RURAL DEVELOPMENT IN KAZAKHSTAN: CHALLENGES AND PROSPECTS

KAZAKHSTAN
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Executive Summary

"Rural development in Kazakhstan: Challenges and Prospects" is a special report on human development in the Republic of Kazakhstan. It focuses on rural development, since 44% of the country's population resides in rural areas. Notwithstanding the fact that the general population of Kazakhstan has experienced difficulties throughout the transition period, climate and geography, as well as shortcomings of reform, have made the rural population particularly vulnerable and rural areas are still experiencing a very painful development process.

There is much more to rural development than just development of agriculture. The notion implies development of the whole set of rural community relationships. Accordingly, rural re-birth is discussed in the report from the perspective of rehabilitation of political, social and economic links in the countryside.

The central idea of the report is that sustainable development in rural areas is achievable only subject to several key provisions: ensuring acceptable living standards for the population; formation of a sustainable social, economic, environmental and political system adapted to rural conditions; measures against man-made environmental damage and landscape destruction; enrichment of cultural values; a long-term approach to the utilisation of natural resources for agriculture and industry, as well as for local crafts, tourism, recreation and other human activity.

The logic behind the report is based on the following principles:

1. The analysis of economic development, social and administrative reforms from a human development viewpoint offers a more holistic picture of anticipated impacts and aims of the transition process. Therefore Report offers a short review of the basic indicators of human development. It also sheds light on differences between living standards in rural and urban areas, and provides a general evaluation of human development levels, based on the Human Development Index (HDI) for Kazakhstan.

2. HDI allows the benchmarking of the dynamics of human development, evaluation of the impact of various components of human development and the clarification of implications for decision-making processes. Nevertheless, its values must be supported by analysis of data evaluating other aspects of life that affect human development. Chapters One to Three analyse the rural economy, the social sector and public administration as major determinants of human development in rural areas.

3. The totality of social costs that have accumulated over the reform period has started to inhibit further reforms in the country and puts pressure on society. This raises the question of the effectiveness of the state rural administration system. As the analysis presented in Chapter One indicates, stimulating economic growth and social development in rural areas is impossible without greater government involvement in the management of rural development. Throughout the Soviet period the state paid little attention to the development of rural markets. It would appear that the time has now come for the state to support the sustainable development of rural markets. The state should exercise its powers to prevent or neutralize the effect of market failures as well as complement market mechanisms and secure the achievement of the goals of social and economic development before leaving the market to find its own equilibrium.

4. Analysis of basic economic indicators for the rural sector, detailed in Chapter Two, indicates a close link between rates of economic growth and human development. Falls in economic growth have impacted adversely on incomes, employment, social and environmental security, and have caused uncontrollable migration away from villages. However, the correlation between economic and human development is not perfect, as illustrated by the data for Atyrau and Mangistau oblasts. These oblasts have the largest GDPs as well as the highest percentages of low income population in rural areas.

5. Economic measures cannot be solely relied upon to solve all rural problems. Economic growth will effectively contribute to raising living standards only if accompanied by implementation of an integrated social development program. The social policy to be adopted (see analysis in Chapter Three) should provide for reinforcing factors such as efficient demographic policy; human capacity development and poverty reduction; social capital expansion and wider opportunities for public involvement in decision-making.

6. Poverty, in a broad sense, implies not

only limited ability to satisfy basic needs such as nutrition, clothing, housing, health protection and education but also includes limited personal choice, poor involvement in public life and inability to influence decision making processes. A subtler and more socially focused side of the problem is the *perception* of poverty: "Heightened self-perception of vulnerability and insecurity can prove to be a more destabilising factor, contributing to instability within the country".[1]

7. A long period of stagnation in rural areas increases the risk of transferring poverty to forthcoming generations. Children from low-income families, deprived of opportunities early in life, are more likely to remain poor throughout their lives, becoming 'used to' poverty and lacking motivation to try to change their lives.

8. An abundance of laws, decrees, and government resolutions had no visible positive impact on rural life until actual financial support for agricultural producers was put in place. At the same time villagers perceive a lack of government concern, connected to low levels of participation of local communities in decision making processes, including decisions on social issues. This is also indicative of the poor resource base available to local administrative bodies and their impotence with regard to finding solutions to persistent problems.

9. State policy on rural reforms will be effective only if conditions for public participation, mobilisation and self-development are in place. This requires delegating authority to people, giving them opportunities to acquire experience and knowledge and to cultivate their decision-making abilities and take responsibility for outcomes. The introduction and promotion of such social participation mechanisms would contribute to the sustainable development of rural communities, as well as each individual.

10. If the policy of empowering regions - in particular with fiscal mechanisms - results in higher local budget revenues and increased national budget allocations, this should have a favourable effect on local communities. This, in turn, should further increase overall human development capacity.

11. To facilitate human development benefit from market reforms it is advised that the government and the public concentrate their efforts on the three strategic aims of Kazakhstan rural development that emerge from an analysis of the economy, social sector and rural administration, presented in chapters One to Four. In this regard, the political and strategic decisions offered in chapter Five are considered in the context of agricultural and infrastructure development, as well a strategy of administration that would seek to utilise the capacity of all public institutions, contributing to the main development goal of offering all people the opportunity to live long, fulfilling and productive lives.

[1] *Conference on poverty reduction, Astana, April 25-26, 2002.*

Foreword By Imangali Tasmagambetov The Prime Minister Of The Republic Of Kazakhstan

This year we celebrated the 5th anniversary of Kazakhstan's development strategy "Kazakhstan 2030". The main mission of the strategy is to build an independent, prosperous and politically stable Kazakhstan.

The development of sovereign Kazakhstan to date proves that we have chosen the right course. We associate our successes in all areas of Kazakhstani society with approval and implementation of Strategy 2030.

Results achieved in economic development have allowed us to focus on other sectors of the economy that previously did not receive the necessary support. Indeed, the coming three years (2003-2005) have been officially designated by President Nursultan Nazarbayev as 'Years of Rural Development'.

Furthermore, I would like to emphasise that priority should be given not only to agricultural development but also to the revival and improvement of rural infrastructure and the resolution of key social problems of rural areas. One specific example of this is the 2003 budget, which differs from previous years in its concentration on social issues.

It is therefore very important and timely that the United Nations Development Programme has focused its attention on rural development and prepared this National Human Development Report entitled "Rural Development in Kazakhstan: Challenges and Prospects". I believe that this comprehensive analysis, together with concrete measures of the Government of Kazakhstan, will help ensure the effective achievement of our targets.

In conclusion, I would like to thank the authors of this National Human Development Report 2002 and to express my sincere hope for further constructive cooperation in future.

Imangali Tasmagambetov

Foreword By Fikret Akcura UN Resident Coordinator/UNDP Resident Representative In Kazakhstan

UNDP's annual Human Development Report (HDR) was created in 1990 to measure the progress of nations not in dry economic statistics but in the lives of ordinary citizens. The report ranks countries by quality of life, based largely on life expectancy, education and personal incomes. To supplement the global report, we have also started publishing National HDRs which bring the basic messages of human development closer to the decision makers in the countries which we serve. This year, we chose the National HDR to address a key topic whose time has come to be considered within the transition process – ***rural development***. Following successful reforms at the central level, it is timely that Kazakhstan now turns its attention to carrying the fruits of success to all corners of its vast territory where almost half of its citizens live in lower status of human development.

As a signatory to the ***Millennium Development Goals,*** Kazakhstan undertook to reach a number of targets that define a higher level of well being for its citizens. Today, seventy-five percent of the world's poor live in rural areas and the rural communities in Kazakhstan also form a social stratum that has suffered disproportionately during the Soviet era as well as the transition period that followed.

Improvements in the well-being of the poor will only be possible through enhancement of their productive, social and environmental assets. This means increasing the productivity and growth of both the farm and non farm economies. There has been a noticeable shift in developing countries towards market led growth, with increasing involvement of both the private sector and civil society. There have been technological advances in both agricultural science, and in the rapid spread of information. Much of this has been led by the increasing pace of globalization, which while creating opportunities for developing countries and the rural poor can also carry risks – most notably that the poor may be left behind. For Kazakhstan, there are also the important policy challenges of liberalization of agricultural trade and full participation in the WTO, which it has applied in 1996. OECD markets, particularly for cereals, dairy, sugar, and meat products, have not been sufficiently opened to developing countries. Especially, at the initial stages of opening up to world markets, the dislocations suffered are felt most acutely by the poor and most notably by the rural poor. Hence, particular attention to rural development now is timely and has to be sustained so that human development of the young nation proceeds equitably and the creative energies of all are utilized in furthering reforms.

Consistent with the ***Millennium Development Goals***, rural policy's prime focus must be on pro-poor rural development. At the core, this means increasing the productivity of both labor and land.

- Fostering broad based growth. While agriculture is a key to a vibrant rural economy, increased attention should be given to capitalizing on agricultural growth to catalyze nonfarm activities and fostering a sound investment climate for private sector participation.
- Focusing on the rural geographic area. Rather than a sector by sector or piecemeal approach, there has to be a more cross-sectoral and holistic emphasis
- Working with stakeholders. Rural development should be a more inclusive and participatory processes involving all the stakeholders in project and program design and implementation.
- Detailed action program for implementation. The policy should be articulated in action programs at rayon and sub-rayon levels.

While agriculture is a key catalyst of rural economic growth, sustainable rural development needs a far more holistic approach. This is underpinned by multi-disciplinary and pluralistic approaches to poverty reduction, social and gender equity, local economic development, natural resource management and governance. Rural development should promote reliance on market forces and private sector initiative where these are the efficient and effective mechanisms to achieve growth, yet it must take into account the fact that there are many market failures that justify government or community roles, e.g., the provision of public goods and the regulation of activities that have environmental consequences.

It should be recognized that while rural growth is important for the reduction of poverty, specific measures are often needed to ensure that the benefits of growth are widely shared, and that the process of policy and institutional reform is accompanied by targeted interventions to protect and improve the welfare of the poor. The policy should highlight pub-

lic sector responsibilities in adopting various measures to improve the access of the rural poor to nutrition, health, and education, and outlines approaches that governments need to undertake so as to enable the poor to better cope with risk, and reduce vulnerability. Again in keeping with the eighth goal of ***Millennium Development Goals***, the donor community should be committed to assist the government and communities in the required investments and activities through funding, policy advice, and the sharing of knowledge. As UNDP, we promise to continue our utmost support to the Government's valuable and timely program on rural development.

Fikret Akcura

Comments From The Authors Group

The National Report on Human Development 2002 "Rural Development in Kazakhstan: Challenges & Prospects" is focused on the issue of rural development, as over 40% of the country's population currently reside in rural areas. This theme was chosen for a number of reasons: the need for a detailed comparative analysis of human development for the second largest population group in the country. Analysis of living conditions and human development indicators for a given social stratum and comparison with the corresponding national indicators helps us to better assess the natural characteristics, the current state and the potential dynamics of human capacity.

Kazakhstan's rural areas have recently become a focus of public attention as they will enact the final stage of market reforms – the transition to private ownership of land. The increasing importance of rural development issues also influenced the choice of rural development as the main theme. The country's future is dependent on effective rural development, not only from the food supply viewpoint but also from the perspective of population growth. An analysis of the current situation and development trends in these areas will contribute to more effective decision-making and strategic planning for rural areas.

Another important factor in the analysis of human development in rural areas is large-scale migration away from rural areas, mostly to cities. The uncontrolled character of the process may endanger human capacity development, which is why the report emphasizes social aspects of rural development.

The factors influencing the choice of theme have also largely shaped the report's contents. Along with analysis and evaluation of human development we also discuss rural poverty issues in the context of income poverty and poverty of opportunity, including the issues of access to healthcare, education, drinking water and sanitary infrastructure.

The resolution of rural development problems depends not only on climate, but also on the effectiveness of state policy and the active involvement of rural communities. We therefore discuss the future of rural areas, analyze possible social sector and infrastructure development policies, and look at viable forms of community organization.

The authors have worked at length to collect and analyse data for the report. We have analyzed current conditions in all rural areas and developed new classification methods. As part of the preparatory work we analyzed various statistical data and international experience in the area of rural policy in different countries, as well as conducting a large-scale survey. Given the current focus on achieving the targets outlined in the President's annual address, according to which the three coming years are "years of the aul", we would like to express our hope that the National Report on Human Development 2002 might contribute to further human development goals.

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Last but not least, the UNDP report task force would like to thank the Department of Multilateral Cooperation of the Ministry of Foreign Affairs and, personally, Yerzhan Khoseyevich Kazykhanov for continuous support.

List Of Abbreviations

ADB – Asian Development Bank
AIC – Agricultural Industrial Complex
AIDs – Acquired Immune-Deficiency Syndrome
CDC (UNCDC) – UN Convention on Desertification Control
CEDAW – Convention on Eliminating Discrimination Against Women
CIS – Commonwealth of Independent States
CMTSPR – Comprehensive Medium-Term Strategy on Poverty Reduction for 2003 - 2007
DOTS – the World Health Organisation's strategy on tuberculosis prevention
EBRD – European Bank for Reconstruction and Development
EKO – East Kazakhstan Oblast
EPC – European Comparison Program
EU – European Union
GAV – Gross Added Value
GDP – Gross domestic Product
GEF - Global Environmental Fund
GNP – Gross National Product
HDI – Human Development Index
HDIGF – Human Development Indicator adjusted for Gender Factor
IBRD – International Bank for Reconstruction and Development
ILO – International Labor Organization
IMF – International Monetary Fund
JSC – Joint Stock Company
LEI – Life Expectancy Index
LEIGF – Life Expectancy Index adjusted for Gender Factor
LLP – Limited Liability Partnership
LSGB – Local Self-Governance Bodies
MES RK – Ministry of Education and Science of the Republic of Kazakhstan
NEAP – National Environmental Action Plan
NGO – Non-Governmental Organization
NKO – North Kazakhstan Oblast
NRHD – National Report on Human Development
OSCE – Organization for Security and Cooperation in Europe
PDI – Population Destitution Index
PPI – Population Poverty Index
PPP – Purchasing Power Parity
RK – Republic of Kazakhstan
RSE – Republican State Enterprise
SIC – Social Individual Code
SKO – South Kazakhstan Oblast
TACIS – EU Program of Technical Assistance to CIS Countries & Mongolia
UN – United Nations
UNHCR – United Nations High Commission for Refugees
UN UDCCP – United Nations Drug Control and Crime Prevention unit
UNAIDs – United Nations Program on HIV/AIDS Prevention
UNDAF – United Nations Development Assistance Foundation
UNDD – United Nations Unit on Desertification and Drought Control
UNDP – United Nations Development Program
UNEP – United Nations Environment Program
UNESCO – United Nations Organization on Education, Science and Culture
UNICEF – United Nations Fund for Children
UNFPA – United Nations Population Foundation
USAID – United States Agency for International Development
USIS – United States Information Service
WB – World Bank
WHO – World Health Organization
WKO – West Kazakhstan Oblast

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Chapter 1. Rural Development In Kazakhstan

The first National Report on Human Development in Kazakhstan was published seven years ago. Since its publication the notion of 'human development' has become an intrinsic part of everyday language in Kazakhstan, not to mention the language of politics and science. Nowadays no one doubts the fact that analysing the economy, social sector or administrative reforms from a human development perspective allows us to better assess the effects and ultimate goals of given changes. Abstract reforms, remote from people, may bring about temporary benefits that are often outweighed by greater negative 'human' costs.

Our own country has learnt the truth of the above thesis at different stages of the reform process. It was the 'human' cost incurred during the early stages of economic, social and political transformation, which created an understanding of the idea that it would be unwise to ignore human aspects, while sustainable development would be unrealistic without securing appropriate living conditions for the whole population.

This report, "Rural Development in Kazakhstan: Challenges and Prospects" is an attempt to look at the development of the country's rural areas since 1991, not only from the agricultural development viewpoint, but also through the prism of overall human development in rural areas. This rural focus can also be explained by the fact that rural areas account for 97.2% of Kazakhstan's territory and almost half the country's population. Besides, as President Nazarbaev noted in a recent address: " any revolutionary cataclysms are most likely to affect rural areas", an argument that will be further discussed in this report.

The second article of the Law of the Kazakh SSR dated February 13th, 1991 "On Prioritized Development of Auls, Villages and Agricultural and Industrial Sector of the Kazakh SSR" offers a definition of a rural network which includes auls, villages, khutors, zaimkas, winter settlements and other settlements for distant-pasture farming, as well as villages and rayon centers the majority of whose population is employed in the production, processing, storage and sale of agricultural produce. Article three of the Law of the RK dated December 8th, 1993, number 2572-XII "On Administrative-territorial Division of the Republic of Kazakhstan" defines an *aul* (village) as a settlement whose population exceeds 50 people, with agricultural employees and members of their families accounting for over half the inhabitants. Both documents consider the village as a structural element of agricultural production. In this regard, it is important to discuss other aspects of the development of a rural settlement as of a socio-territorial subsystem, and take this into account when developing a balanced rural development policy as well as when evaluating the overall level of national development.

