



Annexes

HUMAN DEVELOPMENT-RELATED ANNEXES

Annex 1.1. Human Development Index Methodology

HDI is a synthesis of the human development based on three major goals of development:

- Longevity – as expressed by life expectancy at birth.
- Education – computed as weighted arithmetic average of the adult literacy rate (with a share of two thirds) and of global gross enrolment rate (one third).
- Living standards – estimated as GDP per capita expressed in US dollars at Purchasing Power Parity.

Based on minimum and maximum values (goalposts) established by UNDP for each indicator, the specific index for each of the three dimensions is computed as follows:

$$I_s = \frac{V_{real} - V_{min}}{V_{max} - V_{min}}$$

where:

I_s – specific index;

V_{real} – actual value of indicator;

V_{min} – minimal value;

V_{max} – maximal value.

The GDP index is calculated as difference between logarithmic values.

The extreme goalposts and the actual values for the Republic of Moldova used for calculating the HDI are the following:

Indicator	Maximum value	Minimum value	Actual value
Life expectancy at birth, years	85	25	69.4
Adult literacy rate (%)	100	0	99.1
Global gross enrolment rate (%)	100	0	68.9
GDP per capita at PPP, US dollars	40,000	100	2,986

HDI is calculated as arithmetic average of the specific indices:

$$HDI = \frac{I_{LE} + I_E + I_{GDP}}{3}$$

Below there is an illustration of the calculation of the HDI for the Republic of Moldova in 2008.

a. Life expectancy index (I_{LE})

$$I_{LE} = \frac{69.4 - 25}{85 - 25} = 0.740$$

b. Education index (I_E)

b.1. Alphabetisation index (I_A)

$$I_A = \frac{99.1 - 0.0}{100.0 - 0.0} = 0.991$$

b.2. Index of the global gross enrolment index (I_{GER})

$$I_{GER} = \frac{69.8 - 0.0}{100.0 - 0.0} = 0.698$$

By combining the two education indices with the corresponding weights one gets:

$$I_E = \frac{2I_A + I_{GER}}{3} = 0.893$$

c. The GDP index (I_{GDP})

$$I_{GDP} = \frac{\log 2986 - \log 100}{\log 40000 - \log 100} = 0.567$$

As result, the Human Development Index

$$HDI = \frac{0.740 + 0.893 + 0.567}{3} = 0.733$$

Annex 1.2. Gender-related Development Index (GDI)

GDI adjusts the level of human development to the gender differences in the three major areas of human development. The calculation of the GDI involves three stages:

a. Calculation of the gender disaggregated specific indices ($I_{F/M}$), according to the general formula:

$$I_{F/M} = \frac{V_{real} - V_{min}}{V_{max} - V_{min}}$$

where:

$I_{F/M}$ – specific index for women / men;

V_{real} – actual value of indicator;

V_{min} – minimal value;

V_{max} – maximal value.

b. The female and male indices are combined in a way that the differences between achievements in each dimension are perceived as negative factors and penalised. The resulting index, referred to as Equally distributed index (I_{EDI}), is calculated according to the following general formula:

$$I_{EDI} = (P_F * I_F^{1-\epsilon} + P_M * I_M^{1-\epsilon})^{\frac{1}{1-\epsilon}}$$

where:

I_{EDI} – equally distributed index;

P_F and P_M – shares of females / males in total population;

ϵ – a measure of aversion to inequality. For GDI the UNDP has established the $\epsilon=2$ for which the general formula transforms in a simple harmonic average of the indices calculated for men and women:

$$I_{EDI} = \frac{1}{\frac{P_F}{I_F} + \frac{P_M}{I_M}}$$

c. GDI is calculated as simple arithmetic average of the equally distributed specific indices:

$$GDI = \frac{I_{LEEDI} + I_{EEDI} + I_{GDPEDI}}{3}$$

where:

I_{LEEDI} – equally distributed life expectancy index;

I_{EEDI} – equally distributed education index;

I_{GDPEDI} – equally distributed income index.

d. Calculation of the equally distributed income index is rather complex. For its calculation the following data are necessary:

Total number of population;

GDP per capita, US dollars at PPP;

W_f/W_m – ratio of the female wage to male wage in non-agricultural activities;

E_f – share of women in economically active population;

E_m – share of men in economically active population;

S_f – contribution of women to total income;

Y – total GDP calculated in US dollars at PPP;

N_f – total number of women;

N_m – total number of men;

Y_f – estimated income received by women (US dollars at PPP);

Y_m – estimated income received by men (US dollars at PPP);

The extreme and actual values of the Republic of Moldova (except GDP which is computed below) used for GDI are included in the table below:

Indicator	Maximum value	Minimum value	Actual value
Women life expectancy at birth, years	87.5	27.5	73.2
Men life expectancy at birth, years	82.5	22.5	65.6
Women alphabetisation rate (%)	100	0	98.5
Men alphabetisation rate (%)	100	0	99.7
Global gross enrolment rate of women (%)	100	0	73.2
Global gross enrolment rate of men (%)	100	0	66.6
GDP per women, US dollars, PPP	40,000	100	
GDP per men, US dollars, PPP	40,000	100	

Other indicators used for calculation are:

- GDP per capita at PPP: 2,986 US dollars
- Total population: 3,570.1 thousand

Women: 1,853.9 thousand

Men: 1,716.2 thousand

- Share in total population of (%):

Women: 51.9

Men: 48.1

- Share in economically active population of (%):

Women: 49.4

Men: 50.6

- Ratio of women wage to men wage in non-agricultural activities (%): 70.1.

Based on the data above the following specific indices are calculated:

- Equally distributed life expectancy index (I_{LEEDI})

- Gender disaggregated life expectancy indices:

Women:

$$I_{LEF} = \frac{73.2 - 27.5}{87.5 - 27.5} = 0.762$$

Men:

$$I_{LEM} = \frac{65.6 - 22.5}{82.5 - 22.5} = 0.718$$

- Equally distributed life expectancy index:

$$I_{LEEDI} = \frac{1}{\frac{0.519}{0.762} + \frac{0.481}{0.718}} = 0.740$$

- Equally distributed education index (I_{EEDI})

- Gender disaggregated alphabetisation indices:

Women

$$I_{AF} = \frac{98.5 - 0.0}{100.0 - 0.0} = 0.985$$

Men

$$I_{AM} = \frac{99.7 - 0.0}{100.0 - 0.0} = 0.997$$

- Gender disaggregated enrolment indices:

Women

$$I_{GERF} = \frac{73.2 - 0.0}{100.0 - 0.0} = 0.732$$

Men

$$I_{GERM} = \frac{66.6 - 0.0}{100.0 - 0.0} = 0.666$$

b.3. Gender disaggregated education indices:

Women

$$I_{EF} = \frac{2I_{AF} + I_{GERF}}{3} = \frac{2 * 0.985 + 0.732}{3} = 0.901$$

Men

$$I_{EM} = \frac{2I_{AM} + I_{GERM}}{3} = \frac{2 * 0.997 + 0.666}{3} = 0.887$$

Equally distributed education index:

$$I_{EEDI} = \frac{1}{\frac{0.519}{0.901} + \frac{0.481}{0.887}} = 0.894$$

c. Equally distributed income index (I_{GDPEDI})c.1. Index of females contribution to total income (S_f)

$$S_f = \frac{\frac{W_f}{W_m} E_f}{\frac{W_f}{W_m} E_f + E_m} = \frac{0.701 * 49.4}{0.701 * 49.4 + 50.6} = 0.406$$

c.2. Gender disaggregated income:

GDP per women:

$$Y_f = \frac{S_f * Y}{N_f} = \frac{0.406 * 106603186}{1853.9} = 2335 \text{ US dollars}$$

GDP per men:

$$Y_m = \frac{Y - S_f * Y}{N_m} = \frac{106603186 - 0.406 * 106603186}{1716.2} = 3690 \text{ US dollars}$$

c.3. Gender disaggregated income indices:

Women

$$I_{GDPF} = \frac{\log 2335 - \log 100}{\log 40000 - \log 100} = 0.526$$

Men:

$$I_{GDPM} = \frac{\log 3690 - \log 100}{\log 40000 - \log 100} = 0.602$$

Equally distributed income index:

$$I_{GDPEDI} = \frac{1}{\frac{0.519}{0.526} + \frac{0.481}{0.602}} = 0.560$$

Applying the simple arithmetic average, the Gender-related Development Index is:

$$GDI = \frac{0.740 + 0.894 + 0.560}{3} = 0.731$$

Annex 1.3. Gender Empowerment Measure

The Gender Empowerment Measure is calculated based on explicitly defined variables measuring the opportunities (capabilities) women have for participating in political and economic decisions and for controlling their economic resources:

1. The distribution of seats in Parliament by gender is used as an estimate for degree of participation in political decisions;
2. For illustrating women's participation in economic life the following ratios are used:
 - Share of women out of total number of managers and senior officials in public administration and socio-economic units;
 - Share of women out of total number of professionals employed in intellectual and scientific occupations.
3. Women's control over economic resources is estimated based on gender disaggregated GDP per capita (unadjusted).

For each of the three dimensions an equally distributed equivalent percentage is calculated (EDEP), using the following formula:

$$I_{EDEP} = (P_F * \%I_F^{1-\varepsilon} + P_M * \%I_M^{1-\varepsilon})^{\frac{1}{1-\varepsilon}}$$

where:

P_F and P_M – the shares of females/males in total population;

$\%I_F$ and $\%I_M$ – the gender indices for every of the three dimensions.

To adjust the respective dimension of development to gender disparities, as in the case of the GDI, a weighted formula is used with the aversion index $\varepsilon = 2$.

For the first two dimensions the EDEP is indexed by dividing them by 50. The indexation is based on the hypothesis that in an ideal society women's participation in decision making is equal to that of the men.

Besides the data used for calculating the GDI, other indicators used for calculating the GEM are:

- Share in Parliament (%):

Women: 21.8

Men: 78.2

- Managers and senior officials in public administration and socio-economic units (%):

Women: 37.9

Men: 62.1

- Professionals employed in intellectual and scientific occupations (%)

Women: 63.4

Men: 36.1

Calculation of the GEM involves three steps:

- a. The EDEP for participation in political decision making is calculated based on female and male shares in total population and in Parliament seats (IDP):

$$EDEP = \frac{1}{\frac{P_F}{\%M_F} + \frac{P_M}{\%M_M}} = \frac{1}{\frac{0.519}{21.8} + \frac{0.481}{78.2}} = 33.38$$

where $\%M_F$ and $\%M_M$ is share of women and, respectively, share of men in Parliament seats

$$IDP = \text{Indexed EDEP for parliamentary representation} = EDEP : 50 = 0.668$$

b. The index for participation in economic decision making and economic life is calculated as follows:

b.1. for manager and senior officials in public administration and socio-economic units (IC):

$$EDEP = \frac{1}{\frac{P_F}{\%C_F} + \frac{P_M}{\%C_M}} = \frac{1}{\frac{0.519}{37.9} + \frac{0.481}{62.1}} = 46.64$$

where $\%C_F$ and $\%C_M$ are expressions of the female and male shares in this group of occupations

$$IC = \text{Indexed EDEP for positions as managers and senior officials} = EDEP : 50 = 0.933$$

b.2. for professionals with intellectual and scientific occupation (IS):

$$EDEP = \frac{1}{\frac{P_F}{\%S_F} + \frac{P_M}{\%S_M}} = \frac{1}{\frac{0.519}{63.4} + \frac{0.481}{36.6}} = 46.89$$

where $\%S_F$ and $\%S_M$ are the shares of women and men in this group of occupations

$$IS = \text{Indexed EDEP for intellectuals and scientists} = EDEP : 50 = 0.938.$$

The average of the indices referring to these two groups of occupations represents the degree of participation of women in economic decision making and economic life (I_{DE})

$$I_{DE} = \frac{I_C + I_S}{2} = 0.936$$

c. The equally distributed income (I_{GDPEd}).

The gender disaggregated equally distributed income indices (I_{GDPF} and I_{GDPM}) are calculated based on unadjusted GDP per women and per men (no logarithmic values).

Women:

$$I_{GDPF} = \frac{2335 - 100}{40000 - 100} = 0.056$$

Men:

$$I_{GDPM} = \frac{3690 - 100}{40000 - 100} = 0.090$$

I_{GDPEd} is calculated according to the same algorithm as the GDI.

$$I_{GDPEd} = \frac{1}{\frac{P_F}{I_{GDPF}} + \frac{P_M}{I_{GDPM}}} = \frac{1}{\frac{0.519}{0.056} + \frac{0.481}{0.090}} = 0.068$$

The GEM is calculated as simple arithmetic average of the three equally distributed indices

$$GEM = \frac{0.668 + 0.936 + 0.068}{3} = 557$$

CLIMATE CHANGE-RELATED ANNEXES

Annex 2.1. Methods used for the comparative adaptive capacity analysis

Indices used in other analyses of adaptive capacity

“The selection of indicators and the measurement process represent a theoretical reasoning and prediction. One of the main challenges that indicator studies face is that of finding reliable data” (Adger 2004). National level studies usually use proxy indicators for economic capacity, human and civic resources and environmental capacity (see for example Adger 2004; Brooks 2005; Füssel 2005 or Klein 2002): Economic well-being corresponds to proxy variables such as GDP per capita, Gini Index, Debt repayments or more generally to economic values and competing demands etc. Proxies for health and nutrition are education expenditure (Percent of government expenditure or Percent of GNP) or the literacy rate (Percent of population over 15). Geographical and demographic factors are related to population, population development and population density, but also to accessibility. A dependence on agriculture can be measured in terms of agricultural employees, rural population, sectoral value added shares or agricultural exports. Alberini and Chiabai (2005) determine adaptive capacity of two hypothetical countries by a vector system of seven attributes, including per capita income, inequality in the distribution of income, measures of the health status of the population, the health care system, and access to information. Based on expert judgments, coefficients on these rankings were used to construct an index of countries with highest to lowest adaptive capacity.

Rationale for focusing on indicators on the regional economic structure

The justification for extensively using variables describing the sectoral composition of the regional economy is – partly – provided by classical growth theory [explicitly in the Cambridge view of classical growth theory]. The core idea of the classical theory is that a surplus is the determinant of growth (an idea that was brought up again in John von Neumann’s work). While early in economic theory, growth was usually seen as an ongoing industrialisation, Schumpeter argued in his Theory of Economic Development that there are – in general – no diminishing returns to innovation; therefore a growing economy is characterized by alternating changes in the economic environment. Consequently, growth leads to economies of scale and may lead to permanently high industrial concentration and high profits (Schumpeter 1934 /1997) which results in growth again. But even Schumpeter mentioned limiting factors, such as a lack of credit or a lack of human resources (which is broadly spoken nothing else than a lack of “entrepreneurs”).

Following Kaldor, productivity encourages increased competitiveness which in turn leads to an additional increase in demand, with the manufacturing sector being the driver of growth. Kaldor’s first law states that the manufacturing sector is the engine of growth. It exhibits higher productivity increases due to increasing returns to scale and can incorporate technological progress more easily, thereby inducing growth in the rest of the economy. In Kaldor’s second law a positive relationship between labour productivity in the industrial sector and output productivity is hypothesised, while the third law claims a positive relationship between the labour productivity of the total economy and of manufacturing production (see Aumayr Ch. 2008). Based on the classical demand-driven growth models, the Kiel school focused on technological change as the big crucial variable that is constantly leading to increases in the rate of return on capital and thus higher investment.

Another important contribution was made by Lewis and Singer: again growth is driven by industry, but industrialisation strongly depends on social development as a whole. Therefore human capital, education and demographic developments are not seen “just” as limiting factors in theoretical considerations but as necessary pre-requisites which have to be applied to the framework of growth theory. As a result, structural issues were incorporated into the theory, namely urbanisation, agricultural transformation, education, health, unemployment, inequality or population changes. Additionally, the stage theory of economic development suggests that underdeveloped economies develop institutions and standards of living over time and catch up in different stages of development.

Recent work proves empirical evidence to support the classical ideas; Rowthorn/Ramaswamy (1997) – for example (for an overview of recent literature see Aumayr 2008) – present a 3-sector closed economy model which illustrates the hypothesis that deindustrialization is a “natural” consequence of the process of development, because productivity in the manufacturing sector expands faster than that in the service sector. They claim that it is not the decline in demand for manufacturing products that serves as a major explanation for the secular decline of manufacturing employment after the mid 60s in the US, Japan and Europe, but essentially productivity differentials between services and industry (Rowthorn 1997).

Box 25. Indicators used to measure adaptive capacity on the regional level

DEMOGRAPHY: Regionalized Population Projections 2025: This indicator illustrates the forecasted number of inhabitants in each of the analysed regions for the year 2025. The population of 2001 serves as a basis and is set to 100. All regions average on a population projection of 84. Therefore the studied area as a whole is characterised by depopulation.

Education Level [ISCED3_6] in relation to the average of all regions: The regional education level is measured according to the ISCED (International Standard Classification of Education). Different ISCED levels represent different levels of education, reaching from the pre-primary level of education to the second stage of tertiary education. Unfortunately the ISCED comparisons between different countries are difficult because schools in different countries that are classified at the same ISCED level may not provide the same programmes or have the same function. The indicator used in the cluster analysis gives the education level of a certain region in terms of the average of all regions, which is set to 100. For the regions considered in the cluster analysis the mean of this indicator amounts to 96.

WEALTH: Growth rate of Regional GDP per habitant/pps 2001-05: For measuring economic growth generally the growth rate of the regional gross domestic product per capita is taken. Since national statistical offices usually provide the (regional) GDP in national currency and differences in the price levels have to be taken into account, Purchasing Power Standards are implemented. The indicator used in the cluster analysis gives the rate at which the regional GDP per capita, measured in purchasing power standards, grew between the years 2001 and 2005. The regional GDP growth rate of all regions included in the cluster analysis averages at 138 per cent.

Ratio of Regional GDP per habitant/pps in terms of national average: The regional GDP per capita is an indicator of a region’s total production. Therefore it can be used to measure and compare the degree of economic development of different regions within a country. This proxy indicator allows for further consideration of regional disparities on the national level. The indicator used in the cluster analysis gives the per capita GDP of a region measured in Purchasing Power Standards in terms of the national average. Values below 100 indicate that the region’s per capita GDP is below the national average whereas values above 100 indicate that the region has a GDP per inhabitant that lies above the national average.

THE STRUCTURE OF THE ECONOMY: Regional Employment Shares: Regional employment shares indicate the regional proportion of employees in the population of working age.

Sectoral Employment Shares: The sectoral employment shares indicator illustrates the distribution of a region’s total employment in the agricultural, industrial and service sectors. Within the regions included in the cluster analysis, the agricultural sector on average accounts for 35 per cent of total employment, whereas the industrial and service sectors on average show employment shares of 29 per cent and 36 per cent respectively.

Sectoral Value Added Shares: The indicator regarding the sectoral value added shares measures the contribution of each of the three sectors (agriculture, industry, service) to the total production of a region. The agricultural sector contributes on average 19 per cent to total

production whereas the industrial and service sectors exhibit value added shares of 31 per cent and 50 per cent respectively.

Sectoral Productivity Indicators: The sectoral productivity indicators measure the productivity (value added per employee) of one of the three sectors (agriculture, industry, service) compared to the total productivity of a region. If the sectoral productivity indicator exceeds the value 100, the industry under consideration is more productive than the total economy of the respective region.

PART 3b Hirschman-Herfindahl Index (HHI) aggregates of regional employment shares: The HHI is a concentration measure. For the purpose of this cluster analysis it indicates the degree of sectoral concentration. Based on available data, regional employment shares are divided into six branch-aggregates (a_b representing agriculture; c_e including producing branches; f representing construction; g_h_i representing services including trade and tourism; j_k including knowledge intensive branches and l_to_p including public services and education). The HHI is calculated by summing the squares of the regional employment shares of the sectors mentioned. The normalised HHI ranges from 0 to 1. Therefore, having the same employment shares in each branch mentioned above equals 0 on the Hirschman-Herfindahl Index. Generally a HHI below 0.1 indicates that the sectoral concentration is very diverse or in other words, that the economy is unconcentrated. A HHI between 0.1 and 0.18 points at moderate concentration, whereas a HHI above 0.18 indicates high concentration.

