

Institute for Child Health
IRCCS Burlo Garofolo
Trieste, Italy



Unit for Health Services Research
and International Health
WHO Collaborating Centre for
Maternal and Child Health

Child nutrition in Central and Eastern Europe and Commonwealth of Independent States - report of a situation analysis -

Work commissioned by UNICEF Regional Office for Central and Eastern Europe
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Adriano Cattaneo, Jenny Bua, Tamara Bomestar and Giorgio Tamburlini
at the Unit for Health Services Research and International Health
(WHO Collaborating Centre for Maternal and Child Health),
Institute for Child Health IRCCS Burlo Garofolo, Trieste, Italy.

and Arnold Timmer
UNICEF Regional Office for CEE/CIS
Geneva, Switzerland

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Acronyms of countries and territories

Albania	Alb	Moldova	Mda
Armenia	Arm	Former Yugoslav Republic of Macedonia	Mkd
Azerbaijan	Aze	Romania	Rom
Belarus	Blr	Russian Federation	Rus
Bosnia and Herzegovina	Bih	Serbia**	Ser
Bulgaria	Bul	Montenegro**	Mnt
Croatia	Cro	Tajikistan	Tjk
Georgia	Geo	Turkey	Tur
Kazakhstan	Kaz	Turkmenistan	Tkm
Kosovo	Kos	Ukraine	Ukr
Kyrgyzstan	Kgz	Uzbekistan	Uzb

* Kosovo under UN Security Council Resolution 1244.

**Serbia and Montenegro are independent countries at the time of writing this document, but most of the available information refers to times when they were a single country (Serbia and Montenegro).

Other acronyms

BFH/ BFHI	Baby Friendly Hospital / Baby Friendly Hospital Initiative
BMI	Body Mass Index
CDC	US Centers for Disease Control and Prevention
CEE/CIS	Central and Eastern Europe / Commonwealth of Independent States
DHS	Demographic and Health Surveys
GNI/PPP	Gross National Income per capita in Purchasing Power Parity
H/A	Height-for-age
HDI	Human Development Index
IBFAN	International Baby Food Action Network
IDA	Iron Deficiency Anaemia
IDD	Iodine Deficiency Disorders
IEC	Information Education Communication
ILO	International Labour Office
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
LBW	Low Birth Weight
LSMS	Living Standard Measurement Survey
MICS	Multiple Indicator Cluster Survey
MOH	Ministry of Health
MSS	Micronutrient Status Survey
NBC	National Breastfeeding Committee
NCPHP	National Centre for Public Health Protection
NGO	Non Governmental Organization
RHS	Reproductive Health Survey
RLMS	Russian Longitudinal Monitoring Survey
SoWC	State of the World Children
U5MR	Under Five Mortality Rate
UN	United Nations
UNDP	United Nations Development Programme
USI	Universal Salt Iodization
VAD	Vitamin A Deficiency
W/A	Weight-for-age
WB	World Bank
WDR	World Development Report
WFP	World Food Programme
W/H	Weight-for-height
WHA	World Health Assembly
WHO	World Health Organization
WHO/EURO	WHO Regional Office for Europe
WHO/GD	WHO Global Database

Background and objectives

Some background information on the CEE/CIS region.

The CEE/CIS region finds itself in a “disadvantaged” position:

- The good news of economic growth in countries of the region strengthens the myth that improved nutrition is a by-product of other measures of poverty reduction and economic advance. With a growing number of countries now entering the middle income category, the perception that support is required will only decrease.
- Many of the nutrition problems observed are “hidden” and an underlying cause for impaired child development. Micronutrient deficiencies, stunting as outcome of poor infant and young child nutrition, and low prevalence of wasting makes it hard to “sell” the nutrition problem, with all related consequences. Owing to low visibility of the problem, it attracts little donor interest.
- The region knows a relatively short history of external support and its situation is not so well known outside the region; its scientific community is isolated. The region and the topics are insufficiently represented in international circles of publications and forums.
- The health care and education system was well developed during Soviet times, with extensive reach and high coverage, but mainly treatment-oriented. A “culture” to mask problems in reporting existed. The health care system that we know today still depends to a great extent on the “old” infrastructure and type of care. However, the quality of care is rapidly eroding due to various reasons, though the impression persists that it is functioning well.
- Nutritionists are often medical doctors specialised in hygiene and nutrition, and treatment oriented; the understanding of the current public health and nutrition problems, therefore, is limited.

In a recent document,¹ the WB states that “nutrition is the true foundation of sustainable poverty reduction, yet it is still neglected.” This statement points to the importance of child nutrition; malnutrition in early life may in fact damage health (physical, psychological) and development (cognitive, social) in such an irreversible way that future performance at school and work will be impaired.

Malnutrition means “bad nourishment”. It concerns not having enough food (inadequate calory or micronutrient intake) as well as excess caloric intake. It also includes the body's response to a wide range of infections that result in malabsorption of nutrients or the inability to use nutrients properly to maintain health. Clinically, malnutrition is characterized by inadequate or excess intake of protein, energy, and micronutrients such as vitamins and minerals, and the frequent infections and disorders that cause malabsorption and therefore malnutrition.. People are malnourished if they are unable to fully use the food they eat, for example due to diarrhoea or other illnesses (secondary malnutrition), if they consume too many calories which result in excess weight gain (over-nutrition), or if their diet does not provide adequate calories, micronutrients and protein for growth and maintenance (undernutrition or protein-energy malnutrition). Malnutrition in all its forms increases the risk of disease and early death. This appears to hold true for both under and over nutrition.^{2,3}

The CEE/CIS countries show a wide variation in political, economic, cultural and social characteristics. Therefore, often, division of the region in sub-regions is used. Information on the nutrition problems in CEE/CIS and their determinants is limited and a comprehensive review has not been carried out recently. Based on the available data, children in the region may be suffering from preventable nutrition problems. For this reason the Regional Office of UNICEF for CEE/CIS

countries commissioned this situation analysis to review and compile available information on child nutrition and to identify factors associated to malnutrition in individual countries or groups of countries.

UNICEF's main objectives for the review were to:

- Obtain a comprehensive overview of nutritional status of children and their determinants.
- Understand the challenges of child nutrition, the persistent patterns of high child mortality in certain countries (and the decrease in others) and the lack of progress despite economic development in others.
- Raise the profile inside and outside of CEE/CIS countries of its unique character of nutrition problems and open the debate for required action.
- Engage partners and donors for support, building capacity, harmonizing approaches, and taking the region's scientific community out of its isolated situation.

Methods

The first step in a situation analysis is the collection of available and relevant data. Within the given time frame, the search was limited to databases and documents in English, as follows:

- Documents provided by officers and collaborators of the Regional Office of UNICEF;
- Documents provided by UNICEF Country Offices;
- Reports from demographic and health survey (DHS), multi-indicator cluster survey (MICS) and other national/local surveys;
- Documents available on the websites of the WHO (Headquarters and Regional Office for Europe), UNICEF, World Bank (WB) and UNDP;
- WHO databases on child growth and malnutrition, infant and young child feeding, and micronutrient deficiencies available at <http://www.who.int/nutrition/databases/en/>.

Summary tables on child nutrition (low birth weight (LBW), stunting, wasting, underweight, overweight), breastfeeding (initiation, exclusivity in the first six months, duration, timely complementary feeding) and micronutrient deficiencies (vitamin A deficiency (VAD), iodine deficiency disorders (IDD), iron deficiency anaemia (IDA)) by country and year were then compiled using data derived from the above databases and documents. These tables allowed to identify gaps and inconsistencies that were used to develop a questionnaire later sent to all UNICEF country officers. The questionnaire requested to:

- Look at the compiled tables to fill gaps and sort out inconsistencies;
- Provide additional data, if available, to complement the existing ones;
- Provide information on plans, programmes, projects and resources available to address child nutrition problems (e.g. progress with the Baby Friendly Hospital Initiative (BFHI), food fortification and/or supplementation projects).

Questionnaires were returned, after some reminders, by 16 UNICEF offices: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kazakhstan, Kosovo, Kyrgyzstan, Romania, Russia, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan. The questionnaire returned by Serbia did not include data on Montenegro. The range and quality of information provided was variable. With these additional data, the summary tables were revised and a summary table on activities and resources was added. A new table was also constructed with socioeconomic (GNI/PPP, HDI, adult literacy rate) and health (IMR, U5MR, life expectancy) indicators for each country. Finally, data were extracted from the above tables to develop profiles.

To analyse data, it was decided to perform comparisons between countries before moving to the analysis of data from each country. The variable first used to rank countries was the U5MR (latest available year). The resulting rank order was considered useful and maintained throughout the

exercise, including the report. The rank order does not imply a value judgement or to have strategic implications.

The results, in terms of prevalence, are presented in the following sequence: LBW, undernutrition, overweight and obesity, infant and young child feeding, and micronutrient deficiencies. To help investigate factors associated with child nutrition, data were stratified when possible by social determinants: gender, urban/rural residence, age group, maternal education, wealth quintiles. Some information on relevant interventions was also added and analysed, to the extent made possible with the available data. The results are followed by a section on their interpretation and by some conclusions.

With the exception of Table 1, all the remaining tables are attached as Annex 1 for easier formatting and reading. The figures are instead integrated into the text of the report. Profiles are presented in Annex 2. With the exception of a few instances where data from single countries are used as example of more generic issues, we refrained from making comments on specific country situations throughout the document. Country specific information is of variable quality, as shown by gaps, inconsistencies and unexplained fluctuations in time. This information has to be checked and complemented at national level before making any attempt to draw final conclusions and to identify national policy implications.

At the time of preparing this regional overview, the old WHO growth reference charts, based on data from the US National Centre for Health Statistics, were used. Application of the new WHO growth standards, issued in April 2006, if applied to the raw anthropometric data, would likely results in increased rates of stunting and wasting. The results presented here, therefore, serve as a basis for further analysis, strategy formulation and plans of action.

Results

Table 1 shows the rank order of countries based on U5MR. It shows also the latest available figures on GNI/PPP and stunting (moderate plus severe). In general, the higher the GNI/PPP the lower the U5MR. There are exceptions to this rule:

- Serbia and Montenegro, Moldova, Georgia, Kyrgyzstan and Uzbekistan report lower than expected U5MR in relation to their GNI/PPP (or lower than expected GNI/PPP in relation to their U5MR);
- At the other extreme, Russia, Turkey, Kazakhstan, Azerbaijan and Turkmenistan, report higher than expected U5MR in relation to their GNI/PPP (or higher than expected GNI/PPP in relation to their U5MR).

U5MR and stunting are correlated too: the higher the U5MR the higher the rate of stunting. Even in this correlation there are outliers:

- Albania and to some extent Russia (considering that the figure for stunting does not include the severe forms), report higher than expected rates of stunting in relation to their U5MR (or lower than expected U5MR in relation to their rates of stunting).

Unexpected results may be due to specific national situation or to incompleteness and/or inaccuracy of data. Although the available data does not allow to explore further, in Albania the situation is likely to be worse than U5MR suggests, due to poor infant and young child nutrition. Possible explanations for the phenomena observed are under investigation.

Table 1. CEE/CIS countries by U5MR, GNI/PPP and rates of stunting.

Country	U5MR 2004 ^a	GNI/PPP (USD) 2005 ^b	% stunting ^{ac} moderate + severe	% stunting ^{ac} Severe
Croatia	7	12750	1.0	-
Belarus	11	7890	2.5	0.5
FYRO Macedonia	14	7080	8.7	2.3
Bulgaria	15	8630	3.8 ^d	1.3 ^d
Serbia & Montenegro	15	3280 ^e	5.9 ^f 5.2 ^g	1.3 ^f 1.5 ^g
Bosnia & Herzegovina	15	7790	7.4	2.5
Ukraine	18	6270	2.7	0.6
Albania	19	5420	22.3	8.8
Romania	20	8940	5.9	1.6
Russia	21	9902	12.3 ^h	0.5
Moldova	28	2150	8.4	1.7
Turkey	32	8420	12.2	3.6
Armenia	32	5060	13.0	2.7
Georgia	45	3270	10.4	4.9
Kyrgyzstan	68	1870	13.7	3.7
Uzbekistan	69	2020	14.6	4.3
Kazakhstan	73	7440	12.8	4.0
Azerbaijan	90	4890	19.6	7.2
Turkmenistan	103	4584	22.3	7.4
Tajikistan	118	1260	27.0	9.1

^a SoWC 2006; ^b WDR 2007; ^c children 6-59 months; ^d children 12-59 months; ^e excludes data from Kosovo; ^f Serbia; ^g Montenegro; ^h moderate only.

Malnutrition may be present at birth, as a consequence of intrauterine growth retardation caused by poor nutrition and/or excessive work load and/or disease of the mother, or as a consequence of excessive weight gain and/or reduced physical activity and/or disease of the mother. The most accurate way to assess nutritional status at birth takes into account the distribution of birth weight and gestational age. Unfortunately, the only data available regard the percentage of LBW (less than 2,500 g) infants, which includes not only small for gestational age babies but also preterm babies who may be well nourished. Table 2 shows the information available by year and source. The most recently reported national rates range between 4-6% (Belarus, Montenegro, Kosovo, Ukraine, Turkmenistan) and 10% (Bulgaria, Tajikistan). When data from a consistent and reliable source, such as DHS or MICS, are available, the trend is either stable (Bosnia and Herzegovina, Georgia, Uzbekistan) or downward (Kazakhstan, Tajikistan). In none of the countries can an upward trend be confirmed, though data from Albania and Azerbaijan may deserve further consideration. Except for Bulgaria and Tajikistan, most values are included in a range of rates similar to those reported in high-income countries. There might be, however, large disparities within countries, but information on distribution of birth weight according to social and economic strata is not available.

Undernutrition

Table 3 shows the latest data on stunting, wasting and underweight by country. Sources of information, year and sometimes even age groups are different and make comparison across countries a difficult exercise. Most data derive from MICS and DHS surveys. For Ukraine, data are available from MICS carried out in 2000 and a CDC survey carried out in 2002 in children aged 6-36 months; the former survey reports unexpectedly high rates of stunting, while the latter reports rates compatible with the level of development of the country; the CDC survey used more accurate methods and its results are therefore reported here. The methods used in other surveys may help

explain other unexpected results, such as the high rate of wasting in Russia. For some countries only data at a single point in time are available. For some other countries there are data from surveys conducted at different points in time; in this case, the chosen year is not always the latest available, but the latest available from the source that provides more information and allows comparisons with previous years. Whenever possible, i.e. when data come from similar sources and/or age groups, an attempt is made to show whether the rates indicate an upward (↑), downward (↓) or stable (=) trend compared to the value immediately preceding the one shown in the table.

Figure 1 shows the rates of stunting, wasting and underweight (median and range) by groups of countries based on U5MR levels. Stunting, more than wasting and underweight, seems associated with higher U5MR.

Figure 1. Rates of stunting, wasting and underweight: median and range by level of U5MR.

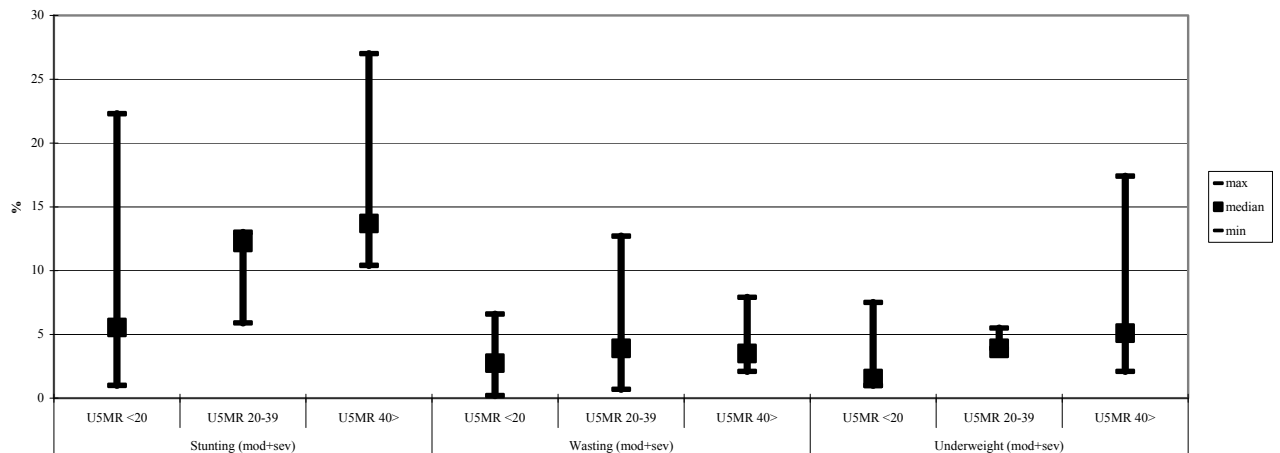


Figure 2 shows the correlation between U5MR and the rates of stunting, underweight and wasting. Correlation does not imply a causal relationship. This figure, however, seems to confirm the ability of stunting and underweight prevalence, as compared to wasting prevalence, to predict childhood mortality.⁴

Figure 2. Correlation between U5MR and rates of stunting, wasting and underweight by country.