A development process centered on people, suggests that economic growth that does not lead to better living standards for every individual is unsustainable from social, political and environmental viewpoints. Consequently, in order to stimulate people-oriented economic growth and social development, it is necessary to strengthen state administration at the national and local levels with the goal achieved subject to active involvement of the public.

The economy, social sector and administration are difficult to rank in terms of their relative importance to human development, as they all are complementary. Each area is "res-ponsible" for certain aspects of social develop-ment and only taken together do they constitute true

sustainable human development. Therefore this report considers in turn each of these three aspects of rural development in Kazakhstan and their effects on the rural population.

1.1 Rural development policy in Kazakhstan during the years of independence

The process of agricultural reforms in the country can be broken down into four stages:

The period 1992-1994 was characterised by rapid reform of agricultural entities. The role of the state at that stage was to create a new legal framework. Consequently, laws on land, privatisation and agricultural entities were adopted. The major goals of land reform – transformation of land relations and creation of alternative forms of land use – were achieved.

By the end of 1994 the number of agricultural entities had increased eight times compared with 1990 as a result of privatisation of collective farms, known as *sovkhozs* and *kolkhozs*. By 1994, therefore, alternative forms of agricultural operating unit had been established, but total agricultural output had not increased, due to economic, legal and social barriers to efficient production and rational land use.

The majority of the rural population appeared unready to accept reforms, which represented fundamental changes in the rural lifestyle. Technological links in the production process were disrupted. Also the serious problem of price disparity between industrial and agricultural production emerged at that time as the government, having liberalised prices for industrial goods and services, put a check on growth in prices for agricultural produce.

When agricultural prices were finally liberalised in 1994, higher prices caused a fall in consumer purchasing power, which prevented agricultural producers from raising prices to account for increases in industrial prices. High inflation then led to the loss of current and partly fixed assets (primarily – livestock) as livestock owners slaughtered it to raise cash. It was at this point that significant rural outmigration started.

The principle of continuity of technological processes on farms, battery farms and similar enterprises was not upheld. Several factors, such as accelerated privatisation of state agricultural entities (production, storage, processing and service), limited forms of organisation, an emphasis on the creation of private farms at a time of inflation and the imbalanced nature of the sector, all made vertical integration in agriculture impossible, which further reduced the efficiency of the production process.

Despite the fact that the 1993 law "On Loans to the Agricultural Sector and Financing for State Enterprises", provided a framework for loan financing for newly established farms, state land use programs, pest and infection control, the funds provided were insufficient. Furthermore, the state budget did not allocate funds for the rural sector within the framework of the 1991 law "On Prioritised Development of Auls, Villages and Agriculture", which might have softened the consequences of market transition for the rural economy.

Thus, inadequate implementation of market reforms in agriculture from 1992-1994 resulted in falling output, a deteriorating asset base and increasingly negative trends in both production and social sectors and significant increase in migration of the rural population to cities.

The period 1995-1997 was characterized by an increasingly rapid fall in agricultural output due to declines in the cultivated area and decreasing livestock numbers, as well as lower yields and productivity. Accordingly, the processing sector output also declined.

As a result of continuing privatization of *sovkhozs* and *kolkhozs*, private farms accounted for 93.5% of all agricultural entities while numbers of production co-operatives and agricultural partnerships were also growing. However, the underlying conditions for the reforms had changed. Before 1992 approximately 300 farms had been set up with a sufficient resource base, whereas during the 1993-95 "mass privatisation" period most agricultural enterprises, deprived of state support and "thrown" into the free market, were in debt. All too often the share of property that an employee ought to have received was smaller than his/her share of the debt. In this situation agricultural employees were often forced to sell their land use rights almost unconditionally.

Resolution #1001 passed by the government on 20 June 1997, entitled "On Transition to Accrued Methods in Tax Accounting" seriously complicated the situation for farmers as they now had to pay taxes after shipment of their produce, without waiting for actual payment on the deal to be concluded. Untimely tax payment led to interest payments on the outstanding balance and penalties, or, ultimately, to asset transfer. This resulted in the bankruptcy of insolvent farms.

Investments in the agricultural sector had

been substantially reduced due to sudden policy changes and transition from state distribution of investment resources to market mechanisms characterised by lower budget financing/external financing ratios.

Farms were not able use profits and amortisation provisions for investment purposes as most of them had none. Loans were difficult to obtain due to instability and various 'crises' in the sector. Government measures were not very effective either. During the 1995-1997 development stage gross agricultural output declined by 38% compared with 1992-1994, a fall made up of a 26% reduction in crop farming and a 55% drop in livestock farming output.

This decline in agricultural output inevitably had adverse social effects. Social tensions grew and migration away from rural areas, particularly of younger people, intensified. Average wages in agriculture were 3.8 times lower than in industry. Social infrastructure in the majority of villages was inadequate even to satisfy basic needs. After the 'optimisation' of education and health care sectors had been completed, nearly 60% of villages had lost their medical care stations, libraries, clubs and food shop, while more than 50% of rural settlements did not have post offices and the number of children not attending schools increased.

The period 1998 to 2000 brought the first positive changes in rural life since independence. During this period more state support was made available for agricultural producers. A growing number of enterprises began to receive favourable loans, advance payments for their produce within the state procurement program, as well as being able to lease equipment. The year 1999 was remarkable for the fact that agricultural production grew for the first time in several years: some 28% growth compared with 1998, including a 66% rise in crop farming output. Declines in the number of cattle and horses slowed, while corresponding numbers for pigs, sheep and goats began to rise.

However, agricultural producers were still constrained by the lack of guaranteed access to local wholesale food markets, low purchasing prices for their produce, a largely depreciated asset base, limited financing options, high taxes, unstable tax and legal policies, depletion of natural resources and low consumer purchasing power. Falling living standards and higher unemployment rates led to rising levels of 'self-employment', to 2 million by 2001, as well as increased migration, which, in its turn, led to a significant drop in the country's population, including rural areas.

Such social processes in villages necessitated greater government support for rural areas and in early 2001 the following laws were adopted: "On Grain" (adopted 19 January 2001) and "On Land" (24 January 2001) gave the state greater control over grain quality and land use.

In 2001-2002 the government adopted a two-level grain-purchasing scheme. In accordance with the law "On Agricultural Partnerships and their Associations", adopted 25 December 2000, the government established the Agricultural Corporation, 100% owned by the state, whose mandate also included facilitation of credit partnership development in rural areas. During this period the government made a number of key decisions such as ensuring lower prices for fuel, providing subsidies for seed-farming, livestock-breeding, crop protection and veterinary programs. To support livestock farming the government passed resolution #1168 on 8 September 2001 "On establishment of closed joint-stock company "*Mal onimderi corporatsiyasy*", with 100% state participation in its charter capital.

Meanwhile, budget allocations for agriculture gradually increased. In 2002 some 15.6 billion tenge from the state budget (excluding administrative expenses) is to be used for these purposes - 1.3 billion tenge more than in 2001. The state portfolio of agricultural loans will also grow - to 12.3 billion tenge in 2002 compared with 8.42 billion in 2001. Local budgets also increase their agricultural outlays, while foreign investment grew as well.

Positive changes can be observed in the rural social sector too. As a result of more recent government measures, the number of rural settlements without a medical care facility or attendant dropped from 1,00 to just 13 during 2001. In the same year 70 first aid centres were re-opened, as well as 17 medical-obstetric centres, 3 rural family ambulance stations and 27 rural hospitals. Nevertheless, the

quality of medical care and the resource base of rural medical centres still leave much to be desired. Similar problems remain in rural education. To address this issue, in March 2002 the government announced its decision to develop a special education program known as "Aul mektebi".

Similar measures have been taken by the state in other areas of rural social sector development. However, it is clear that the prevailing idea that economic growth will automatically raise rural living standards means that economic development remains government priority. The village, as a socio-territorial subsystem, currently performs a wide spectrum of 'economic' functions such as environmental, cultural-ethnic, recreational, etc. The village is a way of life for millions of people, a depository of traditions and ethnic specifics of all ethnic groups in the country and despite all the important qualities of rural areas they were largely ignored during the early years of transition.

Progress of agricultural reforms in CIS countries

Agricultural reforms in the countries of the CIS have primarily targeted output growth and improvement in the competitive characteristics of agricultural produce. For example, the government of the **Russian Federation** has undertaken a series of measures to overcome a crisis in agriculture. Thus, between 1991-1999 some 42 laws were adopted, 34 Presidential decrees signed, and 152 government resolutions passed on these issues. Agricultural producers received grants and subsidies and credit for purchase of fuel. They were also given tax preferences and lower rates for power consumption, while various payments were deferred and customs and tariff policies were repeatedly changed to protect the domestic food market. However, these measures have not been particularly effective.

The main cause of the failure of agricultural reforms in Russia is the lack of a consistent state agricultural policy, which should have facilitated an evolutionary transition to a market economy: the decision to "skip" the transition period was a major strategic mistake. Stabilisation and development programs, adopted at the national level, did not work in the same direction and also lacked resources for their implementation, which reduced their effectiveness significantly.

In June 2000, the Russian government adopted the 'concept' of a new agricultural policy. This document defined the agricultural sector as a priority development area and outlined major areas of state involvement in agricultural policy, including market regulation and new forms of support for agricultural producers. The document also lists priority measures to target stabilisation and development of agricultural production.

The effects of adoption of this 'concept' are noticeable already. Quite importantly, the attitude of farmers has started to change, as more producers adapt to market conditions, while the economic fundamentals of the rural sector are improving as the number of loss-making entities falls.

In the Republic of **Belarus** there are four major directions of agrarian reform:

a) transformation of state farms and kolkhozs into joint-stock companies; b) development of private farms; c) expansion of the 'non-market' agricultural sector (rural households); d) transformation of processing sector entities into joint-stock companies (with no less than 40% of shares in each factory sold to agricultural producers).

Another important feature of agricultural development in Belarus is a system of state income support for food producers, which takes the form of preferential loans provided to pay for fuel, fertilisers, raw materials, lease equipment and other items. The mechanism of state support is tightly regulated and enforced, which clearly does not comply with market economy principles.

In **Armenia** agrarian reforms have targeted land relations, fixed assets and transition to a multi-profile market economy. The Armenian Ministry of Agriculture assists local agricultural producers in purchasing fuel, seeds, fertilisers and chemicals, equipment, as well as in accessing loans. The government has a program of forage production and quality improvement to help raise output of the farming sector. Meanwhile, the Republican Research Institute developed a model to assess optimal farm size depending on the type of

Box 1: Experience of European Union in rural development support

In European Union countries direct budget transfers target not production stimulation but rather farmers' income level support. This is the main idea of current agricultural policy reforms in the EU. The state should play the central role in developing agricultural infrastructure, primarily in building a diversified transportation network. The state also bears a large proportion of costs of soil fertility support, a capital-intensive measure with a long payback period. Another special area of state responsibility is land use control to ensure preservation of national land resources and prevent their misuse. This explains the active involvement of the state in land and land lease markets. The multiplicity of state functions in agricultural regulation requires substantial budget outlays, with state investment in agriculture usually exceeding budget revenues generated by the sector.

activity (Program "Agromodel-2000". Agricultural produce is sold at prices negotiated by the counterparts. The Armenian government also adopted a law on the sale of land, which should stimulate expansion of small farms and growth of output.

In **Uzbekistan** agricultural reforms are considered key to the whole process of economic reform based on the significant role of the country's agrarian sector. Agricultural reforms started with transformation of most state farms into other property types. The state procurement program provides for purchases of 25-30 % of grain and cotton output at fixed prices.

Agricultural policy in **Kazakhstan** takes account of experience from other countries and analysis of the effects of earlier reforms. The state provides a legal framework for agrarian policy in Presidential decrees and laws that outline legal, economic and organisational aspects of state agrarian policy. Rules for the enforcement of legislative acts are also adopted at governmental level. Today, it can be stated that, unlike many other CIS states, over market reform period Kazakhstan has managed to establish a stable system of state support of agricultural producers.

Throughout this period access to credit resources has been a critical issue for the agricultural sector in view of the seasonal nature of agricultural activity and its relatively slow turnover. Besides, access to loans was hampered by high interest rates and lack of collateral base for most agricultural producers.

After state subsidies to the sector were revoked, the mechanism of credit provision developed into the following forms:

- use of bills of exchange within the framework of the state grain procurement program. However, because during implementation it became clear that there were too many imperfections to be corrected, the use of this tool was abandoned in 1997;
- a program of micro-loans, launched in 1998 and active until 2000, targeted support for low income population groups and small business development;
- grain warrants - a form of order securities that can be used as collateral when applying for a loan;
- a system of rural credit societies, as an alternative to loans provided by second-tier banks;
- leasing of agricultural equipment and machinery for both production and processing enterprises;
- natural (good) loans - a system of selling inputs (seeds, fuel) on credit to agricultural producers by grain, cotton and tobacco companies;
- project financing through foreign banking institutions;
- credit lines offered by the state budget to local budgets to finance seeding, harvesting and other agricultural activities;
- use of futures contacts to trade grain and farming produce;
- earmarking funds to be allocated for agricultural purposes such as purchases of seeds, fuels, fertilizers, herbicides and spare parts;
- purchases of agricultural produce within the framework of the state procurement program, financed by credit resources provided for the CJSC "Mal onimderi corporatsiyasy".

Figures for state budget allocations for the agricultural sector are as follows: 1996 – 6,687 million tenge, 1997 – 9,881 million tenge, 1998 – 5,603 million tenge, 1999 – 2,886 million tenge, 2000 – 13,665 million tenge.

According to revised budgets for 2001 and 2002 these expenditures are to go up to 22,392 and 28,347 (forecast) million tenge, respectively.

The funds were channeled to finance the veterinary sector, crop protection and quarantine, growing high quality seeds, livestock breeding, leasing, investment projects, etc.

One of the methods of indirect subsidizing is a favorable tax regime, envisioning tax benefits for agricultural producers (set out in the Tax Code of Kazakhstan).

The favorable tax regime for agricultural entities sets out simplified procedures for budget payments in the form of a unified land tax levied on all agricultural producers and processing companies except those engaged in the production, processing or sale of goods subject to excise tax payments.

Agricultural entities that are eligible for the favorable tax regime and are payers of land tax are released from the obligation to pay the following types of taxes:

- personal income tax on income earned from the activity of an agricultural entity eligible for the favorable tax regime;

Box 2: The Annual address of the President of Kazakhstan on major directions of external and internal state policy for 2003. (April 2002)

...There are a number of reasons to make years 2003 to 2005 years of rehabilitation of the village, or 'aul'.

It is this issue that my address is focused on.

We must acknowledge that it was agriculture and farmers who suffered most from the imperfections of the Soviet economy, and it is they who have felt all its defects during the process of transition to a market economy.

The village is a way of life for its people; it is the source of culture, traditions, customs and spiritual values. This totality of factors requires us to treat the village most seriously.

It is widely known and has been proved in history that any revolutionary cataclysms are most likely to affect rural areas, with Kazakhstan no exception to this rule...

- value added tax on revenues of the entity eligible for the favorable tax regime;
- land tax on the activity eligible for the favorable tax regime;
- tax on transportation employed at the investment sites within the limits set out by the Government of the RK;
- tax on property at the investment sites within the limits set out by the Government of the RK.

Agricultural producers that are registered as juridical persons (agricultural enterprises, cooperatives, limited liability partnerships, joint-stock companies, etc) are also eligible to benefit from a favorable tax regime stated in the Tax Code of the Republic of Kazakhstan. This favorable tax regime for juridical persons engaged in agricultural production suggests the use of a patent as a form of tax payments for juridical persons whose main activity is:

- agricultural production involving land use, processing and sale of one's own agricultural produce;
- livestock and poultry-rearing activities (including cattle breeding for meat and beekeeping), as well as processing and sale of one's own produce.

The cost of the patent is computed as a sum of the following taxes: corporate income tax, social tax, land tax, property tax, tax on transportation means, and value added tax (when the taxpayer is registered as a VAT payer). When computing the cost of the patent the total amount of taxes to be paid is reduced by 80%.

The total forecasted amount of tax benefits offered to agricultural producers for 2002 is 14,376 million tenge, while the figures for recent years are: 1996, 327 million tenge; 1997, 929 million tenge; 1998, 2,152 million tenge; 1999, 10,139 million tenge; 2000, 13,851 million tenge; 2001, 14,591 million tenge[2]. As the total amount of tax benefits grows, so does its equivalent per entity value. Thus, in 1996 tax benefits enjoyed by one agricultural entity (juridical person) were recorded at 55,300 tenge on average, while by 2000 the same indicator stood at 2,452,700 tenge (an increase of 4300%); the respective figures for farming households were 350 tenge and 30,300 tenge (an increase of 8400%).

State support for the agricultural producers by means of customs policy takes the form of imposing tariffs on imports of agricultural produce as well as parts and materials for the sector. However, there is so far no coherent strategy developed with regard to the value of these tariffs.