The average normalised HHI is 0.12. Certainly, an optimal concentration ratio does not exist. Nevertheless, negligible employment shares in construction (f) are a sign of a missing stock of capital or indicate an old stock that is not maintained anymore. Furthermore, the service branches j to k include knowledge intensive employment, hence research and development. A diverse economy is characterised by small employment shares in agriculture, substantial employment shares in construction and manufacturing (branches f and c to e) and by having a relatively diverse service sector including the service branches j to k (employment shares in those branches are almost never equally distributed). Conversely, a concentrated regional economy, hence a HHI above 0.18 points, has a disproportionately high level of employment in agriculture as well as excessively low levels of employment in construction as well as missing employment in the service branches j to k.

Methods used to form region types

Structured data analysis is carried out primarily by using two statistical methods: (1) Cluster Analysis to discover primarily structural coherences and to order data into meaningful structures and (2) Principal Component Analysis to reduce multidimensional data sets to lower dimensions for analysis.

The Cluster Analysis is a method of multivariate data analysis with the purpose of dividing a data set into subsets (clusters), where the data in each subset share some common trait. Variables need to be uncorrelated. For the cluster analyses the analysed objects are considered as random variables and displayed as points in a vector space for which the characteristics build the dimensions. The accumulation of points (scatterplot) is called a cluster. To quantify similarities between objects, a measurement of proximity (dependent on the scale level of the characteristics) is chosen to quantify distances between points or the variance within a cluster. The starting point of the cluster logarithm is then the construction of a distance and similarity matrix, which aims at the aggregation of the objects. To group the given objects a broad spectrum of algorithms is available. Those algorithms set up how the distance between a cluster and a single point should be calculated. They are chosen according to the number of variables which are regarded in the process of merging (monothetic and polythetic) and according to the selected procedure of merging. Concerning the procedure one can distinguish the hierarchical procedure (the number of clusters is reduced stepwise, either to the desired number of clusters or as long as the groups melt in to one

remaining group) and the partitional procedure (based on a given group the single elements are switched between different groups until the objective function reaches an optimum). (cf. Backhaus et al 2000, 329-349; cf. Prettenhaler 2003, 7-9).

The Principal Component Analysis (PCA) is a vector space transformation which is used to extract significant linear combinations (principal components) from the whole set of statistical variables, to lower dimensions for further analyses. For that reason an orthogonal linear transformation is used to transform the data to a new coordinate system, whereas the greatest variance by any projection of the data comes to lie on the first coordinate (called the first principal component), the second greatest variance on the second coordinate, and so forth.

The first step of the PCA is to choose relevant variables and test them for correlation. To control the correlation matrix for its adequacy the "measure of sampling adequacy" (Kaiser-Meyer-Olkin-Kriterium) is the best procedure (others are the significance level of the correlations, the inverse correlation matrix, the "Bartlett-Test" and the "Anti-Image-Covariance-Matrix"). The "Kaiser-Meyer-Olkin-Kriterium" indicates to what extent the base variables belong together. The results range from 0 to 1, where a result smaller than 0.5 indicates that the correlation matrix is not adequate and results from at least 0.8 are appreciable. If the variables are dependent and able to group (according to the mentioned tests), the factors need to be extracted from the variables. According to the fundamental theorem therefore the correlation matrix needs to be replicated through the loads on the factors and the correlations between the factors. In the next step the part of the whole variance of one variable which should be explained through all factors has to be set. To choose the number of extracted factors afterwards, the "Kaiser-Kriterium" is used: Therefore all factors with eigenvalues (the sum of the squared load of the factors over all variables; benchmark for the variance which is explained through the factor) greater than 1 will be extracted. To interpret the chosen factors, variables with high loadings on 1 factor are gathered and a collective name is identified. This step needs specific knowledge of the subject. In the last step the values of the factors are calculated to identify which values the objects gain concerning to the generated factors (cf. Backhaus et al 2000, 253-299).

The usage of the composite factors as described above instead of single variables on the one hand blurs the "borderlines" between single clusters (when analyzed in terms of single variables) and makes interpretation more difficult, but on the other hand backs the classification of a single region into one particular type by taking into account the influence of several variables measuring along similar dimensions:

The first or "Industrial Factor" loads high on the value added share in industry and indicates a high employment share in this sector; a high level of education as well as an unproductive service sector characterise this factor. The second factor, the "Agricultural Factor" loads high on the Hirschman-Herfindahl Index, indicating high sectoral concentrations; especially in agriculture as the negative values in secondary and tertiary employment prove. Overall, employment shares are high and agriculture dominates the economy. The third factor, the "Tertiary Employment Factor" characterises relatively rich and fast growing regions with a high share of tourism which goes hand in hand with a high employment share in a productive service sector. The "Population Factor" constitutes the fourth factor and is characterized by a high decrease in the population and a low population density. An economy below average with negative growth rates constitutes this factor as well as a high employment share in agriculture and a low employment share in industry. Finally, the "Growth/Disparity Factor" indicates high population and a growing economy above the average. Growth is led by industry and tourism, which is confirmed by the above mentioned Theories of Economic Development.

Industrialized service regions

Industrialized Service Regions have a relative diverse economy and a productive service sector, whereas the key driver of the economy - the industrial base - is given. Therefore, adaptation potentials are given and exceed the average of all regions presumably slightly.

The first cluster type contains eight regions that are characterized by a relatively high population development (in 2025 95 % of the population in 2001) and a high population density (172 people per square kilometres). The growth rate of regional GDP per habitant (131 %) is slightly below the average of

the 72 regions (138 %) and the ratio of regional GDP per habitant to the national average lies with 93 % above the average of the regions under investigation (83 %). The regions of this Cluster are characterised by a tertiary sector with a very high employment share – a mean of 48 % compared to the average of 37 % that results from all investigated regions in Romania, Bulgaria and Moldova. With 57 % these eight regions under consideration show a mean tertiary share in value added that exceeds the average value of investigated regions (50 %). Nevertheless, these regions are characterized by a – compared to other regions – unproductive tertiary sector (119 %) and an agricultural sector whose productivity (73 %) is above the average (58 %). The secondary sector contributes on average 30 % to total value added, whereas the contribution of the agricultural sector accounts for 13 %. The same manner is found for the employment share of these sectors: Industry 30 %, agriculture 22 %. As the number of beds per thousand inhabitants – a mean of 6.9 compared to an average of 18.6 of all regions – shows, there is virtually no tourism in these regions. The Hirschman-Herfindahl Index (0.07) lies below average and indicates that the economy is very diverse. These regions are furthermore characterized by an educational level (95.7) slightly below the average of all investigated regions (96.3).

Industrialized agricultural regions

A stable population comes along with a low level of education which is typical for rural areas that face low accessibility. Productivity of the tertiary sector of these regions is strongest; industry is – on a low level – developing.

The second cluster type includes 17 regions, which are characterized by the highest population development (93 %) and the lowest educational level (91 %) of all Clusters and a population density accounting for 82 people per square kilometre. The growth rate of regional GDP per habitant (149 %) accounts – beside the fifth Cluster – for the highest of all Clusters, whereas the ratio of regional GDP per habitant to the national average (78 %) accounts for the second lowest value. Employment of the population (40 %) is below the average of all analysed regions. Concerning the economic structure the second Cluster shows the following manner: in terms of value added share and productivity the tertiary sector of these regions is strongest (value added share 47 %; productivity 144 %), followed by the secondary sector (value added share 31 %; productivity 108 %). The agricultural sector accounts on the one hand for the highest employment share (38 %) – the employment share of the secondary sector accounts for 28 % and of the tertiary sector for 33 % – whereas, on the other hand, its contribution to the value added share (22 %) as well its productivity (57 %) are weak. The Hirschman-Herfindahl Index accounts for 0.12, which indicates a moderate sectoral concentration.

Rural service regions

Rural Service Regions miss an industrial base, agriculture is dominating the economy – economic progress is happening mainly due to tourism. Adaptive Capacity is limited, besides the regions are highly vulnerable – tourism but also agriculture are per se exposed to climate change.

Rural Service Regions represent the third Cluster, which consists of 13 regions. The Cluster accounts for the lowest population development (75 %) and population density (58 people per square kilometre) of all regions under investigation, whereas the educational level (95 %) lies only slightly below average. The growth rate of regional GDP per habitant accounts for 131 % and the ratio of regional GDP per habitant to the national average for 79 %. Employment of the population is 41 %. Concerning the sectoral concentration of the economy, the regions of the third Cluster are characterized by a strong tertiary sector: employment share (42 %), value added (56 %) and productivity (135 %) are higher than other sectors and above the average of all analysed regions (except productivity). These numbers are confirmed by the fact, that also the number of beds per thousand inhabitants (59) in these regions is highest of all Clusters. The employment share of agriculture accounts for 36 % and of the secondary sector for only 22 %. Since also value added of the secondary sector accounts only for 23 %, the secondary sector of the regions of this Cluster is, in the sense of employment share and value added, below the average. Value added of agriculture amounts for 21 % and its productivity for 57 % (productivity of industry 102 %). The Hirschman-Herfindahl Index accounts for 0.12, which indicates an average sectoral concentration.

Peripheral industrial regions

A declining population indicating rapid over aging but also a low population density characterized peripheral industrial regions. The employment shares in agriculture are high, whereas productivity is low. Tourism is underrepresented. Adaptation in these regions is limited.

The fourth Cluster includes twelve regions, which are characterized by a population development (75 %) and a population density (65 people per square kilometre) below average. The educational level is, with 105 %, the highest of all regions of investigation. The growth rate of regional GDP per habitant amounts for 131 % and the ratio of regional GDP per habitant to the national average for 93 %. Employment of the population of the regions of the fourth Cluster accounts for 42 % and is therefore slightly above the average. The structure of the economy shows that the secondary and tertiary sector of these regions are, in terms of sectoral employment shares (secondary sector 35 %; tertiary sector 37 %), value added shares (secondary sector 42 %; tertiary sector 45 %) and productivity (secondary sector 122 %; tertiary sector 123 %) almost equal, whereas the agricultural sector lies below the average of all analysed regions: employment share 28 %; value added share 13 %; productivity 48 %. Since the number of beds per thousand inhabitants accounts only for 15, it seems that the tertiary sector is not mainly driven by tourism. The Hirschman-Herfindahl Index amounts for 0.09 and indicates therefore moderate to low sectoral concentration.

Growth regions

Structural change is ongoing in these regions. The service sector is developing, the economy is extremely diverse. Agriculture is productive, hence employment shares are low. The adaptation capacity in Growth Regions is assumed to be the highest of all cluster types.

Growth Regions represent the fifth Cluster, which consists of eleven regions. Results of the Cluster indicate that it doesn't extremely stand out from the other regions of investigation. Concerning population development, the regions of the fifth Cluster amount for a population development of 81 % until 2025 compared to 2001, whereas the population density of the regions amounts for 68 people per square kilometre. The educational level (99 %) is slightly above the average of the investigated regions. The growth rate of regional GDP per habitant is, with a value of 149 %, beside the second Cluster, the highest of all Clusters and also the ratio of regional GDP per habitant to the national average (100 %) is above average. The employment share of the population accounts for 41 %. Sectoral employment shares of the secondary sector (38 %) are highest of all Clusters, whereas the employment share of agriculture (23 %) is – after the first Cluster – the lowest of all Clusters. Employment of the tertiary sector accounts for 38 %. Value added shares show the following structure: tertiary sector 50 %, secondary sector 34 %, agriculture 16 %. Concerning the productivity of the sectors, results indicate that the agricultural sector of the regions (71 %) of this Cluster belongs to the most productive agricultural sectors, whereas the secondary sector (89 %) is the least productive secondary sector. Also productivity of the tertiary sector (131 %) lies below the average of the analysed regions. The number of beds per thousand inhabitants amounts for 15 and the Hirschman-Herfindahl Index indicates, with a value of 0.08, that the sectoral concentration in these regions is very diverse.

Pure agricultural regions

High overall employment shares, a relative stabile population and a homogenous economy, driven by agriculture – this is what Pure Agricultural Regions are about. Besides, the GDP of these regions is the lowest of all regions and so is the adaptive capacity.

Pure Agricultural Regions constitute the sixth Cluster which comprises eleven regions. Regions of this Cluster stand out from other regions in several characteristics. Concerning population development, the regions of the sixth Cluster are marked by a development above average (89 %). Also population density lies, with a value of 88, above the average of the analysed regions. The educational level amounts for 95.8 % and is therefore slightly below average, as well as the growth rate of regional GDP per habitant, which accounts for 131 %. The ratio of regional GDP per habitant to national average accounts for 64 % and is therefore the lowest of all Clusters. On the contrary, employment of the population is the highest of all

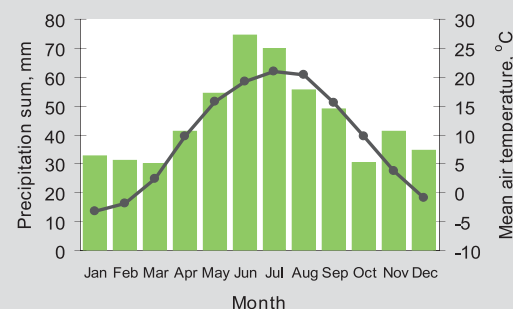
Clusters and amounts for 48 %. Concerning the economic structure of the regions of the sixth Cluster, the Hirschman-Herfindahl Index indicates, with a value of 0.24, highest sectoral concentration of all Clusters. The agricultural sector of the Cluster accounts for – concerning employment shares (57 %) as well as value added shares (27 %) – highest values of all Clusters, whereas in contrast, the productivity of this sector (46 %) is the lowest of all Clusters. Furthermore, productivity of the secondary sector (155 %) and the tertiary sector (187 %) is the highest for these regions of the sixth Cluster, whereas employment share is lowest (secondary sector 19 %, tertiary sector 24 %) of all Clusters. Value added shares of both sectors (secondary sector 29 %, tertiary sector 45 %) are below the average of all regions of investigation. Concerning tourism, also the number of beds per thousand inhabitants is, with a value of 4.7, the lowest of all Clusters.

Annex 2.2. Main characteristics of current climate and observed changes in Moldova

In the coldest month (January) mean air temperature ranges from -2.8 to -5.3 °C (Chart 40), however its coldest values can go down to -27–30 °C. The highest mean monthly temperature is observed in July (19.0–22.0 °C). Practically every year there are days with temperatures up to 30°C; in some years temperature can amount to 38–41 °C. The period with positive temperatures is lasting about 300 days; the duration of annual sunshine changes on average from 1900 hours in the North to 2180 hours in the South. Moldovan springs are not stable, but autumns are usually warm and long, with the so-called *Indian summers*.

Precipitations fall mainly in the warm period as short-term heavy showers with maximum in June–July. Because of the hilly and heavily billowy terrain, the heavy rains often cause erosion, flash floods and silting. Minimal precipitations take place in February–March and October (about 30 mm a month). Solid winter precipitations (snow) average only about 10% of their annual value. Long dry spells are usual, especially in the summer.

Chart 40. Diagram of Moldova's monthly precipitation (bars) with a super-imposed curve of mean air temperatures



Annex 2.3. Meteorological description of droughts in Moldova: example of drought of 2007

The duration of droughts in Moldova varies from a few days to a few months and even to 3 years (e.g. droughts of 1945, 1946 and 1947). In 1990, 1992 and 2003 the droughts lasted the whole vegetation period (April–September). Some characteristics of the extremely hot warm period and the record catastrophic drought of 2007 are shown in Box 26.

Box 26. Meteorological description of 2007 drought in Moldova

2007 was the warmest in the history of instrumental observations in Moldova. Air temperature records were broken in winter, spring, and especially in summer. The warm period was extremely hot and dry. Practically all temperature records have been exceeded while precipitation shortage was all-round (see table below).

Weather records of 2007

Date	Record description	
Air temperature		
Winter 2006-2007	Winter 2006-2007 was the warmest for all period of instrumental observations. Average air winter temperature over the territory amounted 0.9-2.8°C, or 4.1-4.6°C above the norm.	
Spring	Seasonal mean air temperature in Moldova: 11-13°C or by 2-3°C higher than normal.	
23-24 May	<i>Mean daily</i> temperature: 24.1°C in Briceni and 27.5°C in Făleşti (23.05) – by 1-4°C higher than observed maximums for this day; 21.9°C (Ceadir-Lunga) and 27.5°C (Soroaca, Ribnița) – 1-5°C higher than observed maximums for 24.05 in central and north regions. <i>Maximal daily</i> temperatures: 31.5°C (Briceni) and 35.5°C (Ribnița, Bravicea) – here and in other places (Camenca, Bravicea, Cornești) reached or exceeded by 0.7-1.0°C the May absolute maximum temperatures for all observation period.	
25-27 May	<i>Mean daily</i> temperatures in the Centre and South were registered between 21.9°C (Briceni) and 26.6°C (Făleşti) – by 1.6°C higher than abs historic values for these days. <i>Maximal daily</i> air temperature: 30°C in Briceni and 36°C in Dubăsari; in Dubăsari it has reached and in Ribnița exceeded by 0.5°C the abs maximal temperature in May	
Summer	Seasonal mean air temperature over the territory amounted up to 21.0–24.7°C, exceeding the 'normal' value by 2.4-3.8°C. On the most part of territory such temperatures were observed for the first time. May-July period was by 3-4°C higher the norm – record .	
June 1 st decade	<i>Mean decadal</i> temperature in Moldova amounted 19.9-23.5°C, or 2.7-4.3°C higher than normal; in some places (Soroaca, Bravicea, Bălțata, Chișinău, Tiraspol, Dubăsari) it exceeded record values for all period of observation.	
15-17 June	<i>Daily mean</i> temperature in Moldova reached 21.5-27.2°C – an absolute record. <i>Maximum</i> temperatures in some regions (Camenca, Bravicea, Dubăsari, Ștefan-Vodă, Tiraspol) were 34-35°C, or 0.2-0.4°C above absolute maximum for 2 nd decade of June.	
26 June	Absolute maximum of this day temperature in Moldova (39.5°C, Făleşti) – 1.5°C higher than previous value. In the South (33.2°C in Ceadir-Lunga and 37.7°C in Leova – 0.1-1.9°C more than the highest absolute maxima for June.	
19 July	Maximal temperature – 41°C (Tiraspol, Ialoveni) – new absolute maximum for Moldova.	
21 July	Maximal temperature – 41.5°C (Camenca) – new absolute maximum for Moldova.	
20-23 July	The hottest period	
23 July		<i>Maximal</i> temperatures (39.5-41.1°C) in Făleşti, Ribnița, Cornești, Bravicea, Dubăsari, Tiraspol, Ștefan-Vodă, Comrat – 0.4-2.1°C higher than their absolute summer maxima.
24 July		The highest July minimal air temperature – 26.5-26.7°C (Chișinău, Ceadir-Lunga).
July	<i>Degree-days sum</i> , accumulated for continuous period without precipitation, amounted 10000-15 000°C – the highest for all observations period.	
July	The warmest month for all period of instrumental observations in Moldova. Mean monthly temperature amounted 24.0-26.0°C, or above 3.7-4.8°C above the normal.	
25 August	Maximal temperature – 40.5°C (Tiraspol) – absolute maximum for August in Moldova.	
Season	<i>Duration of days with heat</i> : ≥30°C – 45-60, or 3-4 times higher than the norm; ≥35°C – 15-22 against 1 (norm); ≥40°C – 5 (for the first time).	
Precipitation		
May-June	6-50% of normal values	
April-June	48-68 days of relative humidity ≤30%: for the first time and 3-4 times less than norm.	
Season	<i>Precipitation sum</i> : mainly 35-170 mm, or 35-80% of the norm. <i>Duration of rainless period (days)</i> : in the North – 30-75; in the South – 80-110 days; mean unbroken duration – 20-40 days that is observed one time per 20 years, maximal – 52 days in the South.	
Unfavorable weather events		
Season	Practically over all territory there were observed squalls (up to 24 m/s), hail (up to 20-30 mm in diameter), heavy rains and thunderstorms.	

Source: Bugaeva T. & T. Mironova, 2007: *Caracterizarea condițiilor meteorologice și agrometeorologice din vara anului 2007*. Available at: <http://www.meteo.md/newsait/vara07.htm>; *Recorduri meteorologice din 2007*. Available at: <http://www.meteo.md/newsait/nsrecord.htm>.

Annex 2.4. Storylines of SRES A2 and B2 emission scenarios

Features	A2 storyline	B2 storyline
World	Differentiated	Local solutions
Economy	Regionally oriented	Intermediate growth
Population	Continuously increasing	Continually increasing at lower rate than A2
Governance	Self-reliance with preservation of local identities	Local and regional solutions to environment protection and social equity
Technology development	Slowest and most fragmented development	More rapid than A2; less rapid, more diverse than A1/B1

Source: Parry et al., 2007a.

