern Europe, have been accompanied by greater state attention to and investment in ECCE. The historical model of government-funded and government provided early childhood services was reaffirmed.

REGIONAL OVERVIEW

Unlike in most other regions, direct household costs are relatively lower in these two regions, since such a small percentage of enrolments (1% or less) are in private institutions.6

#### Children from poor backgrounds

While research has shown that children from the poorest backgrounds benefit most from ECCE provision in terms of care, health and education, data indicate that they are also the most likely to be excluded from it. Throughout countries in CEE and CA, attendance rates in pre-primary programmes are considerably higher for urban children and, except in Albania, for those from better-off households. The mother's education, along with possession of a birth certificate and, to a lesser extent, vaccination records also increase the likelihood of a child's attendance in ECCE programmes.

The challenges facing countries in CEE and CA are further compounded by the extremely large numbers of young children who live apart from their birth families in institutions or in foster care, quardianship or adoption. UNICEF estimates that about 1.5 million children in the two regions live in such out-of-home care contexts. These 'social orphans' - children whose parents are living but unable or unwilling to care for them - are especially vulnerable and often have limited, if any, access to early childhood programmes.

#### Regional disparities

There are considerable regional disparities in preprimary education coverage. In 2004, GERs ranged from 8% in Turkey and 9% in Tajikistan to close to universal coverage in Belarus, the Czech Republic, Estonia and Slovakia. The highest GER among Central Asian countries is that of Georgia, 49%. In all Central

and Eastern European countries except Albania, Croatia, the former Yugoslav Republic of Macedonia and Turkey, more than half the children are enrolled.

#### Change since 1999

All countries in the two regions improved ECCE enrolment between 1999 and 2004.8 In terms of regional averages, the GER for Central and Eastern Europe increased by thirteen percentage points between 1999 and 2004, to 57%, while that of Central Asia increased by five percentage points. Crossnational comparisons of pre-primary GERs are sensitive to official age groups for the pre-primary level and to compulsory education ages. Among countries with the same age group during this period, the largest GER increases were observed in Kazakhstan (up by sixteen percentage points), Latvia (twenty-six), Mongolia (ten) and the Russian Federation (thirty). Among countries with low GERs in 1999, Azerbaijan made considerable progress, increasing the ratio by six percentage points to 28% in 2004 (though it should be noted that the transition in this country from pre-primary to primary school is not clear-cut, as some 6 year olds are still enrolled in pre primary education even though the official primary entrance age is 6). Eight of the twenty Central and Eastern European countries have made at least one year of pre-primary education compulsory.

#### Gender disparities

Some disparities between the sexes are observed in both regions, which had average gender parity indexes (GPIs) of 0.95 in 2004. Between 1999 and 2004, gender disparities improved significantly in Central Asia, especially in Mongolia and Tajikistan. In Armenia, Georgia and Mongolia, gender disparities still favoured girls in 2004 (the GPIs were 1.17, 1.15 and 1.08, respectively), while in the Russian Federation they tend to favour boys (GPI of 0.91).

#### ECCE quality issues: too few and poorly trained teachers in some countries

Not only are ECCE programmes still rare in these regions, but those that exist often suffer from poor quality. The median pre-primary pupil/teacher ratio (PTR) is about 10:1 for CA and 11.1 for CEE - lower than the averages for the comparable country groupings of the developed world (13:1) in the case

<sup>6.</sup> Nevertheless, parents are often asked to contribute financially to state-run educational institutions. In addition, parents wishing to secure places for their children in higher-quality programmes are asked to make informal payments These conditions represent hurdles for poor families wishing to enrol their children.

<sup>7.</sup> The urban-rural attendance gap in the combined attendance rates for 3- and 4-year-olds is between fourteen and thirty-two percentage points in Azerbaijan, the Republic of Moldova, Mongolia, Tajikistan and Uzbekistan. Similarly, concerning the wealth related attendance gap, among the five countries with data available, the Republic of Moldova reported a spread of thirty percentage points between poor children and those with better-off backgrounds, and Mongolia forty-three percentage points. On the other hand, in Albania participation rates in poorer households are higher than in richer households. Evidence suggests that policy measures in this country have successfully reached disadvantaged children

<sup>8.</sup> In Slovenia enrolments declined due to a change in the pre-primary education structure from one targeting children aged 3 to 6 to one targeting ages 3 to 5. In other words, children now enter primary school one year earlier than before

of Central and Eastern Europe and the developing world (23:1) for Central Asia. Country PTRs range widely in both regions, from 6:1 in Belarus and 9:1 in Armenia to 21:1 in Albania and Kyrgyzstan and a high of 28:1 in Mongolia.

#### Pre-primary teachers' qualifications and training

Among the twenty countries of Central and Eastern Europe, only four had 2004 data on the percentage of trained pre-primary teachers. Of these, the Republic of Moldova and the Russian Federation recorded that more than 90% of pre-primary teachers had received some pedagogical training, while the percentage was much lower in Belarus (64%). In Central Asia, although fewer than 60% of pre-primary teachers were trained in Armenia (56%) and Kyrgyzstan (36%), almost all pre-primary teachers (as well as primary teachers) had received some pedagogical training in Georgia and Uzbekistan, indicating efforts to improve the quality of care, health, education and development of young children.