Another form of the state support for agriculture - obligatory insurance of agricultural producers - was launched in 1996. The program aimed to insure agricultural entities against the loss or quality deterioration of their output due to unfavorable climatic conditions, natural cataclysms, etc. but found little support due to liquidity problems of most agricultural entities and the low profile of existing insurance forms.

To ensure regular information exchange and data sharing (for analytical market research data) between agricultural producers and state bodies, the Ministry of Agriculture of the Republic of Kazakhstan has set up a marketing information network.

Yet, as the 2002 UNDP survey shows, rural residents do not *perceive* this government activity. Thirty five percent of 1,737 respondents believe national and regional authorities are indifferent to rural problems, while 52% were uncertain. This is a cause for concern, as it indicates minimal involvement of rural communities in decision-making on various rural (including social) problems, as well as the poor resource base of local authorities and low effectiveness of their activity with regard to public involvement and awareness issues. This raises the issue of the effectiveness of state administrations and the introduction of self-governance in rural areas.

1.2. The Policy of Decentralisation[3] and its Effects in Rural Areas

The issues of decentralisation of state powers and local self-governance, two closely linked topics, have been discussed in Kazakhstan for some time. Of particular concern is the link between the two when defining sources and volumes of financing, their use in the interests of local communities, as well as identification of these interests and the legal framework of the process.

There is no unanimity on what the status of local self-government bodies should be - whether they should be largely independent of the state administration (as in the Anglo-Saxon self-governance model); be part of the actual local state mechanism with a legislatively defined area of control (as in the French model); follow mixed models (as in Japan); or be different in different regions of Kazakhstan, adapted to local specifics.

[2] *Source: State Agricultural Food Production Program of the Republic of Kazakhstan for 2003-2005*

[3] *Policy of power distribution among the levels of state administration and improvement of inter-budgetary relations*

Failure to resolve these issues is reflected in the fact that the law "On Local Self-governance" is yet to be adopted. At the same time budget formation principles are still in place disregarding irregularities in the actual position of oblasts when some act as donors, others are subsidized, while most local budgets receive transfers form higher level budgets.

Such problems are most typical for rural areas. Local self-governance stipulates ownership of communal property, availability of sufficient resources and powers to be exercised to regulate the social sector, as well as accountability to local communities. However, it is precisely in rural areas that are the above conditions are least likely to exist.

Currently, a government task force is developing a draft version of "The Concept of Power Distribution among Levels of State Administration and Improvement of Inter-budgetary Relations", aiming to overcome imperfections in inter-budgetary relations, namely instability and lack of transparency of the transfer methodology.

The concept considers several alternatives for budget system stabilisation. One of them advocates preservation the existing system with fixed subventions and withdrawals in the mid-term period, though the adequacy of the system is questioned by net donor regions with regard to how 'fair' withdrawals would be set.

Another alternative, excluding the mechanism of budget withdrawals, suggests re-distribution of budget revenues between the republican and regional budgets with regard to income tax payments on income taxable at source, social taxes, etc.

The third variant is based on the centralisation of income tax (on incomes taxable at source) and social tax revenues. Meanwhile, inter-budgetary relations will be built on the basis of fixed subventions in the midterm period.

A third alternative suggests division of revenues into those generated by national enterprises (with their budget payments accumulated in the republican budget) and revenues generated by regional entities, whose tax payments would be channelled into local budgets. Adjustments among local budgets would still be possible via regulated individual income tax, social tax and value added tax for regional status enterprises.

With regard to local administrations, the project envisions rural akimats receiving the status of legal persons with property transfer into trust management with the right to acquire property or non-property rights or liabilities on one's own behalf. Rural akimats are also expected to receive transfers from upstream budgets at the initial stages of the process.

The multiplicity of possible solutions to this crucial budgetary issue is central to the concept of decentralization. The question of power distribution among the various levels of state administration largely depends on resolving this issue.

It is obvious that the question of power distribution between state agencies and self-government bodies has its own value, though it is clearly linked to the decentralization issue. In fact it may be viewed as a projection of decentralization on the local level. At the same time, local self-governance remains part of the horizontal axis of land management, while local administrations remain part of the vertical axis of state power, with authority to address those local problems that communities lack the resources to tackle independently, in addition to carrying out a unified state policy in the regions.

Rural areas of Kazakhstan where people often live in small, remote villages are characteristic of weak local communities. In depressed rural economies, local resources cannot satisfy local needs in most vital sectors such as water supply, land use, road and housing construction, power and heating supply, environmental protection, forestation, employment, education, health care and support for low-income groups.

Consequently, local development cannot rely solely on local resources, so shifting responsibility for these issues to local self-government would mean a shrinking of responsibility. Expansion of the resource base of local communities through, for example, channelling local taxes into local budgets would be effective in communities with a developed tax revenue base – although this is unusual in most rural areas. Land rent cannot be viewed as a universally effective source of local budget revenue either, while communal property that brings substantial revenues is scarce.

Nevertheless, the development of local self-governance in Kazakhstan remains important and necessary, although decentralisation is bound to bring about new challenges and problems for rural residents. The implication is, therefore, that both processes should be related and that their cumulative effects for rural areas should be positive if accompanied by additional government actions.

Among possible measures are those to address the problem of inadequate population settlement in rural areas; new sources of financing infrastructure development programs, such as "environmental rent" paid by companies; extracting non-renewable mineral resources, notwithstanding their ownership; introduction of "green" and other technological innovations in agriculture, with the support of international organisations where possible and appropriate.

As for local self-governance proper, one pre-requisite is the *elected* status of self-governance committees and their accountability to the local population. The idea of combining the functions of the state administrator and the leader of the self-governance body in order to increase effectiveness may be acceptable provided the individual concerned is elected. This scenario might be most appropriate for small, but self-sustainable rural settlements.

All this requires an adequate legal framework, with all laws regulating these processes linked to each other – particularly those laws regulating local self-governance and local state administrations and distribution of their powers and responsibilities; election laws; property laws; tax code and other relevant acts.

However, because the rural sector and rural economy play an important part in the country's life and rural crisis could destabilise social processes and deprive Kazakhstan of a vital component of its development, they must be included in broader external economic policy considerations. The focus here is Kazakhstan's expected accession to the WTO in 2003 and the conditions of accession. One beneficial condition would be an extended transition period for the agricultural sector after joining to allow better assessment of decentralization and self-governance realities and the introduction of viable institutions of self-governance.

Kazakhstan currently has a pronounced dependence on food imports. It should be borne in mind, though, that even if involvement in global economic processes is irreversible, most countries (except the least developed), either do rely on their own food production, or have this alternative in case of emergency circumstances.

The role of rural communities with regard to domestic food production can be very important if mobilisation and support of active and accountable community groups such as self-governance bodies becomes a priority in state rural development policy.

For Kazakhstan, with its huge, sparsely populated territory and large number of rural environmental problems, such a policy should not be viewed as protectionism but rather as a necessity - a key element in the pursuit of sustainable development for rural and urban communities.

If the policy of empowering regions, in particular with fiscal reform, leads to higher local budget revenues and increased national budget allocations, the cumulative effect should be to strengthen rural communities, which, in turn, should increase local self-governance potential. Through accumulation of resource and management capacity, rural communities will be able, independently, to solve their development problems. But even then, considering the harsh climate and other geographical factors, Kazakhstan's rural communities will remain in need of state policy support.

Chapter 2. The Economy as a Factor in Sustainable Rural Human Development

According to official statistics, in 2001 the share of population with incomes below the subsistence minimum in rural areas was 38%, compared with 28.4% for the country as a whole. This indicates that it is virtually impossible to achieve the central development goal – that of a long, fulfilling and productive life – in the short term, especially in rural areas. One of the reasons for the existing imbalance between urban and rural areas is the adopted development strategy where development of cities, mining and construction sectors was prioritized.

This policy has brought about a deterioration in the living standards of the rural population, whose make-up has changed due to the migration to cities of significant numbers of the working age population, leaving a skewed population structure with high proportions of children and the elderly. Currently, the elimination of biased attitudes towards the village has become a priority for state policy. At the same time, economic growth can lead to better living standards only if it is accompanied by implementation of a comprehensive social development program, including such elements as provision of basic social services, elimination of gender inequality, effective social protection and demographic policy.

2.1 The Rural Economy: an Analysis of the Processes

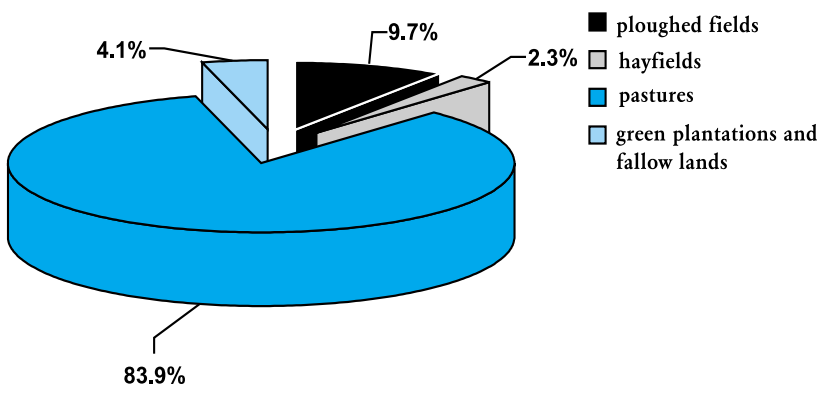
The Republic of Kazakhstan has a territory of 2,724,900 sq. km, which makes it the ninth largest country in the world. Its arable lands alone total some 39 million hectares. Besides this, around 22 million hectares suitable for irrigation have been identified in deserts and semi-deserts, with another 70 million hectares of saline land requiring not only irrigation but also complete reclamation.

Kazakhstan's climate makes it possible to cultivate wheat, barley, oats and rye in most regions. Irrigated lands in southern regions are also home to such temperature-sensitive crops as cotton, tobacco, rice, sugar beet as well as grapes and other fruits. In the early 1990s Kazakhstan had 2.3 million hectares of irrigated lands, which accounted for nearly 6% of the total sown area, yielding up to 30% of crop production. Since then the area of irrigated land has been reduced to 1.2 million hectares and yields have fallen 1.5 to 2 times. The land-reclamation qualities of soils have been deteriorating, while the technical condition of water stations has also worsened.

Natural pasture accounts for 187.9 million hectares of land, which is enough to feed 70.5 million head of sheep or 7.05 million cattle. Kazakhstan's climate is favourable for livestock farming, as most pastures can be utilised throughout the year as a forage base.

Massive exploitation of "virgin lands" in the 1950s, 60s and 70s significantly damaged the steppe ecosystem of Kazakhstan. The national report "Land Degradation" points out that the share of newly ploughed lands ranged from 40 to 80% of the total area, and as much as 90% in northern regions. The scale of ploughing far exceeded environmentally safe levels and radically altered the hydrological, vegetational and even climatic characteristics of ecosystems. The pasture load on unploughed lands grew, due both to the reduced pasture available and a larger cattle stock. The latter was encouraged to ensure year-round employment of people who had moved in as part of the "virgin lands" program. However,

Figure 2.1 Structure of agricultural land as of January 1st 2001



Source: Statistics Agency of Kazakhstan, 2001

Box 3: The consequences of Aral region's desertification

The case of the Aral region's desertification proves how devastating the effects of water misuse can be. As a result of an inadequate resource utilization policy the economy of the region has been practically destroyed over a period of less than 30 years. Before, the Aral Sea region was a developed economic zone with successful fisheries, irrigation-based and livestock farming. Thirteen fishery units were active in the region; the town of Aralsk was a busy port, while ship repair was carried out in Port Uch-Sai. As the Aral Sea started to shrink over 10,000 people were made redundant, with some 50,000 family members affected.

there was no scientific foundation for this policy: livestock per hectare of pasture exceeded established norms by 100-500%. Most affected were pastures located close to villages, milking sites and wells, where overexploitation led to total the disappearance of grass.

Among the factors contributing to a deteriorating quality of life in rural areas is the problem of scarcity of water for irrigation. At the same time, the key issue with regard to water supply and the environment is not so much water shortage as highly uneconomical water consumption, far exceeding consumption levels in countries with comparable climates. This situation is brought about by the use of primitive irrigation and transportation technologies, as well as a lack of economic incentives and water saving traditions.

Huge filtration losses and excessively high irrigation norms are causing **secondary salinity, swamping and water erosion,** while the dumping of drainage waters results in the pollution of rivers with fertilizers and pesticides, as well as excessive mineralization. Over-regulation of the hydrological network has had an adverse impact on biodiversity. Over 4,000 dams, cattle ponds and reservoirs were built to ensure water supply for cattle watering and irrigation needs, with most of them constructed without hydrological feasibility studies. Only a fraction of the dammed water was used rationally, while most of it was lost as ground water run off.

Many lakes have dried up, while others have experienced increased mineralization levels, and consequently loss of their economic significance with regard to drinking water and fish supply.

Environmental factors have the following effects on the rural economy:

a) Falling yields and lower aggregate output of the crop farming sector; b) falling cattle stocks and yields; c) reduced export potential of the agricultural sector; d) slowdown in development of food production and light industry; e) sharp decline in tax revenue from agricultural and processing sectors

The early 1990s saw the start of reforms in agriculture as part of the transition from a centrally planned to a market economy. To make this transition possible agricultural production was to undergo structural changes through the creation of new types of entities and shifts to new forms of ownership.

By 2000 some 86,904 market-oriented agricultural entities had been registered across the country, with most privately owned, including 82,000 smallholdings, 2,000 partnerships, 1,200 co-operatives, 229 joint stock companies, nearly 3,000 countryside ('dacha') co-operatives, as well as 2.2 million individuals with their own home-based smallholdings.(see Figure 2.2)

Since the inception of reforms agriculture has undergone major structural changes, with non-state agricultural production rising from 38.9% of total output in 1990 to 99.3% in 1999.

These changes have been accompanied by large-scale land redistribution as non-state producers have come to utilise 93.9% of agricultural lands and 94.9% of ploughed lands, with a substantial share of both (nearly 70% of all agricultural lands) accounted for by large agricultural producers such as partnerships, co-operatives and joint stock companies. Partnerships and joint stock entities operate land plots averaging around 29,900 hectares, including 5,577 hectares of ploughed lands. The corresponding numbers for co-operatives and other non-state producers are 22,498 (4,714) hectares and 7,131 (184) hectares. The average size of an agricultural proprietorship's land area is 435 hectares, with ploughed land accounting for 81.6 hectares.

Land under crop, almost exclusively controlled by state producers and large agricultural co-operatives in 1990 (with the exception of potato and vegetable lands, where state producers accounted for 49.5% and 68.2% of the total sown areas respectively), had also changed hands by 1999 as individual farms increased their share of lands under crop to 26%, leaving 71.5 % of 15.3 million hectares to be sown by agricultural co-operatives.

By 1999 individual households had emerged as major suppliers of agricultural produce (except wheat, sugar beet and cotton), with 87% of the potato harvest and 63% of all domestic vegetables. Industrial and oil-bearing crops were mainly supplied by agricultural co-operatives (42.4 and 46.3% respectively) and privately owned farms (51.9 and 46.6% respectively), while melons and gourds were mostly harvested on private farms (51.5%) and by individual households (33%).

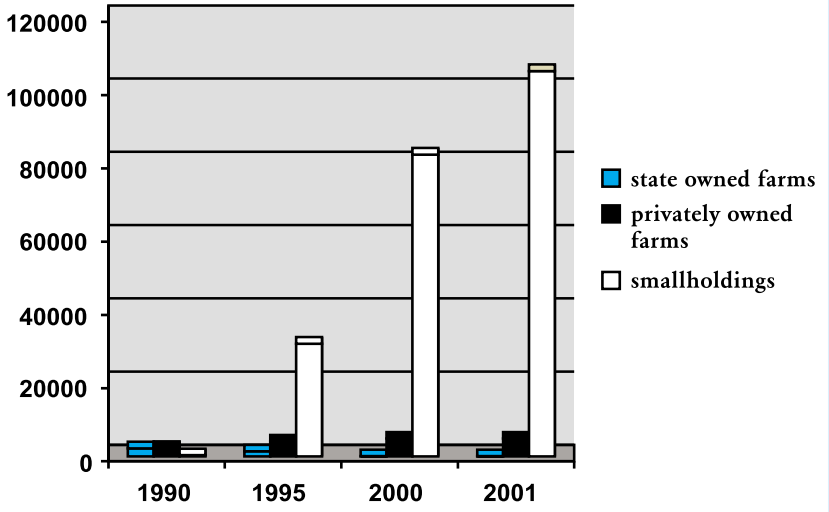
But as ownership forms were changing, so agricultural output was declining. Thus, share of agriculture in GDP fell from 34% in 1990 to 9.9% in 1999 and 8.7% in 2001. Plant production has decreased by one third, while livestock breeding output has more than halved. The share of agriculture in Kazakhstan's GDP over the last decade is presented in figure 2.3.

From 1997 to 2000 the production of meat and wool fell by 17% and 50% respectively, while the production of milk and eggs went up by 10% and 30%.