Annex 2.5. Projections of annual mean air temperature (T) and precipitation (P) changes in Moldova based on six GCM experiments

Table 26. **GCM experiments and modelling centres**

Experiment	Modelling Centres
HadCM3	UK Hadley Center for Climate Prediction and Research
CSIRO Mk2	Australian Commonwealth Scientific and Industrial Research Organization
CGCM2	Canadian Center for Climate Modelling and Analysis
ECHAM4	German Climate Research Centre Deutsches Klimarechenzentrum
GFDL-R30	US Geophysical Fluid Dynamics Laboratory
CCSR-NIES	Center for Climate System Research/National Institute for Environmental Studies

Source: IPCC DDC: <http://ipcc-ddc.cru.uea.ac.uk>.

Table 27. Projections of annual mean air temperature (T) and precipitation (P) changes in Moldova for different time horizons and emission scenarios

Time horizon	Experiment	T, °C		P, mm	
		A2	B2	A2	B2
2010-2039	CGCM2	1.3	1.5	-16	-41
	CSIRO Mk2	1.3	1.8	23	10
	HadCM3	1.4	2.3	-31	-17
	ECHAM4	2.4	2.5	-12	-1
	GFDL R-30	1.3	1.2	5	-12
	CCSR-NIES	2.4	3.0	-22	-41
	Ensemble average	1.7	2.0	-9	-17
2040-2069	CGCM2	3.1	2.2	-51	10
	CSIRO Mk2	2.4	2.5	-12	17
	HadCM3	3.2	3.0	-32	-17
	ECHAM4	3.6	3.7	-28	14
	GFDL R-30	2.6	1.9	1	29
	CCSR-NIES	5.8	6.0	-104	-117
	Ensemble average	3.4	3.2	-38	-11
2070-2099	CGCM2	4.2	3.1	-38	-32
	CSIRO Mk2	4.6	3.3	-45	29
	HadCM3	5.3	3.9	-64	-8
	ECHAM4	5.7	4.6	-64	-8
	GFDL R-30	3.4	2.4	18	3
	CCSR-NIES	9.5	7.3	-189	-119
	Ensemble average	5.4	4.1	-64	-23

Source: IPCC DDC: <http://ipcc-ddc.cru.uea.ac.uk>.

Annex 2.6. Approaches and indicators used for evaluation and representation of new humidity conditions

Statistical approach – calculation of Potential Evaporation and Aridity Index for assessing the change in annual and seasonal humidity conditions, using following equations:

Ivanov potential evaporation (PE):

$$PE = 0.0018 (25+T)^2 - (100-a),$$

where: T – mean monthly air temperature, °C; a – relative air humidity, %

Aridity index (AI):

$$AI = P/PE,$$

where: P – precipitation sum, mm; PE – potential evaporation, mm;

Graphical approach is based on construction of climatic diagrams to show the possible temporal dynamic of change in humidity conditions.

Annex 2.7. Methods used for estimation of temperature extremes

A statistical view on weather extremes reveals that the higher mean air temperatures, the more extremely warm events are likely. Moreover, there is a linear correlation between average summer maximum temperature (T_{max}) and its extreme values. This correlation can be extrapolated on projections²¹⁹ and be used with a high degree of confidence as an empirical predictor of the type of extremes that may occur.

The simple linear regression of summer maximal temperatures on mean temperatures showed that in 1981-2008 each degree of mean summer warming in Chişinău is accompanied by statistically-significant increase in mean summer maximal temperatures by 1.14 °C and in absolute summer temperatures – by 1.27 °C. Based on such dependencies there were calculated projections of these variables (see chapter CLIMATE CHANGE AND ITS CHALLENGES FOR MOLDOVA, discussed in main text. In particular, by the end of the 21st century, along with the likely increase of mean summer temperatures – respectively by 6.5°C and 4.7°C in comparison with baseline climate according to *SRES A2 and B2* scenarios – the mean maximal temperatures can increase by 7.4 °C and 5.4 °C (by 6.4 °C on the average for two emissions).

Table 28. Mean values, standard deviations (σ) and probabilities of observed and projected summer (June-July-August) temperatures at Chisinau weather station

Period	Mean							Absolute						
	Mean and range			σ	Percentile, %			Mean and range			σ	Percentile, %		
	Mean	Max	Min		90	95	99	Mean	Min	Max		90	95	99
Maximal summer temperature, °C														
1961-1990	25.6	28.1	23.6	1.19	27.1	27.6	28.4	32.0	29.0	34.1	1.50	33.9	34.4	35.5
1981-2008	26.4	30.2	23.6	1.37	28.2	28.6	29.6	32.9	29.2	38.0	1.86	35.3	36.0	37.2
2010-2039	28.0			1.37	29.8	30.3	31.2	34.7			1.86	37.0	37.7	40.0
2040-2079	29.9			1.37	31.7	32.2	33.1	36.8			1.86	39.2	39.8	41.1
2070-2100	32.0			1.37	33.8	34.3	35.2	39.1			1.86	41.5	42.2	43.4
Minimal summer temperature, °C														
1961-1990	15.3	16.6	13.8	0.69	16.2	16.4	16.6	10.2	12.0	7.3	1.11	11.6	11.8	12.0
1981-2008	16.5	18.8	15.0	0.86	17.6	18.2	18.8	11.1	13.5	8.4	1.41	12.9	13.4	13.5
2010-2039	16.9			0.86	18.0	18.3	18.9	11.8			1.41	13.6	15.0	16.3
2040-2079	18.1			0.86	19.2	19.5	20.1	13.9			1.41	14.1	15.5	16.9
2070-2100	19.5			0.86	20.6	21.0	21.5	14.5			1.41	15.1	16.5	17.8

Source: IPCC DDC: <http://ipcc-ddc.cru.uea.ac.uk>.

Although there is an assumption that any change in temperature means is accompanied by corresponding change in the variances, our results do not confirm this hypothesis (Table 28). Therefore, the current variability of high temperatures was used to estimate the probabilities of future extremes.

²¹⁹ Beniston, 2004; Beniston and Stephenson, 2004.

Annex 2.8. Hydrographical characteristics of the main rivers of Moldova

River	Length, km	Catchment area, thou. km ²	Mean stream flow, km ³ /year
Danube *	about 0.8	8.3	203
Prut * (Danube's tributary)	695	8.0	2.9
Ciuhur (Prut's tributary)	97	0.7	0.02
Dniester *	657	19.1	10.7
Răut (Dniester's tributary)	286	7.8	0.3
Căinar (Răut's tributary)	113	0.8	0.05
Cubolta (Răut's tributary)	100	0.9	0.06
Bîc (Dniester's tributary)	155	2.0	0.09
Botna (Dniester's tributary)	152	1.5	0.03
Ichel (Dniester's tributary)	101	0.8	0.02
Ialpug *	135	3.2	0.09
Cogîlnic *	125	1.0	0.06

Note: * Transboundary rivers; length and area are given within Moldova's territory.

Annex 2.9. Modelling water resources quantity and quality

Surface and ground water features depend on a series of variables, but only a part of them is climate-related and can be reliably modelled in the context of changing climate. The following models were developed using climatic variables of the baseline period of 1961-1990 (1970s) in their relationship with hydrological parameters. For prognosis, the outputs of Global Circulation Models downscaling were used as primary inputs into the hydrological models. There were taken three standard future time-slices: 2010-2039 (2020s), 2040-2069 (2050s) and 2070-2099 (2080s) and two scenarios (SRES A2 and B2) of greenhouse gas emissions. Projections for the following water resources parameters are provided:

1. Projections for **big rivers' stream flow**, the cases of Dniester and Prut rivers, were obtained through multiple regression analysis. Regression parameters were calculated using statistical modelling for specified catchments.²²⁰

Table 29. Multiple linear regression parameters for big rivers' stream flow modelling

River	R	p-value	constant	Regression coefficients	
				temperature	precipitations
Dniester	0,517	0,0002	277,6	-17,12	0,36
Prut	0,502	0,0001	79,8	-6,40	0,11

2. For projecting climatic norm of **small rivers' run-off**, the method of water-heat balance by V.S. Mezentsev were used:²²¹

$$\bar{Q}_p = (\bar{P} \pm \Delta\bar{P}) - \bar{E}_m \left(1 + \frac{\varepsilon \Delta\bar{t}}{100} \right) \left\{ 1 + \left[\frac{\bar{E}_m \left(1 + \frac{\varepsilon \Delta\bar{t}}{100} \right)}{\bar{P} \pm \Delta\bar{P}} \right]^n \right\}^{-1/n} \quad (1)$$

where, \bar{Q}_p – projected climatic norm of small rivers' run-off (mm); \bar{P} and \bar{E}_m – baseline climate's averages for precipitation (mm) and evaporativity (mm), accordingly; $\Delta\bar{P}$ and $\Delta\bar{t}$ – expected changes in annual precipitations (mm) and temperature (°C); ε and n – constants, equal to 4.44 and 2.45, accordingly, in the particular cases of the Republic of Moldova.²²²

²²⁰ Далекин Н.В., Сыродоев, И.Г., 2004: Некоторые подходы к оценке воздействий изменения и изменчивости климата на водные ресурсы. В: Р.М. Коробов (ред.). Климат в Молдове в XXI веке: проекции изменений, воздействий, откликов. Кишинэу, стр. 176-212.

²²¹ Мезенцев В.С., 1976: Расчеты водного баланса. Омск: ОСХИ.

²²² Коробов Р.М., Николенко А., 2004: Новые проекции антропогенного изменения климата Молдовы в XXI столетии. Р.М. Коробов (ред.). Климат Молдовы в XXI веке: проекции изменений, воздействий, откликов. Кишинэу, стр. 54-97.

Table 30. Baseline values (mm) and projected relative changes of Dniester (at Bender) and Prut (at Ungheni) rivers' stream flow and small rivers' run-off (%)

Scenario	Time-slice	Dniester	Prut	Small rivers
baseline	1970s	323	88	73
SRES A2	2020s	-10.0	-13.2	-16.9
	2050s	-22.8	-29.9	-38.7
	2080s	-36.5	-48.0	-55.5
SRES B2	2020s	-12.9	-16.9	-22.7
	2050s	-18.4	-24.6	-27.1
	2080s	-24.5	-32.7	-36.5

3. Monthly distribution of the small rivers' run-off was obtained using general version of the water-heat balance:²²³

$$q_m = p_m + W_{m0} - W_{m1} - e_m \quad (2)$$

where, q_m , p_m and e_m – average monthly norms of stream flow, precipitations, and evaporativity (mm); W_{m0} and W_{m1} – humidity within the 1 m soil depth at the beginning and at the end of the month (mm).

Table 31. Baseline values (mm) and projected relative changes of monthly Răut River run-off (%) (at Jeloboc)

Scenario	Time-slice	Months											
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
baseline	1970s	2.7	2.4	4.2	7.9	6.4	2.3	3.0	3.3	1.8	1.7	2	2.5
SRES A2	2020s	16.7	16.7	0.0	1.6	-34.8	-56.7	-60.6	-27.8	-41.2	-60.0	-56.0	-18.5
	2050s	20.8	16.7	1.3	-46.9	-17.4	-66.7	-66.7	-33.3	-41.2	-50.0	-60.0	-3.7
	2080s	4.2	11.9	-54.4	-53.1	-60.9	-86.7	-90.9	-72.2	-11.8	-45.0	-68.0	3.7
SRES B2	2020s	33.3	-2.4	-3.8	0.0	8.7	-66.7	-69.7	-50.0	-52.9	-70.0	-64.0	18.5
	2050s	29.2	0.0	-8.9	-6.3	0.0	-50.0	-54.5	-16.7	-17.6	-60.0	-40.0	37.0
	2080s	50.0	28.6	1.3	-1.6	-43.5	-76.7	-66.7	-38.9	-52.9	-55.0	-60.0	18.5

4. Coefficient of variation of annual stream flow was calculated using two different approaches depending on river size. In the case of big rivers, statistical linear regression was used (Dniester case study):²²⁴

$$C_v = -0.0002 * Q_{an} + 0.3531 \quad r = 0.729; p = 0.000 \quad (3)$$

In the case of small rivers, another equation, obtained for Moldovan rivers,²²⁵ was used:

$$C_v = 1.03 - 0.0117 * Q_{an} \quad (4)$$

In each of the equations C_v represents coefficient of variation of annual stream flow and Q_{an} means annual stream flow (mm).

²²³ Лалыкин Н.В., Сыродоев, И.Г., 2004: Некоторые подходы к оценке воздействий изменения и изменчивости климата на водные ресурсы. В: Р.М. Коробов (ред.). Климат в Молдове в XXI веке: проекции изменений, воздействий, откликов. Кишинэу, стр. 176-212.

²²⁴ Ibid.

²²⁵ Лалыкин Н.В., Собченко, А.П., 1998: Водные ресурсы рек Молдовы и пути их определения. In: Resursele funciare și acvatice. Valorificarea superioară și protecția lor. Conferința științifico-practică. Chișinău, стр. 142-153.

Table 32. Baseline values (%) and projected relative change of annual stream flow coefficient of variation (%)

Scenario	Time-slice	Dniester (at Bender)	Small rivers
baseline	1970s	29	17
SRES A2	2020s	2	32
	2050s	5	51
	2080s	8	65
SRES B2	2020s	3	37
	2050s	4	41
	2080s	6	49

5. Spring flood projections were obtained by combining multiple regression method²²⁶ and the method of analogue years.²²⁷

Table 33. Multiple linear regression parameters for spring flood modelling

Variables	R	p-value	constant	Regression coefficients			
				annual flow layer	share of spring flood flow in the annual flow	flood flow layer	flood duration
Flood flow layer	0,971	0,000	-41.8	0.27	1.51		
Maximal discharge	0,848	0,000	935.2			26.0	-14.74

Note: Input values of the share of spring flood flow and flood duration for the three future time-slices (2020s, 2050s, and 2080s) were obtained through selecting among historical records 5-8 years having annual stream flow similar to projected; it was assumed that years with the stream flow similar to projected have other characteristics similar as well. Thus, median values of the selected historical records were used as input parameters in the model.

Table 34. Baseline values of flood run-off (mm) and maximal discharge (m³/s) and projected relative changes of Dniester River flood parameters (%) (at Bender)

Scenario	Time-slice	Flood run-off	Maximal discharge
baseline	1970s	46	1374
SRES A2	2020s	-13.5	-31.5
	2050s	8.1	-17.2
	2080s	-44.3	-59.1
SRES B2	2020s	27.1	3.4
	2050s	12.1	-13.8
	2080s	-33.4	-49.7

6. Expected **summer-autumn low water** was calculated by means of simple linear regression:²²⁸

$$Q_{min} = 0.56 * Q_a - 11.1 \quad r = 0.745; p = 0.000 \quad (5)$$

where, Q_{min} and Q_a – minimal and annual water discharge (m³/s).

²²⁶ Лалыкин Н.В., Сыродоев, И.Г., 2004: Некоторые подходы к оценке воздействий изменения и изменчивости климата на водные ресурсы. В: Р.М. Коробов (ред.). Климат в Молдове в XXI веке: проекции изменений, воздействий, откликов. Кишинэу, стр. 176-212.

²²⁷ Kundzewicz Z.W., Somlyódy L., 1997: Climatic change impact on water

resources in a system perspective. Water Resources Management 11: 407-735.

²²⁸ Лалыкин Н.В., Сыродоев, И.Г., 2004: Некоторые подходы к оценке воздействий изменения и изменчивости климата на водные ресурсы. В: Р.М. Коробов (ред.). Климат в Молдове в XXI веке: проекции изменений, воздействий, откликов. Кишинэу, стр. 176-212.

Table 35. Baseline value (m³/s) and projected relative changes of the Dniester River low water stream flow discharge (%) (at Bender)

Scenario	Time-slice	Low water stream flow
baseline	1970s	150
SRES A2	2020s	-7.61
	2050s	-18.40
	2080s	-30.06
SRES B2	2020s	-10.01
	2050s	-14.69
	2080s	-19.91

7. There are four categories of **water resources** in the Republic of Moldova: natural, real, ecological, and available resources:²²⁹

- Natural water resources are formed under natural conditions and are conditioned by natural factors of annual stream flow;
- Real water resources represent really formed river flow as a result of human activity that changes catchment surface characteristics (agriculture, forestry etc.);
- Ecologic water resources – resources needed for maintaining present environmental state of floodplains and neighbouring areas;
- Available water resources are those available for economic use.

Only the latter can be used without harming natural and human ecosystems.

More than 98% of the natural water resources are being formed within Dniester and Prut river catchments; therefore, assessment of water resources is worthy of being made just for these two catchments. Taking in consideration that Dniester and Prut are transboundary rivers and their resources should be shared equally among neighbouring states (Romania and Ukraine), obtained projections are divided by two, in order to show Moldovan share of the resources.

Available water resources were calculated according to the following schema:

$$W_{av} = W_{rea} - W_{ecol} \quad (6)$$

$$W_{real} = W_{nat}(1 - \varphi) \quad (7)$$

where, W_{nat} – natural water resources, W_{real} – real water resources, W_{ecol} – ecological water resources, W_{av} – available water resources, φ - constant.

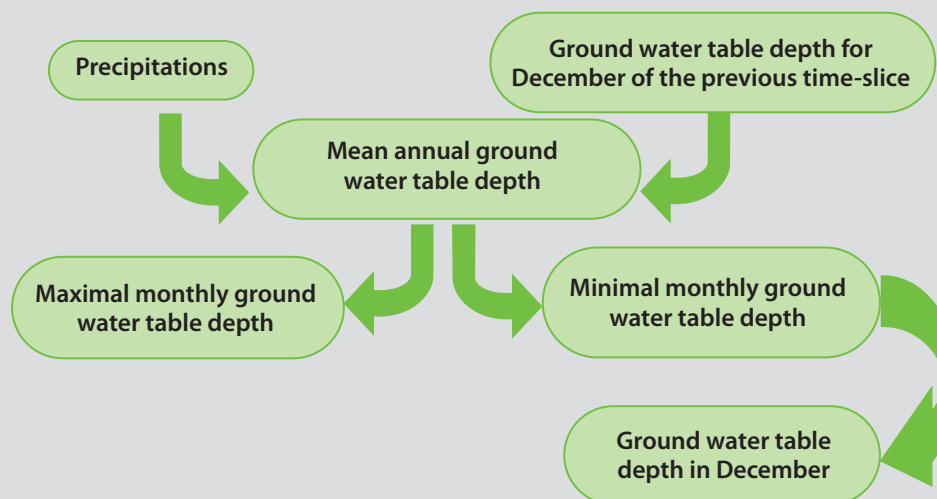
Table 36. Baseline value (km³) and projected relative changes of available water resources in the Republic of Moldova (%)

Scenario	Time-slice	Dniester and Prut Rivers catchments
baseline	1970s	4.3
SRES A2	2020s	-15.9
	2050s	-36.0
	2080s	-57.7
SRES B2	2020s	-20.3
	2050s	-29.2
	2080s	-38.9

²²⁹ Лалыкин Н.В., Собченко, А.П., 1998: Водные ресурсы рек Молдовы и пути их определения. In: Resursele funciare și acvatice. Valorificarea superioară și protecția lor. Conferința științifico-practică. Chișinău, стр. 142-153.

8. Ground water depth parameters were calculated according to the following schema (Chart 41):

Chart 41. Sequence of the ground water table parameters calculation



Source: Лалыкин Н.В., Сыродоев, И.Г., 2004: Некоторые подходы к оценке воздействий изменения и изменчивости климата на водные ресурсы. В: Р.М. Коробов (ред.). Климат в Молдове в XXI веке: проекции изменений, воздействий, откликов. Кишинэу, стр. 176-212.

Input parameters into the model were obtained as follows: mean annual ground water table depth estimated using graphical method (Chart 42); for other variables (extreme ground water table depths and the depth in December) regression method was used:

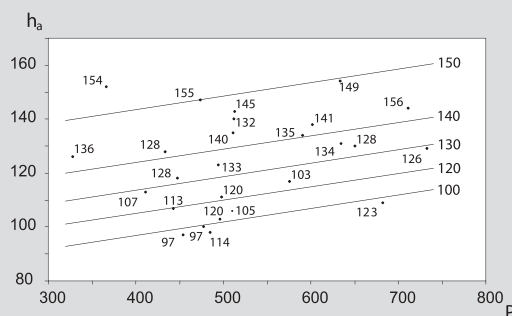
$$h_{max} = 0.84 * h_a + 31.1 \quad r = 0.946; p = 0.000 \quad (8)$$

$$h_{min} = 1.3 * h_a - 51.1 \quad r = 0.973; p = 0.000 \quad (9)$$

$$h_{dec} = 0.65 * h_{min} + 57.3 \quad r = 0.901; p = 0.000 \quad (10)$$

where, h_a , h_{max} , h_{min} and h_{dec} – values of ground water table depth (mm): annual average, maximal, minimal and for December, accordingly.