Formal academic requirements for pre-primary teaching can sometimes be an issue. In Kazakhstan pre-primary teachers are supposed to have post-secondary, non-tertiary qualifications, but only 36% of them meet this minimum requirement.

#### Some encouraging signs

If children in Central and Eastern Europe and Central Asia are to enjoy the benefits derived from learning opportunities in early childhood, there is a pressing need to increase access to ECCE programmes and to improve their quality. There are promising signs:

- Early childhood is a national priority, with ambitious targets in country education plans, in Armenia, Kyrgyzstan, Romania, Turkey and Ukraine.<sup>9</sup>
- There is a commitment to create specific pre-primary teacher training programmes, competence-based teacher training or in-service training requirements in Albania and Estonia.
- International organizations have assisted Poland,
   Romania and Slovenia in developing and using educational quality scales and observational guides.

- ECCE policies are aligned with other national and sectoral development policies in Romania as a strategic way to leverage resources and promote integration of ECCE.
- In ten countries, ECCE policies target vulnerable and disadvantaged children in poor or geographically isolated communities.<sup>10</sup>

#### Improving quality

Governments must ensure that minimum acceptable standards are met for all children. Such quality regulations should apply to all providers, public and private. Most governments regulate ECCE programmes using easy-to-measure structural indicators of quality such as class size, child/staff ratios, availability of materials and staff training. But it is equally important, if not more so, to consider the quality of carer-child relationships, family involvement, and responsiveness to cultural and language diversity and to children with special needs. In the Republic of Moldova, the availability of toys and of drawing and play materials in the home was a good predictor of high cognitive development scores among children aged 1 to 3, regardless of the family's socio economic status.

#### Recruiting and training ECCE personnel

A key issue in improving the quality of ECCE programmes is how to recruit and retain large numbers of trained ECCE personnel. To draw more candidates to the field, some countries are improving overall working conditions in ECCE programmes or developing more flexible entry routes into higher education and teacher training. Albania, for example, recently developed its first programme for pre-school teachers.

#### Challenging gender stereotypes

Training should help pre-primary teachers challenge gender stereotypes in their own practice and in curricula. This is particularly important because early childhood is the period when perception of what is masculine and what is feminine takes hold. Encouraging more men to work in early childhood programmes (women accounted for between 95% and 100% of pre-primary teaching staff in the Central and Eastern European and Central Asian countries with 2004 data) can also help challenge assumptions of the

For example, 18% of the budget in Kyrgyzstan's proposal for the Fast Track Initiative is devoted to early childhood education, mainly for the over-3 age group. In some countries, including Ukraine, special policy attention is given to children under 3.

<sup>10.</sup> The countries are Armenia, Kazakhstan, Mongolia and Uzbekistan in Central Asia, and Albania, Belarus, Bulgaria, Romania, the former Yugoslav Republic of Macedonia and Ukraine in Central and Eastern Europe.

woman as sole carer and encourage fathers to be more involved in their children's upbringing.

#### Smoothing the transition to primary school

Finally, if ECCE is to prepare children for school in terms of their physical, social and cognitive development, school itself should be ready to welcome children and facilitate their transition to primary education. Possible actions to this end include:

- integrating ECCE more closely with primary school by forging stronger links among the health, care and education components of ECCE (Czech Republic, Kazakhstan);
- ensuring continuity in the curriculum; 11
- engaging parents in school activities;
- introducing measures to ensure professional continuity between the two levels by including joint training, putting emphasis on active learning approaches and according equal professional status to ECCE and primary school teachers.

#### Better coordination through shared vision

In general, ECCE involves multiple sectors, programmes and actors, making coordination a frequent challenge. The involvement of multiple players can bring together agencies with different areas of expertise. It can also lead to friction between ministries. In a majority of countries in Central and Eastern Europe and Central Asia, administrative responsibility for early childhood is organized by age group, although some countries, including Armenia, Kyrgyzstan, the Russian Federation and Serbia and Montenegro, have designated education as the lead ministry for children from birth. Regardless of who takes the lead, coordination among the institutions and sectors involved is needed. Coordination mechanisms provide a forum for potentially achieving a common vision encompassing resources, standards, regulations, training and staffing.

# Participation in primary education and beyond: quite high across the two regions

#### **Primary education**

Overall, the vast majority of primary school age children in CEE and CA are enrolled in primary school. The primary net enrolment ratio (NER) averaged 91% in the former region and 92% in the latter in 2004, well above the global average of 86%. The regional NERs improved slowly between 1999 and 2004, each rising from 89%. At country level, Albania, Bulgaria, Poland, Slovenia and Tajikistan have achieved universal primary education (UPE) or soon will. However, Azerbaijan, the Republic of Moldova, Mongolia and Ukraine have NERs of less than 85% and will need to strengthen efforts to expand access to primary education if the UPE goal is to be met. Moreover, information is missing for Bosnia and Herzegovina, Serbia and Montenegro, Turkmenistan and Uzbekistan, some of which have had relatively low enrolment ratios in the past.

The continuing increase in primary enrolment ratios translates into a decrease in the number of out-of-school children in these regions, from a combined total of 3.1 million in 1999 to 2.4 million in 2004. Approximately 54% of these children are girls, and about 85% of all the out-of-school children are concentrated in Central and Eastern Europe. The challenge posed by large numbers of out-of-school children is greatest in the Russian Federation, Turkey and Ukraine, with more than 300,000 each.