Moreover, since 1991 the total sown area has shrunk by more than half, from 35.2 million hectares in 1990 to 15.3 million hectares in 1999, with grain-sown lands falling by a similar proportion from 23.4 to 11.4 million hectares. However, the area of land sown with industrial and oil-bearing crops has actually grown over the same 1990-1999 period, representing increases of 25% (550,000 ha) and 44% (384,000 ha), respectively.

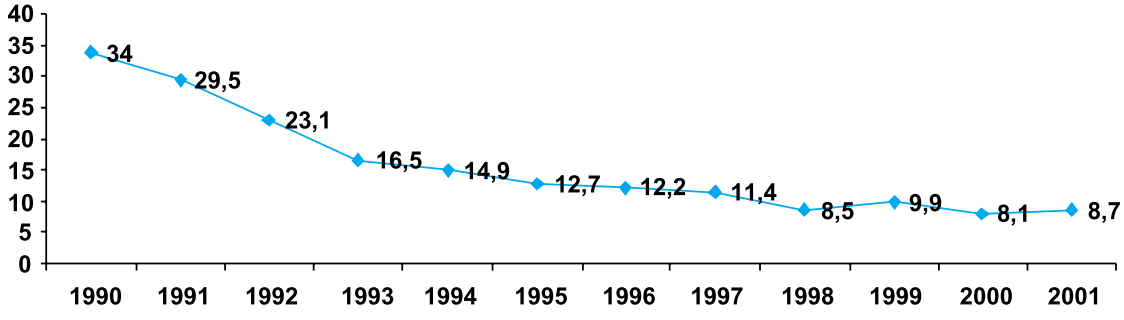
At the heart of this prolonged downward trend in Kazakhstan's agricultural potential are the inadequate targets of agricultural policy pursued over recent years. As a result of land

Figure 2.2
Structure of active agricultural units



Source: Statistics Agency of Kazakhstan, 2001

Figure 2.3
Share of agricultural production in GDP, Kazakhstan, 1990-2001



Source: Statistics Agency of Kazakhstan, 2001

reform and privatisation, Kazakhstan has experienced land re-distribution and production transformation, with rural economic units being fragmented over the last 6-7 years.

The problem here is not in changing property forms, but the fact that reforms have created land shortage. Agricultural entities, numbering 105,200 in November 2001 and 133,700 in July 2002, with an average area of 238.1 hectares are unable to use high capacity agricultural machinery and equipment. Simultaneously, there is a problem of shortage or absence of current assets, as farmers find themselves unable to purchase equipment, seeds or fertilizers, i.e. the means essential for intensive production.

Depreciation and lack of agricultural equipment lead to less efficient farming and a longer asset turnover period. Also, whereas previously output had depended on the following ratio of inputs: fertilisers, 50%; seeds, 20%; technology, 30%, nowadays the situation has changed, with significant increases of weeds due to insufficient fertiliser and technology inputs, causing a loss of integrity of grain lands and subsequent deterioration of harvests. The roots of this problem lie in farmers' continuing lack of finance and equipment, leading to irregularities in grain cultivation.

Cross-sector price disparities have also proved an obstacle to agricultural development, as over the 1991-1999 period prices for agricultural output increased 2,000 times, while prices for industrial production and agricultural services all increased 12,000 times. This led to reduced cash flows, which in turn reduced the scope for investments in fertilisers and other chemical products. By 1995 volumes of organic fertilisers in use had fallen 28 times to just 4 kg per hectare of ploughed land. Overall use of fertilisers in Kazakhstani agriculture plummeted from 1,919,000 tons in 1986 to 10,700 tons in 1999. Currently, only 0.7 kg of fertilisers are used for each hectare of sown land, with the fertilised areas decreasing by 29% during 1999 alone, to a level 105 times lower than in 1990.

The shortage of domestically-produced food and its inability to compete with imports has contributed to higher inflation in the country, which in turn has reduced consumer purchasing power – a fact reflected in falling meat & milk, fish and vegetable oil consumption of 40%, 65%, and 35% respectively, at the same time as an increase in bread consumption of 30 per cent.

Recently, however, there have been some positive changes in agricultural development, due to economic stabilisation in the country as a whole and government encouragement of investment in the sector, particularly the food production and processing industries.

Financial conditions in many agricultural entities have improved since 1999. In 1998 farmers in general were in the red, posting a total net loss of 26.6 billion tenge. By 1999 this situation had improved to become an overall profit of 2.6 billion tenge, while the proportion of loss-making entities fell from 78% to 49%. Net profits from the sale of agricultural products totalled 7.3 billion tenge, with profit margins at 14.6%. These figures can be broken down by sector: crop cultivation profits were 9.2 billion tenge with a 24.9% profit margin; livestock breeding posted losses of 1.9 billion tenge, with a negative margin of 14 per cent.

The gross grain harvest grew 2.2 times in 1999 compared with 1998, to reach 14.2 million tons, with 3.8 million tons of grain exported. The yields for many crops exceeded not only the previous year's levels, but were also better than in 1997 when the grain harvest totalled 12.4 million tons. For example, the grain crop yield increased to 13 hundredweight per hectare in 1999 versus 12.9 in 1997.

Productivity in the cattle-breeding sector has also improved. The average annual milk yield per cow was 1,913 kg in 1999 - an increase of 138 kg per cow compared with 1998 and 355 kg compared with 1997.

By January 1st 2000 the decline in cattle numbers had started to decelerate, while overall numbers of sheep, goats, pigs and poultry had actually begun to grow.

Since 1999 there have also been positive changes in food consumption patterns as people have tended to consume more milk, eggs, vegetables, melons, gourds and vegetable oil.

From 1999-2000 the overall sown area expanded by 1.1 million hectares to 16.4 million, while by 2002 nearly 1 million hectares of fallow land had been re-cultivated. The aggregate agricultural output in 2001 reached 285.8 billion tenge, adjusted for current prices.

Meanwhile, the focus has shifted from production to marketing and distribution. Under current conditions in which processing plants are either lacking in rural areas or have very limited capacity, farmers have problems selling their raw agricultural produce. Only relatively large farms, employing only a fraction of the rural population, can afford to deliver their raw produce to processing plants and subsequently cover production, transportation and other costs.

One direct consequence of this is the reduced significance of the village as the country's main food supplier. This loss of rural areas' 'economic significance' is now seen as the key problem for rural communities in

Kazakhstan. If this significance is totally lost, the village will become a burden for the country. However, it is obvious that villages cannot overcome this difficulty on their own, and it therefore seems necessary to develop vertical integration to build an 'agricultural production-trade' link. This can be done by setting up branches of trading companies in villages that would purchase agricultural produce or, alternatively, foster the creation of co-operatives that would both produce and sell their own output.

A number of rural areas with good quality land have the potential to increase their grain and meat production. In addition, the country's soil and climate make it possible to satisfy all domestic demand for potatoes, vegetables, fruits and melons through local production or domestic re-distribution.

However, due to factors such as the 'transportation margin'[4], lack of capital investment for local food processing, and lack of local equipment manufacturing capacity, Kazakhstan's enormous agricultural potential remains significantly under-utilised, necessitating costly imports to satisfy food demand. Thus, the share of imports is still relatively high for such foods as vegetable oil (75%), sugar (56%), fish and fishery products (49%), fruits and berries (36%), while such items as canned fruit and vegetables and baby foods are almost exclusively imported.

For Kazakhstan as a whole imports exceed exports in oils, animal fat and finished food items. Meanwhile, Kazakhstan exports more arable produce (mainly grain) than it imports, indicating its bulk product export orientation, as opposed to imports, which are predominantly processed foodstuffs. Effectively, Kazakhstan supplies raw produce to foreign processing industries, which it later consumes as processed finished products, with inevitable negative effects on rural incomes.

Taking into account that 2,835,500 persons are 'self-employed', with 1,817,700 of them living in rural areas, the complexity of the related social problems is clear, since a self-employed individual is usually not covered by pension schemes, social security or health care systems.

From the human development viewpoint there are other factors weakening the positive contribution of agriculture to the country's economy in recent years, with the following among the most significant:

- An inefficient, sometimes artificial, residential structure in rural areas, set up under a different state system and in different economic conditions;
- Continuing deterioration of rural infrastructure;

- A widening quality of life gap between urban and rural areas.

Rural environmental problems are also a significant factor, primarily linked to economic activity and living standards of rural communities. Most vulnerable to environmental hazards are residents of Atyrau, Zhambyl, Kyzylorda and Mangistau regions, which all have environmental crisis zones. Unfavourable environmental conditions in these regions often have adverse impacts on public health, birth rates and quality of life, reduce the habitable land area, affect agricultural productivity, and finally lead to lower incomes and increased unemployment. Poverty, in its turn, often leads people to further overexploit their environment. Having no means to pay for coal, gas and power, people are more likely to cut down trees for firewood, thereby destroying protective forest cover. Poverty is also one of the underlying reasons for poaching and the export of rare animals and genetic resources.

"Poor farmers cannot afford to sustain irrigation systems which force them to switch to dry, less productive farming. Poor farmers cannot afford to use fertilisers, observe soil protection technologies or improve breeding. They cannot make the investments to develop agricultural and processing technologies. Poor cattle breeders cannot afford to use distant pastures, which leads to degradation of pastures in the vicinity of settlements and biodiversity reduction, also making some areas unsuitable for agricultural purposes".[5]

Economic reforms in rural areas have led to environmental problems, deteriorating liv-

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[4] *According to research conducted jointly by the UNDP and President's Administration, 38.2% settlements are at a distance of 200-500 km from their regional center, for another 15% this distance is 100 km, while 27% of villages are 150-180 km away from their sub-regional (rayon) centers, with most of them having no highway connection.*

[5] *Conference on poverty reduction, Astana, April 25-26, 2002.*

ing standards and have precipitated large-scale migration away from villages.

The migration process has been characterised by the following patterns: Kazakh people migrate within the country – mostly to regional centres, Almaty and Astana cities; members of other ethnic groups have tended to emigrate (to Russia, Germany and other countries). A secondary migration flow of Kazakh 'oralmans' (returnees from abroad) has mainly focused on Mangistau and Atyrau regions, Kazakhstan's major oil industry centres.

At the same time, cities are ill-prepared to cope with rural newcomers due to limited employment opportunities for unskilled workers and the presence of many unemployed city residents. Newcomers therefore tend to take irregular jobs, often in the informal sector and contribute to higher crime rates and greater marginalisation in cities.

The social fabric therefore acquires a new quality as a result of old and new division lines – regional, residential, social, economic, ethnic and educational – such that problems tend to concentrate at points where possible solutions are very limited. One of consequences of this process is a reduction of social capital (measured as the level of mutual public trust) and decreased confidence in state structures.

Thus, analysis of the basic economic indicators of rural development points to a close connection between economic growth rates and human development levels. Falls in GDP have an adverse impact on population income levels, as well as employment and social and environmental security, causing uncontrollable migration away from rural areas.

Among the poor, in addition to 'traditionally' vulnerable population groups such as children, the disabled and pensioners, are people that are usually classified as 'able to work'. It is among this latter population group that there is potential for poverty reduction and the fostering of human development through economic development. This statement is well established, since one of the basic conditions for supporting sustainable income sources in rural areas is to promote greater diversification in agricultural production and simplify access to productive land through redistribution of land plots and improved soil quality.

It is also of utmost importance to conduct a pricing policy to eliminate discrepancies against the rural sector, and to expand domestic markets by improving links between farming and non-farming sectors in rural areas, as well as links between the rural non-farming and industrial sectors by setting up local processing facilities. Among other factors contributing to poverty reduction are improved quality of production infrastructure, better access to environmentally-friendly technologies for the rural population, as well as credit resources at reasonable rates. All these would foster job creation opportunities, especially for women and other employment-vulnerable groups plus better access to job locations, markets and basic public services, and of course improved environmental conditions.

To reiterate, one should not rely solely on economic methods to solve all rural problems: Kazakhstan's long-term development cannot be sustainable without development of its rural population.

Rural development has its own inherent value, since land degradation, including that of abandoned territories, limits the overall human resource. The rural population has a right to claim some resource re-distribution in its favour to compensate for various types of handicap in terms of climate, geography, culture and information and to be given opportunities for further development as inhabitants of rural areas.

For the foreseeable future certain environmentally damaged rural areas cannot be supported without severe strain on the whole country. Rural dwellers in these cases might be assisted to change residence while these territories would be considered as a potential 'reserve' for future development in more favourable circumstances.

Chapter 3. Social Development in Rural Kazakhstan

The UNDP's Global report on human development states that countries with the same GDP per capita levels can be ranked differently with regard to the effectiveness of government social policy. Conversely, high human development levels are sometimes registered in countries with relatively low GDP per capita. The conclusion to be drawn is that economic growth can effectively contribute to human development only when it is accompanied by implementation of an adequate social program.

In Kazakhstan, the development of two oblasts in particular – Mangistau and Atyrau – serves to illustrate well the above viewpoint. While contributing most to the national budget, these oblasts also have the highest proportions of poor people among their population. In a number of rural areas in Mangistau oblast poverty levels are as high as 87%, indicating a failure in resource redistribution policy that effectively rules out human capacity development. Social policy must include the following elements to be oriented on the individual:

- efficient demographic policy;
- conditions for human capacity development and poverty reduction;
- social capital expansion and wider opportunities for individual involvement in community life.

Based on the above scheme we now consider social sector development in Kazakhstan's rural areas from 1991 to 2001.

3.1. Demographic Factors and the Dynamics of Ethnic Processes

Analysis of statistics on population composition during the last decade indicates that the country has faced serious demographic problems. The 1989 census showed the country's population to be 16,199,154 while the corresponding figure at the 1999 census was down to 14,953,126, a net decrease of 1.2 million people, or nearly 7.5 percent. Over the same period Kazakhstan's rural population decreased by some 440,695, and currently stands at 6,579,064 (44% of the total population). This can be explained by factors such as falling birth rates and migration of rural people to cities in search of jobs and better living conditions.

The largest falls in population have occurred in Kostanai oblast (140,281 people), North Kazakhstan (133,266), Akmola (106,180), East Kazakhstan (104,348) as well as Karaganda oblast. This can largely be explained by the ethnic make-up of these oblasts, since central and northern Kazakhstan have relatively high proportions of ethnic Russians, which pre-determined greater emigration flows. Conversely, southern and western Kazakhstan are more Kazakh in composition, which has led to smaller out-migration flows and even some natural population increases in these regions. Thus, in 2000 the migration outflow from Akmola, Karaganda, Kostanai and East Kazakhstan oblasts was in the 28-39,000 range, while the corresponding numbers for Atyrau and Mangistau oblasts were 4,290 and 7,880 people. Relatively small migration outflow numbers (inflow for Mangistau) coupled with traditionally higher birth rates have led to population growth in the west and south of the country.

Between the 1989 and 1999 censuses rural population grew in South Kazakhstan (by 164,171), Mangistau (30,817) and Atyrau (15,468) oblasts. Overall, however, Kazakhstan still suffers from by falling population growth rates and continuing net migration outflows, with an increasingly urban population, uneven population distribution and low population density.

The gender-age structure of the rural population is also shaped by demographic, social and economic factors. According to the 1999 census the male population of rural areas was 3,283,300, while the number of females was 3,292,600. The proportion of reproductive aged women in rural areas grew from 44.8% to 49.7% between 1989-1999, representing an increase from 1,584,400 to 1,635,000.

Data on the age structure of the male and female population for January 1st 2000 shows a lower percentage of 'able to work' women in rural areas compared to the urban female population (50% and 60% respectively). The corresponding figures for men (60% and 60.3%) show no significant difference between rural and urban areas. Villages, with more many-children families, have greater proportions of younger people (under 15) than ur-

Table 3.1 Ethnic make-up of Kazakhstan's rural population in 1989 & 1999

	1989	1999
Total	7,016,518	6,575,823
Kazakhs	4,007,955	4,369,520
Russians	1,393,040	1,035,974
Ukrainians	310,704	207,909
Uzbeks	208,138	253,956
Germans	485,032	171,829
Others[6]	611,449	539,935

ban areas, while in the structure of the elderly population women outnumber men in both urban and rural areas.

Both cities and villages have an ageing population, as the proportion of over 65s increased from 5.6% in 1989 to 6.7% in 1999. One of the reasons for the relatively high rate of population ageing is the fact that emigrants are mainly those of working age, while the elderly are far less mobile.

The ethnic composition of the rural population of Kazakhstan is currently as follows: Kazakh 66.6%; Russian 15.8%; other ethnicities 17.6%. We will now look at ethnic composition dynamics in the context of rural changes. The table below gives figures for various ethnic groups registered by the censuses of 1989 and 1999:

From 1989 to 1999 the total rural population shrank by 440,695 or approximately 6 per cent. The number of rural Kazakhs grew in the following regions: South Kazakhstan (increase of 175,715 people), Zhambyl (42,058), Mangistau (30,998), West Kazakhstan (23,771), Atyrau (20,093) and Akmola (19,448). Falling numbers of rural Kazakh population were observed in East Kazakhstan (a drop of 28,006 people) and Karaganda regions (-15,718). Nation-wide, the rural Kazakh population grew by 361,656 (approx. 9%) from 1989 to 1999.