Chart 42. Dependency of mean annual ground water table depth (h_a) on annual precipitations (P) and mean water table depth in December previous year (indicated by points)



Source: Лалыкин Н.В., Сыродоев, И.Г., 2004: Некоторые подходы к оценке воздействий изменения и изменчивости климата на водные ресурсы. В: Р.М. Коробов (ред.). Климат в Молдове в XXI веке: проекции изменений, воздействий, откликов. Кишинэу, стр. 176-212.

Table 37. Baseline values (mm) and projected relative changes of ground water table parameters (%) (at Bălțata)

Scenario	Time-slice	Ground water table depth (mm)			
		Average	Highest	Lowest	in December
baseline	1970s	121	133	104	121
SRES A2	2020s	-7.4	-5.9	-9.1	-1.9
	2050s	-10.7	-8.4	-14.1	-4.7
	2080s	-13.2	-10.3	-17.9	-6.8
SRES B2	2020s	-8.3	-6.5	-10.4	-2.6
	2050s	-9.9	-7.8	-12.9	-4.0
	2080s	-10.7	-8.4	-14.1	-4.7

9. Mean annual and monthly distribution of **water temperature** were obtained using a series of simple linear regressions describing relationship between air temperature and water temperature for year as a whole and by months, separately.²³⁰ As examples, there can be shown two equations used in the modelling, to obtain annual value of water temperature (eq. 11) and for one of the months (eq. 12):

$$\text{Annual average: } T_w = 1.04 * T_{air} + 0.49 \quad r = 0.981; p = 0.000 \quad (11)$$

$$\text{November average: } t_w = 0.7 * t_{air} + 3.07 \quad r = 0.835; p = 0.000 \quad (12)$$

where, T_w and t_w – mean annual and monthly water temperature, accordingly (°C); T_{air} and t_{air} – mean annual and monthly air temperature, accordingly (°C).

Table 38. Baseline values (°C) and projected relative changes of the Dniester River monthly and annual water temperature (%) (at Bender)

Scenario	Time-slice	Months												Year
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
baseline	1970s	0.7	0.5	2.2	9.4	16.6	21.1	23.1	22.7	18.7	12.5	6.1	2.0	11.3
SRES A2	2020s	13.4	27.2	56.0	10.3	3.1	2.9	4.6	5.3	5.7	10.0	22.3	7.7	33.7
	2050s	30.7	50.7	104.5	21.7	8.5	7.7	11.3	12.0	12.1	19.2	37.5	87.7	64.2
	2080s	46.1	80.9	187.1	34.3	14.1	14.7	20.0	19.6	20.7	30.5	56.5	144.8	103.5
SRES B2	2020s	13.1	30.7	67.5	17.6	4.6	4.2	6.2	6.9	7.0	10.1	23.0	23.4	39.6
	2050s	24.1	50.6	97.2	22.9	6.7	6.7	10.3	11.5	12.9	17.2	37.9	58.1	59.7
	2080s	36.3	61.9	140.9	27.0	9.2	9.5	14.1	14.5	16.2	21.9	45.0	82.2	76.4

10. Mean annual and monthly distribution of **dissolved oxygen (DO) level** were obtained using simple linear regression model:²³¹

$$DO = -0.28 * t_w + 14.45 \quad r = -0.882; p = 0.000 \quad (13)$$

where, DO – dissolved oxygen level (mg/l); t_w – water temperature (°C)

²³⁰ Sirodoev I.G., Corobov, R.M., 2005: An approach to the modelling of some river water quality parameters. Gh. Duca (ed.). The third interna-

tional conference "Ecological chemistry". Latest advances. Book of proceedings. Chișinău: Tipogr. Acad. Șt., p. 242-248.

²³¹ Ibid.

Table 39. Baseline values (°C) and projected relative changes of the Dniester River monthly and annual DO level (%) (at Bender)

Scenario	Time-slice	Months												Year
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
baseline	1970s	14.7	14.5	14.2	11.8	9.8	8.5	8.3	8.6	9.8	11.4	13.1	14.3	11.6
SRES A2	2020s	-3.2	-1.5	-4.9	-2.2	-1.3	-1.7	-7.3	-9.8	-9.0	-7.1	-5.6	-3.2	-4.5
	2050s	-3.5	-1.7	-6.9	-4.7	-3.9	-5.0	-12.6	-14.7	-12.4	-9.9	-7.6	-6.3	-6.9
	2080s	-3.7	-1.9	-10.4	-7.6	-6.5	-9.9	-19.3	-20.3	-17.0	-13.4	-10.0	-8.5	-9.9
SRES B2	2020s	-3.2	-1.5	-5.4	-3.8	-2.0	-2.6	-8.6	-10.9	-9.6	-7.1	-5.7	-3.8	-5.0
	2050s	-3.4	-1.7	-6.6	-5.0	-3.0	-4.3	-11.8	-14.3	-12.8	-9.3	-7.6	-5.1	-6.6
	2080s	-3.5	-1.8	-8.5	-5.9	-4.2	-6.3	-14.7	-16.6	-14.6	-10.8	-8.5	-6.1	-7.9

Annex 2.10. Overview of Millennium Development Goals and targets and possible climate change implications

Goal	Target	Possible Climate Change Implications
Goal 1: Eradicate Extreme Hunger and Poverty	<p>Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day</p> <p>Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger</p>	<ul style="list-style-type: none"> Economic security given increase in weather extremes Loss of biodiversity and less access to natural resources Diminished crop yields Changing soil structure (erosion, compactation, salinization, etc)
Goal 2: Achieve Universal Primary Education	Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	<ul style="list-style-type: none"> Change of lifestyle: more time to ensure food, water and cash income, this reduces time for education Possible ill-health impacts and follow up of calamities as barriers to attending classes
Goal 3: Promote Gender Equality and Empower Women	Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	<ul style="list-style-type: none"> Women's greater reliance on subsistence and natural resources for income
Goal 4: Reduce Child Mortality	Target 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	<ul style="list-style-type: none"> Health impacts on children and mothers as they are particularly vulnerable to disaster-related, water quality and hunger related diseases
Goal 5: Improve Maternal Health	Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	<ul style="list-style-type: none"> Health impacts on people already living with diseases as they have an increased vulnerability to climate change
Goal 6: Combat HIV/AIDS, Malaria and other diseases	<p>Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS</p> <p>Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases</p>	<ul style="list-style-type: none"> Increases in heat related mortality and illness associated with weather extremes (hot waves especially)

<p>Goal 7: Ensure Environmental Sustainability</p>	<p>Target 9. Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources</p> <p>Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.</p> <p>Target 11. Have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers</p>	<ul style="list-style-type: none"> • Increased water shortages as a result of changes in rainfall patterns, greater periods of drought • biological diversity and ecosystems loss, and environmental degradation due to variations in temperature and precipitations
<p>Goal 8: Develop a Global Partnership for Development</p>	<p>Target 12. Develop further an open, rule-based, predictable, nondiscriminatory trading and financial system (includes a commitment to good governance, development, and poverty reduction? both nationally and internationally)</p> <p>Target 13. Address the special needs of the Least Developed Countries (includes tariff- and quota-free access for Least Developed Countries' exports, enhanced program of debt relief for heavily indebted poor countries [HIPC] and cancellation of official bilateral debt, and more generous official development assistance for countries committed to poverty reduction)</p> <p>Target 14. Address the special needs of landlocked developing countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and 22nd General Assembly provisions)</p> <p>Target 15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term</p> <p>Target 16. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth</p> <p>Target 17. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries</p> <p>Target 18. In cooperation with the private sector, make available the benefits of new technologies, especially information and communications technologies</p>	<ul style="list-style-type: none"> • Dealing with costs of weather related disasters that could affect the Gross Domestic Product, the level of indebtedness, state of public finances, and investments

Source: <http://www.unmillenniumproject.org/goals/gti.htm> Last checked on August 1, 2009.

Annex 2.11. Analysis of current strategies and legal framework

Domain	Title and date of issue	Climate change provisions
General	The National Strategy on Development for 2008 – 2011	<p>In the SWOT analysis of the actual situation in the Republic of Moldova it is also mentioned that while the effects of climate change will intensify, the frequency and severity of natural disasters, like draught, hail, as well as soil erosion will increase. It also states that the worsening of the environmental situation in the Republic of Moldova has a negative impact on human health, as well as on rural development and agricultural production.</p> <p>The MDGs, among which is MDG 7 Ensure Environmental Sustainability, are emphasized. Based on these objectives, the Strategy proposes five main general objectives. Only the last one – regional development – implies working with the environment but it does not respond to any of the issues on which climate change is based.</p>
	Action Plan on Improvement of National Capacities in the Field of Global Environmental Management According to Country's Obligations under Rio de Janeiro Conventions (2005-2010)	Based on Action Plan the following activities should be realized till 2010: elaboration of National Action Plan on adaptation to climate change and strengthening capacities of Climate Change Office according to provisions of the UN Framework Convention on Climate Change; elaboration of national strategy and branch programmes on reduction of GHS emissions; inclusion of requirements on GHS emissions inventory in branch programmes and strategies (energy, transport, household sector, public sector, industry, agriculture, forestry, waste management, etc). A number of obligations regarding adjustment of legal and normative act were identified as well.
Water	Law on Environment Protection, 16.06.1993	There are no issues specifically related to climate variability and change.
	Water Code of the Republic of Moldova, 22.06.1993	There are no issues specifically related to climate variability and change.
	Law on Rivers' and Reservoirs' Water Protection Zones and Belts, 27.04.1995	There are no issues specifically related to climate variability and change.
	Law on Natural Resources, 06.02.1997	There are no issues specifically related to climate variability and change.
	Law on Drinking Water, 10.02.1999	There are no issues specifically related to climate variability and change.
	Government decision on Framework Regulation of Using Communal Water Supply and Disposal Systems, No. 656, 27.05.2002	There are no issues specifically related to climate variability and change.
	Concept of National Water Resources Policy (2003-2010), No. 325-XV, 18.07.2003	There are no issues specifically related to climate variability and change.

Domain	Title and date of issue	Climate change provisions
	Programme of Water Supply and Disposal in the Settlements of the Republic of Moldova till 2015, No. 1406, 30.12.2005	There are no issues specifically related to climate variability and change.
	Strategy on Water Supply and Disposal in the Settlements of the Republic of Moldova, No. 662, 13.06.2007	There are no issues specifically related to climate variability and change.
	National Programme on Environmental Security for 2007-2015, No. 304, 17.03.2007	There are no issues specifically related to climate variability and change.
Energy	Law on Renewable Energy, No. 160-XVI, 12.07.2007 (Official Monitor No. 1, 2007)	There are no issues specifically related to climate variability and change.
	Energy Strategy of the Republic of Moldova until 2020, approved by Government Decision No.958 of 21.08.2007 (Official Monitor No. 141-145/1012,07.09.2007)	There are no issues specifically related to climate variability and change.
	Methodology of Tariff Determination for the Energy Obtained from Renewable Sources (approved by Decision of National Agency for Energy Regulation, 25.02.2009 - ANRE, 2009)	There are no issues specifically related to climate variability and change.
	Energy Conservation Programme for the period 2003-2010. (Official Monitor No. 200-203/1133, 19.09.2003)	There are no issues specifically related to climate variability and change.
Transportation	Land Transportation Development Strategy for 2008-2017	There is nothing explicit about the specific imperatives imposed by the climate changes on roads and rail-road building technologies.
	Concept of Development of the River Transport in the Republic of Moldova, March 2008	There are no issues specifically related to climate variability and change.
	Strategy for Development of the Civil Aviation in 2007-2012	There are no issues specifically related to climate variability and change.
Biodiversity	National Strategy and Action Plan on Biodiversity Conservation of the Republic of Moldova (Government Decision 112-XV of 27.04.2001)	There are no issues specifically related to climate variability and change.
	The National Action Plan to Combat the Desertification (NAPCD). (Government Decision 367 of 13.04.2000)	There are no issues specifically related to climate variability and change.
	The Strategy for Sustainable Development of Forest Sector of the Republic of Moldova (Government Decision 350 of 12.07.2001)	There are no issues specifically related to climate variability and change.
	State Programme for regeneration and afforestation of Forest Fund Lands for 2003-2020. (Government Decision 737 of 17.06.2003)	There are no issues specifically related to climate variability and change.

Domain	Title and date of issue	Climate change provisions
Agriculture	National Strategy for Sustainable Development of Agricultural Complex of the Republic of Moldova for 2008-2015 (Government Decision No. 282 of 11.03.2008. Official Monitor No. 57-60, 21.03.2008)	<p>One of the reasons to elaborate this Strategy was the excessive vulnerability of the agricultural sector to natural conditions, expressed by sudden reduction of crops in the years with various natural calamities.</p> <p>The Strategy provides that climate change can affect food security by erosion, droughts and floods, resulting in dramatic reduction or collapse of agricultural production because of natural disasters.</p> <p>Thus, it is needed to increase the reservoir system, rehabilitate existing dams in flood areas, enhance efficiency of the irrigation system, implement agro-systems in order to increase resistance to erosion, improve soil quality, identify plant species adapted to the Republic of Moldova's conditions (high temperatures and low humidity). The decrease of the vulnerability of agriculture to risk factors and risk control can be promoted by various mechanisms and policies.</p> <p>General measures (organizational); special measures on erosion control, against droughts, to diminish flood risks, devastating weather events.</p>
	Strategy for Agricultural Sector Development during 2006-2015 (Government Decision No. 1199 of 17.10.2006. Official Monitor No. 170-173/1312,03.11.2006)	There are no issues specifically related to climate variability and change.
	National Programme "Moldovan Village"(2005-2015)	There are no issues specifically related to climate variability and change.
	National Action Programme to Combat Desertification (Government Decision No. 367 of 13.04.2000)	There are no issues specifically related to climate variability and change.
	National Complex to Increase Soil Fertility (No. 591, 20.06.2000)	There are no issues specifically related to climate variability and change.
	Programme of Recovery of New Land to Increase Soil Fertility during 2003-2010. Chisinau, 2004	There are no issues specifically related to climate variability and change.
	Health	National Health Policy of the Republic of Moldova (Government Decision No. 886 of 06.08.2007)	There are no issues specifically related to climate variability and change.
Law No. 10 of 03.02.2009 on the Supervision of State Public Health (Official Monitor No. 67, 03.04.2009)		There are no issues specifically related to climate variability and change.
Health System Development Strategy for 2008-2017 (Government Decision No. 1471 of 24.12.2007)		There are no issues specifically related to climate variability and change.

Domain	Title and date of issue	Climate change provisions
	Strategic Development Plan of the National Health Information during 2008-2017 in the Republic of Moldova. Chisinau, 2007. Approved by Common Order of the Ministry of Health, Ministry of Information Development, National Bureau of Statistics, National Health Insurance Company Nr. 412/127/125/185-A on 06.11.2007	There are no issues specifically related to climate variability and change.

Annex 2.12. Explanation of criteria used for selection of adaptation options

Criteria used for selection considering highest-priority development goals include five specific risk-multipliers for human development reversals, identified in the HDR 2007/2008:

- **Agricultural production and food security (Reduced agricultural productivity):** It is closely related to poverty reduction. People with low income are the most directly and severely affected by disasters that affect agricultural production. Reducing their vulnerabilities and addressing poverty as a root cause of disasters should be identified as a key priority.
- **Water stress and water insecurity (Heightened water insecurity):** Water supply, quality and availability are a prerequisite for a normal development of the country, population and environment.
- **Exposure to climate disasters (Increased exposure to extreme weather events):** Disaster risk reduction and climate change adaptation must be closely linked to development and must address local needs. Climate information must capture the complexity and uncertainty in supporting adaptation and disaster risk reduction.
- **Ecosystems and biodiversity (The collapse of ecosystems):** Climate change is already transforming ecological systems. While some animal and plant species will adapt, for many species the pace of climate change is too rapid and many species could face extinction.
- **Human health (Increased health risks):** Rich countries are already preparing public health systems to deal with future climate shocks, such as the 2003 European heat-wave and more extreme summer and winter conditions. However, the greatest health impacts will be felt in developing countries because of high levels of poverty and the limited capacity of public health systems to respond. Major killer diseases could expand their coverage.²³²
- **These five drivers do not operate separately.** They interact with wider social, economic and ecological processes that shape opportunities for human development. Inevitably, the precise mix of climate change and human development factors varies across and within the country. Additionally there are large areas of uncertainty. What is certain is that dangerous climate change has the potential to deliver powerful systemic shocks to human development. Many of the human development impacts (like lost opportunities for health and education, diminished productive potential, loss of vital ecological systems) are likely to prove irreversible.²³³
- **Costs:** Any adaptation option will necessitate some costs, but these could be low cost options (an affordable/small financial and/or social effort) or options that will be high cost and could be implemented only if there is external support (including financial)

Proposed measures should include both structural and non-structural measures as well as the financial means and the institutional changes necessary to implement successful adaptation processes. They should be based on participatory processes, prioritising the potential reforms and investments taking into account the financial, institutional resources and other means and knowledge available to implement them. These options should ensure the step-wise implementation of the adaptation strategy, in accordance with determined priorities, including coping measures from the individual to the State level.²³⁴

²³² Human Development Report 2007/2008.

²³³ Human Development Report 2007/2008.

²³⁴ Draft guidance on water and climate change adaptation, UNECE, WHO, July 2008.

Climate change is global but the effects are local. Physical impacts will be determined by geography and microlevel interactions between global warming and existing weather patterns. Human development impacts will also vary as changes in climate patterns interact with pre-existing social and economic vulnerabilities.²³⁵

The shape of the interplay between climate change and human development outcomes will be defined the type of local climate effects, by the specific social and economic coping capacities, and by public policy choices, among other factors. What is important in the context of climate change is that Moldova being one of the vulnerable countries starts preparing adaptation strategies in order to reduce *Income poverty and Child mortality, improve Nutrition and Health*.

HUMAN DEVELOPMENT STATISTICAL APPENDIXES

Information was provided by National Bureau of Statistics of Republic of Moldova. Data do not cover the Trans-Dniester region and the Bender municipality, except for the mentioned cases when calculations are made for the entire country.

²³⁵ Human Development Report 2007/2008.

Annex 3.1. Human Development Index (HDI)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP per capita:																
Moldovan lei, current prices	505	1,313	1,798	2,167	2,441	2,498	3,379	4,402	5,247	6,227	7,646	8,890	10,475	12,483	14,937	17,602
US dollars at Purchasing Power Parity *	2,935	2,975	2,105	2,128	2,207	2,087	2,033	2,112	2,300	2,533	2,765	2,028	2,362	2,561	2,715	2,986
Adult literacy rate (%)	97	97.2	97.4	97.5	97.7	97.9	98.0	98.2	98.3	98.5	98.7	98.9	99.0	99.0	99.1	99.1
Gross global enrolment ratio (%)	71.7	70.2	71.1	71.8	72.9	73.4	71.2	70.3	70.4	70.7	71.0	70.9	71.7	71.2	69.9	69.8
Life expectancy at birth (years)	67.5	66.1	65.8	66.7	66.6	67.8	67.4	67.6	68.2	68.1	68.1	68.4	67.8	68.4	68.8	69.4
Indexes:																
GDP	0.564	0.566	0.509	0.510	0.516	0.507	0.503	0.509	0.523	0.539	0.554	0.502	0.528	0.541	0.551	0.567
Education	0.886	0.882	0.886	0.889	0.894	0.897	0.891	0.889	0.890	0.892	0.895	0.896	0.900	0.897	0.894	0.893
Longevity	0.708	0.685	0.680	0.695	0.693	0.713	0.707	0.710	0.720	0.718	0.718	0.723	0.713	0.723	0.730	0.740
Human Development Index (HDI)	0.719	0.711	0.692	0.698	0.701	0.706	0.700	0.703	0.711	0.716	0.722	0.707	0.714	0.720	0.725	0.733

* Estimated based on results European Comparison Program of 1996.