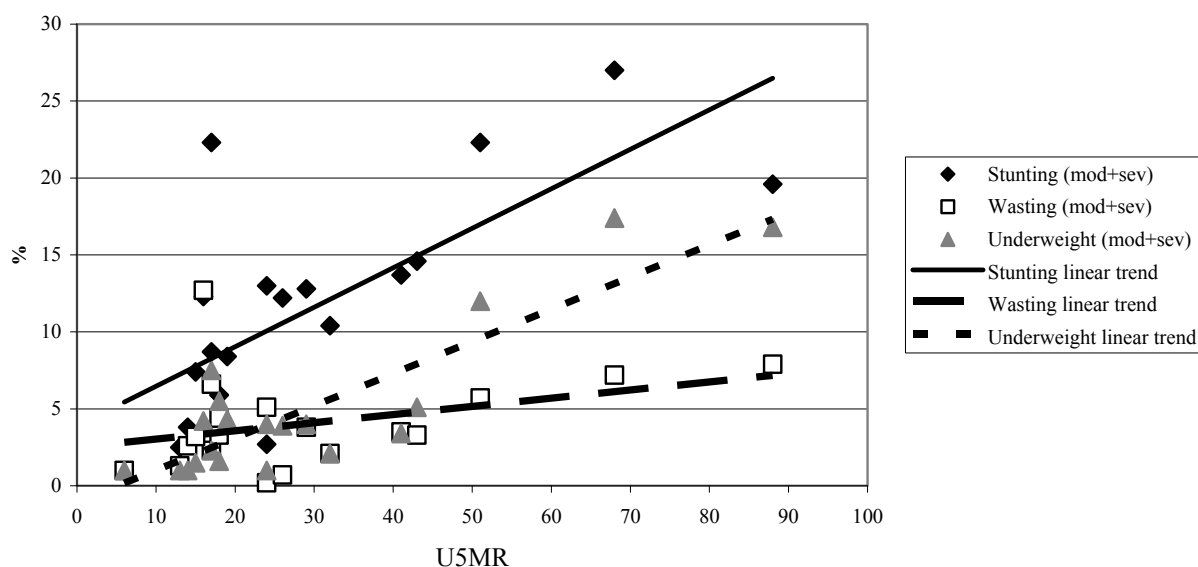


Table 4 shows the latest data on stunting, wasting and underweight by age sub-groups. There are no data for Croatia, Bulgaria, Kosovo and Russia. Bold characters indicate the highest rate in each category of malnutrition. The rates of stunting are higher at 12-23 months, except for Montenegro, Bosnia and Herzegovina and Romania (6-11 months), and tend to be lower afterwards; in Serbia and Montenegro, Albania, Turkey, Kyrgyzstan, Uzbekistan and Tajikistan, where stunting is higher at older ages, the trend shows an increase from 12-23 months. Wasting appears to occur at earlier ages, and peaks are observed at less than 6 months in Turkey, Kyrgyzstan and Kazakhstan; the rates, however, are lower than those of stunting. Underweight too seems to be higher around 12-23 months.

Where data are available, differences are observed also within countries. Table 5 shows that the rates of stunting are worse in rural areas, in children of less educated mothers (Figure 3), and in families belonging to the lowest wealth quintiles (Figure 4), while differences between males and females tend to be less consistent; rates of stunting are often higher in boys, except for Turkey, Uzbekistan and Azerbaijan where girls seem to be more affected.

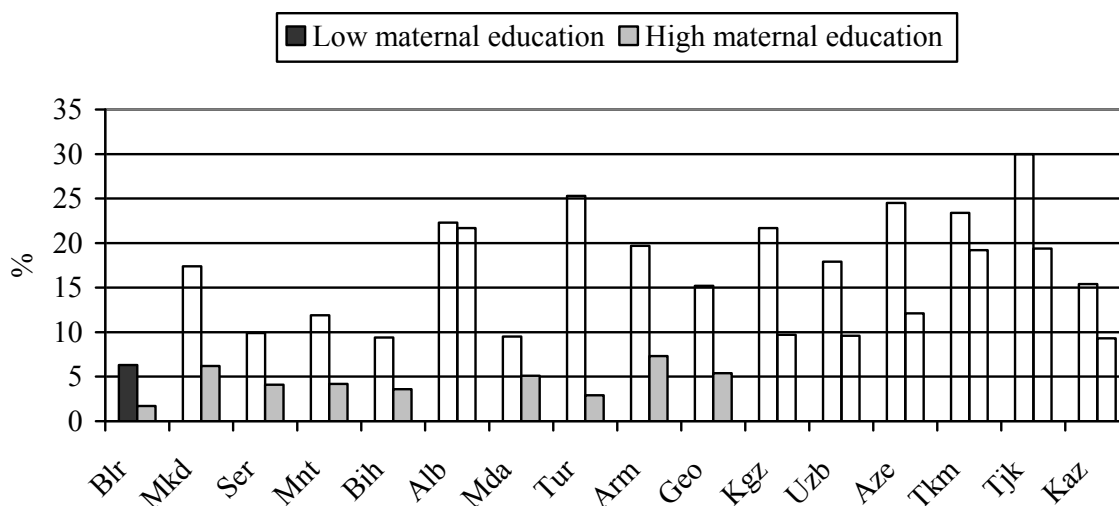
The average rate of stunting in children under five masks variations among age groups. This is particularly important in younger children, especially at 12-23 months, that present substantially higher rates of stunting in all countries except Albania; in eight countries, the rates of stunting in this age group exceed 15%. This is an important finding as it shows that the linear growth of children under two is severely hampered, which may be irreversible and everlasting. Its causes may be sought in the infrequent practice of exclusive breastfeeding and the low quality of complementary food and feeding practices. This shows the critical age period on which interventions should focus.

Another sub-group that is typically affected by higher rates of stunting are children in rural areas. This is true in all countries except Albania and Armenia, for which no reason can be given. Households in rural areas are generally poorer, which affects people's available resources to purchase food. The Social Monitor of 2006 also showed that families with children have more difficulty to cope and are poorer. Availability of suitable food items for young children

(complementary food) is probably not a main factor, while knowledge and cultural feeding habits most likely influence families in rural areas in a negative sense, more than in urban areas where access to education and information is higher. Stunting levels disaggregated by maternal education reveal very striking results. Children of mothers with lower education have higher rates of stunting than those with a higher education. In eleven countries, the prevalence in the former group exceeds 15% and in six it exceeds 20%. Of these eleven countries, nine belong to the high U5MR group. However, a very high prevalence of stunting is found in Albania (22%), a low U5MR country. The large difference with the average for all under fives indicates the large disparity that education or lack thereof determines for the child. However, very little is known about the practices, cultural beliefs and current knowledge on the feeding of young infants and children.

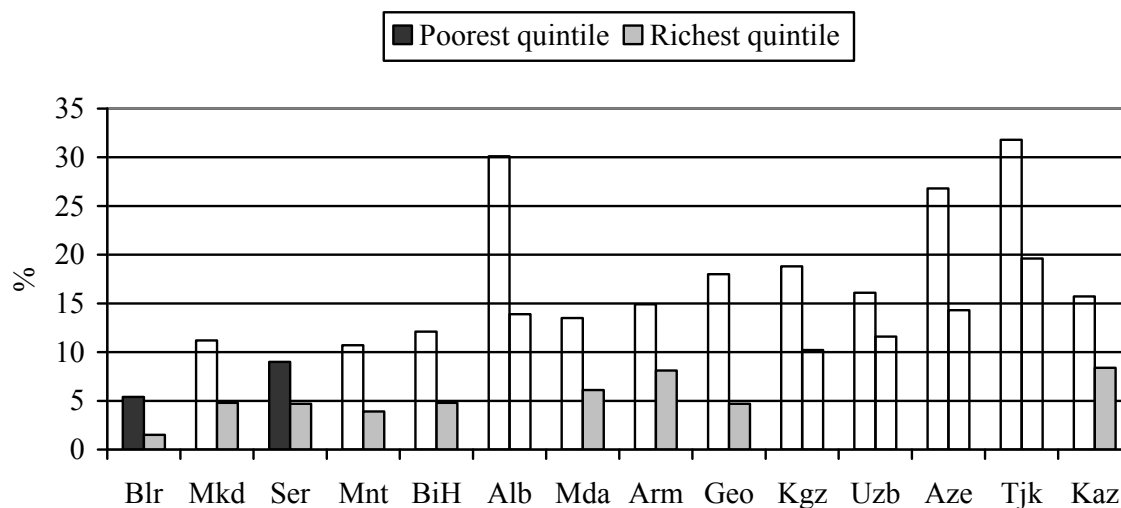
When combining all disparities related to stunting (rural, lowest wealth index, low maternal education and 1-2 year old children), the high mortality countries and Albania score the worst, which indicates that social inequity is a main contributing element in the higher mortality found here.

Figure 3. Rates of stunting (moderate + severe) by maternal education.*



* Low maternal education is defined as primary school (completed or not), high maternal education refers to university degrees (except for FYRO Macedonia and Turkey where completion of secondary school is included).

Figure 4. Rates of stunting (moderate + severe) by wealth quintile.



Overweight

Table 6 shows data on overweight. There is less information on prevalence of excess weight among preschool children than on undernutrition. The available data, however, seem to indicate that in almost countries the rate of overweight is higher than the rate of underweight; it is also higher than the rate of stunting in some countries (Figure 5). Where sequential data exist, overweight seems to be increasing in FYRO Macedonia, Serbia and Montenegro, Albania, Georgia and Kazakhstan, but decreasing in Montenegro, Kosovo and Romania.

The problem of overweight, as expected, appears to be generally lower in high U5MR countries and higher in South Eastern Europe. Using the same standard used by WHO to classify wasting as a public health problem, only three countries are in the “acceptable” category, three in the “poor”, five in the “serious”, and four in the “critical” category. Younger children in the age group 1-2 years are even more affected: three countries fall in the “acceptable”, two in the “poor”, three in the “serious”, and six in the “critical” category.

It is difficult to make further analysis as there is less information on overweight than on undernutrition. The available data, however, seem to indicate that in many countries there is a double burden of malnutrition, while in most of the countries overweight may be considered a higher priority public health problem than under nutrition.

Figure 5. Rates of moderate plus severe overweight (W/H), underweight (W/A) and stunting (H/A) by country.

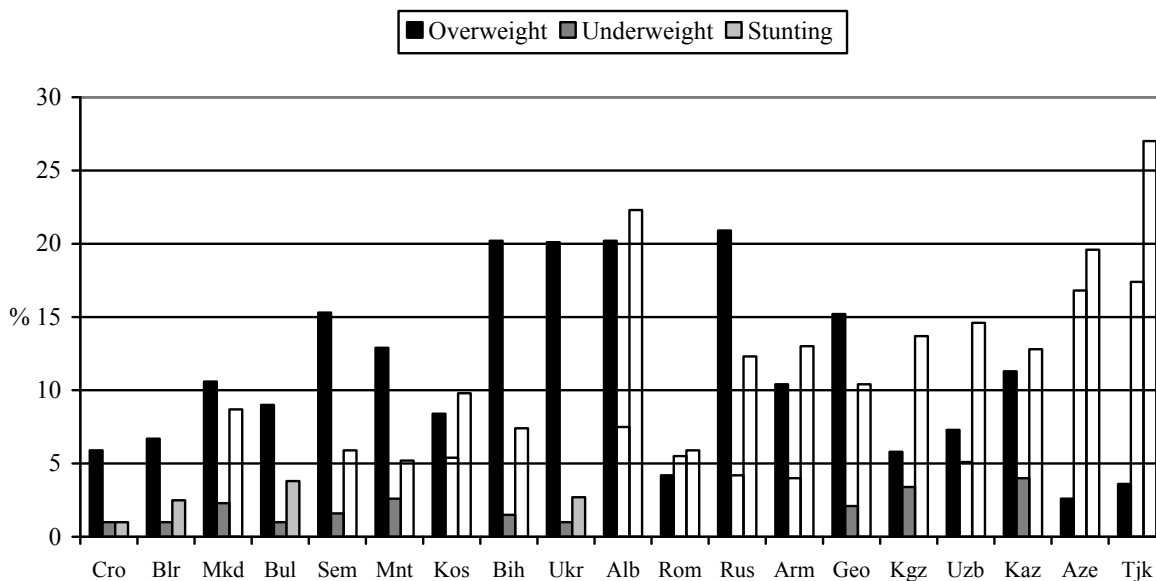
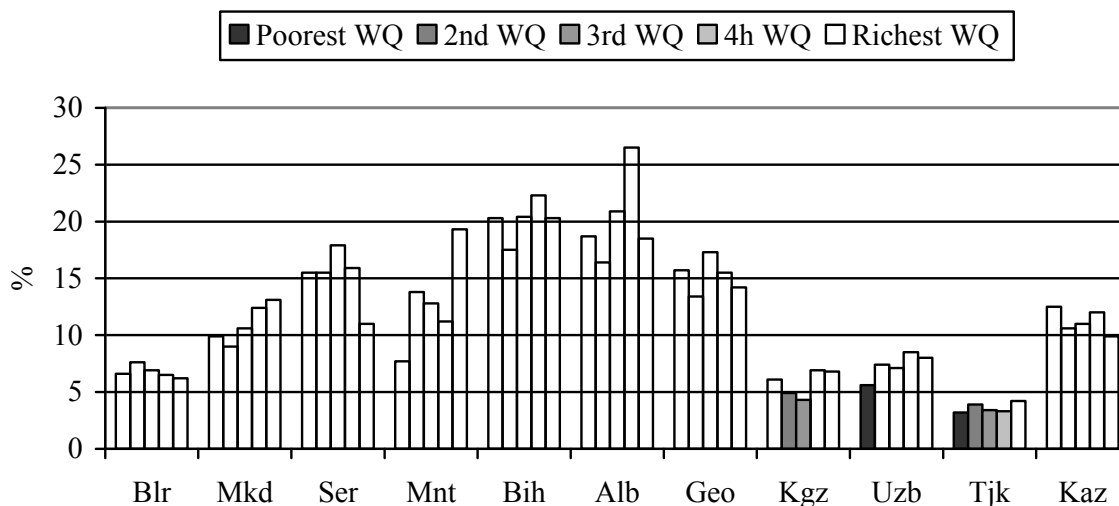


Figure 6. Rates of overweight (moderate + severe) by wealth quintile.



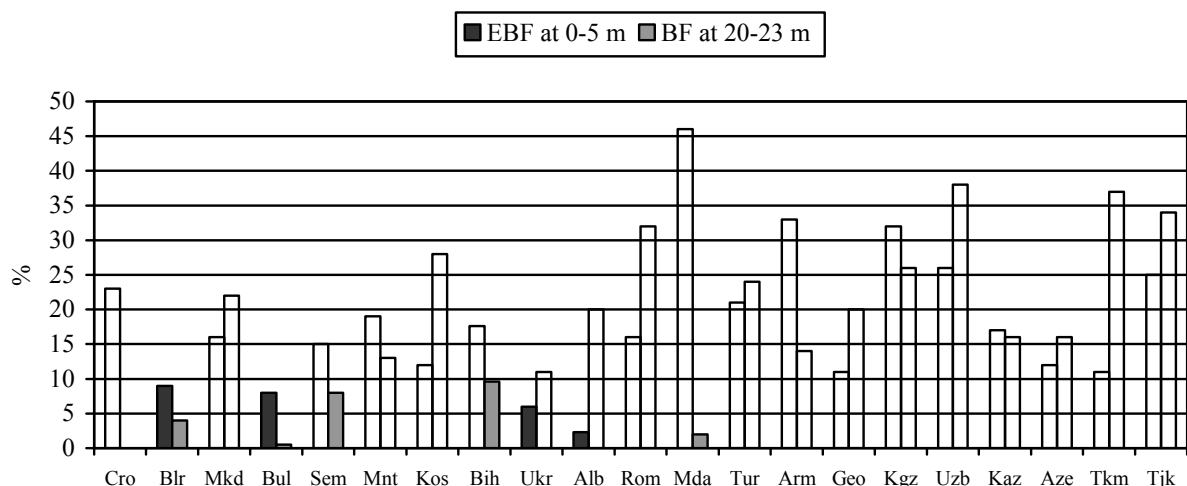
Gender, place of residence, maternal education and wealth, i.e. the same factors considered for undernutrition, are associated with differences in rates of overweight (Table 7). The pattern, however, is not clearcut; in some countries, such as Belarus and Serbia, the children of poorer and less educated families in rural areas seem to be more affected by overweight, while the opposite picture seem to emerge in other countries, such as FYRO Macedonia, Bosnia and Herzegovina, Montenegro and Albania (Table 7, Figure 6).

Infant and young child feeding

Table 8 shows data on breastfeeding. The “ever breastfed” rate is reported to be high in all countries; not shown in the table are the ever breastfed rates reported in previous years by many

countries, similarly high. Problems, however, seem to start very soon, as shown by lower rates in the first 24 hours, when available; this is probably due to the excessive use of supplements, including non nutritive and traditional fluids, in many hospital settings. UNICEF and WHO recommend exclusive breastfeeding for six months and continued breastfeeding, with timely, adequate and safe complementary food, up to two years and beyond.⁵ The reported rates of exclusive and continued breastfeeding in CEE/CIS countries fall short of these recommendations (Figure 7). CEE/CIS countries seem to have poor practices of exclusive breastfeeding, with rates ranging from 6% to 46%, and a regional average of 22%, in infants less than six months. As a comparison, countries in the East Asia and Pacific region have 43% of exclusive breastfeeding in the same age group, while the global average is 36%. The rates of diarrhea and acute respiratory infections are very low in most countries. The relatively low rates of exclusive breastfeeding, and the consequent early introduction of other fluids and foods, deprive these infants of essential nutrients, with immediate effects on growth. This is confirmed by the rates of stunting, micronutrient deficiencies and overweight found during the first year of life.