The number of rural Russians fell throughout the country, with the most significant decreases registered in Almaty oblast (a fall of 73,767 people), North Kazakhstan (-58,637), Kostanai oblast (-49,301), East Kazakhstan (-44,500) and Akmola oblast (-38,387). Overall, Kazakhstan's rural Russian population decreased by 357,066 (approx. 25%) from 1989 to 1999.

The number of Ukrainians living in rural areas also declined nation-wide, with the largest falls being in Kostanai oblast (-25,293), North Kazakhstan (-18,126) and Akmola oblast (-13,503). Overall, the number of people of Ukrainian origin living in Kazakhstan's rural areas decreased by 102,795 (or one third) in the period 1989-1999.

Numbers of Germans followed a similar downward path, falling most significantly in Akmola oblast (a decrease of 56,960 people), North Kazakhstan (40,389), Almaty oblast (39,487) and Kostanai oblast (36,775), an overall decrease of 313,403 or approximately two-thirds of the ethnic German population of rural Kazakhstan.

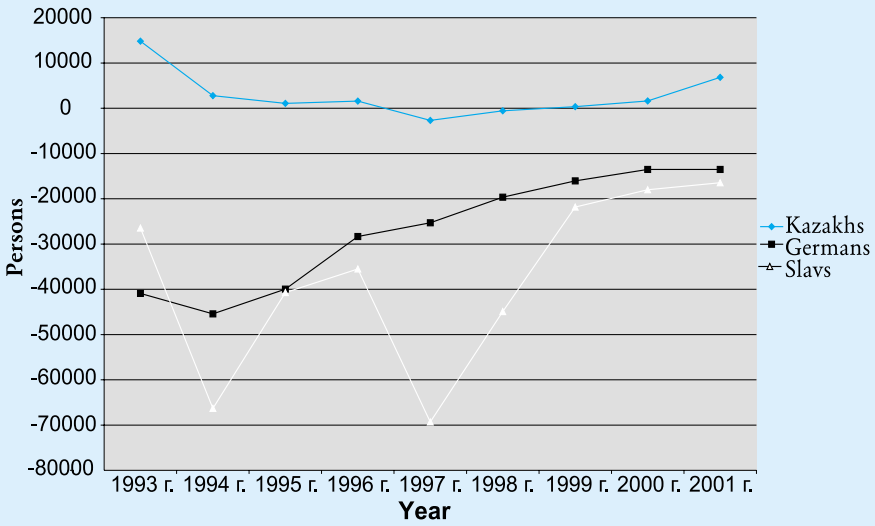
The Uzbek population also shrank in all rural areas except for a significant increase in South Kazakhstan oblast, where the number of rural Uzbek residents rose by 48,398, contributing to a rise in the total number of rural Uzbeks of 45,818, or approximately 22 per cent.

The number of rural residents belonging to other ethnic groups increased only in Almaty oblast (by 6,300) and Zhambyl oblast (6,192). In all other oblasts numbers declined, most significantly in Kostanai (a drop of 21,331 residents), Akmola (-16,594) and North Kazakhstan (13,331). The cumulative effect of these changes is a net outflow from rural areas of 74,814 residents of various ethnic backgrounds.

The dominant feature of rural demographics is out-migration. Figure 3.1.[7] shows the scale and dynamics of migration of rural residents of Kazakh, German, Russian, Ukrainian and Byelorussian origin from 1993 to 2001.

The comparison shows that the largest net outflow of Germans and Slavs was recorded in 1994, with the sharpest drop (against the previous year) in inflow numbers for Kazakhs also registered in 1994. With no natural cataclysms, man-made catastrophes or ethnic con-

Figure 3.1
Comparative dynamics of migration for Kazakhs, Germans and Slavs for rural areas of Kazakhstan in 1993 to 2001



Source: Statistics Agency of Kazakhstan, 2001

[6] *include Tatars, Azeris, Chechens, Koreans, Greeks, and Uighurs.*

[7] *Similarity of net emigration trends for Russians, Ukrainians and Byelorussians allows smoothing them into one shared trendline.*

flicts occurring, the only process that could cause such massive emigration outflows, and whose time frame coincides with the above period, is privatization in rural areas.

The government's rural policy was adopted in March 1993 in "The National Privatisation Program of the Republic of Kazakhstan for 1993-1995 (Stage Two)". This made provision for privatisation in agriculture to take place in the form of the break-up of the *sovkhoz* or collective farm. In April 1994 it was made possible to transfer the title for a land plot, i.e. a 99-year lease with an inheritance title. By the end of 1994 almost two-thirds of all agricultural entities eligible for privatisation - with *sovkhozs* being the largest, most developed units accounting for nearly 60% of the total - had been privatised.

The second major emigration for Slavs and Kazakhs occurred in 1997, when the privatisation outcomes and effects of a parallel 'optimisation' process resulted in a substantial reduction in social provision in rural areas, mainly affecting rural health protection and education systems. Smaller out-migration numbers for Slavs and net inflows of Kazakhs in 1995 and 1996 are indicative of unpredictable emigration patterns for these ethnic groups during the period.

Different patterns are observed in the emigration flows of ethnic Germans, for whom 1997 did not see record flows. Indeed, since 1996 net outflows of Germans have been steadily decreasing. This can be explained by the emigration 'mood' prevailing since 1994 and a gradual shrinkage of the potential emigrant base of people of 'mobile' age. Four out of seven 'other' ethnic groups experienced their largest outflow numbers in 1994, while 1997 was another peak outflow year for six of these ethnic groups.

One general conclusion to be drawn from the above analysis for all ethnic groups that constituted rural population of Kazakhstan 1993-2001 is that largest outflows observed in 1994 and 1997 can be considered as a general 'multi-ethnic' reaction to the processes of privatisation and 'optimisation' and their consequences for Kazakhstan's villages.

The Dynamics of birth rates, mortality rates and life expectancy in rural areas

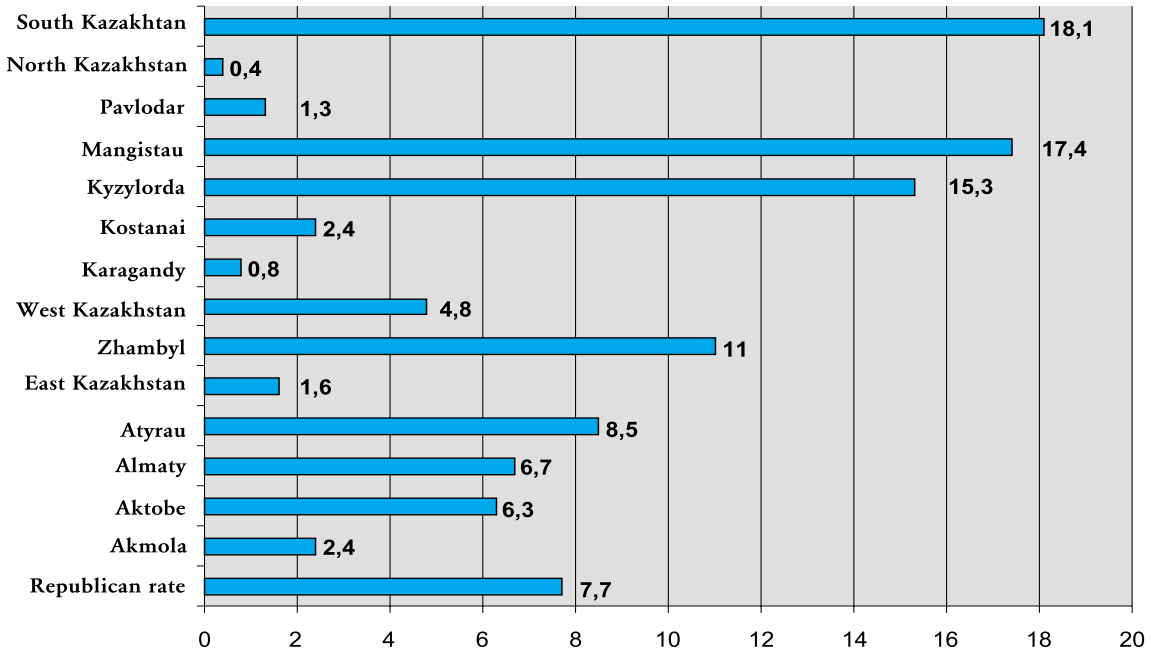
As the situation was further affected by negative internal migration tendencies, the country faces the increasingly serious issue of falling reproduction rates.

In 1991-2000 natural growth (births over deaths) in rural areas was 832,500 persons. Natural growth in rural areas generally does not have negative values, at the same time natural growth continues to fall in Akmola, Western Kazakhstan, Eastern Kazakhstan, Karaganda, Kostanai, Pavlodar and Nothern Kazakhstan oblasts.

The highest levels of natural growth are in Southern Kazakhstan (18.1), Kyzylorda (15.3), Mangistau (15.4) and Zhambyl (11.0) oblasts.

Data shows that Kazakhstan's overall birth

Figure 3.2
Natural population growth in rural areas in 2000 (per 1,000 persons)



Source: *The Ministry of Health Protection of the Republic of Kazakhstan, 2001*

Вұұ 4: Birth rates in selected oblasts

Of the 16 rayons in Kostanai oblast, eleven have low birth rates, the lowest being Zhetikarinsky (9.4), Kostanaisky (9.9), Taranovsky (10.5) and Karassusky (11.0).

In the majority of Karaganda oblast rayons birth rates are very low: in Bukharzhirau rayon – 7.8, in Abay rayon 11.0. Among East Kazakhstan rayons the lowest birth rates are in Beskaragaisky (11), Borodulikhinsky (9.8), Glubokovsky (7.3), Ulansky (8.9) and Shemonaikhninsky (9.5).

Traditionally high birth rates are recorded in South Kazakhstan (23.9), Mangistau (23.4), Kyzylorda (21.6) and Atyrau (16.1) oblasts. Low birth rates - from 8.8 to 12.6 births per 1,000 - are found in Akmola, East Kazakhstan, Karaganda and Pavlodar oblasts.

rate has been falling gradually: in 2000 the birth rate stood at 16.0 per 1000, representing a fall of 1.4 times since 1991.

Both declining birth rates and still high mortality rates can be explained by deteriorating economic conditions for families and individuals. In 1997 the mortality rate in rural areas stood at 8.9 deaths per 1,000 while the figure for 2000 fell to 8.4, which is below the national average. Mortality rates are higher than the national average in East Kazakhstan (10.5), North Kazakhstan (11.6) and Akmola (10.2) oblasts.

Increased mortality rates due to such factors as accidents, murders, suicides and other 'externally-caused' deaths are unprecedented and rank second among causes of death. The leading cause of such deaths is not traffic accidents or natural disasters, but intoxication caused by alcohol consumption and/or drug abuse, which account for up to 80% of deaths of working age males.

Most women in Kazakhstan now practice family planning with regard not only to the number of children but also the timing of births. This is only partially achieved through the use of contraceptives: often, especially in rural areas, abortions are used.

Although maternal and infant mortality rates in rural areas have declined recently they are still relatively high with respect to accepted international standards: by 2000 rural mortality rates had fallen from 51.3 to 47.5 compared with 1999, while in cities it decreased from 47.9 to 41.0. Maternal mortality in villages accounts for 60% of all female deaths. Infant mortality rates are highest in regions with high birth rates, in particular in the south and west of the country.

Deteriorating demographic and quality of life indicators have significantly affected life expectancy both in urban and rural localities. Over the period 1989 to 1999 life expectancy in the country as a whole decreased by 3.7 years, with male and female life expectancy going down by 4.4 and 2.7 years respectively. However, it is worth noting that life expectancy at birth for both females and males is greater in rural areas. In 1999 rural life expectancy for females and males was 71.5 and 62.5 respectively, while the figures for urban areas were 70.5 and 58.8 years.

Overall, analysis of the demographic constituents of human development in Kazakhstan suggests a necessity for measures to optimise reproductive processes. As of January 1st, 2001, 48.6% of polled rural households had five or more members, with children under-16 present in 74.8 per cent.

At the same time, improvements in the demographic situation should not be limited to quantitative population growth. A set of financial, legal and cultural mechanisms should be employed to help ameliorate the situation. Lower death rates, longer life expectancy and birth rates balanced with public resources are all dependent on improvements in social and economic conditions. Demographic growth will be achieved only when a sound material base for families is created and poverty, in the widest sense of the word, is reduced.

3.2. Rural Poverty

The most widely known definition of poverty was adopted within the framework of the human development concept, as advocated by the UNDP since 1990 in its annual human development reports. The interpretation of human development as capacity improvement introduced the notion of 'ability poverty', initially found in the Human Development Report in 1996. According to this definition, a lack of or limited possibilities to satisfy basic human needs such as a full and healthy life, access to education, access to resources required for a fulfilling life, can be considered characteristic of poverty, in addition to the longer-established income per capita indicator.

There are three perspectives on the concept of poverty:

- the **income** (or consumption) perspective;
- the **basic needs** perspective;
- the **human capacity development** perspective.

We will briefly consider each below.

3.2.1 Income Poverty

The widening income gap in Kazakhstan is largely accounted for by fewer legitimate

income sources, which has led to more people having to work in the informal sector or subsistence farming. For rural areas this has meant a massive shift of local residents to individual farming and livestock breeding as last resorts, rather than indicating any increased entrepreneurial activity.

Wages in agriculture have always been lower than those in industry, but the gap has never before been so significant. For example, in 1985 and 1991 agricultural workers earned 89% and 78% of industrial wages respectively. By 1994 this had dropped to 37%, and stood at only 60% of the nation's average wage. This downward trend in agricultural versus industrial wages has persisted, falling to 29% in 2001, or only 39% of average wages nation-wide (see Table 3.2).

Over the last five years wages in agriculture remained very low (one fifth of salaries in the finance sector; 30% of industrial production employees' wages; slightly over 30% of transportation and communication sector employees). The above ratios are true for all regions. Therefore nominal rural cash incomes, largely comprised of wages and salaries, are half that of urban residents.

The average size of a rural household is more than five people, and even though nominal wages of those employed in agriculture are tending to grow, they are still quite low. Over the period 1991 to 2001 up to 80% of the rural population had monthly cash incomes of less than 3,000 tenge.

Average monthly wages in agriculture in 2001 stood at 7,473 tenge for men and 5,411 tenge for women, i.e. 72.5 % of their male counterparts. Despite the fact that this gender pay gap is smaller in agriculture than in other sectors, the absolute wage values are the lowest in the whole economy for both men and women.

As wages and social transfers are not the sole income sources for families, it is important to rely on data for real consumption when estimating poverty. State statistics bodies use values for 'consumed income' in their computation of poverty indicators for oblasts, whereas previously these calculations were made only for the country as a whole. Table 3.3 gives estimates of poverty dynamics in rural areas.

The table shows substantial differences in poverty expansion in Kazakhstan. Average wages in regions exhibit a 200% difference; average wages in agriculture differ 100% across regions. Over the last decade the highest average wages have been registered in Mangistau oblast, while the lowest average wages have been in Almaty oblast; the highest wages for agricultural employees have been observed in Kostanai oblast, while the lowest are in South Kazakhstan.

Table 3.2 Average monthly wages in the Republic of Kazakhstan in 1991-2001 (tenge)

	Average nominal Monthly wages			Minimum wage
	Overall	Industry	Agriculture	
1991*	441	534	414	115
1992*	4625	6161	4834	589
1993	128	171	101	13
1994	1726	2801	1038	122
1995	4786	7792	2392	262
1996	6841	10198	3512	1550
1997	8541	12489	3875	2129
1998	9683	13465	3896	2395
1999	11864	16370	4600	2605
2000	14374	20647	5657	2680
2001	17303	23812	6851	3484

* *Data in roubles*

Source: Annual Statistics Report, Statistics Agency of the RK, Almaty, 2001.

Impressive economic results of some oblasts are not always reflected in improved conditions for the poor. For example, Mangistau and Atyrau regions boast the highest Gross Regional Product values, while at the same time they have the highest proportion of poor, especially in rural areas.

The highest proportions of rural population with consumed incomes below the living minimum are seen in Mangistau (95%), Zhambyl (53%), Atyrau (48%), Kyzylorda (47%), Aktobe (45%) and South Kazakhstan (44%) regions. The highest ratio of 'poor regional population/total country poor population' is observed in South Kazakhstan (23.2%), Almaty oblast (18.5%), Zhambyl oblast (12.3%) and Kostanai oblast (7.4%).

Among rural households, whose income per person is below the subsistence minimum the majority are those with 5 and more people (51%). The average number of dependants in low income households is 3.3. The findings of the survey of young families, carried out jointly by the UNDP and the President's Administration, have similar implications: 9% of young families in rural areas have three or more children (the equivalent number for young city families is

Table 3.3 Basic poverty indicators in the Republic of Kazakhstan

	Proportion of population with income below the living minimum, per cent		Proportion of population with income below consumer food basket value, per cent	
	Overall	Rural	Overall	Rural
1999	34,5	37,1	14,5	16,8
2000	31,8	34,2	11,7	15,9
2001*	28,4	38,0	11,3	16,3

** Transition to new household sampling principles to ensure representative nature of data at oblast level. Sources: Statistics Bulletin, Statistics Agency of the RK, Almaty, 2002*

3.8%) while 38.4% of families have two children and 52.6% of families have only one child.