Annex 3.2. Gender-related Development Index (GDI)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Life expectancy	67.4	67.6	68.2	68.1	68.1	68.4	67.8	68.4	68.8	69.4
Women	71.0	71.2	71.7	71.7	71.6	72.2	71.7	72.2	72.6	73.2
Men	63.7	63.9	64.5	64.4	64.5	64.5	63.8	64.6	65.1	65.6
Adult literacy rate (%)	98.0	98.2	98.3	98.5	98.7	98.9	99.0	99.0	99.1	99.1
Women	96.9	97.1	97.4	97.6	97.9	98.3	98.4	98.4	98.5	98.5
Men	99.3	99.3	99.4	99.5	99.5	99.6	99.6	99.6	99.7	99.7
Gross global enrolment rate (%)	71.2	70.3	70.4	70.7	71.0	70.9	71.7	71.2	69.9	69.8
Women	72.4	71.9	72.3	72.8	73.5	74.0	74.8	74.3	73.2	73.2
Men	70.1	68.7	68.5	68.7	68.5	67.9	68.7	68.2	66.8	66.6
GDP per capita USD at PPP	2,033	2,112	2,300	2,533	2,765	2,029	2,362	2,560	2,714	2,986
Women	1,579	1,665	1,823	2,042	2,150	1,597	1,909	1,881	2,118	2,335
Men	2,527	2,598	2,819	3,067	3,434	2,499	2,855	3,296	3,357	3,690
Gender-related Development Index (GDI)	0.697	0.700	0.709	0.715	0.720	0.705	0.711	0.718	0.723	0.731

Annex 3.3. Gender Empowerment Measure (GEM)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Parliamentary participation (%)	7.9	7.9	12.9	15.8	17.5	22.0	22.0	21.8	21.8	21.8
Managers and high officials in public administration and social and economic units (%)	36.6	33.2	37.5	40.2	39.4	39.0	38.8	38.9	40.2	37.9
Women with intellectual and scientific occupation	61.3	63.1	62.4	60.3	62.9	62.2	62.9	62.1	64.4	63.4
Percent of women in total population	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.0	51.9	51.9
Percent of women in economically active population	49.3	50.0	50.1	50.8	50.4	51.0	51.5	49.1	49.5	49.4
Ration of women to men average wage in non-agricultural activities. (%)	...	...	...	70.0	66.9	66.8	68.5	64.1	69.3	70.1
GDP per capita USD at PPP	2,033	2,112	2,300	2,533	2,765	2,028	2,362	2,561	2,715	2,986
Gender Empowerment Measure (GEM)	0.422	0.413	0.475	0.512	0.524	0.555	0.556	0.557	0.557	0.557

Annex 3.4. Demographic profile

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Population. Entire country. January 1 (thousand people)	4,347.9	4,334.4	4,320.0	4,304.7	4,293.0	4,281.5	4,264.3	4,247.7	4,228.9	4,208.5	...	...	...	...
Population. Trans-Dniester region and Bender municipality not included (thousand people)	3,678.4	3,671.8	3,663.7	3,655	3,649.3	3,643.5	3,634.5	3,627.2	3,617.7	3,606.8	3,599.8	3,589.9*	3,581.1*	3,572.7*
Annual rate of population growth (%)	0.8	0.5	0.7	0.4	-0.7	-1.1	-1	-1.7	-1.8	-1	-1.9	-1.5	-1.4	-0.9
Birth rate (per 1,000 inhabitants)	13.0	12.0	12.5	11.3	10.6	10.2	10.0	9.9	10.1	10.6	10.5	10.5	10.6	10.9
Mortality rate (per 1,000 inhabitants)	12.2	11.5	11.8	10.9	11.3	11.3	11.0	11.6	11.9	11.6	12.4	12	12	11.8
Rate of natural increase (per 1,000 inhabitants)	0.8	0.5	0.7	0.4	-0.7	-1.1	-1	-1.7	-1.8	-1	-1.9	-1.5	-1.4	-0.9
Life expectancy at birth (years)	65.8	66.7	66.6	67.8	67.4	67.6	68.2	68.1	68.1	68.4	67.8	68.4	68.8	69.4
Marriage rate (per 1,000 inhabitants)	7.5	6.0	6.1	6.0	6.5	6.0	5.8	6.0	6.9	7.0	7.6	7.6	8.2	7.5
Likelihood of not surviving the age of 60 years (%)	...	...	...	...	...	...	12.2	13.0	13.0	13.4	13.6	12.5	11.0	10.4
Rate of divorce (per 1,000 inhabitants)	3.4	3.1	2.8	2.8	2.4	2.7	3.0	3.5	4.1	4.1	4.0	3.5	3.9	3.5
Infant mortality rate (per 1,000 newborns alive)	21.2	20.2	19.8	17.5	18.2	18.3	16.3	14.7	14.4	12.2	12.4	11.8	11.3	12.2
Mortality rate:														
0-4 years aged (per 1,000 newborns alive)	27.4	26.2	25.9	22.9	23.9	23.3	20.3	18.2	17.8	15.3	15.7	14.0	14.0	14.5
Maternal (per 100,000 newborns alive)	40.8	40.2	48.3	36.3	28.6	27.1	43.9	28.0	21.9	23.5	18.6	16.0	15.8	38.4
Share of underweighted newborns alive (%)	6.1	6.1	6.3	6.4	7.2	4.3	4.7	4.4	4.7	4.6	4.8	4.9	5.0	5.3
Conjectural rate of fertility	1.76	1.60	1.66	1.49	1.37	1.29	1.25	1.21	1.22	1.26	1.22	1.23	1.26	1.28
Number of abortions per 1 newborn alive	1.0	0.9	0.7	0.7	0.6	0.7	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4
Share of population aged 0-15 years (%)	28.6	28.1	27.6	27.4	26.7	25.7	24.8	23.8	22.7	21.8	20.8	20.1	19.9	19.2
Share of population aged 65 years of age and above (%)	9.0	9.0	9.1	9.3	9.4	9.4	9.5	9.6	9.8	9.9	9.9	9.8	10.3	10.3
Demographic dependency ratio** (%)	60.1	59.1	57.9	58	56.3	54.1	47.6	45.6	43.9	42.1	40.6	39.2	39.8	38.7
Number of emigrants (thousand people)	5.4	4.7	5.5	4.8	6.3	9.1	6.4	6.6	7.4	7.2	6.8	6.7	7.2	7.0
Share of emigrants aged 20-34 years in total number of migrants	...	...	...	...	...	...	...	...	40.7	42.4	41.2	43.3	44.5	44.2

* Stable population.

Annex 3.5. Health

	1995	1996	1997	1998	1999	2000	2001*	2002	2003	2004	2005	2006	2007	2008
Mortality rate (per 100,000 inhabitants) by causes:														
Circulatory system deceases	568.62	576.56	612.43	575.63	623.41	631.99	618.14	654.78	679.58	653.71	700.14	671.37	675.95	657.4
Tumours	131.81	134	130.9	131.89	127.36	126.55	129.94	134.72	138.53	141.54	145.75	153.41	152.62	157.4
Respiratory deceases	78.3	70.37	72.91	65.93	71.17	69.44	64.61	74.34	79.01	69.3	79.15	72.88	72.13	68.9
Infant mortality rate (per 1,000 newborns alive)	21.2	20.2	19.8	17.5	18.2	18.3	16.3	14.7	14.4	12.2	12.4	11.8	11.3	12.2
Maternal mortality rate (per 100,000 newborns alive)	40.8	40.2	48.3	36.3	28.6	27.1	43.9	28	21.9	23.5	18.6	16	15.8	38.4
New cases of active tuberculosis (per 100,000 inhabitants)	54.5	58.8	58.9	67.9	61.8	59.9	83.1	83.6	87.5	91.5	105.7	103.0	99.0	92.7
AIDS incidence (per 100,000 inhabitants)	0.05	0.02	0.2	0.1	0.1	0.1	0.2	0.5	1.0	1.0	2.0	2.4	5.3	2.3
Number of population per medical doctor	252	250	261	263	273	281	282	283	286	287	286	283	281	282
Number of population per medical assistant	96	100	102	105	119	124	131	132	135	129	139	130	129	130
Hospitals beds (per 1,000 inhabitants)	12.2	12.1	11.6	11.2	8.2	7.6	6.9	6.8	6.7	6.4	6.4	6.3	6.1	6.1
Public expenditures for health and social assistance. % of GDP	6.4	7.4	11.1	8.3	6.7	6.8	5.5	6.4	6.1	14.4	15.4	16.2	17.3	18.0
Persons in hospitals:														
total, thousand	939	858	831	786	647	585	533	586	610	588	593	598	615	636
per 100 inhabitants	21.6	19.8	19.3	18.3	15.1	13.7	14.7	16.2	16.9	16.3	16.5	16.7	17.2	17.8
Visits to medical doctors:														
total, thousand	35	36	36	36	25	23	23	25	23	20	22	22	22	22
per inhabitant	8.2	8.3	8.4	8.3	5.9	5.3	6.2	6.8	6.4	5.6	6.1	6	6.2	6.3
Number of private sanitary units:														
ambulatory or policlinic units providing medical assistance to the population	30	13	11	10	216	310	326	338	341	372	379	437	458	496
hospitals	-	-	1	4	5	8	10	15	9	12	13	11	10	10
medical offices	1	4	7	12	9	16	14	18	25	13	16	66	60	56
pharmacies	18	344	371	431	423	553	941	1,058	978	1,053	1,088	806	814	861

* Starting 2001, data are not including Trans-Dniester and Bender municipality.

Annex 3.6. Formal education

	1995/ 1996	1996/ 1997	1997/ 1998	1998/ 1999	1999/ 2000	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009
Institutions, total	1,674	1,696	1,706	1,737	1,746	1,760	1,780	1,778	1,766	1,749	1,722	1,704	1,696	1,679
School population, thousand	766.5	778	786.5	788.1	770.9	753	746.7	738	726	709.4	697.2	675.4	641.5	608
Teaching personnel, thousand	57.1	55.3	55.2	54	53.1	51.9	52.2	51.1	52.4	51.2	51.6	51.2	49.5	48.1
Schools, gymnasiums, lyceums														
Day schools, gymnasiums, lyceums	1,515	1,530	1,536	1,549	1,558	1,566	1,577	1,580	1,576	1,570	1,551	1,539	1,534	1,519
Pupils, thousand	642.8	649.5	652.7	650.7	643.1	629.3	618.4	603.4	578.7	546.6	517	491.5	461	434.3
Teaching personnel, thousand	46.5	44.8	45	44.8	43.2	42.3	42.5	41.6	42.6	41	40.9	40	38.6	36.9
Evening schools	11	10	9	7	7	7	7	7	7	7	7	7	7	7
Pupils, thousand	3.1	2.9	2.7	2.5	2.1	1.9	1.9	1.8	1.8	1.9	2.0	2.0	1.8	1.8
Teaching personnel, thousand	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Institutions of secondary vocational education														
Number of educational institutions	78	81	80	87	81	80	82	83	83	81	78	78	75	75
Students, thousand	34.8	34	32.7	32.5	23	22.8	23	22.6	22.8	22.7	25	23.7	24.5	24.3
Teaching personnel, thousand	3.5	3.4	3.2	2.0	2.5	2.3	2.3	2.2	2.2	2.3	2.4	2.5	2.4	2.3
Colleges														
Number of colleges	50	51	53	56	57	60	67	63	60	56	51	49	49	47
Students, thousand	31	33.3	32.8	29.7	25.4	19.9	17.0	15.2	18.7	23.6	27.1	30.2	31.3	32.7
Teaching personnel, thousand	2.6	2.5	2.3	2.4	2.2	1.9	2.0	1.7	1.8	1.9	2.0	2.0	2.0	2.4
High education institutions														
Number of institutions	20	24	28	38	43	47	47	45	40	35	35	31	31	31
Students, thousand	54.8	58.3	65.6	72.7	77.3	79.1	86.4	95	104	114.6	126.1	128	122.9	114.9
Teaching personnel, thousand	4.3	4.4	4.6	4.7	5.1	5.3	5.3	5.5	5.7	5.9	6.2	6.6	6.4	6.4
Per 100,00 inhabitants														
School pupils	1,794	1,813	1,796	1,790	1,770	1,737	1,710	1,671	1,607	1,522	1,438	1,372	1,289	1,222
Students in vocational institutions	97	94	89	89	63	63	63	63	63	63	70	66	69	68
Students in colleges	86	93	90	81	70	55	47	42	52	65	75	84	88	92
Students in universities	152	162	180	199	212	217	238	262	288	318	351	357	344	322
Gross enrolment rate (%) in:														
preschool education (3 – 6 years)	...	...	50.5	49.4	44.1	44.1	47.6	57	61.1	66.1	69.7	70.1	72.6	74.4
primary education	98	99	98.8	100	100.1	99.4	99.5	99.5	99.8	97.9	93.7	94.4	94	93.6
lower secondary education	94	93	88.8	88.3	90.7	90.2	91.1	92.3	92.2	92.5	90.5	90.5	90.1	89.3
Public expenditures, as % of:														
GDP	8.9	10.3	9.9	7.0	4.7	4.5	4.9	5.5	5.4	6.8	7.2	8.1	8.0	8.2
Consolidated public budget	24.2	28.3	24.7	21.2	16.4	16.8	21.4	23.9	24.3	19.3	19.4	20.1	19.0	19.8

Annex 3.7. Population enrolment in education

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rate of education young early leavers	17.4	20.7	22.8	23.6	22.6	21.8	22.6	23.6	21.0	20.1
Rate of youth education (%)	82.7	79.4	78.1	75.9	76.8	77.2	76.1	75.5	77.7	78.5
Rate of adult population education (%)	100	100	100	100	100	100	100	100	100	100
Low level education	19.8	20.4	20.2	20.4	19.5	18.6	18.8	18.4	18.3	17.4
Medium level education	67.8	67.0	66.8	66	66.3	66.4	66.3	64.0	65.1	65.6
High level education	12.4	12.6	13	13.6	14.2	15	14.8	17.6	16.6	17.0
Participation to lifelong education	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.9	0.82	0.85

Annex 3.8. Labour force employment

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employed population (above 15 years of age), thousand people	1,495	1,515	1,499	1,505	1,356	1,316	1,319	1,257	1,247	1,251
- women	755	767	762	774	696	685	689	629	626	622
Rate of employment (%)	54.5	54.8	53.7	53.3	47.5	45.7	45.4	42.9	42.5	42.5
- women	51.8	52.2	51.4	51.7	46	44.9	44.8	40.5	40.5	40.1
Rate of employment of population aged 15-64 years (%)	59.4	59.6	58.5	57.7	52.3	50.2	49.7	47.1	47.1	47.3
- women	57.5	57.8	57.3	57.2	51.8	50.5	50.4	45.7	46.2	46
Youth employment rate (aged 15-24 years) (%)	32.8	30.6	27.9	26.8	20.1	18.1	17.7	18.9	17.7	18.5
- women	30.9	28.3	26.4	26.4	18.6	17.3	16.8	16.7	15.3	16.1
Share of population employed in private sector* (%)	66.8	69.9	71.1	71.6	68.8	68.1	67.9	66.2	67.1	69.7
Distribution of employed population by sectors (%):										
agriculture, total,	49.8	50.9	51.0	49.6	43.0	40.5	40.7	33.6	32.8	31.1
Including in private sector	90.7	93.2	96.2	98.4	98.5	98.2	98.0	96.9	97.6	98.2
manufacture, total,	10.7	10.6	11.0	11.4	12.1	12.3	12.1	12.8	12.7	13.1
Including in private sector	49.8	50.0	53.7	55.6	62.6	60.2	61.0	65.0	67.7	69.2
constructions, total,	2.9	2.9	2.9	3.1	3.9	4.0	3.9	5.4	6.1	6.6
Including in private sector	55.7	64.8	69.1	75.8	81.5	84.4	85.2	93.3	94.6	94.2
services, total,	37.6	35.2	35.1	35.9	41.0	43.3	43.3	48.2	48.5	49.3
Including in private sector	33.8	38.7	40.1	41.4	43.4	43.7	43.9	46.9	48.5	48.7
Share of population employed in public sectors (%):										
health	5.4	4.9	4.7	4.5	4.7	4.8	4.7	5.0	5.1	5.3
education	9.2	6.7	6.7	8.2	9.1	9.4	9.4	10.0	10.0	10.0
public administration	3.3	4.2	4.4	4.0	4.3	4.4	4.4	4.6	4.6	4.6
Number of wage-employed, thousand	932	951	899	892	868	841	831	843	832	850
Share of wage-employed in total employed population (%)	62.3	62.8	60.0	59.3	64.0	63.9	63.0	67.6	66.7	68.0
Share of wage-employed of private sector in total population employed in this sector (%)	48.7	45.6	43.7	43.4	49.2	48.0	46.8	51.9	52.3	54.1
Share of women in total wage-employed (%)	49.8	49.9	50	51.2	52.1	52.6	53.2	51.3	52.4	52.0
Share of population employed in informal sector (% of total employed)	...	...	...	...	14.5	12.7	12.1	10.0	10.4	10.9
Share of population informally employed (% of total employed)	...	...	...	...	38.0	34.6	33.4	35.1	33.6	31.1

Source: Labour Force Survey. Statistical surveys of enterprises.

* Private sector – according to the official Classifier of propriety.

Annex 3.9. Labour participation

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Share of economically active population aged 15 years and above in total population of this age (%)	61.3	59.9	57.9	57.2	51.6	49.7	49.0	46.3	44.8	44.3
women	56.9	56.3	54.6	54.7	49.1	47.9	47.7	43.0	42.2	41.5
Rate of participation of population of age 15-64 years (%)	67.2	65.4	63.3	61.1	57.0	54.8	53.8	50.9	49.7	49.4
women	63.4	62.6	61.0	60.8	55.5	54.1	53.7	48.5	48.1	47.7
Rate of participation of youth (aged 15-24 years) (%)	42.2	36.4	33.3	31.6	24.6	22.6	21.8	22.8	20.7	20.8
women	37.8	33.2	30.7	30.2	22.4	21	20.5	19.8	17.7	18.4
Rate of labour participation of population above 50 years of age (%)	41.7	45.0	45.6	47.5	42.3	42.4	43.8	40.3	39.2	38.2
women	34.4	38.4	38.3	40.2	35.5	36.6	38.2	34.0	32.9	31.9
Structure of active population by professional status* (%)										
total	100	100	100	100	100	100	100	100	100	100
wage-employed	66.8	63.2	60.2	59.2	63.1	62.6	61.5	65.5	65.5	67.2
employers	0.5	0.5	0.5	0.7	0.6	0.6	0.6	0.9	0.9	1.0
self-employed	22.6	27.1	29.1	30.5	31.1	32.5	33.5	27.4	29.0	27.9
other categories	7.0	6.9	7.9	7.2	2.4	1.0	1.0	2.8	2.2	2.3
Economic dependency ratio (‰)	1443	1408	1428	1413	1671	1745	1733	1855	1871	1857
Labour replacement rate (%)	120.0	113.8	107.5	101.2	95.2	89.3	84.5	80.3	80.0	76.7

Source: Labour Force Survey.

* Classification of unemployed was made based on their professional status at the last job. There were not included the unemployed that never worked or stopped working 8 years ago.

Annex 3.10. Registered unemployment *

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of unemployed (persons)	24,543	23,426	27,973	32,021	34,918	28,873	27,646	24,019	19,666	21,018	21,717	20,358	18,898	17,833
Out of which, women	16,077	15,872	17,728	19,012	21,569	16,955	14,041	12,262	9,393	9,310	10,421	10,783	10,636	10,536
Unemployment rate (%)	1.4	1.5	1.5	1.9	2.1	2.1	2.0	1.9	2.0	1.8	2.0	1.9	1.9	1.6
Share of those receiving unemployment benefits in total registered unemployed (%)	32.5	29.8	26.7	25.2	32.6	23	19.7	14.6	9.5	5.1	6.7	9.3	10.5	11.6
Ratio of average unemployment benefit and average wage per economy (%)	37.9	34.2	37.3	31.7	33.2	29.4	24.6	24.6	19.2	23.1	38.9	28.0	26.6	26.1
Number of unemployed in retraining programs	2,139	3,356	3,506	4,244	2,640	3,532	1,482	3,470	2,008	2,461	2,142	2,428	2,046	2,250

Source: National Agency for Labour Force Employment. End of year.