Figure 7. Percentage of children aged 0-5 months exclusively breastfed, by country.



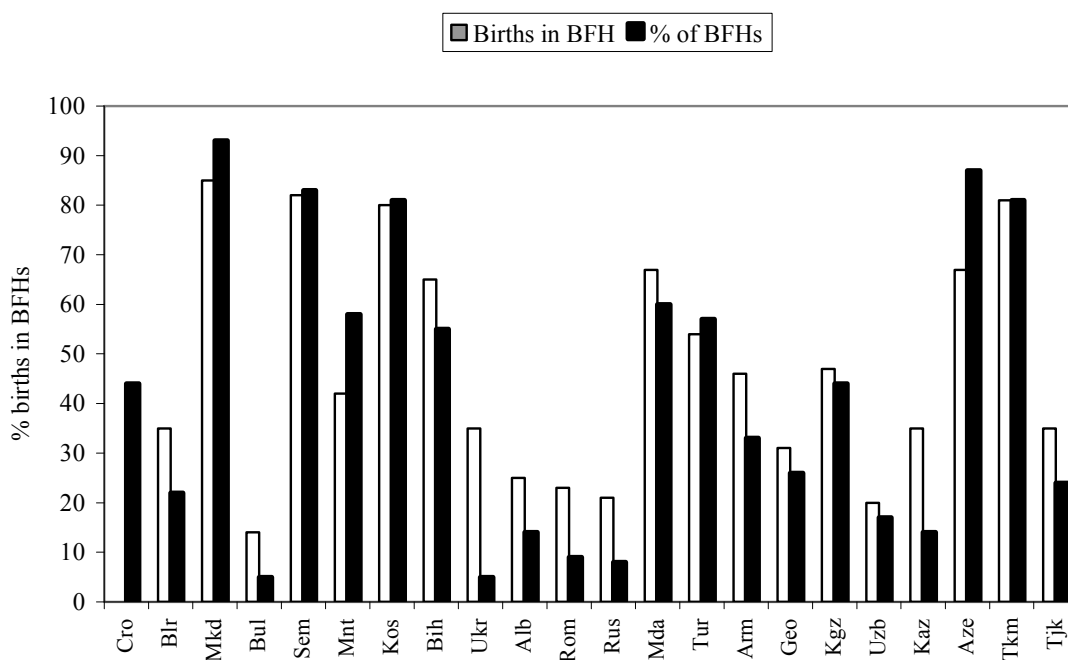
In the few countries where data gathered in subsequent surveys are comparable, the trend for exclusive breastfeeding at 0-5 months seems to be pointing upwards (Azerbaijan, Serbia and Montenegro, Turkey, Kyrgyzstan, Uzbekistan, Kazakhstan, Tajikistan); only in Georgia the trend points downwards. There are more downwards trends for breastfeeding at 20-23 months: Serbia and Montenegro, Albania and Kazakhstan. The differences in the exclusivity and duration of breastfeeding do not seem associated with differences in U5MR among countries. Within countries there are differences associated with ethnicity and religion; for example, among Roma people the duration of breastfeeding is longer, as reported from Serbia and Montenegro and FYRO Macedonia.

Table 9 summarizes information on infant and young child feeding programmes. The Baby Friendly Hospital Initiative has been implemented quite successfully in CEE/CIS. Figure 8 shows the percentage of births in BFHs and the proportion of BFHs over all maternity hospitals; these figures are high compared with the average in many industrialised countries, mostly European.⁶ The number of hospitals now baby friendly has increased over the last few years and continues to increase. Since most deliveries take place in health facilities, high proportions of babies are born in baby-friendly hospitals/clinics, therefore. For individual countries this percentage is ranging from 14 to 85%, with a regional average of 37%, determined by most populous country, Russia.

Of the 21 CEE/CIS countries, 5 (25%) have more than 60% of health facilities designated as BFH and 5 (25%) have more than 60% of births in BFHs, compared with 3 (17%) and 2 (13%), respectively, in 38 industrialised countries. Sixteen per cent of health facilities are BFH in CEE/CIS compared with 6% in industrialised countries. None of the CEE/CIS countries has less than 10% of births in BFHs compared with 20 (53%) in industrialised countries. Apparently, however, there is no correlation between the achievements of the BFHI and the rates of exclusive breastfeeding in the first six months and of continued breastfeeding into the second year of life; other factors have obviously an effect on this correlation, including better support at community and primary health care levels.⁷

The BFHI and the International Code aim at providing all mothers and infants with a good start in life. Albania, Azerbaijan, Georgia, Serbia, Tajikistan and the Republic of Serpska in Bosnia and Herzegovina have adopted the International Code. Only Albania and Georgia, however, meet all the required standard of a complete legislation on the Code. Monitoring remains a challenge everywhere and violations have been regularly reported.

Figure 8. Percentage of BFHs and of births in BFHs.



There is little information on complementary feeding, especially in terms of adequate quantity and quality. The rates of timely complementary feeding, i.e. complementary food added to continuing breastfeeding, at 6-8 months are: Belarus 34%, FYRO Macedonia 18%, Bulgaria 30%, Serbia 39%, Montenegro 35%, Bosnia and Herzegovina 17%, Ukraine 83%, Albania 70%, Romania 32%, Moldova 18%, Turkey 38%, Armenia 57%, Georgia 28%, Kyrgyzstan 50%, Uzbekistan 45%, Kazakhstan 39%, Azerbaijan 39, Turkmenistan 71% and Tajikistan 15%. Earlier introduction of complementary foods is common, as reflected by the low rates of exclusive breastfeeding at six months. At 4-5 months the rates of complementary feeding, in addition to breastfeeding, are: Bulgaria 15%, FYRO Macedonia 8%, Serbia and Montenegro 49%, Kosovo 17%, Ukraine 31%, Albania 6%, Moldova 21%, Turkey 15%, Armenia 31%, Georgia 13%, Kyrgyzstan 15%, Uzbekistan 13%, Kazakhstan 61%, Azerbaijan 36%, Turkmenistan 44% and Tajikistan 5%. A proportion of infants has obviously been completely weaned by the age of six months.

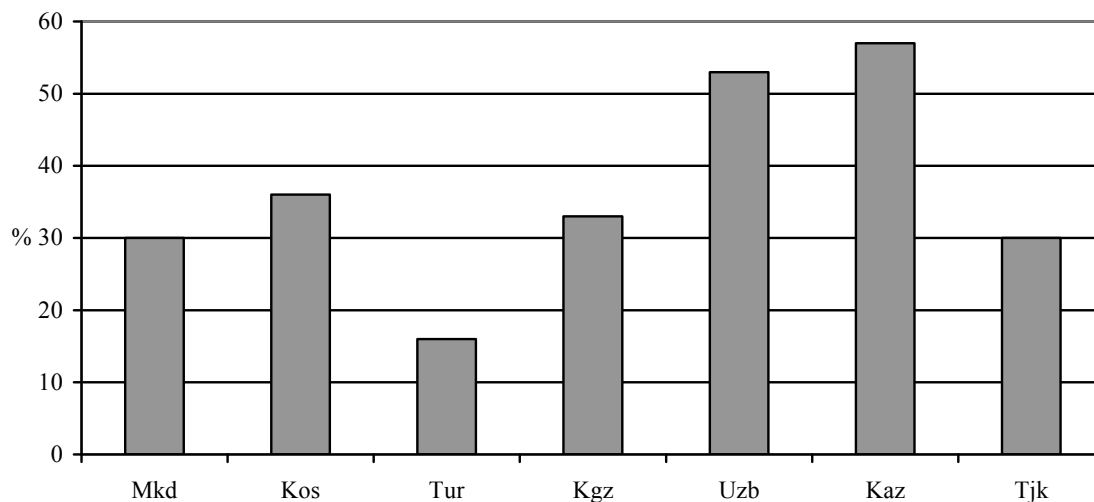
More detailed qualitative data are available from five countries (Moldova, Armenia, Kazakhstan, Kyrgyzstan, Turkmenistan), based on DHS conducted between 1997 and 2005. Infants given complementary foods and fluids before six months usually get cow milk or formula (of which some are fortified and some are not), fruit and vegetables. Fortified complementary foods are not available and therefore not part of the daily diet. Few get tubers, legumes and meat, fish or eggs; more are given carbohydrate-rich foods (porridge, bread, pasta, biscuits). The percentage of infants given protein-rich foods (meat, fish, eggs, dairy products) increases between 6 and 9 months to 14-19%, most complementary foods belonging to the other categories at this age. The same percentage goes beyond 50%, to reach 90% in some places, only in the second year of life. Protein-rich foods are given more and earlier in urban than in rural areas.

The available data do not provide information on inequalities concerning infant and young child feeding. However, whenever inequalities have been sought, they have been found. In CEE/CIS countries, as in the rest of Europe,⁸ better maternal education and occupation, as well as family income and social class, are probably associated with better breastfeeding practices, and this is probably applicable to complementary feeding. The percentage of women enrolled in secondary schools range between 61% (Georgia) and 87% (Croatia, Kazakhstan), while the proportion of females among professional and technical workers is lowest in Turkey (30%) and highest in Moldova (66%).⁹

Micronutrient deficiencies

Figure 9 and Table 10 shows information on levels of vitamin A deficiency and supplementation coverage in countries where this is considered a public health problem. In those where this is not, vitamin A supplements may be given to all infants, as in Serbia and Montenegro for example. In addition to those between countries, there are differences within countries: regional surveys in Turkey report a range of VAD between 16% and 30%, for example.

Figure 9. Estimated rates of moderate plus severe VAD in children under five.



The international health community considers VAD a public health problem when 15% or more of the children tested has serum retinol levels less than 20 mcg/dl.¹⁰ Based on this criterion, all the countries listed in Table 10 have a VAD public health problem except for Albania and Turkmenistan (no data). Tur does not have a VAD public health problem at national level, but certainly has it in some regions.

Iodine Deficiency

IDD, which affects the entire population, re-emerged as a public health problem after the collapse of the Soviet Union because iodized salt was no longer produced. Since the 1990's efforts were revitalized to implement USI; this gained momentum after 2001 when UNICEF, with support from donors, started to advocate for USI in countries. Between 2000 and 2007 the use of iodized salt has doubled from 28% to almost 50% and 7 countries have now eliminated IDD. A number of countries have adequate iodine status at population level but with insufficient coverage rates of iodized salt among the population. The USI programme is one of UNICEF's most successful in the CEE/CIS region.

Table 11 shows the levels of IDD measured in two ways (prevalence of goitre and median urinary iodine) and the percentage of households that use adequately iodised salt. In considering whether the sustainable elimination of iodine deficiency as a public health problem has been achieved, the following criteria should be met:¹¹

- The percentage of table salt with iodine content of at least 15 ppm, in a representative sample of households, must be equal to or greater than 90%.
- The median urinary iodine is greater than or equal to 100 mcg/l, with more than 50% of children with values above 100 mcg/l and no more than 20% of children with values below 50 mcg/l.
- At least 8 out of 10 criteria related to national inter-sectoral coordination, political commitment, responsible executive officer in charge of the programme, legislation or regulation for USI, regular monitoring and capacity to carry this task, communication activities, regular monitoring data in salt quality and iodine status, and a database for public reporting are met.

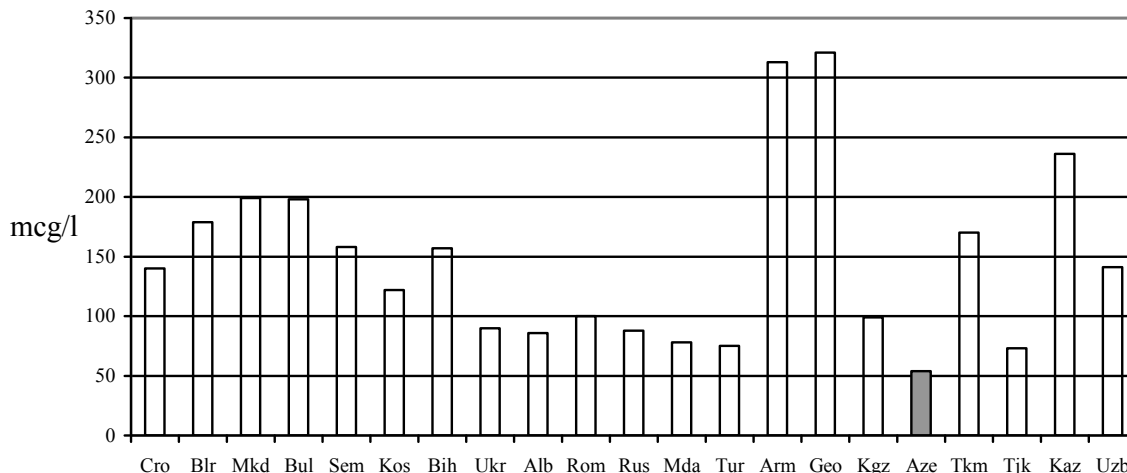
Based on these criteria, the following CEE/CIS countries have achieved sustainable elimination of IDD: FYRO Macedonia, Bulgaria, Armenia and Turkmenistan (confirmed by the global Network for Sustained IDD Elimination), and Croatia, Georgia and Kazakhstan (awaiting confirmation).

One of the indicators of IDD is goitre. Out of 14 countries with national data, nine still have rates of goitre (all grades) in school children above 5%. Belarus, FYRO Macedonia and Bosnia and Herzegovina can be categorised as mildly affected (5% to 19%); some regions in Russia and Moldova are moderately (20% to 29%) while Albania, Turkey, Georgia and Azerbaijan are severely (30% or more) affected.¹² Data is sometimes available only from some regions (Turkey, Kyrgyzstan, Azerbaijan). It should be noted that there is wide variation between regions within countries.

Figure 10 shows the median urinary iodine concentrations, a measure of recent iodine intake and therefore iodine status. School children are the normal survey group since they are easily accessible and represent the general population. Median urinary iodine concentrations do not indicate the level of IDD. None of the countries report values below 50 mcg/l, the threshold for moderate or severe iodine deficiency. Albania, Russia, Ukraine, Moldova, Turkey, Kyrgyzstan, Azerbaijan and Tajikistan fall into the mild iodine deficiency category (50-99 mcg/l), with the remaining countries and Kosovo having an adequate iodine status (100 mcg/l or more). Kosovo, Ukraine, Albania, Uzbekistan and Tajikistan had more than 20% of school children with moderate or severe iodine deficiency based on urinary iodine. Since the median urinary iodine data are national averages and survey designs often do not allow sub-national categorization, sub-national differences that may exist are masked. This assumption is emphasized when combining urinary iodine data with proportion of households using iodized salt. Out of all 14 countries with median urinary iodine higher than 100 mcg/l, only six have less than 90% of households using iodized salt, which suggests a sub-national inconsistency of iodine status or inadequate information on the use of iodized salt in

food. Information at sub-national level and from the food industry therefore is required to better identify problem areas where iodized salt use and iodine status are likely to be inadequate. Available data almost always refer to school age children; if iodine deficiency is a problem in this group, it is very likely to be a problem in infants and young children as well. On the other hand, if iodine status is sufficient in school children, pregnant women, the most vulnerable group where iodine deficiency is of particular importance for the brain development of the foetus, do not necessarily show sufficiency, because of their higher requirement and, often, lower salt (and therefore iodine) intake.

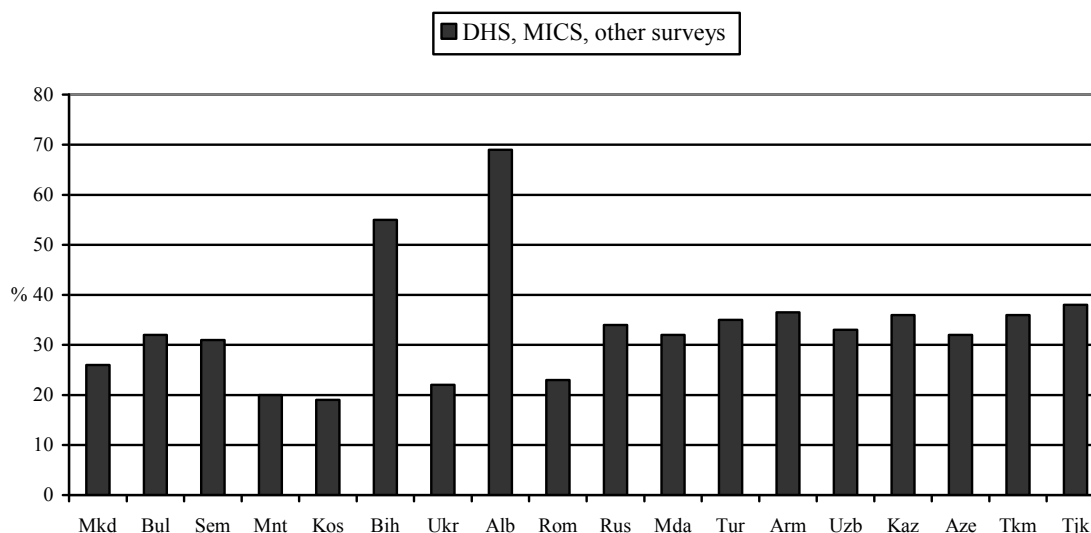
Figure 10. Median urinary iodine concentrations in CEE/CIS.