Nearly 27% of the polled households consider themselves to have incomes insufficient even for balanced nutrition. Over 35% of respondents indicated that their income covers only nutritional needs, with only 7.1% of families saying that they had incomes high enough to pay for nutrition, clothing and basic services.

Among the causes of low income levels, 29% of the polled households mentioned low wages, 27% cited limited employment opportunities, while 25% of respondents said they had no permanent jobs in their place of residence.

The following data were collected with regard to the employment status of rural residents: 40.6% of respondents were employed full time in 2001 (with 45.9% of these employed in state agencies); 59.4% were self-employed (74,9% of these working in their own households, and 1.4% acting as employers themselves). The age group in greatest demand on the rural job market is from 25 to 44 years. Among the unemployed are mostly young people from 16 to 19 (17.8%) and from 20 to 24 (20.6%). Males in these age groups have higher unemployment rates (19.3% and 21.0%, respectively), than females (16.5% and 20.2%).

Out of 132,374 officially registered unemployed women in Kazakhstan at the end of 2000, nearly 30 per cent (36,840 women) lived in rural areas.

In the survey for this report 65.5% of rural female respondents stated they were unemployed, compared with 53.2 % for males; 17.2% of male respondents and 18.7% of female respondents work for public organizations; 18.8% of men and 10% of women are employed on collective farms. The question "Do you have your own smallholding?" was answered affirmatively by 9.1% of males and 5.0% of females. 1.8% of male respondents and 0.7% of female respondents said they had established their own farms.

The educational profile of the employed respondents is the following: 49.1% have secondary education; 19.2% vocational training; just over 9% have a college education. For the unemployed respondents the respective figures are 63.2% for those with secondary education and 13.9% for those with vocational training. Unemployed people with college education are ranked fifth as a group, accounting for 3.2% of the total. Similar tendencies are observed in classification according to gender.

Only 17.8% of rural residents are employed in the field in which they majored at college (17.7% for male respondents, 17.9% for females). The unemployment rate fluctuates across the regions from 2.9% (for East Kazakhstan region) to 14.6% (for Mangistau region), which is followed by West Kazakhstan (13.7%), Atyrau oblast (13.4%), Kyzylorda and Almaty oblasts (around 10% each) and South Kazakhstan (just over 9%).

Asked about the key causes of unemployment, rural residents offer the following explanations:

- no jobs available at all – 42.4%;
- no job offers after graduation – 21.0%;
- dismissal due to enterprise liquidation – 10.4%;

Box 5: Perception of poverty and unemployment by males and females

Rural men who lose their jobs due to agricultural reforms and fail to find work on private farms or start their own business, most often try to find work in the nearest town, taking up casual work such as part time workers, builders, drivers, loaders, etc. Men who stay in villages and fail to find a job are left with nothing to do. As a result, alcohol abuse has become more widespread among rural male residents: suicides rates have increased, particularly among young men aged 20 to 28. For some rural men it is very difficult to admit to being unemployed and when participating in surveys they often name their last job, concealing the fact they lost it a while ago.

According to the Statistics Agency of Kazakhstan, the number of self-employed females in villages is 926,600, which is 35,500 more than self-employed males. The majority of rural women who lose their jobs work in their own households, take care of their families, or move to cities to sell items at market. As a result of this pendulum job-search migration women face the risk of being left alone to take care of their children. The situation can become even more complicated if a woman from a village finds herself in a semi-legal situation, with neither housing nor financial means nor the opportunity to return to her village, often also without documents or urban registration. This is not only very unfavorable for the woman, but also deprives her children of stable family relations, good nutrition, access to decent home conditions, health care and education.

During the survey, those rural men deprived of income tended to identify themselves as unemployed, while rural women usually say they work in the household, tend livestock, make home produce (butter, cheese, bread, etc.). Both males and females count on the support of the state and rehabilitation of their workplaces and are ready to start their own business, subject to receiving some financial, technical or other assistance.

- dismissal due to downsizing – 10.4%.

Some 32.6% of the polled rural residents had been unemployed for more than a year at the time of the survey (46.9% of them male, 53.1% female); almost a third (32.3%) had been unemployed for more than five years (42.8% male, 57.2% female).

One of the ways to overcome unemployment and, consequently, to improve one's welfare is to set up one's own business. However, the results of the survey show that the financial base to support medium and small business still poorly developed under transition conditions, and the population remains poorly prepared to run private businesses.

The household surveys indicate that entrepreneurial activity is still at a very low level, particularly in households with incomes lower than the subsistence minimum, as only 0.2% of such households currently run their own business. Among these low income households not engaged in entrepreneurial activity, 71% of respondents believe that setting up one's own business could improve their welfare, although less than half (46%) think they have the potential to do it.

Among the core obstacles to setting up a private business, 68% of low income respondents mentioned lack of start-up capital; 38% cited difficulties in securing a loan; 34% highlighted lack of knowledge and experience.

Access to land, which implies consumption of one's own farming produce, is another possible way to raise the quality of life in rural areas. Some 84.5% of the polled low income households have access to land. The survey showed that there is a positive correlation between household size, land ownership and cattle breeding, i.e. the greater the number of people in a household, the more likely it is to have access to land and farming produce. At the same time, only 63% of the polled rural respondents stated that they wanted to have access to land. Those not interested gave the following reasons: poor access to water for irrigation was blamed by 22.8% of respondents; 13.8% said they lacked resources to invest in land; 10.5% complained of poor health and 10.1% mentioned their age as an obstacle.

The data presented in this chapter clearly demonstrate that in order to overcome poverty low income people need not only wider credit-finance opportunities, as they themselves indicated, but also better access to education and health protection which means overcoming poverty in a wider sense: poverty of opportunity.

3.2.2 Access to social services

In 2001 state expenditure on education was

Box 6: Gender aspects of rural poverty.

Despite the fact that the whole rural population has felt the adverse effects of reforms, women have found themselves in a less favorable situation. As a group, Kazakhstan's rural women are highly vulnerable to poverty. Among the reasons for poverty among rural women are lack of access to well-paid jobs, low revenues from production and sale of agricultural output, the traditionally high number of children in families, and an emphasis on unpaid work in the household. Other poverty factors are poor access to health care, reduced social services - including the falling number of kindergartens - as well as poor legal knowledge, low activity levels and traditional family ways of life.

At the same time, the majority of rural men have neither the experience nor means to start their own business. They often prefer to keep their jobs on farms, and transfer their land use rights to a more enterprising individual in exchange for a regularly paid job. Most women are left out of such job opportunities, as rural work is mostly physical and unacceptable for women. Meanwhile, it is women who are engaged in household agricultural production to feed the family or sell produce in towns. It is therefore the women who worry about marketing, transportation and prices for produce.

Women take up some of the few state jobs available in villages, working as teachers or local akimat officials. It is worth noting that women outnumber men in rural administration bodies - 52% and 48 % respectively. These women, unlike most other rural females, do receive cash compensation for their work. The majority of women, however, support their families by providing household agricultural produce. They therefore face difficulties in providing their families with clothing and medicine, as well as in paying for fuel, public transport and children's tuition fees, i.e. in all cases where payment has to be made in cash.

Among families that have managed adapt to new rural realities are those which had the means to purchase cattle during the privatization period and had experience in livestock – often former shepherds. Their position was helped by the fact that during Soviet times all family members were involved in farming, with each person having his or her own role. In fact there was a family labor organization similar to family farms in market economies. Family farming is a good example of the equal involvement of both men and women in the production of a market good. Besides, as the importance of the family household has grown, with revenues from the sale of produce becoming major income source, men have begun working more on their family land plots. According to a Statistics Agency survey, rural male residents aged 23 to 40 spend more hours per week working in family households than women (67.26 hours against 55 hours); for people older than 41 the number of hours worked in family households grows to 78 hours per week for men and 75.3 hours for women.

3.2% of GDP compared to 3.3% in 2000. In 2001 the state spent 1.9% of GDP on health protection, down from 2.1% in 2000.

a) Access to health care

By 1990 Kazakhstan had made significant gains in the area of health protection, such as longer life expectancy, falls in infant mortality, close to 100% children immunisation, infection prevention and control. The creation of a comprehensive public health care system offering free medical services, as well as rising educational standards contributed to improvements in overall health indicators. However, morbidity rates continue to increase.

A number of infectious diseases such as tuberculosis (TB), kept under control before, have become more prevalent. For example, TB cases have more than doubled since 1991 and there is widespread growth of TB in rural areas. The list of oblasts most seriously affected by TB remained largely unchanged by 2001: Kyzylorda (429.0 cases per 100,000 people); Mangistau (260.1); Atyrau (226.2); Pavlodar (172.0); West Kazakhstan (166.9) and Aktobe (165.3).

Also, the threat of an HIV/AIDS epidemic in Kazakhstan has begun to emerge. Meanwhile, problems in accessing clean drinking water have begun to affect public health significantly. In many oblasts increased morbidity rates are linked to deterioration of the environment (see Table 3.5).

Table 3.4 Morbidity rate for rural population in Kazakhstan (number of first time patients, per 100,000 people)

	2000	2001
Total, including	32,090	34,482
Adults	25,772	28,520
Teenagers	40,918	43,880
Children	42,261	43,900

Source: The population's health in the Republic of Kazakhstan and the activity of health protection agencies in 2001. Statistical report, Ministry for Health Protection of Kazakhstan, Astana, 2002.

Due to cost-cutting in health care and the inadequate number of hospitals, the level of medical services available to the general population has deteriorated. The number of first aid stations in rural areas has fallen from 5,400 obstetric centres and 1,810 emergency/obstetric stations in 1991 to 4,700 and 441, respectively in 2001, while the capacity of these stations has halved.

As a result of the changes in the health sector, by 1999 some 1,200 villages were left with no local first aid stations, and it is only since then that this depressing trend has been reversed after the government resolution "On improved quality of medical aid offered to the rural population" was passed. Nearly 700 certified medical specialists were allocated to work in rural areas, which reduced the number of unattended villages to 112. This, however, has not gone all the way to solving the problem.

Rural localities are still experiencing a shortage of qualified specialists, with staffing at 88.1 – 99.7% of the required level. According to data of the National Statistics Agency in 2001 more than 31% of patients had to travel over 4 km to the nearest emergency aid station; alternatively, 19% of patients spent more than an hour on their way to the nearest aid station; 8.6% had to travel from one to four hours, and 3.8% of patients spent more than four hours on the way to a clinic.

In addition, although first aid still remains a free public service, over 77% of rural population does not know what type or services are provided in the guaranteed package. More than 58% of the rural population is not happy with

the level of medical care offered locally.

After transition to a market-based economy, access to medical care begins to require some kind of payment - sometimes accepted in the form of 'presents' and unofficial payments in state medical centres. This situation negatively affects mostly low-income groups, as treatment can become quite expensive. A rural household survey, conducted in 2001, indicated that 34% of respondents found it difficult to find money to pay for medical care. Almost 66% of patients who received hospital treatment had to borrow money, 20.5% had to sell their cattle, while 0.3% sold other property. Some 15% of those needing treatment did not seek it, as they could not afford it. Only two thirds of patients were able to purchase all medicines prescribed by their doctors, and out of those who did not, 67% said they could not afford it.

Apart from the problem of affordability of medical care, other issues to address are raising the population's general education level, promotion of healthy lifestyles and improved personal health care. These measures become increasingly important given current trends which include growing rates of chronic diseases, drug addiction, sexually transmitted diseases, as well as low quality of health care and the remoteness of medical centres in rural areas. In 2001 57% of rural respondents needing medical aid, treated themselves using medications; 14% preferred herbal treatments and folk remedies; 9% decided they would do without any treatment; 2.5% did not have time to see a doctor while one in a hundred patients sought treatment from a 'healer'.

b) Access to drinking water and sanitary infrastructure

With regard to river run-off volume Kazakhstan is one of the **least water-rich states** in the world. Moreover, water resource distribution across the country is very uneven and this does create instability and imbalance of water supply for different regions and economic sectors. Kazakhstan's required annual water consumption is 54.5 cubic km, while the average supply of water for economic purposes is 46.0 cubic km. In dry years total water supply goes down to 58 cubic km, while the volume available for economic use falls to 26 cubic km.

Before 1990 the **rural water supply network** in Kazakhstan included 54 major pipelines with a total length of 13,500 km, plus 1,500 local water pipelines totalling 17,600 km and 3,700 km of village pipelines, **to bring water to 3 million people living in 2,935 settlements, plus 16.2 million livestock and 97.5 million hectares of irrigated land.**

Currently the quality of nearly all Kazakhstan's water bodies is unsatisfactory, with rivers like the Ural, Irtysh, Nura and Syrdarya most polluted. Problems with quality of and access to drinking water in Kazakhstan, and in rural areas in particular, are mainly caused by two factors: dilapidation of water supply networks and the high pollution levels of surface and ground water.(Figure 3.3)

Nearly sixteen per cent of water tests taken from different water bodies across the

Box 7: Morbidity rates in Kostanai oblast

Kostanai oblast has registered worryingly high numbers of cases of tuberculosis, HIV and drug addiction. Mortality caused by tuberculosis in Kostanai oblast accounted for more than a third (36.6%) of all cases in Kazakhstan in 2000.

There were also sixty recorded cases of HIV, with 70% of those infected aged 20 to 29. Some 85% of those infected with HIV belong to vulnerable population groups.

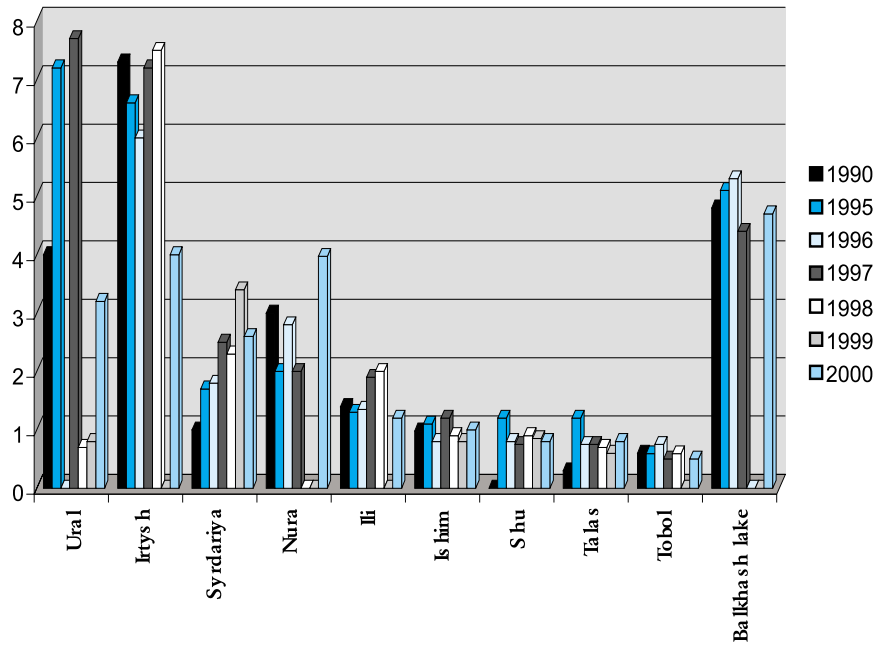
There are 13,909 officially registered drug addicts in the oblast, with teenagers ac-

Table 3.5 Health condition of rural population in 2001 (diseases caused by environmental factors), per 100,000 people

Disease	Number of first time patients
Infectious and parasitical	1,433
Neoplasm	209
Blood diseases, with immune mechanism affected, total	1,607
including children	520
Endocrine	446
Blood circulation system	1,242
Respiration organs	14,283
Digestion organs	2,665
Urine-genital system	2,526
Inborn anomalies, deformations and chromosome irregularities, total	78
including children	138

Source: The population's health in the Republic of Kazakhstan and the activity of health protection agencies in 2001. Statistical report, Ministry for Health Protection of Kazakhstan, Astana, 2002.

Figure 3.3
Water quality in major rivers, pollution index



Source: RSE Kazgidromet, 2001

country showed sub-standard water quality, although the figure for Kyzylorda oblast is as high as 88.8%. Such poor water quality can largely be explained by wastewater dumping, irregularities in wastewater disinfecting and the poor condition of sewerage equipment. Among major water polluters are cattle farms, as well as various precipitation and storage tanks for solid and liquid wastes and petroleum products.

Over 3 million of the rural population (20.9% of Kazakhstan's total population) get their drinking water from decentralised sources, such as wells, springs and artesian wells without distribution pipes, despite the fact 10.4% of these water sources have failed to meet microbiological standards, while 20% do not satisfy sanitary norms. In this respect the following oblasts – Kyzylorda, Kostanai, Pavlodar, Akmola, Zhambyl and North Kazakhstan - have ratios above the national average. 685,400 people, or 4.6% the of total population, rely on drinking water of unknown quality imported from other localities; for South Kazakhstan this ratio is as high as 10.4%, while the figure for Mangistau oblast is 29.7 per cent.