#### Who are the out-of-school children?

For governments to formulate effective policies to reduce the number of out-of-school children, it is necessary to better understand who they are. Looking at the education experiences of these children as well as at their background characteristics provides valuable guidance for designing differentiated programmes that effectively redress the problem of disadvantage in its various dimensions.

About half the 2.4 million children who were not enrolled in 2004 in CEE and CA had never been enrolled in school and might never go to school without additional incentives. More than one-third of the out-of-school children were likely to enter late, and the remaining children had previously been enrolled but then dropped out of school.

<sup>11.</sup> Thirty countries in the two regions participate in the Soros Foundation's Step by Step programme, which facilitates the transition by ensuring that classmates from a given pre-school are transferred together to the same primary classroom.

Data from household surveys indicate that, in addition to gender, characteristics such as place of residence, household wealth and mother's education significantly affect the likelihood of children being out of school. Children from rural and poorer households are significantly less likely to be enrolled than children from urban and wealthier households. The gap between rich and poor is particularly large in Kazakhstan.

#### School retention and completion

Once enrolled in primary school, almost all children in these regions succeed in reaching the final grade. Median survival rates to last grade in 2003 were 98% in CEE and 97% in CA, significantly higher than the world average of 87%. Countries with relatively low survival rates included Albania (90%), the Republic of Moldova (90%), Mongolia (91%) and Turkey (92%).

Overall, after experiencing enormous challenges related to recent economic and political transformations, most countries in Central and Eastern Europe and Central Asia have quite high NERs in primary education. The most salient problem involves substantial pockets of out-of-school children in certain countries, in which sustained government action is necessary.<sup>12</sup>

#### Secondary education

Demand for, and participation in, secondary education have been strong throughout the CEE and CA regions. Transition rates between primary and secondary education are very high: above 98% in the vast majority of countries in 2003. Figures for 2004 indicate that almost 48 million students were enrolled in secondary education, which corresponds to an average GER of 90% in each region. Not all countries, however, have achieved such high secondary GERs. In Albania, Azerbaijan, Georgia, the Republic of Moldova, Tajikistan, the former Yugoslav Republic of Macedonia and Turkey, less than 85% of the relevant school age population is enrolled in secondary school.

Changes in regional GERs were modest between 1999 and 2004, with increases of about four percentage points for both CEE and CA. At country level, however, increases were often more marked, e.g. above ten percentage points in Belarus, Bulgaria, the Czech Republic, Mongolia and Tajikistan.

#### Regional differences

High overall secondary GERs can mask substantial disparities between lower and upper secondary education. In fact, a major inter-regional difference is found when comparing GERs for lower and upper secondary education: in CEE the GERs for both levels were high in 2004 (92% for lower secondary, 88% for upper) while CA recorded a substantial drop-off in GERs from lower to upper secondary, from 95% to 78%. The two regions also differ in their emphasis on secondary technical and vocational education (TVE). In CEE the share of TVE enrolments in secondary education is considerable higher (19%) than in CA (5%).

### Tertiary education: limited access in Central Asia

More than 18 million students in Central and Eastern Europe, and 1.9 million in Central Asia, were enrolled in tertiary level institutions in 2004. Both figures indicate considerable increases since 1999, by nearly 43% for CEE and 47% for CA. Expressed as a share of the relevant age group, the tertiary GER was 54% in CEE and 25% in CA. The CEE figure is more than twice the world average (24%) but about ten percentage points below the GER for developed countries (65%).

Country enrolment ratios in tertiary institutions vary substantially in both regions. For example, Latvia, Lithuania and Slovenia have GERs of over 70% whereas Albania, Turkey and the former Yugoslav Republic of Macedonia have GERs of less than 30%. Tertiary GERs within Central Asia alone range from less than 20% in Azerbaijan, Tajikistan and Uzbekistan to more than 45% in Kazakhstan.

Finally, with the exception of Bulgaria, all countries in the two regions improved their situation between 1999 and 2004, and the increases in tertiary GERs were above twenty percentage points in Georgia, Hungary, Latvia, Lithuania and Slovenia.

<sup>12.</sup> Additional issues involve seasonal attendance and school capacity, especially in Central Asia. Many children miss substantial portions of the school year due to seasonal work, agricultural activities and illness. Also, many schools are open for double shifts, reducing class time for students and increasing teacher workloads.

# Literacy: the challenge remains in some countries

Conventional statistics indicate very high adult literacy rates in both regions, well above 97%. Yet, almost 10 million adults – about 75% of them women – still lack minimal literacy skills. Turkey is the country with the most pronounced literacy challenge: while the adult literacy rate improved from 78% to 87% between 1990 and 2004, more than 6 million adults are denied the right of literacy, accounting for about two-thirds of all adult illiterates in CEE and CA together. By conventional statistics, Turkey is the only country in either region that is in danger of not meeting the EFA literacy target by 2015. There is a clear need for the Government of Turkey to continue to expand opportunities for adult literacy programmes and provide an enabling literacy environment for all.