Anaemia and Iron Deficiency

It is difficult to find reliable data on iron deficiency because most countries report rates of anaemia and only a variable proportion of it is associated with iron deficiency. Table 12 summarises the data available for anaemia defined as low haemoglobin (Hb); there are no data for Belarus, Georgia and Kyrgyzstan. Making comparisons is rather difficult because data refer to different age groups and have been gathered with different methods. Figure 11 shows anaemia data available for children under five; most data derive from DHS, MICS and other national or subnational surveys. Differences reflect different age groups and periods, but also different methods of data collection. In Bosnia and Herzegovina, for example, the prevalence was estimated using haematocrit as opposed to haemoglobin; in Albania the high rate refers to a single province.

Figure 11. Estimated prevalence of IDA in children under five.*



* Regional data for Albania, Russia and Bosnia and Herzegovina.

Anaemia is a major public health problem among children under five in CEE/CIS countries. According to WHO criteria, anaemia is considered a severe public health problem where its prevalence is 40% or more; it is moderate between 20% and 39%, mild between 5% and 19%.¹³ Based on these criteria, no country is in the normal or mild category, while the majority are in the moderate and four countries are in the severe category (Table 12). Moreover, some regions or some population groups in some countries may have a severe anaemia problem; where data are available, disparities between rural and urban areas and by socioeconomic level (e.g., education, wealth) are clear for all micronutrient deficiencies, and anaemia should not be an exception. As malaria and worm infestations are absent in most countries (except for a few countries in Central Asia) one can conclude that almost all anaemia found is due to iron deficiency. Very little data exist on the extent of the actual iron deficiency problem, but it can be stated safely that anaemia is a major hazard for early childhood development.

The breakdown by age groups reveals an even more astonishing picture. Of the 12 countries with data, 10 have rates higher than 40% in children aged 12-23 month; in seven countries, the rate exceeds 40% even in children 6-11 month old. In more than half the countries the rate of anaemia exceeds 50% in children under two. There is no distinction between low and high U5MR countries nor for sub-regions. In conclusion, younger children aged 6-24 months are the most affected due most likely to their inadequate intake of iron. Although hardly any data exist on zinc, it can be expected that deficiency rates will be high as well, especially in countries with the highest rates of anaemia.

The data on anaemia in non-pregnant women is limited but shows that Central Asia and Caucasus are among the high prevalence regions, while Russia is the exceptions with over 50% of its women anaemic. Although a high anaemia prevalence among non-pregnant women is a public health burden and affects their health and well-being, the consequences of anaemia among pregnant women also impacts the health of the foetus and birth outcome.

Policies and plans

According to a recent assessment carried out by the WHO Regional Office for Europe,¹⁴ almost all the CEE/CIS countries have developed a nutrition policy. Only Moldova, Azerbaijan and Turkmenistan have no policy; Belarus, Bosnia and Herzegovina, Ukraine and Albania have draft policies, while in Serbia and Montenegro and Tajikistan the policy is in preparation. In addition to

policies, some countries have developed national plans for the priority areas in their policies, which usually include infant feeding. Other plans are more specific and address, for instance, the protection, promotion and support of breastfeeding or specific micronutrient deficiencies. Actions to prevent overweight and obesity are included in many national nutrition and/or food policies and/or plans; in addition, all the ministers of health of the European region approved recently in Istanbul (16 November 2006) the new European Charter on Counteracting Obesity.¹⁵ Having a policy and/or a plan does not necessarily mean having activities; lack of political, financial and technical support, as well as lack of coordinating and intersectoral mechanisms, may hinder implementation.

Composite index for child nutrition

When combining the most important nutrition indicators including U5MR, stunting (and disparities), wasting, underweight, overweight, exclusive breastfeeding, anaemia, vitamin A deficiency, and iodine deficiency, the prevalence in countries can be rated from low to high. The results show that four countries stand out: Albania, Azerbaijan, Uzbekistan and Tajikistan. Apart from Albania, these are high U5MR countries. Other Central Asian countries, as well as Bosnia and Herzegovina, Russia and Ukraine, are somehow less affected but nevertheless face similar challenges. Only Croatia and Belarus fall in the lowest category. Although this is an arbitrary categorization, it indicates the level of severity of child nutrition problems. Important to note is that U5MR does not seem to be the only determining factor for the multitude and severity of nutrition problems.

Discussion

Comparisons and interpretation are hampered by incompleteness and inaccuracy of data. The use of standard surveys, such as DHS and MICS, reduces this problem for some indicators in the countries using these surveys. Many of the differences between and within countries described above, therefore, may be due more to lack of complete information and/or to the use of different methods of data collection. Unfortunately, it is difficult to say whether better and more complete information would increase or reduce differences. Moreover, incomplete information prevents a full understanding of nutrition inequalities; this would be essential for possible targeting of programmes and activities and to monitor the size of the gap between different population groups (urban/rural, more/less educated, better/worse off, ethnic minorities).

The rates of LBW present several challenges for interpretation. As already mentioned, they reflect both fetal malnutrition, often associated with maternal malnutrition, and preterm birth, in proportions that can not be estimated. In addition, they are based on incomplete data collection (WHO and UNICEF estimate that about 21% of births were not weighted in 2000, with differences between and within countries),¹⁶ may be inaccurate (it is very likely that in some countries scales and methods lack calibration and standards, in other countries birth weight may be reported and not actually measured), and may be affected by mistakes at the various levels of reporting. That said, LBW, with few exceptions, does not seem to represent a priority problem in CEE/CIS countries. There might be, however, regions and/or social and minority groups within countries with rates of LBW above the national average. Improving mean birth weight and reducing the rate of LBW is anyway a useful objective to achieve everywhere because of the implications birth weight has not only on survival,¹⁷ but also on future health.^{18,19} Finally, many of the health and social determinants of LBW²⁰⁻²² are associated with other health and nutrition outcomes; acting upon them may bring about other benefits, in addition to reducing the rate of LBW.

Undernutrition

Stunting is usually considered an indicator of chronic malnutrition; wasting indicates acute malnutrition; underweight is a consequence of both chronic and acute malnutrition; stunting, wasting and underweight are boosted by and increase the risk of infection.^{23,24} Figure 1 and Tables 1 and 3 show a clear gradient: the rates of stunting, as well as U5MR, increase, not surprisingly, with poverty. A similar, though less clear, association can be observed for underweight, which includes parts of stunting.

Overall, the rates of stunting, underweight and wasting in CEE/CIS are comparable with those of industrialised countries for Croatia, Belarus, FYRO Macedonia, Bulgaria, Serbia, Montenegro, Kosovo, Bosnia and Herzegovina and Romania, but similar to those reported by some low income countries in Latin America and East Asia for Turkey, Armenia, Georgia, Kyrgyzstan, Uzbekistan, Kazakhstan, Azerbaijan, Turkmenistan and Tajikistan. In between is a group of countries (Ukraine, Albania, Russia and Moldova) where the rates are higher than expected based on other health and socioeconomic indicators; this might be due to disparities within countries, with large population groups pushing the national average high, and/or to incompleteness and inaccuracy in data collection. In any case, the rates of undernutrition in CEE/CIS countries never approach the levels seen in Southeast Asia and Sub-Saharan Africa.¹ Based on a simple categorization of stunting levels proposed by WHO,⁴ only Turkmenistan and Tajikistan would be classified as countries with medium (20-29%) prevalence in children under five; all the other CEE/CIS countries would fall into the low (<20%) prevalence category. Azerbaijan and Armenia would be added to the medium prevalence category if only children aged 12 to 23 months were considered. Finally, when temporal trends are available, and with few exceptions, the rates of stunting, wasting and underweight appear to be decreasing.

Because most data derive from standard surveys and do not seem to be flawed by severe incompleteness and inaccuracy, it is assumed that the rates and observed trends can be used to identify countries in which undernutrition still represents a public health problem: Tajikistan, Turkmenistan and Azerbaijan are the countries with the worst situation, followed by Kyrgyzstan, Uzbekistan, Kazakhstan and probably some regions in Georgia, Armenia and Turkey. The situation in Ukraine, Albania, Russia and Moldova has to be further studied because their data on undernutrition conflict with the values of other health and development indicators.

The control of stunting and underweight is based on a combination of social, economic, health and nutrition interventions.¹ The control of wasting needs a different approach in both prevention and management.^{25,26} From a public health point of view, i.e. excluding interventions on distal factors such as agriculture, food industry, trade or prices, the strategies most often used to address undernutrition in children fall in the domain of food supplementation and of Information Education Communication (IEC) to improve feeding practices. With few exceptions, mainly local projects limited in time and associated with emergencies, food supplementation to pregnant women and/or children under five does not seem to be popular in CEE/CIS countries. Most reported activities are based on IEC and are integrated into other maternal and child health programmes.

Overweight

The available data, despite their scarcity and the likelihood that interpretation will suffer from the same drawbacks already described for undernutrition, allow to draw a clear conclusion: in most countries, interventions for the prevention of obesity will have to be given a higher priority. W/H is not a very good indicator of overnutrition; the BMI would be preferable for surveillance, other measures being more appropriate for research and clinical medicine.²⁷⁻²⁹ In interpreting the available data one should also keep in mind that the use of the recently launched new WHO growth standard may change the current estimates of the rates of overweight and obesity in children, as well as stunting, making the picture worse than how it looks now.³⁰

The fact that overweight and obesity, in older children and adults, are a public health problem in CEE/CIS countries had already been established years ago.^{31,32} If it is a problem in older children and adults, it is very likely to be of similar or even larger magnitude in pre-school children, as experienced in industrialised countries.³³ As for stunting, WHO categorizes levels of wasting.⁴ Using the same categorization for overweight, measured in terms of W/H as wasting, Croatia, Belarus, Bulgaria, Kosovo, Kyrgyzstan and Uzbekistan would be classified as low (5-9%); FYRO Macedonia, Montenegro, Bosnia and Herzegovina, Armenia, Georgia and Kazakhstan as medium (10-14%); and Serbia and Montenegro, Ukraine, Albania and Russia as high (15% and over) prevalence countries.

As with undernutrition, preventive strategies will have to include a complex mix of social, economic, health and nutrition interventions to be delivered over a long time.^{1,34} Much can be gained with a boost of programmes for the protection, promotion and support of breastfeeding, leading to increased exclusivity in the first six months and duration in the second year of life.³⁵ The available information points to a lack of activities for the prevention of overweight and obesity in preschool children so far.

Infant and young child feeding

As with LBW, data on breastfeeding suffer from many problems in terms of definitions and methods. The WHO definitions,³⁶ for instance, are not used consistently in all countries; they are not used at all in Russia from where reliable national data are not available. Many other countries report incomplete data. Only when these derive from standard surveys it is possible to make comparisons and analyse trends. Available data, however, may allow to conclude that initiation is not a problem, while exclusivity for six months and continuation well into the second year of life are. Moreover, the protection, promotion and support of breastfeeding stand out as priority interventions for the control of both under- and overnutrition.³⁷⁻³⁹

Complementary feeding is where information is the poorest. The rates of timely complementary feeding say very little about adequacy and safety. It is very likely that where stunting and underweight are a problem, complementary feeding will be inadequate in terms of energy, proteins and micronutrients; on the contrary, where overweight is a problem, complementary feeding will probably be anticipated before six months and unbalanced in favour of sugar- and fat-dense foods. Interventions to facilitate and promote timely, adequate and safe complementary feeding will probably be needed in most CEE/CIS countries.

Breastfeeding and healthy complementary feeding need legal protection from marketing of breastmilk substitutes and energy-dense foods and beverages. The former are covered by the International Code;^a it is clear from the information available that, 25 years after the Code was issued and with some exceptions, this has not yet been translated into strong national laws and, where these are available, monitoring and enforcement are far from satisfactory. For the latter, regulatory measures are needed, as foreseen in the Charter recently signed in Istanbul.^{15,34} Things are better when maternity protection is considered; in all countries with available information, the maternity leave is longer than the minimum required by the ILO Convention 183. In many countries, however, enforcement of the maternity protection legislation is far from satisfactory, especially for those women who do not enjoy full labour protection. Finally, five years after the Global Strategy on Infant and Young Child Feeding, many countries still lack adequate policies and plans based on it; moreover, funding is insufficient.

^a The International Code of Marketing of Breast milk Substitutes and the subsequent relevant WHA Resolutions are jointly referred to in this document as the International Code.

Programmes on infant and young child feeding usually include a training component. Training on breastfeeding is well developed in many countries using WHO and UNICEF course materials and within IMCI activities. It reaches a wide range of health professionals, sometimes also members of mother-to-mother support groups, and appears to have reached a reasonable coverage in many countries. Nothing, however, can be said about the quality of training and its effects. In some countries training extends to complementary feeding and courses are also organised on the International Code and related monitoring activities. Ministries of health and non government organizations, especially IBFAN groups, are active in this field. UNICEF is often involved, including funding. Communities and the media are also involved in the dissemination of messages used in training activities through leaflets, booklets, newspapers, magazines and radio/TV programmes.

Micronutrient deficiencies

VAD seems to constitute a public health problem only in some countries or part of countries. Azerbaijan does not report data on VAD and supplementation coverage, yet it has a nationwide programme since 2005, integrated with the immunization programme. Albania has some supplementation coverage even in the absence of a national programme. Kyrgyzstan, Tajikistan and Uzbekistan seem to be the countries with better developed national programmes among those in which VAD is a public health problem.

As far as IDD is concerned, goitre is still highly prevalent in some countries and in some regions within countries, while USI is still far from reaching the majority of the population and only about half the households in the region use adequately iodized salt. IDD elimination is a regional priority since 2001 and USI is a priority in all countries. Programmes to achieve USI are running everywhere, often with high coverage. These programmes have reduced but not eliminated IDD as a public health problem in many countries and should therefore be continued.

Data on IDA are even more difficult to compare; those available refer to different age groups and are gathered with different methods at different times. Comparisons are therefore almost impossible and sometimes it is even difficult to trust the reported rates (see for example the high rates reported from Bosnia and Herzegovina and Albania). Many CEE/CIS countries, however, based on available data, can be classified as having a moderate IDA problem. The control of IDA include several interventions: better birthing practices and delayed cord clamping,⁴⁰⁻⁴² protection, promotion and support of exclusive breastfeeding up to six months with diversification of complementary feeding to include iron-rich foods afterwards,⁴³ and fortification of staple foods.^{1,44} Daily or bi-weekly iron supplementation is effective and safe,⁴⁵ but it is more difficult to implement at high coverage and is unlikely to reach the children who most need it. However, where possible and sustainable, it can be taken into consideration as an additional measure. Preventive iron (and folate) supplementation is a routine during pregnancy in many CEE/CIS countries, with self-reported coverage ranging between 4% (Azerbaijan), 39% (Romania) and 90% (Uzbekistan, in 8 out of 14 regions) among countries reporting. Some countries have iron supplementation programmes for children under five, usually between 6 and 24 months, and some report on coverage (latest values): Romania (47%), Turkey (38%), Uzbekistan (90%, again in 8 out of 14 regions), Turkmenistan (dropped from 90% to nil in few years) and Tajikistan (10%).

Conclusions

In short, children seem to start off well in life, but then, until the age of two, growth deteriorates rapidly in most countries, leading to a double burden of underweight (stunting) and overweight. The main causes of this deterioration are related to infant and young child feeding, including low rates of exclusive breastfeeding and inadequacy of complementary feeding; the latter may be associated

with a combination of lack of resource and inadequate knowledge and behaviour. The consequence is chronic under- and over-nutrition that is hidden and hard to recognize. In some countries, infectious diseases like diarrhea and respiratory infections may contribute to malnutrition.

As written at the beginning of this report, malnutrition in early life may damage future health and development in an irreversible way. The data available show an association between undernutrition and higher child mortality. Turkey, Armenia and Georgia, and even more Kyrgyzstan, Uzbekistan, Kazakhstan, Azerbaijan, Turkmenistan and Tajikistan are the countries that would benefit more, in terms of reduction of U5MR, from actions aimed at removing or mitigating the root causes of undernutrition. There are less and less reliable data to confirm the association between undernutrition and impaired child development. The permanence of IDD as a public health problem, though moderated by the progress in USI, in the same and other countries, indicates that undernutrition will keep affecting the performance of many people for years to come.

In addition, many of these countries (namely Armenia, Georgia, Kyrgyzstan, Uzbekistan and Kazakhstan) are already facing the double burden of under- and overnutrition. The latter is probably a priority public health problem also in Serbia, Montenegro, Bosnia and Herzegovina, Ukraine, Albania and Russia. The prevention of overweight and obesity starts in infancy and includes the protection, promotion and support of exclusive breastfeeding until six months and continued breastfeeding until two years and beyond. Despite more than a decade of successful implementation of the BFHI, exclusivity and duration of breastfeeding are far from optimal in all CEE/CIS countries. Actions aimed at ensuring that the results obtained by the BFHI are extended to the first six month of life, for exclusivity, and to the second year, for duration, are needed. The prevention of overweight and obesity depends also on timely and adequate complementary feeding, on a healthy family diet, and on adequate levels of physical activity. These healthy behaviours depend on social factors that have to be adequately addressed in all countries.