As indicated above, deterioration of drinking water quality has been a significant factor in rising rates of certain diseases. Specifically, infectious diseases have been increasing in rural areas, particularly water-borne infections such as dysentery, typhoid, and infectious hepatitis A. Overall, some 22.6% of hepatitis A sufferers contracted the disease through contaminated water, with significant variation between oblasts e.g. 7.9% for Akmola, 41.8% in Kyzylorda, 31.1% in Kostanai, and 27.6% in Karaganda.

Among the factors contributing to a deteriorating quality of life in rural areas is the problem of irrigation water. At the same time, the key issue with regard to water supply and the environment is not so much water shortage as highly uneconomical water consumption, far exceeding consumption levels in countries with comparable climates. This situation is brought about by the use of primitive irrigation and transportation technologies, as well as a lack of economic incentives and water saving traditions.

Environmental legislation during that period provided little safeguard against overexploitation of resources, since there were no effective environmental protection mechanisms in place. Environmental norms and regulations did not stimulate rational resource utilisation and failed to prevent environmental damage in most cases, while any economic incentives had no noticeable effect. Under these conditions of 'free' use of key resources and users' lack of personal accountability, unsustainable resource utilisation was almost inevitable.

In order to overcome the problems of rural areas one needs to fundamentally revise existing approaches to rural development. An approach that would consider rural areas to be not only agricultural production zones but also social and territorial units, performing a wide range of functions (demographic, labour resource, cultural,

Due to economic problems, some rural settlements have abandoned the use of the main water pipeline network, while others have been cut off from water supply networks due to non-payment. Meanwhile, populations in certain areas experience water shortages and have to consume poor quality water. Households of Atyrau, North Kazakhstan and Almaty oblasts are among the most remote from water supply units (see Table 3.6).

Table 3.6 Water supply in rural areas of the Republic of Kazakhstan, per cent

	Type of water supply						Distance to water supply	
	Water supply network	Private well	Public water pump	Public well	Spring, lake, pond	Water barrel	500-1000 meters	More than 1 km
Republic of Kazakhstan	8,9	40,4	28,1	12,7	3,5	6,4	4,9	2,7
Akmola	2,3	24,6	52,6	13,1	1,0	6,4	1,7	0,3
Aktobe	12,8	42,8	6,7	37,7	-	-	1,9	-
Almaty	14,0	35,7	41,7	1,0	7,6	-	4,0	5,2
Atyrau	1,1	72,3	21,1	1,1	-	4,4	9,5	17,9
East Kazakhstan	22,7	60,6	11,7	3,5	1,5	-	3,0	0,3
Zhambyl	0,3	78,1	15,2	6,4	-	-	2,1	0,9
West Kazakhstan	3,7	39,9	19,5	12,0	-	24,9	2,3	-
Karaganda	-	67,8	17,8	13,2	1,1	-	-	-
Kyzylorda	17,4	19,0	14,9	37,9	8,5	2,3	9,6	0,3
Kostanai	-	0,8	68,4	15,8	0,8	14,2	16,5	1,0
Mangistau	-	-	-	-	-	100,0	-	-
Pavlodar	-	42,9	26,3	15,0	-	15,8	4,0	-
North Kazakhstan	4,4	25,4	28,2	28,2	8,7	5,1	9,3	10,2
South Kazakhstan	8,6	38,9	32,3	4,9	3,0	12,3	6,0	2,1

Source: Basic social and demographic characteristics of households. Statistics Bulletin, the Statistics Agency of Kazakhstan, Almaty, 2002.

environmental, recreational, etc.), should be promoted as the cornerstone of a new rural development strategy. In order to help address increasing rural-urban inequality of income opportunities, the state needs to exercise its protectionist powers to achieve the strategic goals of rural development.

c) Access to education in rural areas

Prior to the transition period the country boasted 97.5% adult literacy levels (1989 census). Attendance levels for all education institutions were high both for boys and girls, as well as the proportion of graduates. However, Kazakhstan is currently running the risk that children from low income families will not have access to decent education. This would exacerbate the existing inequality gap, and increase the chances of future rural generations 'inheriting' poverty.

In 1990 the number of kindergartens in Kazakhstan's rural areas was the highest in the Soviet Union, with 39.7% of children aged 2 months to 6 years attending them. Some 93.6% of six to seven year old children attended school, having received some pre-school training. However, the numbers for pre-school attendance dropped dramatically between 1991-2001: by 630% overall and by 2900% in rural areas. This was not only due to lower birth rates, but also as a result of reduced financial support for pre-school institutions. After *kolkhozs* and *sovkhozs* were liquidated, all responsibility for funding pre-school education shifted to local administrations. This was a burden the local authorities were unable to sustain and consequently many kindergartens were closed down - the number of kindergartens fell by 2200% in rural areas. Currently, the number of pre-school institutions in rural areas is 276.

Most pre-school age children do not currently attend kindergartens and day nurseries. Although parents indicate the lack thereof as the major reason for non-attendance, nearly all respondents confessed they would not be able to afford their children's attendance even if pre-school institutions were re-opened in their villages.

To address this issue the government passed the law "On education" in 1999, which provides for free pre-school classes under all secondary schools in the Republic.

Secondary education is *mandatory* for every citizen of Kazakhstan. However, transition to a market economy has brought changes to the system of general education. At the start of the 2000/2001 academic year the number of secondary schools registered was 3.1% fewer than in 1991, with largest drop against the same bench-

Table 3.7 Pre-school institutions and pre-school attendance in Kazakhstan, 1991-2001

	1991	1992	1993	1994	1995	1997	1998	1999	2000	2001
Number of pre- school institutions	8,881	8,578	8,053	6,551	5,058	1,533	1,338	1,102	914	1,103
Including in rural areas	4995	4835	4623	3814	2766	386	346	243	193	217
Number of children in pre-school institutions, thousand	1,023	868	747	538	407	174	164	124	122	140
Including in rural areas	377	316	276	192	116	18	19	12	11	12

Source: Annual Statistics Bulletin. Statistics Agency of Kazakhstan, Almaty, 2000.

mark year recorded in 1997-1999 (3.7%-3.9%). In addition the number of students enrolled in secondary schools had been falling since 1994, and it was only in the academic year 2000/2001 that this trend was reversed and the number of students enrolled in rural schools began to rise again (see Table 3.8).

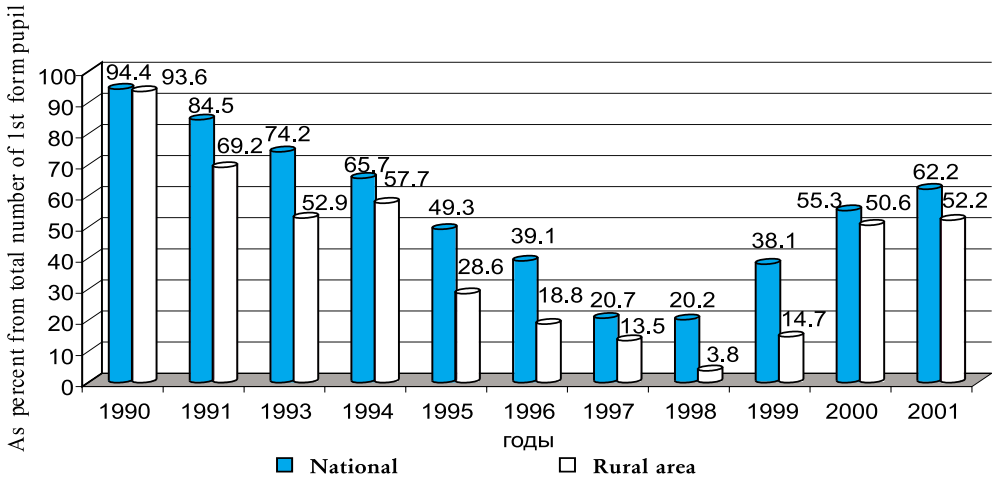
Table 3.8 Secondary schools and secondary school attendance in Kazakhstan, 1991-2001

	1991/ 1992	1992/ 1993	1993/ 1994	1994/ 1995	1995/ 1996	1996/ 1997	1997/ 1998	1998/ 1999	1999/ 2000	2000/ 2001
Number of schools	8,575	8,654	8,751	8,728	8,732	8,618	8,238	8,284	8,290	8,309
Number of students, thousand	3,147	3,127	3,115	3,072	3,060	3,105	3,107	3,115	3,118	3,247
Including in rural areas:										
Number of schools	6,625	6,677	6,735	6,702	6,675	6,554	6,198	6,195	6,170	6,251
Number of students, thousand	1,591	1,583	1,595	1,580	1,558	1,554	1,529	1,505	1,495	1,606

Source: Annual Statistics Bulletin. Statistics Agency of Kazakhstan, Almaty, 2000.

Due to changes in the network of rural settlements and their population, as well as a decrease in the number of boarding schools, the growing numbers of small schools has emerged as another problem. It should be acknowledged that the quality of education deteriorates in small schools and combined classes, which further increases the gap between cities and villages. At the start of the 2002/03 academic year there were 4,072 small schools in rural areas, attended by 405,916 children. The number of combined classes has gone up to 8,820, where classes conducted in Kazakh language equal 2,098 in villages and 2,148 in cities. Small schools are mostly attended by prima-

Figure 3.4
Dynamics of pre-schooling for 5-6 year old children



Source: The Ministry of Education and Science of Kazakhstan, Astana, 2002.

ry school pupils. In the case of East Kazakhstan oblast, out of 815 secondary schools recorded at the start of the 2002/03 academic year, 457 were classified as small, with 445 of these located in rural areas.

According to the state program of development and publication of textbooks and teaching materials, schools rely increasingly on new domestic textbooks. In the 2000/2001 academic year domestic materials were used by 1st-5th graders, with Kazakh, Russian and Uighur as the languages of instruction, and 1st-4th graders, with Uzbek as the language of instruction.

Rural schools are characterized by high staff turnover and low professional level of teaching staff.

Some 2,700 teachers are currently needed in rural schools, in particular teachers of Kazakh language and literature for Russian speaking schools, teachers of mathematics, information technology, foreign languages, home economics and music, as well as preschool teachers. (see statistical annexes)

As of the start of the 2001/2002 academic year 625 villages in Kazakhstan had no secondary schools and 593 settlements did not have 9th grade schools. Consequently, in these areas each 9th grade student has to travel on average 4 km to his/her school, with another 9% of school students travelling from 2 to 4 km. This makes school attendance a problem, particularly in winter, and for children from low income families.

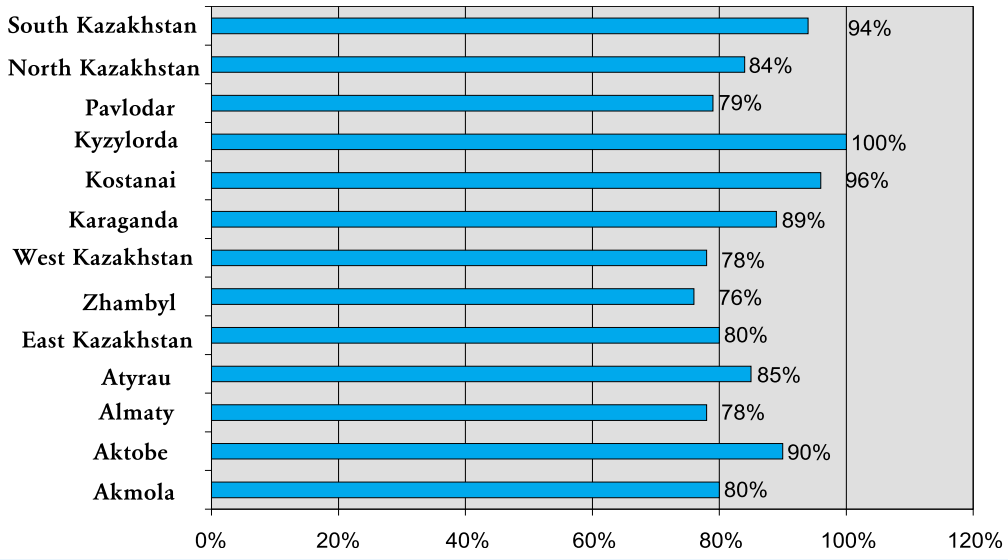
The average number of students per rural school in 2000/2001 was 25 for elementary schools; 101 for 9th-grade schools, and 400 for secondary schools. Sixty per cent of rural

schools have a two-shift system. Most rural schools have very limited material resources: 49% are based in buildings with no sewage or running water; 1,962 school buildings are in need of repair while 373 others require emergency repairs. The greatest number of school buildings in critical condition are located in Almaty oblast (67), followed by Akmola (38), West Kazakhstan (37), East Kazakhstan and Kostanai oblasts (30 each).

In 2000 nearly half rural schools did not have sports facilities, and only one in three schools had skills and crafts facilities. Some 1,300 (1 in 5) rural schools have no library while 505 schools do not have physics, chemistry or biology laboratories.

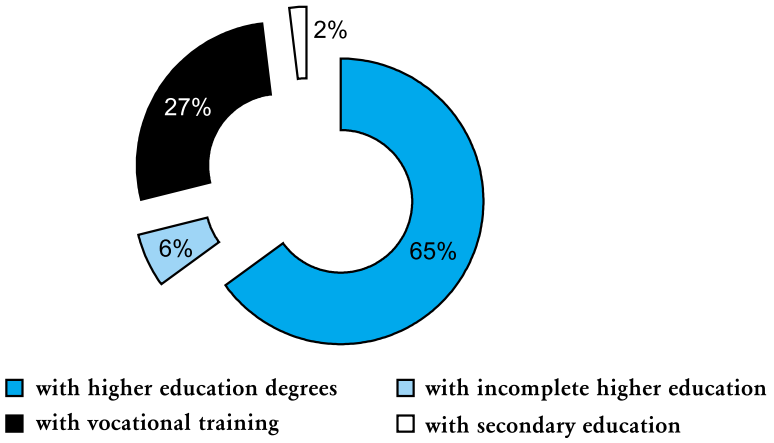
New forms of education are not actively promoted in rural areas. Analysis of results for

Figure 3.5
Availability of textbooks for primary schools in rural areas



Source: *The Ministry of Education and Science of Kazakhstan, Astana, 2000*

Figure 3.6
Faculty in rural secondary schools in 2001-2002 academic year



Source: *The Ministry of Education and Science of Kazakhstan, Astana, 2000-2002*

rural school graduates in 2001 compared with participants of academic competitions shows that rural school students demonstrate a poorer knowledge base compared with their urban counterparts. Only 14.5% of rural schools practice concentration in chosen academic subjects. Only 10% of the total number of gymnasiums and lyceums are located in villages.

As less financing is allocated by the state budget for educational needs, households incur more expenses themselves. Increasingly, parents are required to cover classroom renovation and heating costs, purchase school materials or make unofficial money advances to school or college personnel/staff in addition to buying books and school uniform. According to a 2001 household survey costs of books and school uniform make up 9.6% of the average rural family's education budget; informal expenses account for 9.3% of the budget; and costs of extracurricular classes for elementary and junior high school students take up 1.6% of households' total education expenditure.

The results of 2001 household survey indicate that 0.5% of school age children from low-income families do not attend schools. One in three of these children do not go to school due to insufficient resources or health problems, while 30% believe basic education suffices. Children from low-income families find it increasingly difficult to afford high school attendance or college education.

In many colleges and universities students have to pay for tuition, which virtually rules out children from low-income families enrolling at such institutions. The share of tuition expenses at vocational and higher education institutions in rural households' budgets in 2001 stood at 12.8% and 38.2%, respectively.

Only 16.3% of children from low income families have the opportunity to continue their education after high school. The main reason for limited education opportunities is financial constraints and the inability to pay for tuition, mentioned by 80% of respondents; 9.6% of the survey participants say they do not have 'connections' to get access to free education (through education grants); 5.0% mention family circumstances; 2.5% have no ambition to study further; 1.1% acknowledge poor educational background; lastly, 0.2% blamed poor health.

However, certain government measures appear to have started to ease the situation in recent years.

Thus, since 1997, 82% of rural schools, including 4,229 small schools, have been equipped with computer equipment of various specifications. Also, more schools have started to be connected to the internet: already 1,124 schools (including 289 rural schools) have been connected as part of the "Internet for schools" program. "Daryn" -a distance learning school - was established under the Republican scientific centre, with 34% of its students being children from remote rural schools. Twenty-two specialised boarding schools for gifted children from rural areas were set up in regional centres.