#### **Gender disparities**

Gender parity in primary education is achieved or nearly so in almost all countries in CEE and CA, according to available 2004 data. Some gender disparities remain – for example, in favour of boys in Tajikistan (where 95 girls are enrolled per 100 boys) and Turkey (94 girls per 100 boys), and in favour of girls in Armenia, where 104 girls are enrolled for every 100 boys.

The GPI in secondary education, at 0.96 in each region, shows few disparities. At country level, disparities between the sexes are slightly more pronounced and tend to favour girls. In Mongolia, 104 girls were enrolled in secondary school for every 100 boys in 2004, and the corresponding figure for the Republic of Moldova was 114. Notable exceptions, where girls are under-enrolled, are Tajikistan (GPI of 0.84) and Turkey (GPI of 0.75).

The growing trend towards gender disparities favouring girls and women becomes more salient at tertiary level, especially in Central and Eastern Europe. The regional GPIs for tertiary GER are 1.25 in CEE and 1.05 in CA. Gender parity in adult literacy is achieved in both regions, with average GPIs of 0.97 in CEE and 0.99 in CA. Important gender disparities remain in Turkey, where only 84 women are literate for every 100 men.

In general, girls' performance in primary and secondary education tends to be stronger than that of boys. For example, for the countries with available data in both regions, repetition rates in primary and secondary education tend to be higher for boys than for girls, except in Turkey. In addition, the survival rate to the last grade of primary education is higher for girls than for boys, with Turkey also being a notable exception.

# The quality of education: more attention needed in education policies

Rapid expansion of schooling often occurs at the expense of quality. Although school retention is high in CEE and CA, national and international learning assessments continue to reveal poor literacy and numeracy skills, particularly for students from poorer and culturally excluded families. Average repetition rates in primary and secondary education are not only below the global average but also below the average for developed countries.

Some countries in CEE have participated in international learning assessments: the Czech Republic, Hungary, Latvia, Lithuania, the Russian Federation, Slovakia and Slovenia. Results show that pupil achievement is mixed. Few countries in the CA region have participated in either international or national learning assessments.

#### Not enough teachers in some countries

Having enough teachers and ensuring that they are qualified and well trained is an important condition of education quality. For CEE the median PTR in primary education was 17:1 in 2004, below the global average of 21:1. The median PTR in Central Asia was higher, 22:1, with Kyrgyzstan at 24:1 and Mongolia at 33:1.

In almost all countries with data in the two regions, PTRs improved between 1999 and 2004. At secondary level, the regional medians were again below the global average (17:1), with CEE at 12:1 and CA at 11:1.

## Not enough trained and qualified teachers in some countries

Only limited country-level data are available concerning the percentage of trained teachers in primary and secondary education. In the few countries with data, trained teachers constitute the vast majority of the teaching force and their ranks remained at high levels between 1999 and 2004. The exceptions to this pattern were Armenia and Kyrgyzstan, with 67% and 55% of

primary teachers having been trained, respectively, as of 2004; the respective shares at secondary level were 67% and 73%. In Kyrgyzstan, teacher qualifications are also an issue: only 52% of primary teachers have the required post-secondary, non-tertiary minimum qualification. In Kazakhstan, where tertiary education is the minimum qualification, fewer than 50% of primary teachers meet the requirement.

## Measures to attract more qualified teachers

To increase the number of teachers and link training to the real world of teaching, some countries are introducing shorter training programmes and emphasizing on-the-job practice. Yet, to be effective, such measures require that significant resources be used to support those being trained, with sufficient schools able to serve for training and enough school-based teachers who can act as mentors.

There is also a need to rethink the incentives for recruiting and motivating teachers. Several countries have introduced incentive strategies to increase teacher supply and improve the performance of teachers.

# National expenditure and external aid: more resources are needed

#### National investment in education

Effective national policies can enhance access and quality, especially by shifting more public expenditure to basic education. The situations in the two regions differ:

- In CEE, on average, public expenditure on education as a share of GNP is much higher than in CA – above 4.6% in the majority of countries with 2004 data.
- In CA the median share is 3.1%.
- The share for the two regions combined remains below the world average of 4.8%.
- There is considerable variation by country in public expenditure levels, from less than 3% of GNP in Albania, Georgia, Kazakhstan and Tajikistan to about or above 5.7% of GNP in Belarus, Estonia, Hungary, Mongolia, Poland and Slovenia.

- Public spending on education as a percentage of national income increased between 1999 and 2004 in most countries with data. Increases were relatively large in Georgia, Hungary, Kyrgyzstan, Poland and Ukraine (about one percentage point or more). In contrast, the share fell in Azerbaijan, Estonia, Kazakhstan, Latvia and the former Yugoslav Republic of Macedonia.
- The priority given to education in total government expenditure ranged widely, from 10% to 21%, among the CEE and CA countries with data available for 2004. Five countries had relevant data for both 1999 and 2004: the share of education in total government expenditure increased in Georgia, Poland, Ukraine and Tajikistan but fell in Azerbaijan.
- The majority of countries with data allocated between 15% and 25% of total education expenditure to primary education. Belarus and Romania allocated lower shares and Estonia, Poland and Mongolia higher shares. The competition for resources between primary and post-primary education is likely to intensify, especially with growing pressure to expand programmes at upper secondary level. This shift is already perceptible in countries with relatively high enrolment rates for both primary and lower secondary (e.g. Belarus, Estonia, Lithuania).