Malnutrition is not equally distributed. In some countries regional and ethnic differences exist so that even where undernutrition, overnutrition, breastfeeding or micronutrient deficiencies may not be considered as public health priorities at national level, they may be so for specific population groups or minorities. Also, there is almost always a wealth and education gradient in the rates of malnutrition within countries. This means that an equity lens should be used in both programme implementation and in monitoring and evaluation of results. Data collection systems should be reviewed in this direction.

Equity is not the only reason to review data collection systems. This report reveals that standard methods leading to increased completeness and accuracy are needed to get reliable data especially on LBW, breastfeeding, complementary feeding and anemia. In addition, data collection systems should integrate information on policies, plans and interventions, as well as social and economic context, to facilitate interpretation of changes in health and nutrition indicators.

Progress has been made especially towards the elimination of IDD through USI, the supplementation of vitamin A and the BFHI. Region-wide, 37% of births take place in BFHs and 51% of newborns are protected from brain damage due to iodine deficiency. However, infant and young child nutrition needs more emphasis in the strategic direction for the region.

Based on the above results and discussion, the following conclusions are suggested to address the nutrition problems observed:

1. Children under two are the most affected for many of the indicators included in this assessment. The main areas that therefore require intensive focus include:
 - Overall protection, promotion and support of infant and young child feeding, including breastfeeding at community level beyond the BFHI.

- Prevention of overweight and obesity, in addition to interventions for stunting and underweight.
 - Tackling malnutrition as a whole, as opposed to micronutrient deficiencies alone.
2. A comprehensive approach should be applied to child nutrition including areas like:
- Formulation of national food and nutrition policies and action plans backed by an adequate legal framework.
 - Involvement of other sectors outside health: education, agriculture, private sector (food industry), media.
 - Inclusion of nutrition as part of health sector reform, e.g. building skills on infant and young child feeding among health professionals, integrated nutrition interventions in health care delivery system.
 - Strengthening of the community and family dimensions as opposed to the current health system driven approach.
3. The three recommended pillars of a renewed child nutrition strategy should include:
- Addressing undernutrition and micronutrient deficiencies covering areas such as:
 - Breastfeeding maintained as a prominent and priority intervention, but associated with action to protect, promote and support timely, adequate and safe complementary feeding.
 - Better legal protection of child nutrition issues, including the marketing of infant formula, and energy dense foods.
 - Communication for social and behavioural change to improve feeding practices, including investigation of related cultural, labour and economic aspects.
 - Maintaining efforts to reduce LBW, IDD, VAD and IDA through fortification of staple and complementary foods, micronutrient supplementation, and addressing better feeding practices.
 - Improving the nutritional status of non-pregnant women before pregnancy by ensuring timely provision of folic acid, iron, iodine, vitamin B12, vitamin A and zinc through supplementation and fortification programmes, with a special focus on IDA because of its association with subsequent child development.
 - Addressing overweight through:
 - Exclusive and continued breastfeeding.
 - Adequate and timely complementary feeding, currently too early and high in sugar and fat.
 - Control of the marketing of foods targeted at young children.
 - Promotion of adequate physical activity for pre-schoolers.
 - Addressing inequities and targeting specific population groups including:
 - A focus on ethnic groups, displaced people and people under stress, rural poor, lower educated families.
 - Addressing social and economic determinants such as food availability, purchase and use, and strengthening maternal education.
 - Strengthening mothers' rights in the workplace with adequate maternity leave and breastfeeding support.
4. A number of cross-cutting areas needs to be considered:
- Addressing the knowledge gaps of the scientific community through better linkage with scientists in Western Europe.
 - Aligning the training of medical and other health professionals to international standards, including an increased focus on public health.
 - Setting up a reliable standard system for data collection and use. This should include:
 - Monitoring and evaluation of programmes, ensuring the use of results.
 - Analysis of the effect of interventions on inequalities.
 - Improvement of data collection tools, linking outcomes to social and economic determinants.

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Annex 1. Tables.

Table 2. Rates of low birth weight (less than 2500 g) by year and source.

Name	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cro		8 (WB)				6 (MOH)						
Blr							5 (MOH)				4 (MICS)	
FYRO Mkd							5 (MOH)				6 (MICS)	
Bul							10 (MOH)					
Ser							4 (MOH)				5 (MICS)	
Mnt											4 (MICS)	
Kos							4 (MSS)					
Bih						3 (MICS)						5 (MICS)
Ukr						8 (WB)			5 (MOH)		4 (MICS)	
Alb			7 (MOH)			3 (MICS)		5 (LSMS)			7 (MICS)	
Rom					7 (MOH)		9 (MOH)			9 (MOH)		
Rus							6 (MOH)					
Mda							5 (MOH)				6 (DHS)	
Tur				8 (DHS)								
Arm						6 (DHS)					8 (DHS)	
Geo					4 (MICS)		6 (RHS)				5 (MICS)	
Kgz			6 (DHS)									5 (MICS)
Uzb		4 (DHS)				6 (MICS)						5 (MICS)
Kaz	9 (DHS)				7 (DHS)							6 (MICS)
Aze		6 (DHS)				5 (MICS)						
Tkm						6 (DHS)						
Tjk						13 (MICS)					10 (MICS)	

Table 3. Rates of stunting, wasting and underweight in children aged 0-59 months (except for Bulgaria, 12-59; and Kosovo, 6-59).

		Year	Stunting % (H/A)			Wasting % (W/H)			Underweight % (W/A)		
			mod+sev (-2sd)	moderate (-2sd to -3sd)	severe (-3sd)	mod+sev (-2sd)	moderate (-2sd to -3sd)	severe (-3sd)	mod+sev (-2sd)	moderate (-2sd to -3sd)	severe (-3sd)
Cro	SoWC	2007	1.0	-	-	1.0	-	-	1.0	-	-
Blr	MICS	2005	2.5	2.0↑	0.5	1.3	1.0↓	0.3	1.0	0.9	0.1
FYRO Mkd	MICS	2005	8.7	6.4	2.3	2.3	1.5	0.8	2.3	2.0	0.3
Bul	NCPHP	2004	3.8	2.5	1.3	2.6	1.3	1.3	1.0	0.7	0.3
Ser	MICS	2005	5.9↑	4.6↑	1.3↓	3.3↑	2.8↑	0.5↑	1.6↓	1.5↓	0.1↓
Mnt	MICS	2005	5.2↑	3.7↑	1.5↓	2.9↓	1.9↓	1.0↓	2.6↑	1.9↑	0.7↓
Kos	MSS	2001	9.8↓	6.2↓	3.6	4.4↑	3.3↑	1.1↑	5.4↑	3.9↑	1.5↑
Bih	MICS	2006	7.4↓	4.9↓	2.5↓	3.2↓	2.4↓	0.8↓	1.5↓	1.1↓	0.4↓
Ukr	CDC*	2002*	2.7↓	2.1↓	0.6↓	0.2↓	-	-	1.0	0.8	0.2
Alb	MICS	2005	22.3↓	13.5↓	8.8↓	6.6↓	4.9↓	1.7↓	7.5↓	6.3↓	1.2↓
Rom	MOH	2004	5.9	4.3	1.6	4.4	4.0	0.4	5.5	4.4	1.1
Rus	RLMS	2005	12.3	11.8	0.5	12.7	-	-	4.2	-	-
Mda	DHS	2005	8.4	6.7	1.7	3.9	3.1	0.8	4.3	3.8	0.5
Tur	DHS	2003	12.2↓	8.6↓	3.6↓	0.7↓	0.4↓	0.3↓	3.9↓	3.3↓	0.6↓
Arm	DHS	2005	13.0=	10.3=	2.7=	5.1↑	4.5↑	0.6↑	4.0↑	3.9↑	0.1↓
Geo	MICS	2005	10.4↓	5.5↓	4.9↑	2.1↓	1.7↓	0.4↓	2.1↓	1.8↓	0.3↑
Kgz	MICS	2006	13.7↓	10.0↓	3.7↓	3.5=	3.1↑	0.4↓	3.4↓	3.1↓	0.3↓
Uzb	MICS	2006	14.6↓	10.3↓	4.3↓	3.3↓	2.6↓	0.7↓	5.1↓	4.3↓	0.8↓
Kaz	MICS	2006	12.8	8.8	4.0	3.8	2.8	1.0	4.0	3.2	0.8
Aze	MICS	2000	19.6	12.4	7.2	7.9	6.0	1.9	16.8	12.5	4.3
Tkm	DHS	2000	22.3	14.9	7.4	5.7	4.5	1.2	12.0	10.3	1.7
Tjk	MICS	2005	27.0	17.9	9.1	7.2	5.6	1.6	17.4	13.8	3.6

↑ upward trend, ↓ downward trend, = stable; * children aged 6-35 months

Table 4. Rates of moderate plus severe stunting (H/A -2sd), wasting and underweight by age sub-groups in months.

Name	Source	Year	Stunting % (H/A)						Wasting % (W/H)						Underweight % (W/A)					
			<6	6-11	12-23	24-35	36-47	48-59	<6	6-11	12-23	24-35	36-47	48-59	<6	6-11	12-23	24-35	36-47	48-59
Blr	MICS	2005	0.9	3.4	3.1	1.8	2.9	2.8	2.3	1.2	0.4	2.0	1.0	1.5	0.3	1.4	1.0	1.3	1.3	0.6
FYRO Mkd	MICS	2005	1.8	13.4	13.6	7.5	8.3	6.7	2.1	11.4	1.7	3.9	0.6	0.3	0.3	7.3	3.4	2.3	1.6	1.0
Ser	MICS	2005	5.4	6.2	6.6	7.7	4.2	5.0	3.9	7.1	2.3	2.9	1.9	4.0	1.2	1.7	0.9	2.3	2.2	1.3
Mnt	MICS	2005	4.0	9.9	7.1	2.8	6.0	3.9	2.2	3.9	3.3	4.4	2.2	1.7	-	3.4	4.5	3.1	1.7	2.1
Bih	MICS	2006	2.7	8.9	8.4	7.8	8.2	6.4	6.4	6.1	3.0	2.8	3.3	1.2	0.3	1.7	1.7	1.9	1.9	0.8
Ukr	CDC	2002	-	1.5	3.4	2.9	-	-	-	-	0.6	-	-	-	-	0.7	1.1	1.1	-	-
Alb	MICS	2005	22.7	22.7	19.5	21.6	24.6	22.5	7.3	5.8	6.5	5.3	6.6	7.5	7.7	9.0	7.4	8.5	5.9	7.6
Rom	MOH	2004	4.5	7.2	6.9	4.7	5.9	5.1	2.6	4.1	5.1	4.0	5.2	5.0	1.8	4.2	8.0	5.8	5.7	7.1
Mda	DHS	2005	6.5	6.4	12.2	7.0	6.0	9.2	2.2	7.0	4.1	3.6	4.7	3.0	0.9	2.7	4.1	4.4	5.0	5.9
Tur	DHS	2003	2.2	5.6 ^b 10.8 ^c	12.4	12.2	15.4	15.4	1.2	0.8 ^c 1.5^d	0.8	1.0	0.3	0.3	0.8	1.7 ^c 5.7^d	2.9	5.2	5.1	4.1
Arm	DHS	2005	6.6	10.1	20.0	12.2	11.3	12.9	2.8	1.9	9.1	4.4	7.0	1.6	0.3	5.5	4.7	6.2	5.0	1.5
Geo	MICS	2005	2.8	8.4	13.7	12.1	10.5	10.2	2.0	1.1	0.7	3.0	1.5	3.7	2.1	2.5	3.3	2.2	1.7	1.1
Kgz	MICS	2006	4.9	6.9	15.7	14.7	14.9	16.9	8.3	2.3	6.2	1.6	3.3	1.2	0.3	1.8	3.3	5.3	3.3	4.0
Uzb	MICS	2006	5.2	7.1	16.5	16.7	16.5	16.9	3.2	6.3	5.7	2.3	1.5	1.8	1.3	4.3	8.2	5.8	3.7	4.4
Kaz	MICS	2006	5.8	8.2	16.6	12.5	13.9	13.4	6.7	5.1	3.1	2.7	3.2	4.4	3.3	3.5	4.9	4.4	2.7	4.5
Aze	MICS	2000	9.8	17.1	30.7	21.8	16.5	15.5	9.1	11.6	14.6	7.5	5.2	3.3	8.3	20.1	28.0	18.4	13.7	10.2
Tkm	DHS	2000	8.6	20.1 ^c 17.9 ^d	31.3^d 36.3^c	22.6	22.0	19.3	5.5	8.1^c 2.9^d	7.3 ^e 6.4 ^f	4.8	5.3	6.1	4.8	14.6 ^c 13.5 ^d	25.1^e 16.2^f	10.8	10.7	10.0
Tjk	MICS	2005	10.8	19.4	28.2	28.3	30.5	31.4	8.8	11.1	16.2	6.0	2.5	2.0	4.6	20.1	30.3	19.9	12.5	11.7

^b For children 6-9 months

^c For children 10-11 months

^d For children 12-15 months

^e For children 16-23 months

Table 5. Stunting (H/A -2sd) by gender, urban/rural residence, maternal education (ME), and wealth quintiles (WQ).

Name	Source, year	Male	Female	Urban	Rural	Low ME	High ME	Poorest WQ	2 nd WQ	3 rd WQ	4 th WQ	Richest WQ
Blr	MICS 2005	2.5	2.6	1.8	4.1	6.3	1.7	5.4	2.7	2.2	1.4	1.5
FYRO Mkd	MICS 2005	10.4	6.8	8.2	9.2	17.4	6.2	11.2	7.7	10.3	6.4	4.8
Ser	MICS 2005	6.0	5.7	5.8	6.0	9.9	4.1	9.0	6.6	3.9	5.9	4.7
Mnt	MICS 2005	6.7	3.6	5.1	5.3	11.9	4.2	10.7	3.3	4.8	2.7	3.9
Bih	MICS 2006	7.4	7.4	6.3	7.9	9.4	3.6	12.1	7.1	5.1	8.2	4.8
Alb	MICS 2005	23.6	20.7	22.6	22.1	22.3	21.7	30.1	22.9	24.1	18.4	13.9
Rom	MOH 2004	7.3	4.6	4.6	7.2	-	-	-	-	-	-	-
Mda	DHS 2005	8.1	8.6	6.7	9.2	9.5	5.1	13.5	7.2	9.6	4.0	6.1
Tur	DHS 2003	10.9	13.6	9.0	18.4	25.3	2.9	-	-	-	-	-
Arm	DHS 2005	12.9	13.1	14.0	11.5	19.7	7.3	14.9	6.7	13.1	21.3	8.1
Geo	MICS 2005	11.0	9.8	7.5	13.5	15.2	5.4	18.0	11.5	12.1	8.4	4.7
Kgz	MICS 2006	14.0	13.3	10.8	15.7	21.7	9.7	18.8	14.9	12.5	12.4	10.2
Uzb	MICS 2006	13.9	15.4	14.0	14.9	17.9	9.6	16.1	16.7	14.8	13.4	11.6
Kaz	MICS 2006	13.4	12.1	10.7	14.9	15.4	9.3	15.7	13.7	13.8	9.9	8.4
Aze	MICS 2000	19.2	20.1	17.2	21.7	24.5	12.1	26.8	17.8	19.2	15.7	14.3
Tkm	DHS 2000	23.9	20.8	19.5	24.1	23.4	19.2	-	-	-	-	-
Tjk	MICS 2005	28.2	25.6	26.1	27.3	30.0	19.4	31.8	29.0	30.1	24.0	19.8

Table 6. Rates of overweight in children by age sub-groups in months.