Annex 3.11. Unemployment*

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of unemployed. (thousand persons)	187	140	118	110	117	116	104	100	67	52
Unemployment rate (%):										
total	11.1	8.5	7.3	6.8	7.9	8.1	7.3	7.4	5.1	4.0
men	13.3	9.7	8.7	8.1	9.6	10	8.7	8.9	6.3	4.6
women	8.9	7.2	5.9	5.5	6.4	6.3	6	5.7	3.9	3.4
Young unemployment rate (%) (15-24 years)	22.3	15.8	16.3	15.2	18.1	19.7	18.7	17.1	14.4	11.2
Share of young unemployed (15-24 years) in total unemployed (%)	31.8	26.4	30.2	29.2	26	26.5	27.5	27.3	30.5	30.2
Share of young unemployed (15-24 years) in total young population (%)	9.4	5.8	5.4	4.8	4.5	4.4	4.1	3.9	3.0	2.3
Incidence of long-term unemployment (share in total unemployed) (%):										
6 months and more	92.0	91.8	73.7	71.2	61.7	60.5	62.6	54.8	52.3	47.1
men	92.1	92.7	72.8	70.7	62.4	61.0	60.4	54.4	51.0	42.1
women	91.8	90.5	75.1	72.0	60.7	59.8	65.6	55.4	54.5	53.9
12 month and more	74.2	77.8	58.0	59.6	48.3	44.8	48.9	38.1	35.5	31.3
men	74.8	80.7	57.9	59.5	49.5	44.9	48.5	39.6	34.4	27.8
women	73.2	74.0	58.2	59.8	46.6	44.7	49.4	35.7	37.4	36.0
24 months and more	41.1	48.2	38.8	39.9	34.4	29.8	30.3	25.0	20.8	17.7
men	41.9	51.2	40.5	41.2	35.0	29.2	30.1	24.8	20.5	15.7
women	39.9	44.1	36.4	38.0	33.4	30.7	30.7	25.2	21.4	20.5
Incidence of youth long-term unemployment (share in total young unemployment) (%)										
6 months and more	62.4	61.4	58.1	59.3	45.3	48	50.6	46.2	35.2	30.3
men	63.9	67.6	60.1	59.2	47.7	48.8	50.2	48.1	37.7	24.2
women	59.9	53.0	55.0	59.4	42.0	46.8	51.2	43.3	31.6	36.8
Share of underemployed population in total active population (%)	0.4	5.5	5.5	5.4	3.8	3.3	3.7	7.8	7.6	6.7
women	0.5	5.1	5.2	5	3.5	3.2	3.5	7.4	7.1	6.4
Share of discouraged population in total active population (%)	5	5.5	5.9	4.8	5.1	5.7	5	4.3	2	1.4
women	4.7	5.2	6.1	4.7	5.2	5.5	4.7	4.2	1.9	1.3

Source: Labour Force Survey.

* - According to the International Labour Organisation definition.

Annex 3.12. Female human potential

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Life expectancy at birth (years)	69.7	70.4	70.3	71.4	71.0	71.2	71.7	71.7	71.6	72.2	71.7	72.2	72.6	73.2
Year 1994 = 100%	99.9	100.9	100.7	102.3	101.7	102.0	102.7	102.7	102.6	103.4	102.7	103.5	104.0	104.8
Conjugal rate of fertility	1.76	1.60	1.66	1.49	1.37	1.29	1.25	1.21	1.22	1.26	1.22	1.23	1.25	1.28
Year 1994 = 100%	90.3	82.1	85.1	76.4	70.3	66.2	64.1	62.1	62.6	64.6	62.6	63.1	64.1	65.6
Maternal mortality rate (per 100,000 newborns alive)	40.8	40.2	48.3	36.3	28.6	27.1	43.9	28.0	21.9	23.5	18.6	16.0	15.8	38.4
Gross enrolment ratio (%):														
Primary	97.0	98.9	98.0	99.8	99.6	99.4	99.2	99.3	99.6	97.2	96.1	93.6	93.0	92.7
Lower secondary	93.8	92.2	88.9	88.0	91.0	90.7	91.7	92.9	92.9	92.5	93.4	90.1	89.8	88.8
Evolution of the gross rate of enrolment (1994=100%):														
Primary	100	102	101	103	103	102	102	102	103	100	99	96	96	96.0
Lower secondary	101	99	96	95	98	98	99	100	100	99	100	97	97	96.0
Students per 100,000 inhabitants (women)*:														
Number	1,595	1,702	1,894	2,102	2,280	2,349	2,619	2,859	3,196	3,638	3,903	3,987	3,901	3,583.0
1994 = 100%	111	118	132	146	158	163	182	199	222	253	271	277	271	249.0
Adult women illiterate rate. %	4.1	3.9	3.6	3.4	3.1	2.9	2.6	2.4	2.1	1.7	1.4	1.6	1.5	1.5

* High education.

Annex 3.13. Disparities between men and women

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Life expectancy at birth (years)	65.8	66.7	66.6	67.8	67.4	67.6	68.2	68.1	68.1	68.4	67.8	68.4	68.8	69.4
Women	69.7	70.4	70.3	71.4	71.0	71.2	71.7	71.7	71.6	72.2	71.7	72.2	72.6	73.2
Men	61.8	62.9	62.9	64.0	63.7	63.9	64.5	64.4	64.5	64.5	63.8	64.6	65.1	65.6
Gross rate of enrolment in lower secondary education (gymnasium) (%):														
Women	93.8	92.2	88.9	88.0	91.0	90.7	91.7	92.9	92.9	92.5	93.4	90.1	89.8	88.8
Men	92.6	92.8	88.6	88.5	90.5	89.7	90.5	91.6	91.5	92.5	92.5	90.9	90.3	89.8
Unemployment rate (%):														
Women	...	...	...	...	13.3	9.7	8.7	8.1	9.6	10.0	8.7	5.7	3.9	3.4
Men	...	...	...	...	8.9	7.2	5.9	5.5	6.4	6.3	6.0	8.9	6.3	4.6
Average wage in non-agricultural activi- ties. September (Moldovan lei)														
Women	...	...	...	...	...	...	...	679	833	998	1,191	1,529	1,859	2,134
Men	...	...	...	...	...	...	...	969	1,245	1,495	1,739	2,383	2,384	2,910

Annex 3.14. Structure of disposable income by categories of households

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Income from wage												
Total households	36.4	34.7	35.4	37.3	37.8	37.0	37.3	40.5	43.7	41.6	41.4	42.9
Households with:												
Employed	48.5	47.0	48.6	54.0	56.1	58.5	59.3	62.9	67.0	66.7	68.4	69.2
Farmers	11.3	10.0	10.5	10.3	14.8	8.6	8.8	11.2	12.2	14.1	14.5	17.7
Pensioners	9.9	7.7	6.3	5.7	6.9	5.7	6.5	8.3	9.5	14.7	14.8	17.8
Others	22.6	12.5	8.8	7.0	11.4	8.9	6.9	3.3	7.5	12.9	8.4	7.7
Income from individual agricultural activity												
Total households	35.6	39.4	38.5	34.5	31.9	29.9	28.9	23.1	20.2	18.6	15.1	10.5
Households with:												
Employed	30.2	32.6	30.7	25.5	22.4	19.3	16.3	12.5	10.4	11.1	9.1	6.3
Farmers	75.2	76.5	76.5	72.5	65.2	70.1	70.8	63.0	62.0	46.1	35.4	31.9
Pensioners	42.0	49.5	50.0	44.3	38.6	34.0	34.2	26.9	23.3	24.3	21.2	14.1
Others	15.9	24.4	14.5	8.7	7.1	4.6	4.0	2.6	2.0	8.8	7.2	5.7
Income from individual non-agricultural activity												
Total households	4.6	3.7	3.7	3.2	3	2.7	4.5	4.2	3.2	7.8	6.4	7.5
Households with:												
Employed	5.2	4.6	4.9	4.5	4.3	4.3	6.8	6.0	5.1	3.4	2.2	3.1
Farmers	3.7	2.1	1.2	0.7	1.6	1.1	0.9	0.8	0.1	2.1	1.6	3.5
Pensioners	2.5	1.6	0.8	1.1	0.7	0.8	1.4	1.8	0.7	2.3	2.2	2.6
Others	14.7	1.9	5.1	0.3	1.0	0.5	3.0	4.7	1.7	40.7	33.5	32.8
Social transfers												
Total households	10.4	10.1	8.3	9.6	10.9	14.1	14.0	15.2	18.0	13.2	13.6	14.9
Households with:												
Employed	3.5	4.1	3.2	2.7	3.5	4.3	4.8	4.8	4.8	5.0	5.1	5.7
Farmers	3.1	5.5	3.9	3.9	4.8	6.0	5.2	7.5	7.7	9.3	9.5	5.4
Pensioners	31.5	29.2	25.7	29.9	33.9	38.9	43.0	47.3	55.0	43.2	44.6	46.6
Others	4.1	6.7	2.7	1.8	2.4	2.2	2.4	2.6	3.5	4.2	3.3	3.6
Other income												
Total households	13	12.2	14.2	15.3	15.9	16.3	15.3	17.1	14.8	18.9	23.5	24.2
Households with:												
Employed	12.5	11.7	12.6	13.3	13.8	13.7	12.9	13.9	12.7	13.9	15.2	15.4
Farmers	6.8	5.9	7.8	12.6	13.6	14.2	14.3	17.4	18.0	28.4	39.0	41.2
Pensioners	14.1	12.0	17.1	19.0	20.0	20.6	15.0	15.7	11.5	15.6	17.2	18.8
Others	42.8	54.5	68.9	82.2	78.0	87.1	83.8	86.7	85.4	33.4	47.7	49.7

Annex 3.15. Structure of consumption expenditure by categories of households

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Food and alcoholic beverages												
Total households	67.9	69.7	68.9	67.5	64.2	62.0	60.0	59.5	56.9	47.1	46.4	42.1
Households with:												
Employed	65.2	67.2	66.0	62.9	59.8	57.3	54.1	54.1	51.7	43.9	44.0	39.5
Farmers	77.4	75.6	79.4	76.0	70.8	69.8	69.8	69.3	67.4	53.6	51.1	45.5
Pensioners	73.3	75.3	76.5	77.2	72.0	69.4	68.8	67.5	64.4	54.2	52.2	47.8
Others	59.5	68.3	49.7	59.5	53.1	47.1	39.4	43.0	35.4	40.0	40.1	38.2
Clothes and footwear												
Total households	9.3	7.1	6.6	7.3	7.6	8.2	8.4	8.1	7.9	11.9	12.0	12.7
Households with:												
Employed	10.9	8.5	8.3	8.8	9.0	9.9	10.5	9.8	10.0	12.6	12.5	13.6
Farmers	7.2	8.7	5.0	7.6	7.8	8.0	7.1	7.5	6.8	12.2	13.4	14.4
Pensioners	5.1	2.9	2.6	2.5	3.9	4.3	3.9	4.0	4.2	8.3	8.7	9.5
Others	14.3	4.9	4.6	9.1	10.3	8.1	16.1	11.0	7.7	14.4	13.7	14.1
Housing and house maintaining												
Total households	11.4	9.9	11.8	12.1	13.5	14.8	15.3	15.4	17.2	18.4	18.3	21.1
Households with:												
Employed	11.7	10.3	12.2	12.8	14.0	15.0	16.5	16.0	17.6	16.9	17.4	18.6
Farmers	8.4	7.5	6.9	8.4	11.8	12.6	12.5	12.7	14.3	19.0	19.8	23.5
Pensioners	11.7	9.6	11.3	12.2	12.8	15.2	15.2	15.6	18.8	19.2	19.4	24.1
Others	9.3	9.9	20.7	10.8	18.0	19.3	11.6	17.8	15.1	20.9	18.2	22.4
Medical care and health												
Total households	3.0	3.3	3.7	3.3	3.9	4.0	4.4	3.9	3.6	5.3	5.4	5.6
Households with:												
Employed	2.6	2.9	3.1	3.2	3.6	3.6	3.7	3.5	3.4	4.8	4.4	4.9
Farmers	0.9	2.0	3.0	1.9	2.7	3.3	2.8	2.3	2.4	4.4	5.1	4.6
Pensioners	4.4	4.9	5.0	4.3	5.4	6.0	7.0	5.6	5.4	8.1	8.3	7.9
Others	3.0	4.9	9.7	3.0	4.2	3.0	4.8	5.3	2.3	3.7	4.5	4.6
Transport and telecommunications												
Total households	4.4	5.1	4.4	5.0	5.2	4.9	5.3	6.3	7.2	9.0	9.2	9.8
Households with:												
Employed	4.8	5.5	5.1	6.3	6.1	6.3	6.8	7.6	8.0	11.0	10.5	11.8
Farmers	3.7	2.7	2.7	3.1	3.7	3.4	3.3	5.3	5.7	6.2	6.3	7.7
Pensioners	3.3	4.6	2.1	2.2	3.4	2.5	2.9	3.6	3.5	5.4	6.8	5.9
Others	7.8	5.9	8.7	8.5	7.9	8.7	10.2	9.5	24.2	11.0	11.8	11.2
Agreement and education												
Total households	1.8	2.1	1.9	2.4	3.1	2.6	3.3	3.5	3.2	2.4	2.5	2.5
Households with:												
Employed	2.4	2.5	2.3	3.1	3.9	3.4	4.1	4.9	4.0	3.4	3.0	3.3
Farmers	1.6	1.9	1.7	1.2	1.4	1.5	2.9	1.1	1.7	1.2	1.3	1.2
Pensioners	0.6	1.0	0.6	0.4	1.1	0.9	0.7	1.9	1.2	1.2	1.5	1.6
Others	1.8	2.4	2.7	5.2	2.2	6.8	12.3	6.8	9.3	2.7	3.2	2.6
Diverse												
Total households	2.2	2.7	2.7	2.7	2.4	3.5	3.3	3.3	4.0	5.9	6.2	6.2
Households with:												
Employed	2.5	3.1	3.1	2.9	3.5	4.7	4.3	4.2	5.3	7.4	8.2	8.3
Farmers	0.9	1.8	1.4	1.9	1.9	1.5	1.6	1.7	1.7	3.4	3.1	3.2
Pensioners	1.5	1.7	1.8	1.2	1.5	1.8	1.6	1.9	2.7	3.6	3.1	3.3
Others	4.4	3.6	4.0	4.0	4.3	7.0	5.5	6.7	6.0	7.3	8.1	6.9

Annex 3.16. Structure of disposable income by quintiles and residence

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Income from wage												
Total population												
Quintile I	27.6	20.2	22.0	29.5	30.4	27.1	35.9	40.0	36.0	34.7	35.0	35.3
Quintile V	42.5	43.1	43.5	46.8	47.1	44.5	41.5	46.1	50.8	44.9	47.5	49.4
Urban area												
Quintile I	49.0	52.3	46.4	52.9	54.4	59.3	57.7	68.9	70.9	49.4	54.2	48.2
Quintile V	60.5	58.9	59.0	62.4	63.6	60.6	55.8	56.9	63.1	57.0	58.6	59.5
Rural area												
Quintile I	20.9	12.2	14.4	15.1	18.9	16.0	26.0	28.7	23.2	27.2	27.2	31.6
Quintile V	18.9	20.2	15.1	21.0	24.7	20.8	22.1	25.1	24.0	25.3	27.9	27.1
Income from individual agricultural activity												
Total population												
Quintile I	50.3	59.8	59.5	42.1	40.3	42.0	35.2	32.7	31.4	25.2	23.8	17.9
Quintile V	25.4	26.3	23.9	22.1	21.1	20.3	20.1	11.9	11.2	12.4	8.7	4.4
Urban area												
Quintile I	9.0	14.4	19.8	16.0	8.8	7.3	5.5	4.5	4.1	3.8	3.8	2.5
Quintile V	4.2	4.4	3.2	2.5	1.9	1.5	1.5	1.2	1.0	1.6	1.2	0.7
Rural area												
Quintile I	63.1	71.2	71.8	58.2	55.3	54.0	48.6	43.8	41.4	36.0	32.0	22.3
Quintile V	53.1	57.8	61.5	54.7	47.0	48.0	45.3	32.8	33.6	29.8	21.9	12.7
Income from individual non-agricultural activity												
Total population												
Quintile I	2.1	0.9	1.3	0.9	1.0	1.2	0.9	1.0	0.6	4.7	4.7	6.7
Quintile V	6.0	5.6	5.9	5.5	3.7	3.7	6.7	7.2	4.6	10.7	6.9	7.9
Urban area												
Quintile I	5.7	2.4	3.7	2.1	1.7	3.1	2.0	3.2	2.7	7.0	8.2	7.5
Quintile V	7.5	7.9	7.5	7.1	4.2	4.6	9.7	7.5	4.7	12.0	7.7	7.4
Rural area												
Quintile I	1.0	0.6	0.6	0.1	0.7	0.5	0.4	0.2	0.0	3.6	3.3	6.4
Quintile V	4.2	2.2	2.9	2.8	2.9	2.2	2.5	6.4	4.3	8.6	5.3	9.0
Social transfers												
Total population												
Quintile I	11.7	9.6	7.4	12.9	18.7	18.4	20.3	20.9	26.3	22.6	21.5	22.4
Quintile V	8.5	9.7	7.9	6.0	6.0	7.8	8.2	8.0	9.8	7.6	8.4	9.4
Urban area												
Quintile I	21.6	14.4	15.1	15.9	22.6	21.1	23.3	17.0	17.0	27.3	20.6	24.2
Quintile V	7.2	8.3	7.7	4.6	5.0	7.3	6.8	7.0	8.3	7.0	7.5	9.6
Rural area												
Quintile I	8.6	8.4	5.0	11.0	16.8	17.4	18.9	22.4	29.6	20.2	21.8	21.8
Quintile V	10.2	11.8	8.1	8.3	7.3	8.6	10.1	10.0	13.0	8.7	10.1	8.9
Other income												
Total population												
Quintile I	8.4	9.5	9.8	14.6	9.7	11.3	7.8	5.4	5.8	12.8	15.0	17.8
Quintile V	17.6	15.4	18.9	19.7	22.2	23.7	23.5	26.9	23.6	24.4	28.5	28.9
Urban area												
Quintile I	14.7	16.6	15.0	13.1	12.6	9.2	11.6	6.4	5.4	12.5	13.1	17.6
Quintile V	20.6	20.5	22.5	23.5	25.3	26.1	26.2	27.5	22.9	22.5	25.0	22.9
Rural area												
Quintile I	6.4	7.7	8.2	15.6	8.4	12.1	6.1	5.0	6.0	13.0	15.8	17.9
Quintile V	13.6	8.0	12.4	13.3	18.1	20.3	19.9	25.7	25.1	27.6	34.8	42.3

Annex 3.17. Structure of consumption expenditures by quintiles and residence

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Food and alcoholic beverages												
Total population												
Quintile I	88.1	90.7	89.7	87.7	85.1	81.9	80.4	81.7	80.7	60.4	58.2	55.5
Quintile V	56.3	56.4	54.8	53.1	49.3	48.5	44.8	44.9	41.9	38.7	38.4	32.2
Urban area												
Quintile I	85	86.9	86.8	83.9	83.2	76.1	73.7	75.1	71.8	54.4	53.6	51.1
Quintile V	49.7	51	49.1	46.8	44.5	43.3	40.9	41.7	40.5	35.6	37.4	32.6
Rural area												
Quintile I	89	91.7	90.6	89.7	86	83.8	83	83.9	83.1	63	59.9	56.7
Quintile V	65	63.9	65.6	63.8	55.1	55.5	49.4	50	44.7	43.2	39.8	31.4
Clothes and footwear												
Total population												
Quintile I	2.9	1.9	1.5	1.5	1.8	2.5	2.1	1.8	1.8	9.1	11.1	11.2
Quintile V	12.3	10.5	9.9	11.4	11.1	12	12.6	11.8	11.2	12.5	11.8	12.6
Urban area												
Quintile I	2.8	1.7	1	1.7	1.6	2.2	1.9	1.6	1.5	6.6	8.1	7.9
Quintile V	14.8	12.3	10.2	12.6	11.8	12.2	13.2	12.3	12.7	12.9	11.9	12.3
Rural area												
Quintile I	2.9	1.9	1.7	1.5	1.9	2.6	2.1	1.9	1.9	10.2	12.1	12.1
Quintile V	9	8.1	9.3	9.4	10.3	11.8	11.9	11	8.4	11.9	11.6	12.9
Housing and house maintenance												
Total population												
Quintile I	5.1	3.9	5.5	6.7	8.4	9.7	10.4	10.1	10.7	17.9	17.9	19.7
Quintile V	15.5	13.1	16.5	15.8	17.3	18.2	19.5	19	21.1	19.8	19.8	24.1
Urban area												
Quintile I	5.8	5.1	7	8.6	9.6	13.2	14.5	14.2	16.8	21.8	21.1	24.3
Quintile V	15.3	15.4	18.6	15.5	17.6	18.1	19	18.2	17.3	17.8	16	19.6
Rural area												
Quintile I	4.9	3.6	5	5.8	7.8	8.6	8.7	8.7	9.1	13.2	16.8	18.5
Quintile V	15.7	9.9	12.3	16.2	16.8	18.3	20	20.4	28.1	22.5	25.6	32.4
Medical care and health												
Total population												
Quintile I	1.4	1	1	1.1	1.5	1.6	2	1.1	1.4	4	3.5	3.5
Quintile V	3.9	4.4	5.4	4.6	5.8	5.2	5.9	5	4.6	5.8	6.1	6.4