In general, countries give relatively low priority to preprimary education in their public finances. As a share of GNP, public expenditure on pre-primary education in 2004 ranged from 0.3% or less in Azerbaijan, Estonia, Kyrgyzstan, Romania and Tajikistan to 0.8% or more in Belarus, Hungary, the Republic of Moldova and Mongolia. An alternative to direct government funding of ECCE programmes is for governments to help parents purchase services from a variety of providers. Kazakhstan is also encouraging private providers to contribute to the provision of ECCE.

#### External aid to education

In 2003 and 2004, the average shares of total aid devoted to education were 11% across five CEE countries and 7% across seven CA countries, of which 15% and 24%, respectively, went to basic education. The only countries receiving over US\$5 million a year for basic education in 2003 and 2004 were Albania (US\$30 million), Tajikistan (US\$15 million), Azerbaijan (US\$9 million) and Mongolia (US\$9 million).

#### Aid commitments: increasing, but still far short

Recent pledges by aid donors could result in the amount of aid for basic education increasing over the next few years, though only to roughly half of the total required universally to achieve EFA.

Given the overall shortage of resources, there is a particular need to ensure that aid is used as effectively as possible. In 2005 more than 100 donors and developing countries signed a declaration on aid effectiveness. The Fast Track Initiative (FTI), now involving over thirty donors and increasingly seen as the principal education aid vehicle, is consistent with the declaration's objectives of tightening coordination and harmonizing requirements. Mongolia, the Republic of Moldova and Tajikistan have joined this initiative and Albania was expected to come on board in 2006.<sup>13</sup>

#### The Education for All Development Index (EDI)

The EFA Development Index (EDI) is a composite measure of a country's situation with regard to attainment of the EFA agenda. Introduced in the 2003/4 EFA Global Monitoring Report, it is updated annually. Ideally, the EDI should include measures of all six EFA goals, but for now it focuses on the four most easily quantifiable goals: UPE, adult literacy, gender parity and equality, and education quality, each proxied by one indicator.\* The EDI for 2004 could be calculated for seventeen (out of 20) countries in Central and Eastern Europe and six (out of 9) countries in Central Asia.

- The vast majority of countries (19 out 23 with data available) have achieved the four most quantifiable EFA goals or are close to doing so, with an EDI values of 0.95 and above.
- Four countries are in an intermediate position, with EDI values between 0.80 and 0.94. The four countries include Azerbaijan, Mongolia, the Republic Moldova and Turkey. In the first three cases, while there have been improvements in the EDI since 2003, the main challenge involves the need to improvement the net enrolment ratio in primary education. For Turkey (while over time data are unavailable), the challenges are broader and involve three of the four components: primary education, adult literacy and gender parity.

#### Mean distance from the four EFA goals:

EFA achieved Close to EFA (EDI between 0.98 and 1.00) (EDI between 0.95 and 0.97) CEE: Czech Republic, Estonia, CEE: Albania, Belarus, Bulgaria, Hungary, Latvia, Poland, Croatia, Lithuania, Romania, Slovakia, Slovenia TFYR Macedonia, Ukraine CA: Kazakhstan CA: Armenia, Kyrgyzstan, **Tajikistan** (8)(11) Intermediate position Far from EFA (EDI between 0.80 and 0.94) (EDI below 0.80) CEE: Republic of Moldova, None Turkey CA: Azerbaijan, Mongolia (4)

<sup>\*</sup> Universal primary education (goal 2) is proxied by total NER (includes children of primary school age who are enrolled in either primary or secondary education); adult literacy (goal 4) is proxied by the literacy rate of those aged 15 and above; gender parity and equality (goal 5) is proxied by the gender-specific EFA index, which is an average of the GPIs for primary and secondary GER and the adult literacy rate; and quality of education (goal 6) is proxied by the survival rate to grade 5. The EDI gives equal weight to the four proxy measures of the four goals. Since each measure is expressed as a percentage, the EDI for a country ranges from 0% to 100% or, when expressed as a ratio, from 0 to 1, where 1 would represent the full achievement of EFA as summarized by the EDI.

#### **Abbreviations**

ECCE: Early childhood care and education.

Programmes that, in addition to providing children with care, offer a structured and purposeful set of learning activities either in a formal institution (pre primary or ISCED 0) or as part of a non formal child development programme. ECCE programmes are normally designed for children from age 3 and include organized learning activities that constitute, on average, the equivalent of at least 2 hours per day and 100 days per year.

**GER:** Gross enrolment ratio. Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education. For the tertiary level, the population used is that of the five-year age group following on from the secondary-school leaving age. The GER can exceed 100% due to late entry or/and repetition.

**GNP:** Gross national product. Gross domestic product plus net receipts of income from abroad. As these receipts may be positive or negative, GNP may be greater or smaller than GDP. This latter indicator is the sum of gross value added by all resident producers in the economy, including distributive trades and transport, plus any product taxes and minus any subsidies not included in the value of the products.

**GPI:** Gender parity index. Ratio of female to male values (or male to female, in certain cases) of a given indicator. A GPI of 1 indicates parity between sexes; a GPI above or below 1 indicates a disparity in favour of one sex over the other.