Name	Source	Year	Age group	Overweight % (W/H) moderate + severe (+2sd)	Overweight % (W/H) severe (+3sd)	Overweight % (W/H) moderate + severe (+2sd) by age sub-groups (months)					
						<6	6-11	12-23	24-35	36-47	48-59
Cro	WHO/GD	1996	12-71	5.9	-	-	-	-	-	-	-
Blr	MICS	2005	0-59	6.7	-	3.3	10.1	12.0	4.0	4.6	6.4
FYRO Mkd	MICS	2005	0-59	10.6↑	-	8.0	4.7	13.9	9.1	9.0	13.8
Bul	NCPHP	2004	12-59	9.0	3.5	-	-	-	-	-	-
Ser	MICS	2005	0-59	15.3↑	4.8 (1996)	10.1	13.2	24.1	12.0	13.8	14.5
Mnt	MICS	2005	0-59	12.9↓	7.5 (1996)	9.4	15.9	21.0	8.7	10.9	11.8
Kos	MSS	2001	6-59	8.4↓	2.9 (1996)	-	-	-	-	-	-
Bih	MICS	2006	0-59	20.2↑	4.8 (MICS 2000)	6.7	19.1	27.1	19.7	20.7	19.3
Ukr	WHO/GD	2000	0-59	20.1	-	12.4	22.1	27.4	18.8	19.2	19.3
Alb	MICS	2005	0-59	20.2↑	-	20.8	19.6	16.3	17.4	19.6	25.5
Rom	WHO/GD	2004	0-59	4.2↓	-	3.6	4.3	5.4	3.0	2.9	4.9
Rus	WHO/GD	1993	0-59	20.9	-	-	-	-	-	-	-
Mda	DHS	2005	0-59	-	-	-	-	-	-	-	-
Tur	WHO/GD	1998	0-59	2.2*	-	2.6	2.9	4.0	1.3	1.3	1.5
Arm	WHO/GD	2001	0-59	10.4	-	12.8	11.9	14.1	9.2	8.8	8.3
Geo	MICS	2005	0-59	15.2↑	-	11.6	22.7	20.0	12.4	12.4	14.3
Kgz	MICS	2006	0-59	5.8=	-	6.5	8.4	8.8	3.6	2.9	6.1
Uzb	MICS	2006	0-59	7.3	-	9.8	10.1	9.8	5.1	5.4	5.9
Kaz	MICS	2006	0-59	11.3↑	-	12.7	16.5	16.6	8.9	8.8	7.2
Aze	WHO/GD	2001	4-59	2.6	-	-	-	-	-	-	-
Tjk	MICS	2005	0-59	3.6	-	8.5	2.6	3.8	3.4	3.2	2.2

↑ upward trend, ↓ downward trend, * reported, not measured

Table 7. Overweight (W/H +2sd) by gender, urban/rural residence, maternal education (ME), and wealth quintiles (WQ).

Name	Source, year	Male	Female	Urban	Rural	Low ME	High ME	Poorest WQ	2 nd WQ	3 rd WQ	4 th WQ	Richest WQ
Blr	MICS 2005	6.6	6.9	6.2	7.8	12.9	5.8	6.6	7.6	6.9	6.5	6.2
FYRO Mkd	MICS 2005	10.6	10.6	12.3	8.7	7.2	12.7	9.9	9.0	10.6	12.4	13.1
Ser	MICS 2005	14.9	15.7	13.6	17.4	15.3	13.2	15.5	15.5	17.9	15.9	11.0
Mnt	MICS 2005	13.5	12.3	13.2	12.4	10.3	14.1	7.7	13.8	12.8	11.2	19.3
Bih	MICS 2006	19.7	20.6	22.5	19.1	17.2	15.4	20.3	17.5	20.4	22.3	20.3
Alb	MICS 2005	19.5	21.1	24.1	18.1	20.2	21.2	18.7	16.4	20.9	26.5	18.5
Geo	MICS 2005	14.3	16.2	15.0	15.4	14.0	15.9	15.7	13.4	17.3	15.5	14.2
Kgz	MICS 2006	5.8	5.8	5.9	5.8	2.0	8.9	6.1	4.9	4.3	6.8	6.8
Uzb	MICS 2006	6.6	7.9	8.6	6.7	8.1	9.1	5.6	7.4	7.1	8.5	8.0
Kaz	MICS 2006	11.1	11.6	11.0	11.7	9.3	12.8	12.5	10.6	11.0	12.0	9.9
Aze	MICS 2000	2.4	2.7	3.3	1.9	-	-	-	-	-	-	-
Tjk	MICS 2005	3.5	3.6	4.0	3.4	6.1	2.4	3.2	3.9	3.4	3.2	4.2

Table 8. Rates of initiation, exclusivity and duration of breastfeeding.

Name	Source	Year	Initiation (any breastfeeding)		Exclusive breastfeeding		Continuing breastfeeding	
			Ever	First 24 h	0-3 m	0-5 m	13-24 m	20-23 m
Cro	SoWC	1996-04	-	-	-	23	-	-
Blr	MICS	2005	-	71	12	9	-	4
FYRO Mkd	MICS	2005	-	81	24	16	-	22
Bul	NBC	2005	96	75	9	8	5	0.5
Ser	MICS	2005	-	67	23↑	15↑	-	8↓
Mnt	MICS	2005	-	73	26↑	19↑	-	13↑
Kos	MSS	2001	90↑	-	16↑	12↑	-	28↑
Bih*	MICS	2006	95/96	84	24	18	-	10
Ukr	MICS	2005	-	82	7	6	-	11
Alb	MICS	2005	85	74	4↓	↓	74	20↓
Rom	RHS	2004	88↓	-	-	16	-	32
Mda	DHS	2005	97	91	57	46	-	2
Tur	DHS	2003	97↑	84↑	29↑	21↑	-	24
Arm	DHS	2005	-	-	-	33	-	14
Geo	MICS	2005	-	65	13↓	11	-	20
Kgz	MICS	2006	-	89↑	41↓ ²	32	-	26↓
Uzb	MICS	2006	-	85↑	37↑	26↑	-	38↑
Kaz	MICS	2006	-	88↑	25↑	17	-	16↓
Aze	DHS	2006	-	-	16↑	12↑	26	16
Tkm	DHS	2000	97	76	8	5	-	25
Tjk	MICS	2005	-	87	36↑	25	-	34=

↑ upward trend, ↓ downward trend, = stable

Table 9. Infant and young child feeding: programmes, policies, activities and resources.

Name	BFHI			International Code		Maternity leave		Programme management	
	Maternity hospitals*	BFH* (%)	Births in BFH* (%)	Legislation	Monitoring and enforcement	Legislation	Monitoring and enforcement	Policies and plans	Funding
Cro	34	15 (44)	-	-	-	26 w at 100%	-	-	-
Blr	119	26 (22)	35	Some provisions but no Code adopted yet	-	18 w at 100%	-	-	-
FYRO Mkd	30	28 (93)	85	-	-	38 w at 100%	-	-	-
Bul	110	5 (5)	14	-	-	19 w at 90%	-	-	-
Ser	59	49 (83)	82	Yes	By IBFAN groups	52 w at 100%	No	Yes	From MOH
Mnt	12	7 (58)	42	-	-	-	-	-	-
Kos	21	17 (81)	80	Yes	Not yet	-	-	Only for BF	From UNICEF
Bih	40	22 (55)	65	Yes, only in Republic Serpska	No	26-52 w	No	Yes, but weak enforcement	Only vulnerable groups
Ukr	1390	72 (5)	35	Some provisions as MOH order	Survey in 2004	18 w at 100%	Yes	Yes, in progress	No
Alb	43	6 (14)	25	Yes	Yes	52 w at 80-50%	Yes	Only for BF	From MOH
Rom	237	22 (9)	23	In progress	Not yet	18 w at 85%	No	Yes	MOH and UNICEF
Rus	~3000	240 (8)	~21	Draft blocked at MOH	Training of BFH staff planned	20 w at 100%	-	-	-
Mda	45	27 (60)	67	-	-	18 w at 100%	-	-	-
Tur	915	520 (57)	54	Draft waiting for approval	No	16 w	No	Yes	MOH and UNICEF
Arm	55	18 (33)	46	Clause added to previous law	No	20 w at 100%	No	Yes, in process	Only from UNICEF
Geo	70	18 (26)	31	Yes	Regular from 1998, violations reported	18 w at 100%	No	In national health programme	
Kgz	57	25 (44)	47	-	-	18 w at 100%	-	-	-
Uzb	186	32 (17)	20	Yes	By the MOH	-	-	Only for BF	From UNICEF
Kaz	220	31 (14)	35	Old MOH orders being improved	No	18 w at 100%	No	No	No
Aze	77	67 (87)	67	Yes	By local NGO	18 w at 100%	-	Only for BF	From UNICEF
Tkm	64	52 (81)	81	Draft	No	16 w at 100%	-	Only for BF	No
Tjk	86	21 (24)	35	Adopted by Parliament, waiting govt. approval	By the MOH	20 w at 100%	Yes, MOH	Only BF; being developed for comp. feeding	From UNICEF

* includes hospitals, maternity departments and polyclinics

Table 10. Vitamin A deficiency and supplementation coverage.

Name	Source	Year	Age group	Vitamin A deficiency (serum retinol)			Children receiving vitamin A supplementation (%)			
				mod+sev (<20 mcg/dl)	moderate (10-19.9 mcg/dl)	severe (<10 mcg/dl)	within last 6 months	prior to last 6 months	not sure when	not sure if received
FYRO Mkd	WHO/GD	1999	0-59 m	30	28	1.4	-	-	-	-
Kos	MSS	2001	6-59 m	36	35	0.7	-	-	-	-
Alb	MICS	2005	6-59 m	-	-	-	8↑	12↓	↓	15↑
Tur	Research*	2000	6-59 m	16	-	-	-	-	-	-
Kgz	MICS	2006	6-59 m	33**	30**	3**	47	19	11	5
Uzb	MICS	2006	0-59 m	53***	44***	9***	72	6	12	3
Kaz	MICS	2006	6-59 m	57↑	47↑	10↑	-	-	-	-
Tjk	MICS	2005	6-59 m	30****	26****	4****	47	5 ⁷	10	7

* regional data; ** in 2003; *** survey carried out in 2002 in the most fertile region of the country; **** national MOH survey carried out in 2003

Table 11. Prevalence of IDD and percentage of households using iodised salt.

		Age group	Iodine deficiency		Households with iodised salt (%)			
			Goitre (%)	median urinary iodine (mcg/l)	Source, year	>15 ppm	1-14 ppm	0 ppm
Cro	WHO/GD 2002	6-12 y	-	140	2000	90	-	-
Blr	MOH/UNICEF 2006	6-18 y	13	179	MOH, 2003	36	19	45
FYRO Mkd	WHO/GD 2002	7-11 y	6	199	MOH 2005	97	3.1	0
Bul	MOH 2003	7-11 y	4	198	2003	94	2	4
Ser	UNICEF 2000	7-14 y*	2*	158*	MICS 2000	73	27	-
Mnt	UNICEF 2000	7-14 y*	2*	158*	MICS 2000	71	29	-
Kos	MSS 2001	6-12 y	0	122	MSS 2001	84	5	11
Bih	MOH 2006	7-14 y	8	157	MOH 2005	79	21	0
Ukr	National survey 2002	Women 15-49 y	-	90	MICS 2005	18	14	68
Alb	UNICEF MOH, 2006	6-13 y	54	86	UNICEF MOH, 2006	60	33	6
Rom	MOH 2004	-	-	100	MOH 2004	74	24	2
Rus	National IDD report, 2006	6-12 y	8-30***	88 (average of several regions; range: 60-110)***	UNICEF 2004	35	0	65
Mda	MOH 1996-98	6-12 y	27-41***	78	DHS 2005	60	1	39
Tur	Survey 2002	6-12 y	30**	75	DHS 2003	64	6	30
Arm	MOH 2005	8-10 y		313	UNICEF/MOH 2005	97	3	0
Geo	Survey 2005	6-12 y	32	321	UNICEF 2005	91	5	4
Kgz**	Survey 2006	6-8 y	-	99	MICS 2006	76	21	3
Uzb	Survey 2005	6-12 y	-	141	MICS 2006	53	28	18
Kaz	National survey 2006	Women 15-49 y	-	236	MICS 2006	92	8	0
Aze**	MOH/UNICEF 2006	8-14 y	46	204	DHS 2006	54	41	5
Tkm	MOH 2004	8-10 y	2	170	MOH 2004	100	0	0
Tjk	MSS 2003	6-59 m	-	73	MOH 2006	58	24	18

* national data including Serbia and Montenegro ** data from some provinces *** regional ranges

Table 12. Rates of anaemia in children.

Name	Anaemia under 5 years (% with g/dl of haemoglobin)						Anaemia in other age groups (% with g/dl of haemoglobin)		
	Source, year	Age group	total (<11)	mild (10-10.9)	moderate (7-9.9)	severe (<7)	Source, year	Age group	total (Hb <11 g/dl)
Cro	-	-	-	-	-	-	WHO/GD 2001	7-14 y	16-19
FYRO Mkd	WHO/GD 1999	6-59 m	26	-	-	-	WHO/GD 1999	6-11 m, 12-23 m	37, 40
Bul	WHO/GD 1999	0-47 m	32	-	-	-	WHO/GD 1999 NCPHP 2004	6-11 m, 12-23 m at 12 m: total mild, moderate, severe	46, 28 29 21, 8, 0
Sem	MICS 2000	6-59 m	31	-	-	-	-	-	-
Mnt	MICS 2000	6-59 m	20	-	-	-	-	-	-
Kos	MSS 2001	6-59 m	19	9	9	1	MSS 2001	6-11 m, 12-23 m	51, 37
Bih	UNICEF 1999	0-71 m	55 ^a	-	-	-	-	-	-
Ukr	MOH 2004	6-36 m	22	-	-	-	-	-	-
Alb	WHO/GD 2000	6-59 m	69 ^a	-	-	-	-	-	-
Rom	MOH 2004	0-11 m 12-23 m 0-59 m	59 57 23	44 42 -	14 13 -	1 1 -	-	-	-
Rus	WHO/GD 2001	6-59 m	34 ^a	-	-	-	WHO/GD 2001	6-11 m, 12-23 m	49, 56
Mda	DHS 2005	6-59 m	32	22	10	0	-	-	-
Tur	WHO/GD 2002	24-71 m	35	-	-	-	-	-	-
Arm	DHS 2005	6-59 m	37 [↑]	17 [↑]	19 [↑]	[↑]	DHS 2005	9-11 m, 12-17 m, 18-23 m	68, 53, 38
Uzb	MOH/UNICEF/ KAN 2006	6-59 m	33 [↓]	20 [↓]	13 [↓]	[↓]	MOH/UNICEF/ KAN 2006	6-23 m 24-59 m	44 24
Kaz	DHS 1999	0-59 m	36 [↓]	18 [↓]	17 [↓]	[↓]	-	-	-
Aze	WHO/GD 2001	12-59 m	32	-	-	-	WHO/GD 2001 WFP 2004	6-11 m, 12-23 m 6-59 m	26, 57 52 ^a
Tkm	DHS 2000	6-59 m	36	19	16 ⁰	1	MOH 2005	6-59 m 0-23 m	39 ^a 38 ^a
Tjk	MSS 2003	6-59 m	38	21	16 ¹	1	MSS 2003	6-11 m, 12-23 m	58, 65

↑ upward trend, ↓ downward trend, ^a regional data, ^b data refer to iron deficiency

Annex 2. Profiles.

This annex presents summary data on social and economic development, child nutrition, infant and young child feeding, micronutrient deficiencies and existing policies, plans and programmes by country. In Table A, only the most recent and reliable values have been considered; years and sources of information are specified:

- HDI and ranking: Human Development Report 2006, refer to 2003.
- GNP/PPP per capita, in USD: World Development Report 2007, refer to 2005.
- Total population, Children under five and U5MR: SoWC 2006, refer to 2004.
- Stunting, wasting, underweight and overweight: moderate plus severe ($\pm 2sd$), except when specified.
- VAD: serum retinol $< 0.70 \mu\text{moles/dl}$ corresponding to 20 mcg/dl.
- Anemia: prevalence of school-age children with Hb levels $< 11 \text{ gr/dl}$.
- BFH/maternity hospitals: includes hospitals, maternity departments and policlinics.

Most data in Table B have been provided by UNICEF officers who responded to the questionnaires sent around while this report was being written.

Albania

A. Basic data.

Health and economic context		Notes
Total population	3 166 000	
Population under five	256 000	
HDI	0.780	
HDI ranking	72	
GNI/PPP per capita (USD)	5420	
UM5R	19↓	
Child malnutrition (2005)		
LBW (<2500g)	7↑	
Stunting (moderate + severe)	22.3↓	Second highest rate for severe stunting (8.8%; Tajikistan 9.1%) among CEE/CIS countries.
Wasting (moderate + severe)	6.6↓	
Underweight (moderate + severe)	7.5↓	
Overweight (moderate + severe)	20.2↑	
Infant and young child feeding (2005)		
Ever breastfed	85	
Exclusive BF at 0-5 months	2↓	
Continued BF at 20-23 months	20↓	
Micronutrient deficiencies		
VAD	N/A	
Anemia	N/A	No national data. Regional data for Lehza (2000): 69%, the highest rate among CEE/CIS countries.
IDD (goitre in school-age children) (2006)	54	
Median urinary iodine excretion level mcg/l (2006)	86	

B. Policies, plans and programmes.

Infant and young child feeding (2006)		Notes
BFH/maternity hospitals	6/43	
Births in BFHs	25%	
International Code	Yes	Monitoring and enforcement in place.
Maternity leave legislation	52 w at 80-50%	
Micronutrient deficiencies (year)		
Children who received Vitamin A supplementation within the last 6 months (2005)	8%	
Vitamin A national programme/policy	No	No programmes, policies and funds.
Iron supplementation national programme/policy	No	Iron supplementation recommended to pregnant women. No national programme, policy and funds for children.
Households with adequate iodized salt (> 15 ppm) (2006)	62%	Urban vs rural 71% vs 48% (2000).

Data sources: LSMS, MICS, MOH, Institute of Public Health.