Annex 3.18. GDP by production and use

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP (million MDL, current prices)	6,480	7,798	8,917	9,122	12,322	16,020	19,052	22,556	27,619	32,032	37,652	44,754	53,430	62,840
Share in GDP of the added value derived in (%):														
agriculture	29.3	27.5	26	25.8	24.9	25.4	22.4	21.0	18.3	17.6	16.4	14.5	10.0	8.9
manufacture and constructions	28.5	26.9	25	19.9	20.3	19.0	21.8	20.2	20.5	20.5	19.1	18.7	19.1	19.5
services	33.1	37.9	38.8	43.8	49.7	45.5	46.1	48.1	48.7	50.1	50.5	52.8	56.3	56.3
Share in GDP of:														
final consumption, total	82.9	94.3	97.4	100.9	90.0	103.1	101.1	103.3	110.3	103.9	109.9	113.9	113.5	113.8
households	55.8	67.2	67.5	75.4	74.2	87.6	86.0	82.0	89.5	87.8	92.2	92.4	92.1	92.2
public administration	25.9	26.0	28.8	24.7	15.3	14.7	14.4	20.3	19.7	14.9	16.4	20.0	19.9	20.3
private administration	1.2	1.1	1.1	0.8	0.5	0.8	0.7	1	1.1	1.2	1.3	1.5	1.5	1.3
gross fixed capital formation	16.0	19.8	19.9	22.1	18.4	15.4	16.7	16.3	18.6	21.2	24.6	28.3	34.1	34.1
exports	60.1	55.3	53.2	45.0	52.3	49.6	50.1	52.5	53.3	51.2	51.2	45.3	45.6	40.7
imports	67.9	73.9	74.4	71.8	65.2	76.6	74.4	77.4	86.8	81.5	91.9	91.9	97.2	91.5
Gross savings, million Moldovan lei	1,206	1,031	930	513	2,385	2,106	3,223	3,617	4,624	7,612	8,564	9,333	11,611	
Total revenue of the National Public Budget*, million MDL	2,002	2,074	2,942	2,722	3,100	4,102	4,325	5,084	6,620	11,408	14,528	17,827	22,292	25,517
Total expenditures of the state budget**, million MDL	1,409	1,472	2,725	2,322	2,853	3,364	2,938	3,556	4,255	6,652**	8,482**	11,019**	14,257**	16,466
Share of private sector in GDP (%)	56	58	56	53	56	60	57	51	51	49	50	51	51	...

* - 1995-2003 Consolidate Budget (state + local administration).

** - all components (core resources, special means, special funds, investment projects).

Annex 3.19. Social revenues, consumption and expenditures

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP per capita														
MDL, current prices	1,798	2,167	2,441	2,498	3,379	4,402	5,247	6,227	7,646	8,890	10,475	12,483	14,937	17,602
USD, PPP	2,105	2,128	2,207	2,087	2,033	2,112	2,300	2,533	2,765	2,028	2,362	2,561	2,715	2,986
Share in GDP of the households disposable income (%)	69	70	69	65	67	74	77	83	90	92	94	95	89	...
Average nominal monthly wage, Moldovan lei:														
public propriety	143.2	187.1	219.8	250.4	304.6	407.9	543.7	691.5	890.8	1,103.1	13,187.9	1,697.1	2,065	2,529.7
private propriety	150.3	203	234.4	263.9	297.6	380.3	506.2	663.8	856.6	1,048.7	12,566.4	1,658.8	1,949.2	2,387.8
mixed propriety (public and private)	122.4	151	174.3	194.4	256.6	374.1	467	585.3	740.3	949.6	1,141	1,445.6	1,840.5	2,278.5
mixed propriety (with foreign capital)	207.8	280.9	354.8	432.7	525.1	692	817.6	993.8	1,360.8	1,699.8	1,855.5	2,247.3	2,691.2	3,163.1
Index of real wage (%):	238.2	342.7	361.3	572.7	763.4	864.8	1,061.6	1,295.4	1,599.2	1,863.6	2,190.8	2,597.9	3,300.6	3,867.1
1998=100%					87.3	89.1	108.3	131	151.1	166.5	177.9	203.2	220	239.1
Previous year=100%	101.7	105.6	105	105.6	87.8	102.3	121.2	120.9	115.4	110.1	106.8	114.2	108.4	108.7
Minimal wage (Moldovan lei)	18	18	18	18	18	18	100	100	100	100	200	200	400	400
Share of public expenditures for law enforcement, as % of:														
GDP	3.6	4.8	5.5	4.7	4.3	4.1	4	4.7	4.4	5.1	5.2	5.4	5.7	5.5
National Public Budget*	9.8	13.2	13.6	14.2	15	15.5	17.6	20.3	19.5	14.5*	14.1*	13.5*	13.6*	13.2
Share of public expenditures for education, as % of:														
GDP	8.9	10.3	9.9	7	4.7	4.5	4.9	5.5	5.4	6.8	7.2	8.1	8.0	8.2
National Public Budget*	24.2	28.3	24.7	21.2	16.4	16.8	21.4	23.9	24.3	19.3*	19.3*	20.1	19.0	19.8
Share of public expenditures for health care and social assistance, as % of:														
GDP	6.4	7.4	11.1	8.3	6.7	6.8	5.5	6.4	6.1	14.4	15.4	16.2	17.3	18.0
National Public Budget*	17.6	20.3	27.5	24.9	23.6	25.4	24.2	27.7	27.2	41	41.7	40.4	41.2	43.2
Annual average consumption per inhabitant, (kg):														
Food and products thereof	23	25.3	25	26.7	24.5	23.6	24	26.6	26.5	31.6	40.4	38.3	36	...
Milk and dairy	165.2	161.4	154.5	155.4	145	152.8	154.6	167.3	164.4	166.2	173.9	177.3	175.4	...
Eggs, items,	107	116	121	122	132	133	139	158	158	162	177	168	177	...
Bakery	135	126.9	134.9	133.9	133.1	133.9	139.4	140.6	132.8	145.5	141.9	136.2	119	...
Potatoes	67.8	71	68.8	65.1	61.5	53.4	65.4	67.7	69.2	62.9	74.9	87.6	58.8	...
Vegetables	86.3	64.8	69	112.5	109	83.1	103.5	99.4	106.6	88.1	101.1	131.9	75.8	...
Fruits	59.7	59.3	77.5	47.7	27.2	31.8	33	38	43	38.4	37.1	38.8	27.9	...

* - 1995-2003 Consolidate Budget (state + local administration).

Annex 3.20. Evolution of economic results

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Annual GDP growth rate (%)	98.6	94.1	101.6	93.5	96.6	102.1	106.1	107.8	106.6	107.4	107.5	104.8	103.0	107.2
Annual GDP per capita growth rate (%)	98.8	94.2	100.1	93.5	96.8	102.3	106.4	108.1	106.9	107.6	107.8	105.1	103.2	107.4
Annual average inflation rate (%)	30	24	12	8	39	31	10	5	11.6	12.4	11.9	12.7	12.3	12.7
Exports, % of GDP	60.1	55.3	53.2	45	52.3	49.6	50.1	52.5	53.3	51.2	51.2	45.3	45.6	40.7
Public budget revenues*, % of GDP	30.9	26.6	33	29.8	25.2	25.6	22.7	22.5	24	35.6	38.6	39.8	41.7	40.6
Public budget balance*, % of GDP	-5.8	-9.7	-7.5	-3.4	-3.2	-1	0	-0.5	1.6	0.5	1.5	-0.3	-0.2	-1.0

* - 1995-2003 Consolidate Budget (state + local administration).

Annex 3.21. Revenues and expenditures of the National Public Budget*

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Revenues, total, million MDL	2,002.0	2,074.2	2,941.7	2,721.9	3,100.3	4,102.4	4,324.8	5,084.4	6,620.5	11,407.6	14,527.7	17,827.2	22,292.0	25,516.9
Share in total revenues, %:	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Corporate profit tax rate	19.9	17.3	8.3	6.6	7.5	6.7	8.1	8.4	8.7	6.8	6	6.1	6.2	2.8
Physical persons income tax rate	10.1	10.6	9.6	8.2	7.1	6.4	8	9.2	9.4	7	5.5	6.3	5.9	5.8
Land tax	4.6	5.6	4.3	3.1	4.5	3.9	3.8	3.7	2.5	1.7	1.3	1.1	0.8	0.8
Real estate tax	0.6	0.7	1	0.8	0.8	0.7	0.6	0.6	0.5	0.3	0.3	0.2	0.2	0.3
VAT	28.8	29.6	32.3	41.3	30.3	32.7	34.6	40	42.2	30	31.8	34.7	34.0	35.6
Excises	9.5	9.5	13.6	13.8	14.3	16	15.7	12.9	13.4	18	8.1	6	6.3	6.2
External economic activity revenues	2.6	4.6	4.3	4	7.4	5.6	5.4	6.6	7.2	4.3	4.7	4.7	4.1	4.5
Other	23.9	22.1	26.6	22.2	28.1	28	23.8	18.6	16.1	41.9	42.3	40.9	42.5	44.0
Share of total revenues in GDP, %	30.9	26.6	33	29.8	25.2	25.6	22.7	22.5	24	35.6	38.6	39.8	41.7	40.6
Expenditures, total, million MDL	2,376	2,827	3,608.4	3,027.1	3,495.3	4,268.8	4,325.8	5,194.1	6,183.4	11,256	13,949.3	17,973.9	22,415.6	26,146.9
Share in total expenditures, %:	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Economic expenditures	6.8	8.7	8.1	9.3	8.8	8.6	7.4	8	8.5	12	14.1	15.1	16.7	13.4
External economic activities expenditures	4.7	...	1.1	1.2	1.6	1.6	1.8	1.9	2	1.4	1.8	1.3	1.3	1.0
Social expenditures, total, including:	47.6	54.9	55.4	48.8	42.5	44.2	47.7	54.2	54.2	62.6	63.3	63.3	62.6	65.4
Education	24.2	28.3	24.7	21.2	16.4	16.8	21.4	23.9	24.2	19.3	19.3	20.1	19.0	19.8
Health care	15.8	18.4	14.9	13	10.2	11.1	12.5	15.2	15.1	11.9	11.3	11.8	11.7	13.0
Social assistance	1.8	1.9	12.6	11.9	13.3	14.4	11.7	12.4	12	29	30.4	28.7	29.4	30.2
Expenditures for law enforcement bodies and public administration	9.8	13.2	13.6	14.2	15	15.5	17.6	20.3	19.5	14.5	14.1	13.5	13.6	13.2
Other expenditures	31.1	23.2	21.8	26.5	32.1	30.1	25.5	15.6	15.8	9.5	6.7	6.8	5.8	7.0
Share of total expenditures in GDP, %	36.7	36.2	40.5	33.2	28.6	26.6	22.7	23	22.4	35.1	37	40.2	42.0	41.6
Surplus (+), deficit (-) (million MDL)	-374	-752.8	-666.7	-305.2	-395	-166.4	-1	-109.7	437.1	151.6	578.4	-146.7	-123.6	-630.0
As % of GDP	-5.8	-9.6	-7.5	-3.3	-3.2	-1	0	-0.5	1.6	0.5	1.5	-0.3	-0.2	-1.0

* - 1995-2003 Consolidate Budget (state + local administration).

Annex 3.22. Rural / urban disparities

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Share of rural population, % entire country	53.6	53.8	53.8	53.8	54	54	54.6	54.7	54.7	54.8	...			...
Share of rural population, % Transnistria and Bender municipality not included	...	...	57.8	57.9	58	58	58.7	58.6	58.6	58.6	58.6	59.1	58.7	58.7
Life expectancy at birth (years):														
Total	65.8	66.7	66.6	67.8	67.4	67.6	68.2	68.1	68.1	68.4	67.8	68.4	68.8	69.4
Rural	64.6	66	65.9	67.3	66.8	66.8	67.3	67.1	67.1	67.4	66.5	67.2	67.8	68.2
Urban	67.3	67.5	67.6	68.4	68.4	68.8	69.6	69.7	69.8	70.4	70	70.4	70.6	71.2
Share of population aged 0-15 years (%):														
Rural	30.5	30.1	29.6	29.4	28.6	27.8	26.7	25.8	24.7	23.8	22.9	22.1	22	21.3
Urban	26.3	25.7	25.1	24.7	23.9	22.9	22	21	19.9	18.9	18	17.2	16.9	16.2
Share of population aged 65 years and more (%):														
Rural	10.7	10.7	10.8	10.9	11	11	11.1	11.1	11.1	11	10.9	10.8	11.7	11.6
Urban	7	7	7.1	7	7.1	7.1	7.6	7.6	7.9	8.1	8.4	8.5	8.4	8.5
Demographic dependency ratio (%):														
Rural	70.1	69.1	68	67.6	65.6	63.3	60.5	58.3	55.8	53.4	51	45	46.6	45.2
Urban	49.9	48.7	47.4	46.4	44.8	42.9	41.4	39.9	38.4	37.1	35.7	31.6	31	30.4
Birth rate (‰):														
Total	13	12	12.5	11.3	10.6	10.2	10	9.9	10.1	10.6	10.5	10.5	10.6	10.9
Rural	14.9	13.8	14.2	12.8	11.9	11.4	11.2	10.8	11.2	11.5	11.5	11.4	11.6	11.8
Urban	10.8	9.8	10.1	9.3	8.7	8.4	8.4	8.5	8.6	9.4	9.1	9.2	9.3	9.7
Fertility rate (‰):														
Total	1.8	1.6	1.7	1.5	1.4	1.3	1.2	1.2	1.2	1.3	1.2	1.2	1.2	1.3
Rural	2.2	2	2.1	1.8	1.6	1.5	1.4	1.3	1.4	1.4	1.3	1.4	1.5	1.5
Urban	1.3	1.2	1.2	1.1	1	1	1	1	1	1.1	1.1	1	1	1
Infant mortality rate (‰):														
Total	21.2	20.2	19.8	17.5	18.2	18.3	16.3	14.7	14.4	12.2	12.4	11.8	11.3	12.2
Rural	22.3	21.1	21.3	16	16.9	17.8	16	14.4	14.6	12.3	12.1	11	11.8	12.7
Urban	19.5	18.7	16.8	20.5	20.7	19.3	16.9	15.1	13.4	12	13	13	10.3	11.2
Average housing surface per inhabitant (m ²):														
Total	19.9	20.1	20	20.4	20.7	20.8	20.9	21	21.3	21.3	21.4	21.5	21.8	22.0

Urban	16.9	17	17.3	17.7	18.2	18.8	18.9	19	19.1	19.1	19.2	19.3	19.7	20.1
Rural	22.2	22.4	22	22.4	22.4	22.3	22.3	22.5	22.9	22.9	23	23.1	23.2	23.3
Unemployment rate:														
Total	...	...	...	...	11.1	8.5	7.3	6.8	7.9	8.1	7.3	7.4	5.1	4.0
Urban	...	...	...	...	19.1	15.7	13.8	12.1	12.2	11.9	11.2	9.2	6.9	5.5
Rural	...	...	...	...	5.4	3.4	2.7	3	4.5	5	4	5.8	3.6	2.7
Gross educational enrolment ratio (%)														
Pre-primary														
Total	...	...	...	...	...	44.1	47.6	57	61.1	66.1	70.7	70.1	72.6	74.4
Urban	...	...	...	...	...	63.8	65.6	75.5	80.4	84.8	89.2	87.2	88.8	90.8
Rural	...	...	...	...	...	34.2	38.6	47.7	51.3	56.4	61	61	63.6	65.2
Primary														
Total	...	...	...	...	...	99.4	99.5	99.5	99.8	97.9	96.7	94.4	94	93.6
Urban	...	...	...	...	...	101.3	101.3	101.7	104	102.8	102.4	100.5	100.9	101.6
Rural	...	...	...	...	...	98.3	98.5	98.3	97.7	95.5	93.7	91.4	90.5	89.4
Secondary														
Total	...	...	...	...	...	90.2	91.1	92.3	92.2	92.5	93	90.5	90.1	89.3
Urban	...	...	...	...	...	95.6	95.1	95.9	95.6	96.6	97.7	95.4	95.4	95.1
Rural	...	...	...	...	...	86.7	88.5	90	90.1	90.1	90.3	87.9	87.3	86.3

Annex 3.23. Demographic indicators in regional profile 2008

	Population as of 01.01.2009 (thousand persons)	Average annual population growth rate (%) 2003-2008	Birth rate (per 1,000 inhabitants)	Mortality rate (per 1,000 inhabitants)	Infant mortality rate (per 1,000 newborns alive)	Proportion of populations aged 0-14 years (%)	Proportion of population aged 65 years and more (%)	Dependency rate
Republic of Moldova	3,567.5	-0.23	10.9	11.8	12.2	17.1	10.2	37.6
Mun. Chişinău	785.6	0.12	10	8.1	9.4	13.8	7.7	27.4
North	1,013.7	-0.45	10.1	13.8	12.8	16.7	13.9	44.2
m. Bălţi	148.1	-0.28	9.9	10.5	11.7	14.2	9.5	31.0
Briceni	76.2	-0.51	10.1	15.8	11.8	16.5	17.3	51.1
Donduşeni	45.9	-0.70	8.5	17.6	5.1	15.6	18.6	51.9
Drochia	91	-0.72	10.2	14.6	11.4	16.5	16.9	50.1
Edineţ	83.6	-0.61	10.6	14.7	16.2	16.1	16.7	48.8
Făleşti	93.1	-0.44	11.1	14.4	16.3	18.8	12.4	45.5
Floreşti	91	-0.57	10.2	14.9	13.9	17.0	13.6	44.1
Glodeni	62.5	-0.54	9.7	13.8	11.5	17.7	13.8	46.1
Ocnita	56.5	0.09	9.5	15.3	3.9	14.6	15.1	42.1
Rîşcani	70.9	-0.41	9.8	14.6	15.9	16.8	16.4	49.7
Sîngerei	93.8	-0.45	11.5	11.5	16.7	20.3	10.9	45.4
Soroca	101.1	-0.31	9.4	12.9	11.6	17.0	12.9	42.8
Center	1,065.2	-0.27	11.9	12.4	13.4	18.8	9.1	38.8
Apenii Noi	83.1	-0.16	11.9	12.1	12.3	18.0	8.6	36.1
Călăraşi	79.3	-0.47	10	13.3	10	18.1	10.5	40.0
Crîuleni	72.8	0.00	13.6	13	8.1	19.4	8.1	37.8
Dubăsari	35.2	-0.32	12	12.4	11.9	17.8	8.8	36.3
Hînceşti	123.2	-0.50	10.7	11.9	12.6	19.3	8.9	39.4
Ialoveni	98.3	0.60	13.6	11.4	13.5	19.1	7.1	35.5
Nisporeni	67.2	-0.32	11.9	12	12.5	20.0	8.5	39.9
Orhei	125.9	-0.65	11.8	12.6	14.2	17.7	9.1	36.7
Rezina	53	-0.37	11.3	13.7	30.1	17.6	9.8	37.8
Străşeni	91.5	-0.05	12.7	12.6	14.7	18.6	8.6	37.2
Şoldăneşti	43.8	-0.59	10.4	14.9	10.9	19.5	12.5	47.1
Teleneşti	74.7	-0.33	11.7	11.8	11.5	20.6	9.8	43.6
Ungheni	117.2	-0.36	12.4	11.9	14.5	19.3	9.8	41.0
South	543.1	-0.33	11.1	12	11.8	18.8	9.5	39.4
Basarabasca	29.5	-0.17	10	11.4	10.2	18.1	9.2	37.4
Cahul	124.4	-0.24	11.2	10.5	8.1	18.3	9.4	38.5
Cantemir	63.2	-0.36	11.7	11.7	16.1	20.3	8.3	40.1
Căuşeni	92.7	-0.16	11.6	13.2	9.3	19.0	9.5	39.8
Cimişlia	62.6	-0.66	8.4	12.7	9.5	18.5	9.3	38.5
Leova	53.8	-0.42	11.5	12.1	12.9	19.0	9.0	38.8
Ştefan Vodă	72.4	-0.34	12.4	12.5	19	19.6	9.9	41.9
Taraclia	44.5	-0.40	10.6	13.2	10.6	17.1	11.3	39.7
ATU Găgăuzia	159.9	0.10	12.4	10.9	11.7	18.0	9.4	37.8