**NER: Net enrolment ratio.** Enrolment of the official age group for a given level of education, expressed as a percentage of the population in that age group.

PTR: Pupil/teacher ratio. Average number of pupils per teacher at a specific level of education, based on headcounts for both pupils and teachers.

Table 1: Central and Eastern Europe And Central Asia: selected early childhood care and education (ECCE) indicators

	Child survival and well-being		Women's emp and leave s		Provision for under-3s		
	Under-5 mortality rate (%)	Moderate and severe stunting (%)	Female labour force participation rate, age 15 and above (%) <sup>2</sup>	Statutory duration of maternity leave (weeks)	Official programmes targeting children under age 3	Youngest age group targeted in programmes (years)	
Countries	2000-2005	1996-2004 <sup>1</sup>	2003	2000-2005 <sup>1</sup>	2005	c. 2005	
Central and Eastern Europe							
Albania	34	34	50	52	no		
Belarus	18		53	18			
Bosnia and Herzegovina	16	10	55		yes	0-3	
Bulgaria <sup>6</sup>	17		45	24	no	0-3	
0	8	1	45 45	26	110		
Croatia							
Czech Republic Estonia	6 12	2	51 53	28 18	no	1-6	
					yes		
Hungary <sup>6</sup>	11	3	43	24	yes	0-2	
Latvia <sup>6</sup>	14		51	16	no	•	
Lithuania	12		53	18	no	-	
Poland <sup>6</sup>	10		48	16			
Republic of Moldova <sup>6</sup>	31	10	57	16			
Romania <sup>6</sup>	22	8	49	18	no	•	
Russian Federation	22	13	54	28			
Serbia and Montenegro <sup>6, 7</sup>	15	5	47				
Slovakia	10		53	28			
Slovenia	7		50	1	yes	1-3	
The former Yugoslav Rep. of Macedonia <sup>6</sup>	18	7	43		no	-	
Turkey	49	12	27	12	yes	0-2	
Ukraine <sup>8</sup>	18	3	51	18	yes	0-3	
Central Asia							
Armenia	35	13	50	20	yes	2	
Azerbaijan	91	13	60	0	yes	0-2	
Georgia	43	12	57	16	yes	0-2	
Kazakhstan <sup>6</sup>	77	10	64	0	yes	1-6	
Kyrgyzstan	66	25	55		yes	1-3	
Mongolia	85	25	54		yes	2-3	
Tajikistan	116	36	49		no		
Turkmenistan	99	22	61	16	yes	0-2	
Uzbekistan	70	21	56	18	yes	2-3	
Ozbenistan	70	۷1	30	10	yes	2-3	
	Weighted	Laverage	Media	ın			
	J	i average					
Central and Eastern Europe	19		51	18			
Central Asia	79		56	16			
Countries in transition	46	14	56	17			
Developed countries	8		50	17			
Developing countries	95	31	52	12			
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#### Data in bold are for 2003.

- 1. Data are for the most recent year available during the period specified.
- 2. Share of employed plus unemployed women in comparison with the working age population, including women with a job but temporarily not at work (e.g. on maternity leave), home employment for the production of goods and services for own household consumption, and domestic and personal services produced by employing paid domestic staff. Data exclude women occupied solely in domestic duties in their own households.
- 3. Attendance rates, indicated in parentheses, are from DHS, LSMS and MICS2 household surveys and were collected in c. 2000.
- 4. ASER trends in certain countries are related to the beginning of primary schooling, for which the official entry age is found in Table 2.

				Provision for	age 3 and old	er				
				Pre-prima	ry education					
Official Gross enrolment ratio (GER)				Age specific	enrolment ra	tio (ASER)3,4	Private			
pre-primary entry age (years)	entry age Total To		Total GPI (%) (F/M)		age 4 (%)	age 5 (%)	enrolment as % of total enrolment	% of trained teachers	Pupil/ teacher ratio <sup>5</sup>	
2004	1999	2004	2004	2004	2004	2004	2004	2004	2004	Countries
								Control and Footons France		
2	44	49	1.03	(22)	(21)	(30)	,		21	Central and Eastern Europe
3	80	104	0.98	(22)	(31)	` '	6	64	6	Albania Belarus
3		104	0.90	(7)	(11)		-			Bosnia and Herzegovina
3 (6)	69	78	0.99	65	76	77	0.3		11	Bulgaria 6
3	40	47	0.98	36	43	46	8 84 12			Croatia
3	94	107	0.96				1		13	Czech Republic
3	90	114	0.98				1		8	Estonia
3 (5)	80	81	0.98	71	87	92	4		10	Hungary <sup>6</sup>
3 (4)	53	79	0.96				2		11	Latvia 6
3	51	64	0.96	52	59	68	0.2		8	Lithuania
3 (6)	50	53	1.01	26	35	45	7		16	Poland <sup>6</sup>
3 (5)	41	50	0.97	39	45	53	0.8	93	10	Republic of Moldova 6
3 (6)	63	76	1.02				1		18	Romania <sup>6</sup>
3	55	85	0.91	92	71	67	1	94	7	Russian Federation
3 (51/2)	44									Serbia and Montenegro 6, 7
3	83	92	0.97				0.7	***	13	Slovakia
3	75	59	0.95	69	79	88	1		16	Slovenia
3 (6)	28	32	1.00	14	15	26	•		11	The former Yugoslav Rep. of Macedonia 6
3	6	8	0.95	2	3	20	4		19	Turkey
3	48	82	0.97				0.3		8	Ukraine <sup>8</sup>
										Central Asia
3	26	31	1.17				2	56	9	Armenia
3	22	28	1.01	17	22	20	0.1	85	10	Azerbaijan
3	38	49	1.15				-	98	10	Georgia
3 (5)	15	31	0.97				5		11	Kazakhstan <sup>6</sup>
3	10	12	0.99	7	7	8	0.8	36	21	Kyrgyzstan
3	25	35	1.08	29	33	35	0.8		28	Mongolia
3	8	9	0.93	(4)	(5)		•	85	14	Tajikistan
3										Turkmenistan
3		28	0.93				•	100	10	Uzbekistan
Weighted average								Median		
	45	57	0.95				1		11	Central and Eastern Europe
	22	27	0.95				0.8	85	10	Central Asia
	41	59	0.93				0.8	85	10	Countries in transition
	73	77	0.99				8		13	Developed countries
	28	32	0.97				54		21	Developing countries
	33	37	0.97				39		18	World