Armenia

A. Basic data

Health and Economic Context		Notes
Total population	3 026 000	
Population under 5 years	164 000	
Human Development Index	0.759	
HDI ranking	83	
GNI/PPP per capita (USD)	5060	
Under five mortality rate (UM5R) /1000	32↓	
Child malnutrition (year)		
LBW (<2500g) (2005)	8	
Stunting (moderate + severe) (2005)	13=	
Wasting (moderate + severe) (2005)	5.1↑	
Underweight (moderate + severe) (2005)	4.0↑	
Overweight (moderate + severe) (2001)	10.4	
Infant and young child feeding (year)		
Ever breastfed (2005)	97	
EBF at 0-5 months (2005)	33	
Continued breastfeeding at 20-23 months (2005)	15	
Micronutrient deficiencies		
Vitamin A Deficiency	-	
Anemia (2005)	37↑	These data refer to 6-59 months old children.
Iodine deficiency (prevalence of goitre in school-aged children)	-	
Median urinary iodine excretion level mcg/l (2005)	313	These data refer to 8-10 years old children.

B. Policies, plans and programmes.

Infant and young child feeding		Notes
BFH/number of maternity hospitals	18/55	
Percentage of births in BFHs	46	
International Code	Yes	Clause added to previous law.
Maternity leave legislation	Yes	20 weeks at 100% of salary. No monitoring and enforcement in place.
Micronutrient deficiencies		
Children who received Vit A supplementation within the last 6 months	No	
Vit A national programme/policy	No	No programme, policy and funds.
Iron supplementation national programme/policy	No	
Percentage of households with adequately iodized salt (> 15 PPM)	97	Regional differences: probably due to the fact that imported salt from Ukraine and Iran is cheaper and not adequately iodized.

Data sources: DHS, National Integrated Nutrition Survey in Armenia (NSIN)

Azerbaijan

A. Basic data

Health and Economic Context		Notes
Total population	8 355 000	
Population under 5 years	607 000	
Human Development Index	0.729	
HDI ranking	101	
GNI/PPP per capita (USD)	4890	
Under five mortality rate (UM5R) /1000	90↓	
Child malnutrition		
LBW (<2500g) (2000)	5	
Stunting (moderate + severe) (2000)	19.6	
Wasting (moderate + severe) (2000)	7.9	
Underweight (moderate + severe) (2000)	16.8	
Overweight (moderate + severe) (2001)	2.6	These data refer to 4 -59 months old children
Infant and young child feeding		
Ever breastfed (2004)	94	These data refer to a regional survey conducted in rural and internally displaced populations.
EBF at 0-5 months (2006)	12	
Continued breastfeeding at 20-23 months (2006)	16	
Micronutrient deficiencies		
Vitamin A Deficiency	-	
Anemia (2001)	32	These data refer to 12-59 months old children. In 2004 WFP survey found a rate of 52% in 6 economic areas, in children under 5 years .
Iodine deficiency (prevalence of goitre in school-aged children) (2004)	46	These data refer to a regional survey conducted in rural and internally displaced populations, with the highest prevalence in the mountainous regions. A survey in 1998-9 in 8-14 years old children showed a goitre prevalence of 84% in the Caucasus region.
Median urinary iodine excretion level mcg/l (1999)	54	These data refer to a regional survey conducted in 13 regions in 8-14 years old children

B. Policies, plans and programmes.

Infant and young child feeding		Notes
BFH/number of maternity hospitals	67/77	
Percentage of births in BFHs	67	
International Code	Yes	Enforced by local NGO
Maternity leave legislation	Yes	18 weeks at 100% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	Yes	A national Vit A supplementation program operates since the beginning of 2005 and is part of the national EPI program. WFP 2004 report a coverage of Vit A supplementation of 5%. UNICEF donation of supplies are programmed each year until 2007
Iron supplementation national programme/policy	Yes	Funds available under IMCI project in 2004-06.
Percentage of households with adequately iodized salt (> 15 PPM) (2000)	54	

Data sources: MICS, DHS, WHO/GD, WFP 2004

Belarus

A. Basic data.

Health and Economic Context		Notes
Total population	9 811 000	
Population under 5 years	444 000	
Human Development Index	0.786	
HDI ranking	67	
GNI/PPP per capita (USD)	7890	
Under five mortality rate (UM5R) /1000	11↓	
Child malnutrition (2005)		
LBW (<2500g)	4	
Stunting (moderate + severe)	2.5	
Wasting (moderate + severe)	1.3	
Underweight (moderate + severe)	1.0	
Overweight (moderate + severe)	6.7	
Infant and young child feeding (2005)		
Ever breastfed	74	
EBF at 0-5 months	9	
Continued breastfeeding at 20-23 months	4	
Micronutrient deficiencies		
Vitamin A Deficiency	-	
Anemia	-	
Iodine deficiency (prevalence of goitre in school-aged children) (2006)	13	In children 6-18 years old.
Median urinary iodine excretion level mcg/l (2006)	179	

B. Policies, plans and programmes.

Infant and young child feeding		Notes
BFH/number of maternity hospitals	26/119-	
Percentage of births in BFHs	35	
International Code	-	Some provisions
Maternity leave legislation	Yes	18 weeks at 100% of salary
Micronutrient deficiencies		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	-	
Iron supplementation national programme/policy	-	
Percentage of households with adequately iodized salt (> 15 PPM)	36	MOH, 2003

Data sources: MICS, WHO/GD

Bosnia and Herzegovina

A: Basic data

Health and Economic Context		Notes
Total population	3 909 000	
Population under 5 years	194 000	
Human Development Index	0.786	
HDI ranking	68	
GNI/PPP per capita (USD)	7790	
Under five mortality rate (UM5R) /1000	15↓	
Child malnutrition (2006)		
LBW (<2500g)	5	
Stunting (moderate + severe)	7.4	
Wasting (moderate + severe)	3.2	
Underweight (moderate + severe)	1.5	
Overweight (moderate + severe)	20.2	
Infant and young child feeding (2006)		
Ever breastfed	96	Value reported is the unweighted mean of two separate surveys for the Federation (96%) and Republic of Srpska (95%).
EBF at 0-5 months	18↑	Value reported is the unweighted mean of two separate surveys for the Federation and Republic of Srpska.
Continued breastfeeding at 20-23 m	10	Data representative for the Federation only.
Micronutrient deficiencies		
Vitamin A Deficiency	-	VAD not a public health problem.
Anemia (1999)	55	Data representative for the Federation only. Anaemia measured by Htc. Second highest rate among CEE/CIS countries after Albania (68.8 %, regional).
Iodine deficiency (prevalence of goitre in school-aged children) (2006)	8	
Median urinary iodine excretion level mcg/l (2006)	157	

B. Policies, plans and programmes

Infant and young child feeding (2006)		Notes
BFH/number of maternity hospitals	22/40	
Percentage of births in BFHs	65	
International Code	No	Yes in Republic of Srpska
Maternity leave legislation	Yes	26-52 weeks of maternity leave. No enforcement.
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	No	
Iron supplementation national programme/policy	No	No policy due to lack of evidence. In 2001 UNICEF funds (20 000 US\$) for training on anaemia of health professionals and distribution of iron syrups for children.
Percentage of households with adequately iodized salt (> 15 PPM) (2006)	79	Regional differences. In the Federation almost all salt is iodized with iodide because the existing regulations allow it. In Republika Srpska, potassium iodide is not allowed by the existing regulations, still more than one third of household salt is iodized with iodide.

Data sources: MOH and UNICEF, MOH, MICS, UNICEF.

Bulgaria

A. Basic data

Health and Economic Context		Notes
Total population	7 780 000	
Population under 5 years	332 000	
Human Development Index	0.808	
HDI ranking	55	
GNI/PPP per capita (USD)	8630	
Under five mortality rate (UM5R) /1000	15↓	
Child malnutrition (year)		
LBW(<2500g) (2001)	10	
Stunting (moderate + severe) (2004)	3.8	All these data refer to 12 to 59 months old children
Wasting (moderate + severe) (2004)	2.6	
Underweight (moderate + severe) (2004)	1.0	
Overweight (moderate + severe) (2004)	9.0	
Infant and young child feeding (2005)		
Ever breastfed	96	
EBF at 0-5 months	8	
Continued breastfeeding at 20-23 months	0.5	
Micronutrient deficiencies (year)		
Vitamin A Deficiency	-	
Anemia (1999)	32	
Iodine deficiency (prevalence of goitre in school-aged children) (2003)	4	These data refer to 7 to 11 years old children
Median urinary iodine excretion level mcg/l (2003)	198	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	5/110	
Percentage of births in BFHs	14	
International Code	-	
Maternity leave legislation	Yes	19 weeks at 90% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	-	
Iron supplementation national programme/policy	-	
Percentage of households with adequately iodized salt (> 15 PPM)	94	

Data sources: MOH, NCPHP, NBC, WHO/GD

Croatia

A: Basic data

Health and Economic Context		Notes
Total population	4 540 000	
Population under 5 years	210 000	
Human Development Index	0.841	
HDI ranking	45	
GNI/PPP per capita (USD)	12750	
Under five mortality rate (UM5R) /1000	7↓	
Child malnutrition (year)		
LBW (<2500g) (2000)	6	
Stunting (moderate + severe) (2004)	1	
Wasting (moderate + severe) (2004)	1	
Underweight (moderate + severe) (2004)	1	
Overweight (moderate + severe) (1996)	5.9	These data refer to 12-71 months old children
Infant and young child feeding (1996-2004)		
Ever breastfed	-	
EBF at 0-5 months	23	
Continued breastfeeding at 20-23 months	-	
Micronutrient deficiencies		
Vitamin A Deficiency	-	
Anemia (2001)	16	These data refer to 7-8 years old children
Iodine deficiency (prevalence of goitre in school-aged children)	-	
Median urinary iodine excretion level mcg/l (2002)	140	In children 6-12 years old.

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	15/34	
Percentage of births in BFHs	-	
International Code	-	
Maternity leave legislation	Yes	26 weeks at 100% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	-	
Iron supplementation national programme/policy	-	
Percentage of households with adequately iodized salt (> 15 PPM)	90	

Data sources: SoWC, MOH, WHO/GD

Georgia

A. Basic data

Health and Economic Context		Notes
Total population	4 518 000	
Population under 5 years	245 000	
Human Development Index	0.732	
HDI ranking	100	
GNI/PPP per capita (USD)	3270	
Under five mortality rate (UM5R) /1000	45↓	
Child malnutrition (2005)		
LBW (<2500g)	5	
Stunting (moderate + severe)	10.4↓	
Wasting (moderate + severe)	2.1↓	
Underweight (moderate + severe)	2.1↓	
Overweight (moderate + severe)	15.2↑	
Infant and young child feeding (2005)		
Ever breastfed	-	
EBF at 0-5 months	11	
Continued breastfeeding at 20-23 months	20	
Micronutrient deficiencies		
Vitamin A Deficiency	-	According to the country representative, it might be a mild health problem, but lacks of evidence.
Anemia (2000)	-	Available national data on iron deficiency in children under 15 years for 1991-01: 61% at 6-11 months, 32 % at 1-3 y and 28% at 3-6 y.
Iodine deficiency (prevalence of goitre in school-aged children) (2005)	32	In children 6-12 years old.
Median urinary iodine excretion level mcg/l (2005)	321	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	18/70	
Percentage of births in BFHs	31	
International Code	Yes	Regular from 1998, some violation still occurring
Maternity leave legislation	Yes	18 weeks at 100%. No monitoring in place.
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	No	No programme and policy because no evidence based information. It might be probably a mild public health problem
Iron supplementation national programme/policy	No	
Percentage of households with adequately iodized salt (> 15 PPM) (2005)	91	Second highest national coverage, after Kazakhstan (91.4%). Urban vs rural 89.6% vs 86 %. National range by regions: 78 – 94%.

Data sources: MICS, MOH IDD Survey, 1991-01 MOH survey.

Kazakhstan

A. Basic data

Health and Economic Context		Notes
Total population	14 839 000	
Population under 5 years	1 079 000	
Human Development Index	0.761	
HDI ranking	80	
GNI/PPP per capita (USD)	7730	
Under five mortality rate (UM5R) /1000	73↑	
Child malnutrition (2006)		
LBW (<2500g)	6↓	
Stunting (moderate + severe)	12.8	
Wasting (moderate + severe)	3.8	
Underweight (moderate + severe)	4.0	
Overweight (moderate + severe)	11.3	
Infant and young child feeding (2006)		
Ever breastfed	88↑	
EBF at 0-5 months	17	
Continued breastfeeding at 20-23 months	16↓	
Micronutrient deficiencies (year)		
Vitamin A Deficiency (2006)	57	In children 6-60 months of age; prevalence of severe VAD is 4. Updated national data will be available in 2006.
Anemia (1999)	36	In children 6-59 months old; rural vs urban 40.3% vs 30.1%. In 1995, for children 0-35 months of age, the prevalence of anaemia was 69.2 %.
Iodine deficiency (prevalence of goitre in school-aged children)	-	In women 15-49 years old
Median urinary iodine excretion level mcg/l	236	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	31/220	
Percentage of births in BFHs	35	
International Code	Yes	Old MOH orders being improved. No enforcement and monitoring in place.
Maternity leave legislation	Yes	18 weeks at 100% of salary.
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	No	No programme, policy and funds.
Iron supplementation national programme/policy	Yes	As a part of the Basic Benefit Package for children 0-59 months and pregnant women, since Dec 2005, countrywide. No policy and funds.
Percentage of households with adequately iodized salt (> 15 PPM) (2006)	92	Iodization is highest in Mangystau oblasts (99.6%) and lowest in the Pavlodar oblasts.(60.7). All other regions are above 84.8 %. No rural/urban differences.

Data sources: MICS, DHS, National Survey

Kyrgyzstan

A. Basic data

Health and Economic Context		Notes
Total population	5 204 000	
Population under 5 years	539 000	
Human Development Index	0.702	
HDI ranking	109	
GNI/PPP per capita (USD)	1870	
Under five mortality rate (UM5R) /1000	68↓	
Child malnutrition (2006)		
LBW (<2500g)	5	
Stunting (moderate + severe)	13.7↓	Urban 10.8 % vs rural 15.7%.
Wasting (moderate + severe)	3.5=	
Underweight (moderate + severe)	3.4↓	
Overweight (moderate + severe)	5.8=	
Infant and young child feeding (2006)		
Ever breastfed	89↑	
EBF at 0-5 months	32	
Continued breastfeeding at 20-23 months	26↓	
Micronutrient deficiencies		
Vitamin A Deficiency (2003)	33	
Anemia (2000)	42	These data refer to 0-35 months old children. Rural 53.1% versus urban 38.5
Iodine deficiency (prevalence of goitre in school-aged children)	-	
Median urinary iodine excretion level mcg/l (2006)	99	Regional data from 3 oblasts (Jalalabad, Naryn and Osh) in 6-8 years old children. A national status survey is planned for 2007.

B. Policies, plans and programmes.

Infant and young child feeding		Notes
BFH/number of maternity hospitals	25/57	
Percentage of births in BFHs	47	
International Code	-	
Maternity leave legislation	Yes	18 weeks at 100% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	47	
Vit A national programme/policy	Yes	Ongoing since 2004. It includes 6-59 months old children and women during the first eight weeks after delivery. The programme is supported by UNICEF.
Iron supplementation national programme/policy	-	
Percentage of households with adequately iodized salt (> 15 PPM) (2006)	76	

Data sources: MICS, WHO/GD

The Former Yugoslav Republic of Macedonia

A. Basic data

Health and Economic Context		Notes
Total population	2 030 000	
Population under 5 years	119 000	
Human Development Index	0.797	
HDI ranking	59	
GNI/PPP per capita (USD)	7080	
Under five mortality rate (UM5R) /1000	14↓	
Child malnutrition (2005)		
LBW (<2500g)	6	
Stunting (moderate + severe)	8.7	
Wasting (moderate + severe)	2.3	
Underweight (moderate + severe)	2.3	
Overweight (moderate + severe)	10.6↑	
Infant and young child feeding (2005)		
Ever breastfed	-	
EBF at 0-5 months	16	
Continued breastfeeding at 20-23 months	22	
Micronutrient deficiencies		
Vitamin A Deficiency (1999)	30	In children 0-59 months old.
Anemia (1999)	26	These data refer to 6 to 59 months old children. In the same year rates of anemia were 37% and 40 % respectively in 6-11 and 12-23 months old children; and rural vs urban 29% vs 23 %.
Iodine deficiency (prevalence of goitre in school-aged children) (2002)	6	In children 7-11 years old.
Median urinary iodine excretion level mcg/l (2002)	199	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	28/30	
Percentage of births in BFHs	85	
International Code	-	
Maternity leave legislation	Yes	38 weeks at 100% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months ()	-	
Vit A national programme/policy	-	
Iron supplementation national programme/policy	-	
Percentage of households with adequately iodized salt (> 15 PPM)	94	

Data sources: MICS 2005, MOH, WHO/GD.