Annex 3.24. Health indicators in regional profile, 2008

	Infant mortality rate (per 1,000 newborns alive)	Mortality rate of children under 5 years of age (per 1,000 newborns alive)	Maternal mortality rate (per 100,000 newborns alive)	Rate of mortality because of medical causes (per 100,000 inhabitants)	
				Circulatory system diseases	Tumours
Republic of Moldova	12.2	14.5	38.4	657.4	157.4
Mun. Chişinău	9.4	10.5	25.5	422.2	156.6
North	12.8	15.0	48.6	824.4	174.1
m. Bălţi	11.7	13.7		551.6	193.1
Briceni	11.8	14.3	130.2	1,051.1	138.8
Donduşeni	5.1	7.6		1,183.2	218.9
Drochia	11.4	11.8	107.1	780.3	176.5
Edineţ	16.2	16.2	112.6	960.1	160.0
Făleşti	16.3	18.3		844.1	167.1
Floreşti	13.9	16.2		910.7	211.5
Glodeni	11.5	11.5		805.5	172.3
Ocniţa	3.9	3.9		891.4	194.2
Rîşcani	15.9	20.2	144.3	839.7	188.5
Sîngerei	16.7	18.6		751.2	134.3
Soroca	11.6	18.8	104.7	752.2	152.0
Center	13.4	16.3	39.5	671.0	145.4
Anenii Noi	12.3	13.1		641.4	185.3
Călăraşi	10.0	10.0		689.7	139.7
Crîuleni	8.1	9.1		714.3	167.6
Dubăsari	11.9	21.4		707.3	110.8
Hînceşti	12.6	17.5	152.2	564.3	142.7
Ialoveni	13.5	15.7	74.9	618.5	144.7
Nisporeni	12.5	17.5		616.7	133.8
Orhei	14.2	18.1		716.4	151.7
Rezina	30.1	33.2	166.1	826.7	118.6
Străşeni	14.7	17.3		667.8	142.1
Şoldăneşti	10.9	15.3		896.4	138.8
Teleneşti	11.5	12.6		688.4	151.1
Ungheni	14.5	16.5	68.8	616.0	134.8
South	11.8	14.8	49.9	670.2	153.1
Basarabasca	10.2	13.6		576.3	159.3
Cahul	8.1	10.8		585.0	144.2
Cantemir	16.1	21.6	135.0	592.4	150.1
Căuşeni	9.3	11.2	93.2	737.1	162.7
Cimişlia	9.5	15.2		647.0	157.8
Leova	12.9	16.2		685.3	143.0
Ştefan Vodă	19.0	19.0	111.1	753.6	153.2
Taraclia	10.6	14.8		819.2	163.8
ATU Găgăuzia	11.7	14.1		602.0	147.1

Annex 3.25. Day schools, gymnasiums and lyceums in regional profile

	Number of institutions								Number of pupils									
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009			
Total	1,570	1,551	1,539	1,534	1,519	546,615	517,029	491,482	460,951	434,320	188	178	174	174	168	96,177	90,618	85,853
Mun. Chişinău	502	497	495	494	493	144,249	137,838	131,963	123,969	117,571	31	30	30	30	30	17,243	16,119	15,403
North	34	34	34	34	34	10,861	10,458	10,042	9,577	9,043	27	27	27	27	27	5,454	5,001	4,741
m. Bălţi	41	41	41	41	41	13,156	12,571	11,963	10,956	10,379	44	44	44	44	44	10,259	9,761	9,376
Briceni	51	51	51	51	51	14,688	14,045	13,549	12,739	12,095	56	56	56	56	56	12,726	11,946	11,314
Donduşeni	28	28	28	28	28	9,537	9,187	8,890	8,404	8,076	30	30	30	30	30	6,193	5,589	5,221
Drochia	41	41	41	41	41	10,029	9,612	9,174	8,440	7,903	41	41	41	41	41	9,612	8,440	7,903
Edineţ	54	52	51	51	51	14,876	14,414	13,823	13,267	12,609	65	63	62	61	60	13,104	12,170	11,411
Făleşti	65	63	62	61	60	14,435	13,630	13,104	12,170	11,411	548	545	540	537	534	154,726	144,877	135,937
Floreşti	38	37	36	36	36	12,918	12,291	11,744	11,008	10,195	42	42	42	42	42	10,666	9,893	9,268
Glodeni	42	42	42	42	42	12,289	11,467	10,666	10,287	9,615	34	34	34	34	34	10,888	10,287	9,615
Ocnîţa	13	13	13	13	13	5,381	5,172	4,862	4,450	4,221	38	38	38	38	37	14,581	13,829	13,184
Rîşcani	57	56	55	54	54	20,949	19,546	18,559	17,232	16,041	38	37	37	37	37	10,570	9,391	8,804
Sîngerei	38	37	37	37	37	11,061	10,570	10,072	9,391	8,804	65	65	65	65	65	17,298	16,465	15,437
Soroca	65	65	65	65	65	18,701	17,298	16,465	15,437	14,412	38	37	37	37	37	10,570	9,391	8,804
Center	38	37	36	36	36	12,918	12,291	11,744	11,008	10,195	42	42	42	42	42	10,666	9,893	9,268
Anenii Noi	42	42	42	42	42	12,289	11,467	10,666	10,287	9,615	34	34	34	34	34	10,888	10,287	9,615
Călăraşi	13	13	13	13	13	5,381	5,172	4,862	4,450	4,221	38	38	38	38	37	14,581	13,829	13,184
Criuleni	57	56	55	54	54	20,949	19,546	18,559	17,232	16,041	38	37	37	37	37	10,570	9,391	8,804
Dubăsari	38	37	37	37	37	11,061	10,570	10,072	9,391	8,804	65	65	65	65	65	17,298	16,465	15,437
Hînceşti	38	37	37	37	37	11,061	10,570	10,072	9,391	8,804	65	65	65	65	65	17,298	16,465	15,437
Ialoveni	38	37	37	37	37	11,061	10,570	10,072	9,391	8,804	65	65	65	65	65	17,298	16,465	15,437
Nisporeni	38	37	37	37	37	11,061	10,570	10,072	9,391	8,804	65	65	65	65	65	17,298	16,465	15,437
Orhei	65	65	65	65	65	18,701	17,298	16,465	15,437	14,412	38	37	37	37	37	10,570	9,391	8,804

Rezina	40	40	40	40	40	40	40	40	40	8,609	8,196	7,827	7,108	6,725
Strășeni	42	42	40	40	40	39	39	39	39	14,511	13,749	12,952	12,360	11,671
Șoldănești	32	32	31	31	31	31	31	31	31	7,147	6,843	6,512	6,211	5,812
Telenești	43	43	43	43	43	43	43	43	43	13,138	12,423	11,853	11,006	10,351
Ungheni	66	66	66	66	64	63	63	63	63	19,829	18,711	17,745	16,665	15,638
South	271	270	269	268	268	264	264	264	264	89,051	84,789	80,560	75,400	70,581
Basarabasca	11	11	11	11	11	11	11	11	11	4,741	4,418	4,234	3,976	3,627
Cahul	62	62	60	60	60	58	58	58	58	20,095	19,225	18,203	17,010	15,887
Cantemir	40	40	40	39	39	38	38	38	38	10,681	10,084	9,565	8,909	8,326
Căușeni	39	38	38	38	38	37	37	37	37	15,085	14,230	13,447	12,493	11,966
Cimișlia	34	34	34	34	34	34	34	34	34	10,784	10,271	9,687	9,122	8,276
Leova	34	34	34	34	34	34	34	34	34	8,821	8,530	8,154	7,662	7,125
Ștefan Vodă	30	30	30	30	30	30	30	30	30	12,211	11,711	11,072	10,438	9,927
Taraclia	21	21	22	22	22	22	22	22	22	6,633	6,320	6,198	5,790	5,447
ATU Găgăuzia	55	55	55	55	55	54	54	54	54	27,640	26,279	25,080	23,322	21,972
Territorial-administrative units on the left bank of the Dniester river and mun. Bender*	6	6	6	6	6	6	6	6	6	3,611	3,145	2,976	2,765	2,406

* - subordinated to the Minister of Education and Youth of the Republic of Moldova.

Telenești	1	1	1	1	1	215	280	244	230	197
Ungheni	1	1	1	1	1	506	555	533	495	533
South	10	10	10	10	10	2,558	2,880	2,888	3,006	2,916
Basarabasca	—	—	—	—	—	—	—	—	—	—
Cahul	2	2	2	2	2	702	762	857	976	986
Cantemir	1	1	1	1	1	154	162	126	135	138
Căușeni	2	2	2	2	2	474	581	516	587	458
Cimișlia	1	1	1	1	1	285	335	291	289	280
Leova	1	1	1	1	1	353	350	337	306	327
Ștefan Vodă	2	2	2	2	2	506	599	611	566	580
Taraclia	1	1	1	1	1	84	91	150	147	147
ATU Găgăuzia	3	3	3	3	3	620	722	675	736	657

Ungheni	2	2	2	2	3	3	3	3	503	683	851	970	1128
South	3	3	3	3	2	2	2	1,084	1,230	1,433	1,515	1,490	1,490
Basarabeanca	—	—	—	—	—	—	—	—	—	—	—	—	—
Cahul	2	2	2	2	2	2	2	923	1,106	1,331	1,495	1,490	1,490
Cantemir	—	—	—	—	—	—	—	—	—	—	—	—	—
Căușeni	—	—	—	—	—	—	—	—	—	—	—	—	—
Cimișlia	—	—	—	—	—	—	—	—	—	—	—	—	—
Leova	—	—	—	—	—	—	—	—	—	—	—	—	—
Ștefan Vodă	—	—	—	—	—	—	—	—	—	—	—	—	—
Taraclia	1	1	1	1	1	1	1	161	124	102	20	20	—
ATU Găgăuzia	2	2	2	2	2	2	2	643	681	742	736	827	827

Annex 3.28. High education institutions in regional profile

	Number of institutions								Number of students							
	2004/05	2005/06	2006/07	2007/08	2008/09	2004/05	2005/06	2006/07	2007/08	2008/09	2004/05	2005/06	2006/07	2007/08	2008/09	
Republic of Moldova	35	35	31	31	31	25	25	25	25	25	114,552	126,132	127,997	122,939	114,865	
mun. Chișinău	28	28	25	25	25	25	25	25	25	25	99,110	109,274	111,279	107,498	100,449	
mun. Bălți	3	3	2	3	3	2	2	2	3	3	9,613	10,898	10,958	10,615	9,552	
Cahul	2	2	2	1	1	2	2	2	1	1	3,374	3,250	3,043	2,117	2,246	
Taraclia	1	1	1	1	1	1	1	1	1	1	94	201	275	328	313	
ATU Găgăuzia	1	1	1	1	1	1	1	1	1	1	2,361	2,509	2,442	2,381	2,305	

Annex 3.29. Unemployed registered at territorial agencies of labour employment

	Number of unemployed registered over the year. Total persons			Of which, women			Unemployed placed in jobs over the course of the year. Total persons			Of which, women		
	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
Total	51,837	48,396	46,230	24,498	24,325	23,973	23,858	23,367	22,185	12,780	13,030	12,151
Mun. Chişinău	6,108	5,013	6,286	3,479	2,883	3,721	2,666	2,619	2,448	1,489	1,527	1,469
North	17,412	15,719	14,869	8,467	8,392	7,948	8,587	7,680	7,529	4,669	4,482	4,091
m. Bălţi	4,218	3,971	3,418	2,368	2,406	2,057	2,528	2,347	2,096	1,333	1,463	1,221
Briceni	563	493	523	228	221	269	533	469	401	188	185	185
Donduşeni	608	550	625	185	143	243	362	356	379	168	115	142
Drochia	1,614	1,365	1,420	724	671	735	574	603	623	340	381	340
Edineţ	1,544	1,326	1,208	702	648	589	636	311	470	347	201	235
Făleşti	1,438	1,323	1,209	826	787	725	738	737	741	520	510	477
Floreşti	1,733	1,401	1,522	683	694	776	584	490	609	294	261	292
Glodeni	1,140	906	913	578	482	514	560	435	423	314	257	252
Ocnîţa	790	569	532	351	255	242	408	318	227	178	129	91
Rîşcani	715	769	748	214	297	359	348	302	286	162	172	167
Sîngerei	842	825	688	402	513	403	300	356	332	169	267	250
Soroca	2,207	2,221	2,063	1,206	1,275	1,036	1,016	956	942	656	541	439
Center	16,859	15,606	13,597	6,766	6,644	6,131	6,564	6,824	6,409	3,313	3,540	3,423
Anenii Noi	775	780	647	400	433	381	402	452	364	216	230	224
Călăraşi	1,439	1,439	1,333	743	659	571	858	1,058	908	463	509	367
Crîuleni	565	558	493	253	236	289	224	222	207	110	118	140
Dubăsari	1,090	887	460	577	432	225	180	216	185	91	123	108
Hînceşti	1,279	1,158	1,003	436	407	412	275	282	285	181	148	159
Ialoveni	1,220	911	848	506	388	443	592	595	500	287	335	266
Nisporeni	699	702	686	266	258	330	246	254	299	146	127	198

Orhei	2,640	2,301	2,024	780	648	692	1,112	1,127	1,130	463	421	491
Rezina	924	1,052	843	432	521	404	492	522	501	248	239	224
Strășeni	1,168	1,033	976	455	493	480	562	598	535	275	326	303
Șoldănești	893	924	748	366	384	296	313	181	206	116	66	128
Telenești	1,332	1,220	1,226	251	404	387	261	304	306	112	213	182
Ungheni	2,835	2,641	2,310	1,301	1,381	1,221	1,047	1,013	983	605	685	633
South	9,035	8,939	8,679	4,328	4,437	4,417	5,041	5,086	4,819	2,612	2,620	2,437
Basarabeasca	728	725	683	329	370	331	273	301	262	89	92	72
Cahul	2,584	2,489	2,298	1,081	1,067	1,116	1,734	1,734	1,601	810	745	775
Cantemir	886	1,020	859	415	587	431	464	542	487	261	355	285
Căușeni	1,443	1,439	1,716	676	645	826	890	902	903	453	428	423
Cimișlia	963	781	704	549	425	409	484	443	450	352	325	299
Leova	476	463	688	192	245	372	171	167	212	96	112	122
Ștefan Vodă	931	947	879	460	473	431	631	642	641	299	342	309
Taraclia	1,024	1,075	852	626	625	501	394	355	263	252	221	152
ATU Găgăuzia	2,423	3,119	2,799	1,458	1,969	1,756	1,000	1,158	980	697	861	731

Annex 3.30. Indicators of economic growth in regional profile

	Industrial output growth rate. previous year= 100%			2008 industrial out-put. 2005=100%		Net number of employed in the course of the year. % average number of employed		Fixed capital investment growth rate. previous year= 100%		Wage growth rate. previous year= 100%	
	2003	2004	2005	2005	2007	2007	2008	2007	2008	2007	2008
Total	95.2	98.7	101.5	95.4	2.4	2.1	121.9	101.7	121.7	121.7	122.5
Mun. Chişinău	95.8	100.5	97.3	93.7	3.6	3.3	119.4	105.4	121.5	121.0	121.0
North	103.1	95.1	111.8	109.6	1.7	1.2	105.5	106.3	120.0	125.2	125.2
m. Bălţi	98.5	110.5	103.2	112.3	4.8	3.1	87.3	108.6	122.3	122.9	122.9
Briceni	130.5	109.8	83.0	118.9	0.0	1.1	102.7	110.1	122.3	122.5	122.5
Donduşeni	114.3	109.4	101.0	126.3	-2.6	1.6	144.0	122.0	117.3	124.7	124.7
Drochia	100.4	96.6	141.6	137.4	-1.3	-0.7	77.4	113.4	112.9	125.3	125.3
Edineţ	104.3	84.8	105.5	93.3	9.1	2.6	144.9	103.8	123.4	119.8	119.8
Făleşti	119.8	55.3	206.4	136.7	-3.3	-2.4	84.7	96.5	116.1	126.1	126.1
Floreşti	99.8	90.0	109.3	98.2	0.3	0.9	102.3	85.7	117.1	123.2	123.2
Glodeni	107.8	49.4	202.7	107.9	0.8	0.4	121.0	78.8	116.6	126.9	126.9
Ocnitza	162.1	135.2	76.2	167.0	-1.1	-2.4	171.7	91.2	119.4	127.2	127.2
Rîşcani	108.9	92.6	116.5	117.5	-2.0	-1.1	125.0	134.8	117.8	130.8	130.8
Sîngerei	102.1	32.0	127.8	41.7	1.5	-0.2	125.0	108.0	117.0	126.7	126.7
Soroca	117.6	101.0	114.1	135.6	2.7	3.2	151.6	116.0	117.0	126.0	126.0
Center	92.2	101.9	93.2	87.5	0.7	1.2	151.1	84.0	119.9	123.0	123.0
Anenii Noi	96.9	111.4	100.2	108.2	1.6	3.3	210	52.0	122.1	120.1	120.1
Călăraşi	113.4	111.4	87.3	110.3	0.0	1.4	84.9	106.8	114.7	121.0	121.0
Criuleni	116.0	85.3	100.5	99.5	-0.9	-0.5	97.3	113.5	120.4	124.9	124.9
Dubăsari	106.4	71.3	107.8	81.8	2.8	-0.8	210	154.3	121.9	122.8	122.8
Hînceşti	83.9	65.9	71.2	39.4	-0.5	-0.7	155.7	66.3	121.9	125.3	125.3
Ialoveni	66.6	71.6	97.6	46.5	-1.2	0.1	144.1	78.2	122.9	120.7	120.7
Nisporeni	53.5	70.0	113.8	42.6	3.2	1.8	174.1	52.5	116.6	124.1	124.1
Orhei	86.3	122.6	92.0	97.4	1.3	2.0	146.0	119.7	116.7	125.7	125.7
Rezina	131.7	108.3	94.8	135.2	1.8	3.1	320	59.9	122.0	120.2	120.2
Străşeni	65.1	100.6	94.5	61.9	2.8	1.2	154.8	74.7	117.6	123.6	123.6
Şoldăneşti	59.7	80.6	166.6	80.2	2.0	-1.5	171.8	82.1	122.2	120.1	120.1
Teleneşti	78.8	94.7	102.1	76.2	-3.6	0.5	101.2	138.7	112.3	127.9	127.9
Ungheni	128.2	120.6	87.2	134.8	2.1	3.1	83.5	142.0	122.3	120.8	120.8
South	75.4	89.0	109.2	73.3	0.9	0.3	129.8	101.0	120.1	122.0	122.0
Basarabasca	77.6	68.0	97.5	51.5	1.5	-0.2	97.0	62.0	126.0	119.4	119.4
Cahul	79.3	95.9	98.8	75.1	2.6	2.8	142.9	135.6	120.4	120.3	120.3
Cantemir	43.1	47.0	196.7	39.9	2.8	0.5	86.8	104.3	119.9	122.9	122.9
Căuşeni	68.5	91.5	103.2	64.7	0.2	0.0	80.0	121.5	117.3	119.1	119.1
Cîmîşlia	70.1	74.0	102.3	53.0	-0.6	0.1	260	44.4	118.9	123.2	123.2
Leova	122.9	57.0	80.4	56.3	1.4	-1.2	116.8	64.2	116.1	122.1	122.1
Ştefan Vodă	74.8	71.4	121.4	64.8	-1.5	-2.2	118.8	96.5	121.9	124.0	124.0
Taraclia	94.6	129.6	116.5	142.9	-0.1	-0.4	163.5	96.8	117.9	129.3	129.3
ATU Găgăuzia	77.8	89.6	111.3	77.6	3.4	1.2	95.3	130.0	119.8	118.7	118.7