 $<sup>{\</sup>bf 5}.$  Based on headcounts of pupils and teachers.

**<sup>6.</sup>** Pre-primary education is compulsory at the age shown in parentheses.

<sup>7.</sup> Compulsory pre-primary for Serbia only.

<sup>5.</sup> Change in pre-primary age group between 1999 and 2004.

Sources: Carr-Hill (2006): Education Policy and Data Center (2006); EFA Global Monitoring Report 2007, statistical tables; ILO (2006); Kamerman (2005); Nonoyama et al. (2006); UNESCO-IBE (2006): UNESCO Institute for Statistics.

Table 2: Central and Eastern Europe and Central Asia: selected education indicators

								l	Primary e	ducation			
	Total population (000)	Compulsory education (age group)	education Index literacy rate		cy rate	NER Age Total group (%)			GER's GPI (F/M)		Survival rate to last grade Total (%)	% of female teachers	
Countries	2004		2004	Total (%)	GPI (F/M)	2004	1999	2004	1999	2004	2003	2004	
Central and Eastern Europe													
Albania	3 112	6-13	0.956	99	0.99	6-9	99	96	0.98	0.99	90	76	
Belarus	9 811	6-16	0.971	100	1.00	6-9		90	0.98	0.97	100	99	
Bosnia and Herzegovina	3 909			97	0.95	6-9							
Bulgaria	7 780	7-16	0.965	98	0.99	7-10	97	95	0.97	0.98	94	93	
Croatia	4 540	7-10	0.973	98	0.98	7-10	85	87	0.98	0.99	100	90	
	10 229	6-15	0.986			6-10			0.99	0.99	98	84	
Czech Republic	10 229	0-15 7-15	0.986	100	1.00	7-12	96	94	0.99	0.99	98 <b>98</b>	84	
Estonia	10 124	7-15 7-16	0.984			7-12 7-10	96 88	94 89	0.97	0.97	98 98	96	
Hungary				100	1.00								
Latvia	2 318	7-15	0.987	100	1.00	7-10			0.98	0.97	98	97	
Lithuania	3 443	7-16	0.975	100	1.00	7-10	95	89	0.98	0.99	99	98	
Poland	38 559	7-18	0.986			7-12		97	0.98	0.99	100	85	
Republic of Moldova <sup>3</sup>	4 218	6-16	0.918	98	0.99	7-10	78	78	1.00	0.99	90	98	
Romania	21 790	7-14	0.965	97	0.98	7-10	96	92	0.98	0.98	95	87	
Russian Federation	143 899	6-15		99	1.00	7-9		91	0.99	1.00		99	
Serbia and Montenegro	10 510	7-14		96	0.95	7-10			0.99				
Slovakia	5 401	6-16	0.983			6-9			0.99	0.99	98	92	
Slovenia	1 967	6-15	0.994	100	1.00	7-10	97	98	0.99	0.99	99	97	
The former Yugoslav Rep. of Macedonia	2 030	7-15	0.961	96	0.96	7-10	93	92	0.98	1.00	98	69	
Turkey	72 220	6-14	0.889	87	0.84	6-11		89		0.94	92		
Ukraine	46 989	6-17	0.952	99	0.99	6-9		82	0.99	1.00	<u>99</u>	98	
Central Asia													
Armenia	3 026	7-15	0.979	99	0.99	7-9		94		1.03	96	99	
Azerbaijan	8 355	6-17	0.946	99	0.99	6-9	85	84	1.00	0.98	98	85	
Georgia	4 518	6-14				6-11		93	1.00	1.00	98	95	
Kazakhstan	14 839	7-17	0.992	100	1.00	7-10		93	1.00	0.99	100	98	
Kyrgyzstan	5 204	7-15	0.974	99	0.99	7-10	88	90	0.99	1.00	96	96	
Mongolia <sup>3</sup>	2 614	8-16	0.933	98	1.00	8-11	90	84	1.04	1.02	91	94	
Tajikistan <sup>3</sup>	6 430	7-15	0.972	99	1.00	7-10	89	97	0.95	0.95	99	64	
Turkmenistan	4 766	7-15		99	0.99	7-9							
	Sum				ghted rage		V	Veighted	d averag	e	Med	ian	
				ave	age								
Central and Eastern Europe	404 186			97	0.97		89	91	0.96	0.97	98	94	
Central Asia	75 961			99	0.99		89	92	0.99	0.99	97	95	
Countries in transition	278 263			99	0.99		85	91	0.99	0.99	98	98	
Developed countries	1 002 588			99	0.99		96	96	1.00	0.99	98	83	
Developing countries	5 094 073			77	0.84		81	85	0.91	0.94	80	64	
World	6 374 924			82	0.89		83	86	0.92	0.94	87	74	
VVOITU	0 3/4 724			UZ	0.07		0.5	00	0.72	0.74	07	74	