Moldova

A. Basic data

Health and Economic Context		Notes
Total population	4 218 000	
Population under 5 years	211 000	
Human Development Index	0.671	
HDI ranking	115	
GNI/PPP per capita (USD)	2150	
Under five mortality rate (UM5R) /1000	28↓	
Child malnutrition (2005)		
LBW (<2500g)	6	
Stunting (moderate + severe)	8.4	
Wasting (moderate + severe)	3.9	
Underweight (moderate + severe)	4.3	
Overweight (moderate + severe)	-	
Infant and young child feeding (2005)		
Ever breastfed	97	
EBF at 0-5 months	46	
Continued breastfeeding at 20-23 months	2	
Micronutrient deficiencies (year)		
Vitamin A Deficiency	-	
Anemia (2005)	32	In children 6-59 months old.
Iodine deficiency (prevalence of goitre in school-aged children)	27-41	In 1996-98, in children. Most probably in school age children.
Median urinary iodine excretion level mcg/l	78	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	27/45	
Percentage of births in BFHs	67	
International Code	-	
Maternity leave legislation	Yes	18 weeks at 100% of salary.
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	-	
Iron supplementation national programme/policy	-	
Percentage of households with adequately iodized salt (> 15 PPM) (2005)	60	The level of iodization is greatest in Chisinau (84%) and lowest in the South region (only 44 %) consume adequately iodized salt.

Data sources: DHS, MOH.

Romania

A. Basic data

Health and Economic Context		Notes
Total population	21 790 000	
Population under 5 years	1 063 000	
Human Development Index	0.792	
HDI ranking	64	
GNI/PPP per capita (USD)	8940	
Under five mortality rate (UM5R) /1000	20↓	
Child malnutrition (year)		
Low birth weight (2004)	9	
Stunting (moderate + severe) (2004)	5.9	
Wasting (moderate + severe) (2004)	4.4	
Underweight (moderate + severe) (2004)	5.5	
Overweight (moderate + severe) (2002)	4.2↓	
Infant and young child feeding (2004)		
Ever breastfed	88↓	
EBF at 0-5 months	16	
Continued breastfeeding at 20-23 months	32	
Micronutrient deficiencies (year)		
Vitamin A Deficiency	-	
Anemia (2004)	23	For age group 11-23 months, urban vs rural is 48% vs 65%.
Iodine deficiency (prevalence of goitre in school-aged children)	-	Most probably in school children.
Median urinary iodine excretion level mcg/l (2004)	100	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	22/237	
Percentage of births in BFHs	23	
International Code	In progress	No reinforcement and monitoring in place.
Maternity leave legislation	Yes	18 weeks at 85% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	No	
Iron supplementation national programme/policy	Yes	National Policy and funds by MOH since 2001, iron supplementation for pregnant women and children under 2 years of age.
Percentage of households with adequately iodized salt (> 15 PPM)	74	

Data sources: WHO/GD, MOH, RHS.

Russian Federation

A. Basic data

Health and Economic Context		Notes
Total population	143 899 000	
Population under 5 years	7 052 000	
Human Development Index	0.795	
HDI ranking	62	
GNI/PPP per capita (USD)	10640	
Under five mortality rate (UM5R) /1000	21	
Child malnutrition (year)		
LBW (<2500g) (2001)	6	
Stunting (moderate + severe) (2005)	12.3	
Wasting (moderate + severe) (2005)	12.7	
Underweight (moderate + severe) (2005)	4.2	
Overweight (moderate + severe) (1993)	20.9	
Infant and young child feeding (year)		
Ever breastfed	-	
EBF at 0-5 months	-	
Continued breastfeeding at 20-23 months	-	
Micronutrient deficiencies		
Vitamin A Deficiency	-	
Anemia (2001)	33.8	These data are regional, from Ingushetzia, and refer to 6-59 months old children
Iodine deficiency (prevalence of goitre in school-aged children) (2004)	8-30	Range is some regions
Median urinary iodine excretion level mcg/l	60-110	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	240/3000	
Percentage of births in BFHs	21	
International Code	-	Draft waiting for MOH approval
Maternity leave legislation	Yes	20 weeks at 100% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months ()		
Vit A national programme/policy	No	
Iron supplementation national programme/policy	No	
Percentage of households with adequately iodized salt (> 15 PPM) (2004)	35	These data are provided by MOH but neither the method used nor the sample size is specified

Data sources: RLMS, WHO/GD, MOH

Serbia & Montenegro*

A. Basic data

Health and Economic Context		Notes
Total population	10 510000	For Serbia & Montenegro.
Population under 5 years	611 000	
Human Development Index	-	
HDI ranking	-	
GNI/PPP per capita (USD)	3280	For Serbia & Montenegro, but Kosovo excluded.
Under five mortality rate (UM5R) /1000	15↓	For Serbia & Montenegro.
Child malnutrition (2005)		
LBW (<2500g)	5	Range
Stunting (moderate + severe)	5.2-5.9	
Wasting (moderate + severe)	2.9-3.3	
Underweight (moderate + severe)	1.6-2.6	
Overweight (moderate + severe)	12.9-15.3	
Infant and young child feeding (2005)		
Ever breastfed	-	Range
EBF at 0-5 months	15-19	
Continued breastfeeding at 20-23 months	8-13	
Micronutrient deficiencies (year)		
Vitamin A Deficiency	-	
Anemia (2000)	20-31	Rnage, in children 6-59 months old.
Iodine deficiency (prevalence of goitre in school-aged children) (2000)	2	For Serbia & Montenegro. In children 7-14 years old.
Median urinary iodine excretion level mcg/l (2000).	158	Range

B. Policies, plans and programmes. **

Infant and young child feeding (2006)		Notes
BFH/number of maternity hospitals	49/59	7/12 in Mnt
Percentage of births in BFHs	82	42 in Mnt
International Code	Yes	Monitoring and enforcement in place by IBFAN groups.
Maternity leave legislation	Yes	52 weeks at 100% of salary. No monitoring and enforcement in place.
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	Yes	Partially: a mandatory use of vitamin A drops in all children; covered by National Health Insurance funds.
Iron supplementation national programme/policy	Yes	For anemic pregnant women and anemic children under five years of age; covered by National Health Insurance funds.
Percentage of households with adequately iodized salt (> 15 PPM) (2000)	71 (Mon)-73 (Ser)	Range

* A single value in the cell refers to Serbia & Montenegro, unless differently specified; two values in the cell represent separately data for Serbia and for Montenegro respectively.

** All data in this section, with the exception for adequately iodized salt, are representative for Serbia only.

Data sources: MICS, UNICEF.

Kosovo

A. Basic data

Health and Economic Context		Notes
Total population	~ 2 000 000	
Population under 5 years	-	
Human Development Index	-	
HDI ranking	-	
GNI/PPP per capita (USD)	-	
Under five mortality rate (UM5R) /1000	-	
Child malnutrition (2001)		
LBW (<2500g) (2005)	6	
Stunting (moderate + severe)	9.8↓	
Wasting (moderate + severe)	4.4↑	
Underweight (moderate + severe)	5.4↑	
Overweight (moderate + severe)	8.4↓	In 1996 rate for severe overweight was 2.9%.
Infant and young child feeding (2001)		
Ever breastfed	90↑	
EBF at 0-5 months	12↑	
Continued breastfeeding at 20-23 months	28↑	
Micronutrient deficiencies (2001)		
Vitamin A Deficiency	36	In children 6-59 months old. Prevalence of severe VAD was 0.7%.
Anemia	19	In children 6-59 months old. Prevalence of severe anemia was 0.6%. The same source reports the iron deficiency prevalence in the same age group of 21.9%.
Iodine deficiency (prevalence of goitre in school-aged children)	0	In children 6-12 years old.
Median urinary iodine excretion level mcg/l (2001).	122	

B. Policies, plans and programmes.

Infant and young child feeding (2006)		Notes
BFH/number of maternity hospitals	17/21	
Percentage of births in BFHs	80	
International Code	Yes	Monitoring and enforcement not in place yet.
Maternity leave legislation	-	
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	Yes	Programme for children under 2 years and post partum women., with coverage 95%. In 2007 will be discontinued. No national policy or funds. Vitamin a capsules were a donation from CIDA, Canada.
Iron supplementation national programme/policy	No	
Percentage of households with adequately iodized salt (> 15 PPM) (2001)	84	The highest prevalence of non-iodised salt was found in Gllagoci (61%) followed by Leposavic (32%) and Lipljan and Obiliqi (31%). Serbian population living in urban areas showed a significantly highest prevalence of use of non iodised salt (20%) followed by Albanians living in rural areas (15%); in Serbian population living in rural areas this prevalence was 8% while in Albanian population living in urban areas was 6%

Data sources: MSS, MICS

Tajikistan

A. Basic data

Health and Economic Context		Notes
Total population	6 430 000	
Population under 5 years	839 000	
Human Development Index	0.652	
HDI ranking	122	
GNI/PPP per capita (USD)	1260	
Under five mortality rate (UM5R) /1000	118↓	
Child malnutrition (2005)		
LBW (<2500g)	10	
Stunting (moderate + severe)	27.0	
Wasting (moderate + severe)	7.2	
Underweight (moderate + severe)	17.4	
Overweight (moderate + severe)	3.6	
Infant and young child feeding (2005)		
Ever breastfed	-	
EBF at 0-5 months	25	
Continued breastfeeding at 20-23 months	34=	
Micronutrient deficiencies (year)		
Vitamin A Deficiency (2005)	30	In children 6-59 months; rate of severe VAD is 3.6%.
Anemia (2003)	38	In children 6-59 months. The rates for moderate, mild and severe are respectively 21 %, 15.8% and 0.9 %. The same source reports the iron deficiency rate 39 % in the same population, measured as serum level of transferrin receptor.
Iodine deficiency (prevalence of goitre in school-aged children) (2003)	45-82	Not specified the age group, but refers to children.
Median urinary iodine excretion level mcg/l (2003).	73	In children 6-59 months old.

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	21/86	
Percentage of births in BFHs	35	
International Code	Yes	Adopted by Parliament, waiting govt. approval
Maternity leave legislation	Yes	Monitoring and enforcement in place, by MOH.
		20 weeks at 100% of salary. Monitoring and enforcement in place.
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months (2005)	47	
Vit A national programme/policy	Yes	Since 2003; coverage 98 % in 2006. UNICEF funding in 2006, not sufficient.
Iron supplementation national programme/policy	Yes	For children under 5 years and pregnant women. UNICEF funding in 2006, not sufficient.
Percentage of households with adequately iodized salt (> 15 PPM) (2005)	58	Use of iodized salt was highest in Sogd (75%) and lowest in Khatlon (27%), and twice as high among richest quintile of the population (63 percent) as compared to the poorest (31 percent).

Data sources: MICS, MSS, MOH.

Turkey

A. Basic data

Health and Economic Context		Notes
Total population	72 220 000	
Population under 5 years	7 236 000	
Human Development Index	0.75	
HDI ranking	94	
GNI/PPP per capita (USD)	8420	
Under five mortality rate (UM5R) /1000	32↓	
Child malnutrition (year)		
LBW (<2500g) (2003)	8	
Stunting (moderate + severe) (2003)	12.2↓	Urban 2.6% vs rural 5.6%. Gender differences: females 2.9% versus males 4.5%.
Wasting (moderate + severe) (2003)	0.7↓	
Underweight (moderate + severe) (2003)	3.9↓	
Overweight (moderate + severe) (1998)	2.2	Reported – not measured - data
Infant and young child feeding (2003)		
Ever breastfed	97↑	
EBF at 0-5 months	21↑	
Continued breastfeeding at 20-23 months	24	
Micronutrient deficiencies (year)		
Vitamin A Deficiency (2000)	16	Regional data from Izmir region in 6-59 months old children
Anemia (2002)	35	These data refer to 24-71 months old children.
Iodine deficiency (prevalence of goitre in school-aged children) (1998-9)	30	These data refer to 6-12 years old children from 15 Turkish regions
Median urinary iodine excretion level mcg/l (2002).	75	These data refer to 6-12 years old children.

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	520/915	
Percentage of births in BFHs	54	
International Code		Draft waiting for approval
Maternity leave legislation	Yes	16 weeks
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	No	
Iron supplementation national programme/policy	Yes	Started in April 2004 in children 6-24 months old. So far 2.172.000 children were reached. MOH funding.
Percentage of households with adequately iodized salt (> 15 PPM)	64	These data include households receiving both iodide and iodate. 4.5% households receiving only iodate.

Data sources: DHS,WHO/GD

Turkmenistan

A. Basic data

Health and Economic Context		Notes
Total population	4 766 000	
Population under 5 years	484 000	
Human Development Index	0.738	
HDI ranking	97	
GNI/PPP per capita (USD)	-	GNI per capita : estimated to be "lower middle" income → 876-3465 USD
Under five mortality rate (UM5R) /1000	103↑	
Child malnutrition (2000)		
LBW (<2500g)	6	
Stunting (moderate + severe)	22.3	
Wasting (moderate + severe)	5.7	
Underweight (moderate + severe)	12.0	
Overweight (moderate + severe)	2.5	
Infant and young child feeding (2000)		
Ever breastfed	97	
EBF at 0-5 months	5	
Continued breastfeeding at 20-23 months	25	
Micronutrient deficiencies		
Vitamin A Deficiency	-	
Anemia (2000)	36	These data refer to 6-59 months old children. Rural 32.6% versus urban 40.9%
Iodine deficiency (prevalence of goitre in school-aged children)	2	
Median urinary iodine excretion level mcg/l (2004).	170	These data refer to 8-10 years old children.

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	52/64	
Percentage of births in BFHs	81	
International Code	Yes	Draft waiting for approval
Maternity leave legislation	Yes	16 weeks at 100% of salary
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months (NA)	-	
Vit A national programme/policy	-	
Iron supplementation national programme/policy (2000)	Yes	Started in 1998 with UNICEF Anemia and Prevention Control Programme in Dashoguz Velayat, expanded to Balkan Velayat in 2000.
Percentage of households with adequately iodized salt (> 15 PPM) (2004)	100	

Data sources: DHS, MOH, UNICEF

Ukraine

A. Basic data

Health and Economic Context		Notes
Total population	46 989 000	
Population under 5 years	1 930 000	
Human Development Index	0.766	
HDI ranking	78	
GNI/PPP per capita (USD)	6270	
Under five mortality rate (UM5R) /1000	18↓	
Child malnutrition (year)		
Low birth weight (2005)	4	
Stunting (moderate + severe) (2002)	2.7	CDC survey in children 6-35 months old
Wasting (moderate + severe) (2002)	0.2	
Underweight (moderate + severe) (2002)	1.0	
Overweight (moderate + severe) (2002)	20.1	
Infant and young child feeding (year)		
Ever breastfed (2005)	-	
EBF at 0-5 months	6	
Continued breastfeeding at 20-23 months	11	
Micronutrient deficiencies (year)		
Vitamin A Deficiency	-	
Anemia (2004)	22	In children 6-35months old.
Iodine deficiency (prevalence of goitre in school-aged children)	-	Not available for children, available only rates for women 15-49 years old.
Median urinary iodine excretion level mcg/l	90	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	72/1390	
Percentage of births in BFHs	35	
International Code	Yes*	*some provisions as MOH order. Monitoring and enforcement by survey in 2006.
Maternity leave legislation	Yes	18 weeks s at 100% of salary. Monitoring and enforcement in place.
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months	-	
Vit A national programme/policy	-	
Iron supplementation national programme/policy	No	
Percentage of households with adequately iodized salt (> 15 PPM) (2005)	18	

Data sources: WHO/GD, MICS, MOH

Uzbekistan

A. Basic data

Health and Economic Context		Notes
Total population	26 209 000	
Population under 5 years	2 815 000	
Human Development Index	0.694	
HDI ranking	111	
GNI/PPP per capita (USD)	2020	
Under five mortality rate (UM5R) /1000	69↓	
Child malnutrition (2006)		
LBW (<2500g)	5	
Stunting (moderate + severe)	14.6↓	
Wasting (moderate + severe)	3.3↓	
Underweight (moderate + severe)	5.1↓	
Overweight (moderate + severe)	7.3	
Infant and young child feeding (2006)		
Ever breastfed	-	
EBF at 0-5 months	26↑	
Continued breastfeeding at 20-23 months	38↑	
Micronutrient deficiencies (year)		
Vitamin A Deficiency (2002)	53	This value refers to Ferghana valley, the most fertile region of Uzbekistan. The rate of severe VAD from the same survey is 9%.
Anemia (2006)	33↓	In children 6-59 months old, while stratified for severity grade the rates for moderate, mild and severe anemia are respectively: 20%, 13% and 0%. The most recent data is from 2005, but not national: 33% in children 6-59 months old.
Iodine deficiency (prevalence of goitre in school-aged children)	-	Available data: percentage of school age children with iodine urinary excretion level < 100 and <50 mcg/l is respectively: 39.8 and 19.9 (2005).
Median urinary iodine excretion level mcg/l	141	

B. Policies, plans and programmes.

Infant and young child feeding (year)		Notes
BFH/number of maternity hospitals	32/186	
Percentage of births in BFHs	20	
International Code	Yes	Monitoring and enforcement in place, by the MOH.
Maternity leave legislation	-	
Micronutrient deficiencies (year)		
Children who received Vit A supplementation within the last 6 months (2005)	72	
Vit A national programme/policy	Yes	National policy available and in 2006 38 212 US \$ by CIDA.
Iron supplementation national programme/policy	Yes	Since 2003, the National programme for pregnant women and children under 5 years, in 8 out of 14 regions.
Percentage of households with adequately iodized salt (> 15 PPM) (2006)	53	Urban vs rural: 61.9% vs 47.8 %. Poorest (45.6%) vs richest quintile (66.9%). Highest in Tashkent (71.1%) vs lowest in the East (42.9%).

Data sources: MICS, MOH, DHS, APCP