Data underlined are for 2001. Data in italics are for 2002. Data in bold are for 2003.

Source: EFA Global Monitoring Report 2007, statistical tables; CRS online database, Table 2; UNESCO Institute for Statistics.

<sup>1.</sup> Data are for the most recent year available during the period specified.

<sup>2.</sup> Based on headcounts of pupils and teachers.

<sup>3.</sup> Fast Track Initiative (FTI): countries with endorsed sector plans.

						ent ratio (Gry education			Teri educ	tiary ation		Educatio	n finance			
	% of trained teachers	Pupil/ teacher ratio <sup>2</sup>		wer ndary 104	Up seco			tal ndary 04		ER 004	Total public expenditure on education as % of GNP		Aid to education per capita (constant 2003 US\$)			
	2004	2004	Total (%)	GPI (F/M)	Total (%)	GPI (F/M)	Total (%)	GPI (F/M)	Total (%)	GPI (F/M)		2004	Annual average 2003-04	Countries		
														Central and Eastern Europe		
		21	102	1.00	53	0.93	78	0.97	16	1.56	П	2.8	27	Albania		
	99	15	107	0.97	66	1.17	93	1.01	61	1.39	Н	5.8		Belarus		
											Н		8	Bosnia and Herzegovina		
		17	88	0.93	119	0.98	102	0.96	41	1.16	Н	4.4		Bulgaria		
	100	18	94	0.98	83	1.05	88	1.02	39	1.19		4.6	4	Croatia		
		18	99	1.01	93	1.02	96	1.01	43	1.10		4.8		Czech Republic		
		14	110	0.96	88	1.09	98	1.02	65	1.68		6.0		Estonia		
		10	99	0.99	94	1.00	97	0.99	60	1.40		6.3		Hungary		
		13	99	0.98	93	1.03	96	1.00	74	1.72		5.4		Latvia		
		15	100	0.97	93	1.05	98	0.99	73	1.56		5.4		Lithuania		
		13	98	0.98	96	1.04	97	1.01	61	1.41		6.6		Poland		
		19	79	1.02	63	1.12	74	1.04	32	1.37		4.2	2	Republic of Moldova <sup>3</sup>		
		17	96	0.99	76	1.04	85	1.01	40	1.26		3.7		Romania		
	99	17	89	1.01	101	0.97	93	0.99	68	1.36		3.8		Russian Federation		
													5	Serbia and Montenegro		
		18	97	0.99	91	1.05	94	1.01	36	1.23		4.4	•••	Slovakia		
		15	99	0.98	100	1.00	100	1.00	74	1.38		6.1	-	Slovenia		
		20	94	0.99	74	0.96	84	0.98	28	1.39		3.4	11	The former Yugoslav Rep. of Macedonia		
			85	0.85	75	0.68	79	0.75	29	0.73		3.8	2	Turkey		
	99.7	19	93	0.99	92	0.95	93	0.98	66	1.19		4.6	***	Ukraine		
													Central Asia			
	67	22	97	1.00	79	1.11	91	1.03	26	1.21		3.1	6	Armenia		
	100	14	87	0.97	73	0.95	83	0.97	15	0.87	Н	3.7	2	Azerbaijan		
	97	14	92	0.99	68	1.00	82	0.99	41	1.03		3.0	5	Georgia		
		18	100	0.98	94	0.96	98	0.98	48	1.38		2.6	0.8	Kazakhstan		
	55	24	90	1.01	82	1.02	88	1.01	40	1.19		4.6	3	Kyrgyzstan		
		33	95	1.09	78	1.25	90	1.14	39	1.64		5.7	14	Mongolia <sup>3</sup>		
	84	22	93	0.89	52	0.62	82	0.84	16	0.33		2.9	3	Tajikistan <sup>3</sup>		
													0.4	Turkmenistan		
Median			Weighted average					Weighted average Me						Median	Weighted average	
		17	92	0.98	88	0.93	90	0.96	54	1.25		4.6		Central and Eastern Europe		
	84	22	95	0.98	78	0.92	90	0.96	25	1.05		3.1	2	Central Asia		
	98	18	92	0.99	90	0.95	92	0.98	54	1.28		3.7	2	Countries in transition		
		14	103	1.00	99	1.01	101	1.01	65	1.27		5.4		Developed countries		
		27	74	0.93	44	0.92	59	0.92	16	0.87		4.7	1	Developing countries		
											П			·		
	***	21	78	0.94	51	0.94	65	0.94	24	1.03		4.8	***	World		