However, these recent developments in rural education have not overcome the negative consequences of social and economic crisis, caused by transition to a different economic model. When even children's basic education is dependent upon family income levels, increased inequality in access to knowledge inevitably results. Especially in a market economy, limited access to education lowers individual potential in other activity areas and increases the risk of 'transfer' of poverty to forthcoming generations.

d) Access to cultural and sports centers

Cultural activities in rural areas are held in libraries, museums and cultural centers. Since 1990, the network of cultural and sports centers has gone through a process of "optimization" and has been substantially reduced. Only in a few regions have local authorities and communities combined their efforts to preserve cultural centers, thus retaining access to this type of social service for the rural population.

For example, the state cultural network of Kostanai oblast includes 321 libraries, 122 cultural centers, 8 museums, 2 theaters, an oblast philharmonic, State Enterprise "Ki-

novideoprokat" (movie entertainment), 216 film projectors in rural areas, 1,963 historical and architectural monuments. The oblast exhibition hall finances all its activity. There are 688 sports units in the oblast, with over 80% of sports centers and stadiums located in rural areas.

3.2.3 Poverty and Human Capacity Development

We have just considered poverty from the perspective of limited ability to satisfy basic human needs in nutrition, housing, clothing, health care and education. However, poverty in a wider sense also implies limited choices, lack of opportunities to participate in and influence public life. Before discussing poverty from this perspective, we are going to sum up the conclusions of the analysis offered above.

The period 1991-1996 impacted significantly on the welfare of the rural population. According to a survey of 1,800 households in 36 villages of 6 oblasts (Almaty, Atyrau, East Kazakhstan, Karaganda, North Kazakhstan and South Kazakhstan), carried out as part of the National Human Development Report, 61% of respondents could hardly afford their basic needs. Extreme poverty forced a quarter of respondents to sell their belongings (clothes, furniture). The following figures prove the pitiful plight of the rural population: 29.7% of respondents said that not all members of their family members had winter clothes; 25% mentioned that they could not afford to purchase prescribed medication; 49.2% buy fruit and vegetables only in summer when prices are low.

Rural areas have also suffered a substantial deterioration in social infrastructure. Most villages currently have no kindergartens or nurseries. Only 3.2% of the rural population recieve fully free medical care that should be available to them by law. 70.9% of respondents said that basic medical care was not available in their village, while only 50% of respondents are satisfied with the quality of medical care offered.

A majority of the rural population (51.5%) is not satisfied with the quality of drinking water they consume; a mere 4% of respondents have hot running water at home; 42.7% of villages have a centralised water supply network. Less than one third of rural settlements have telephone connections in more than 50% of households. In 2001 the number of telephone stations declined (by 20.5 per cent compared with 1999) and more people had to be disconnected for financial reasons.

Considerable time costs are still incurred by rural residents due to poor road conditions and remoteness from rayon and oblast centres. Up to 25 per cent fall in demand for public transport has led to the closure of certain routes, as a result of which some villages have been cut off from the transportation network. Respondents from Akmola (8.2%), Kostanai (7.6%) and East Kazakhstan (6.1%) regions noted it took them an hour to reach the closest bus stop.

In 2001 irregularities in power supply were identified as "very frequent" by 17% of respondents and as "frequent" by another 25%. The power supply situation appears most unstable in Zhambyl oblast (43.3% of the polled households experience frequent power cuts), Kyzylorda (30.3%), Kostanai (27.8%) and Karaganda (16.5%) oblasts. Irregularities in gas supply are a matter of concern for rural residents in Zhambyl oblast (for more than 91% of respon-

Box 8: Government measures in the area of education

1997. **President Nazarbaev indicated in his program address "Kazakhstan 2030" that education was the country's top priority and the key factor in national development.**

1998. **The first Kazakhstani congress of education experts adopted a program of reforms and development of the existing education system.**

1999. **"Education Law" passed to approve the new national education model, conforming to standards of the "International Education Classification". The law also provided for free pre-schooling for five-six year olds at kindergartens or schools.**

2002. **In his annual address the President requested the government and akims to allocate more funds to rural education needs each year from 2003-2005. The Ministry of Education & Science started development of the "Aul mektebi program".**

dents) and South Kazakhstan (over 56%). The heating situation was identified to be a problem for households in nearly all rural regions that have central heating.

Future prospects for young people are seen as the most pressing issue for rural areas. Under conditions of growing unemployment only a fraction of the young workforce has the opportunity to find a job in their place of residence. Registration ('propiska') requirements remain a hurdle to migration to a city, with college enrolment the only apparent alternative. However, only 27.9% of rural respondents viewed college education as a viable opportunity. Among factors deterring rural school graduates from college enrolment are 'incomes too low to pay for tuition', cited by 85.3% of the respondents; 'lack of "connections" to get access to free education', mentioned by 10.6%; and 'having to work full time to support family' for 10 per cent of respondents.

In summary, the conclusions drawn from our previous analyses and data from the survey support the statement that rural residents in Kazakhstan face difficulties in all basic areas of human development, with problems for rural residents far more serious than those of their urban counterparts.

The table below gives poverty index values, computed for each region as a composite of four indicators, expressed as a percentage of the total: population dying before the age of 60; 16-year olds not enrolled at any educational institution; population with incomes below the living minimum; rate of unemployment. The composite index is calculated according to the formula given in the technical notes and characterises poverty from a human development viewpoint (see Table 3.9).

Around a quarter of Kazakhstan's population in 2001 experienced problems in one or more aspects of human development, with rural areas around 25 per cent worse off than towns and cities.

The highest poverty index values (>25%) for urban areas are seen in Zhambyl, Atyrau, Mangistau, Almaty and Kostanai oblasts. The highest rural poverty values (>33%) are found in Mangistau, Zhambyl, Kostanai and Atyrau oblasts.

Overall therefore, 27.6% of the rural population are classified as poor. However, the survey indicates that some 51% of rural residents *see themselves* as being poor. This large discrepancy is an indicator of another sensitive and subtle aspect of poverty, i.e. the feeling or *perception* of poverty.

"In this case the question is not whether people are poor or not but rather if they feel poor and if they accept this situation as being fair. It is much more challenging to view poverty from such a perspective rather than just to compare income levels. The income of a certain individual might not change if the company employing his neighbour goes bust. However, the increased feeling of vulnerability and uncertainty might become a destabilising factor contributing to instability in the country."[8]

Therefore, it is important to understand who forms opinions about the poor and what is done by the state and the poor themselves to improve the situation to give poor people a sense of self-belief and hope for the future. This aspect of the problem is crucial from the perspective of **human capacity development.**

As UNDP research from 2002 indicates, "the survival strategies" of the poor do not vary greatly. Nearly 28% of the rural population has migrated from regions whose economic development lags behind, while more people have plans to do so in future. When asked if they would consider moving should conditions be appropriate, 48% of respondents answered affirmatively, 35% would refuse to move, and 17% were uncertain.

Respondents who would refuse to move from rural areas stated that they use the following 'survival techniques' (ranked in order of frequency):

Active survival techniques:

- Employment by wealthier individuals. Type of work – livestock pasture, fieldwork, hay-stacking, garden weeding, yard cleaning, house renovation. This type of work is seasonal, not offered in winter. Wage rate: 0.5-1 USD daily.
- Use of own household production for nutritional needs.
- Sale of own household production (e.g. vegetables, milk, eggs) in towns.
- Occasional jobs, for example – search of lost cattle, repair of household electronic goods, warehouse security, snow clearance.

[8] *Conference on poverty reduction, Astana, April 25-26, 2002.*

- Petty sale of goods e.g. cleaning items, vodka, received from urban relatives.
- Production and sale of bricks.
- Fishing.
- Taxi work (rare) with a car often rented or provided by relatives.

The most frequently used of these strategies in fact offer the lowest income generation potential while the less common strategies are generally more lucrative.

Passive survival techniques:

- Through children support transfers and pensions of the elderly.
- Begging.

In some cases farm owners provide the poor with some support.

- Only 40% of respondents had a smallholding, which, for most of them (73.6%), is the principal income source. 18.2% of respondents said they plan to start their own business. However, the proportion of 'business-seeking' individuals is quite small, even including those who were already engaged in entrepreneurship (5.9 per cent). This can be explained by the scarcity of such small business pre-requisites as starting capital, business knowledge and support of administrative bodies.

Respondents offered an evaluation of the level of success of their efforts to fight poverty: when asked "How has your welfare changed over the last three years?" 11.6% said the situation had improved; 54.9% did not observe changes in their welfare; while for 31.6% the situation had deteriorated.

The rural population can therefore be stratified into three major groups: those relatively secure and resilient to changes in their environment, who could raise their welfare given favourable circumstances;

less secure individuals, who, provided they receive external support, have good chances of joining the first group;

the so-called 'structural' poor. This group is the hardest to influence externally.

"Those affected by structural poverty, cannot adapt to new economic conditions. They may live in depressed areas which are unable to attract new investment. They have neither the skills nor knowledge demanded in economic growth sectors. Moreover, they do not have money to pay for education Health problems might prevent them from finding a new job, while financial constraints rule out proper medical care, which nowadays must be paid for. What further aggravates the situation is that some of these people seek refuge from

Table 3.9 Human Poverty Index in Kazakhstan by oblast, 2001

Oblast	Overall, %	Urban, %	Rural, %	Urban/ Rural
Akmola	22.6	24.2	24.2	1.00
Aktobe	24.6	21.5	31.5	1.46
Almaty	27.8	26.3	28.5	1.08
Atyrau	30.1	28.7	33.1	1.15
East Kazakhstan	22.6	22.4	25.4	1.13
Zhambyl	32.5	29.6	35.0	1.18
West Kazakhstan	24.7	24.0	24.8	1.03
Karaganda	23.5	23.5	29.1	1.24
Kyzylorda	22.4	21.2	28.1	1.33
Kostanai	28.6	26.0	34.6	1.33
Mangistau	31.9	26.6	60.7	2.28
Pavlodar	21.1	20.9	26.3	1.26
North Kazakhstan	21.4	21.3	22.4	1.05
South Kazakhstan	26.9	23.3	29.3	1.26
Astana City	15.6	15.6	-	-
Almaty City	16.3	16.3	-	-
Republic of Kazakhstan	23.7	22.1	27.6	1.24

Source: Statistics Agency of Kazakhstan, 2001

Box 9: Case studies: survival strategies

Alexey, 30, married with two children: "I have a garden and poultry. My wife is unemployed. Sometimes I take my brother's car and work as a taxi driver."

Karlygash, 34, married, two children: "I work in my garden. If there is a good yield I sell potatoes. My sister, who lives in a city, sometimes sends me odd goods – soap, toothbrushes, etc. and I sell all that".

Muhammad, 69, retired, married, two children: "One of my sons is disabled, he and his family live with me, his wife is unemployed. I have three grandsons. We keep 3 cows and 3 sheep. It costs 10-12,000 tenge to purchase hay for one cow. There are no jobs in our village. I get a pension."

Gulzhakhan, 30, two children, unemployed: "I live with my parents as well as my brother and sisters – eleven people altogether. We have two cows and poultry. Fodder is very expensive if one does not have one's own truck or tractor. Last year my brother, who works as a combine driver, was promised a salary of 80,000 tenge over the harvest period, but received only 15,000 tenge. I work in the garden, take care of the cattle, and sell eggs and milk in town. My brother sometimes rents a car and works as a driver."

Natalia, 39, married with four children, unemployed: "My husband and I are both unemployed. He drinks a lot. I cannot afford to have cattle but I keep poultry – hens, ducks and geese. We also receive child benefit support. This is how we survive".

Bakhyt, 37, married, with seven-year old daughter: "I am disabled. As my husband also has health problems, we cannot breed cattle. We grow potatoes in our garden. Our income sources are my pension and child benefit support."

Mikhail, 48, divorced: "I am unemployed. I live with my mother who has health problems. I go to town in search of occasional jobs. I wish I could move to Russia, but I cannot afford to at the moment."

their poverty in alcohol and drugs. Trying to help these people is a very challenging task".[9]

Should such rural poverty persist, children of the 'structural' poor, deprived of initial opportunities, may 'get used to' the feeling of poverty, and become structurally poor themselves, unable to change their own situation. "According to this scenario an 'underclass' would be established in Kazakhstan which would continue to exist regardless of economic growth or prosperity gains in the country as a whole. Actually, growth and prosperity would act only as a reminder to this class that they were losers, while everybody else had gained. As experience of other countries has shown, this might be a very dangerous phenomenon"[10].

Economic problems and vulnerability have already made low income families see life very pessimistically: only 17% of the rural population believes they will be living better in five years' time. However, there are some positive changes in public mood that offer some hope.

Despite the fact that 42.8% of rural residents are convinced there is no real external aid available to the rural sector, and another 41% still expect the initiative to come from the state, more than one third of respondents (39.4%) agreed that changes can be brought about if rural residents themselves work to improve the situation and combine their efforts in trying to overcome common difficulties. It is this group that is seen as a major resource for poverty reduction from the human capacity development perspective. It is from this group that active participants in community life can be found who can be catalysts and focal points for human capacity development in rural areas.

3.3 Specifics of Human Capacity Development in Rural Areas

Civil society is a new phenomenon for rural areas of Kazakhstan. The contours of its development are largely shaped by more general processes in the social and cultural space of the country, which makes it too early to judge the existence of developed forms of public life due to weak institutionalisation of rural communities and their instability during the transition period.

In this context returning to cultural roots, historical experience and the revival of traditions of self-governance have all emerged as means to adapt to changing life conditions. Kazakhstani rural subculture is characterised by several types of social interaction that regulate community life. The first type, known as ***kindred,*** implies joint efforts of all related families to support an individual in organising family rituals, managing a smallholding or overcoming material or other difficulties.

Another type of social interaction – ***neighbourly*** – calls for joint efforts of all neighbours. The informal character of this collaboration supports the core of the community and acts as a basis for social mobilisation.

Rural areas, with mostly indigenous populations, display another form of community organisation, known as ***aksakal or doyen councils,*** which traditionally play an important role in community life. Such councils account for approximately 14% of the total number of rural social institutes.

The appeal of traditional values of Kazakh people has led to a re-birth of this instrument of self-governance. In many cases such institutions act as local self-government bodies, composed of the most respected and experienced local residents. Questions of public order, interaction with local administrations, support for the needy are all discussed at meetings of such councils. Usually, the resolutions taken are in the form of recommendations, whose legitimacy is based on traditional norms and values e.g. respect for the elderly and collective decision-making.

The role of women as the guardians of family values is traditionally important in rural areas and women's councils are therefore not an infrequent phenomenon. These are in some ways similar to the women's councils (*zhensovet*) of the Soviet times, with their concentration on the problems of rural female residents and methods of work. Often, women's councils are the only reliable source of information about the actual number of families in need of support, and the councils actively collaborate with state bodies in this area.

Women in rural areas have proven to be more adaptable to new market conditions than rural men. Women often learn fast and implement innovative economic approaches, show greater entrepreneurial flair and are less prone to dependency. At the same time women advocate the interests of the whole rural population, supporting initiatives that bring most benefit to the whole village, such as infrastructure development, better access to public services and training in entrepreneurial skills.

The social and cultural changes brought about by the fall of communism were not lim-

[9] *Conference on poverty reduction, Astana, April 25-26, 2002.*
[10] *Ibid*

ited to the revival of self-governance traditions. There has also been a revival of religious traditions. In rural communities religion (mainly Islam and Orthodox Christianity) performs the role of guardian of spiritual values, moral and ethical norms and public tolerance. However, the overall influence of religious directives on public consciousness in villages is still relatively weak, which can be explained by a traditionally weak Islamic influence in Kazakhstan. Rural religious organisations are mostly comprised of senior citizens, while younger people tend to be less actively involved in religion.

Along with rural community organisations whose activity is based on traditional or religious principles, there have also appeared groups of people united by ***shared interests.*** Such organisations now account for 23.9% of the total number of all social structures in rural areas.

The nature of the problems facing a certain locality largely defines the area of activity for community groups and the involvement of certain population groups. Thus, in Kyzylorda region community organisations that deal with cattle breeding and fishery issues are mostly comprised of men, as serious difficulties have forced them to unite and co-ordinate their activity, an example not typical for other Kazakhstani regions.

One logical effect of initiatives to fight poverty has been the formation of so-called self-help groups particularly among vulnerable population groups, whose activity is centred on the principle of ***mutual support*** based on the idea of collective responsibility, material and non-material aid. Such groups work to develop internal savings-and-loan (micro-credit) schemes, group savings funds and sustainable business initiatives; they also advocate greater solidarity and aim to create favourable conditions for loan repayment.

Rural schools have come to play a central role in many rural communities as the hubs of social and cultural community life. ***School parent committees*** are another form of community collaboration. Questions of children's education and upbringing are highly important in rural areas and the activity of parent committees is therefore in high demand. Parent committees seek to address issues such as ensuring adequate conditions for children's education, support for children from low income families and organisation of cultural events.

Despite obvious differences in origin and focus, all community organisations share the following qualities:

a) promoting unity according to location to satisfy needs and demands;

b) all groups seek to resolve specific rural problems;

c) there is no clear organisational structure or division of responsibilities among group members;

d) expressed enthusiasm to bring about changes in rural life.

Yet, notwithstanding the fact that the nature of rural problems is obvious to most rural residents, low levels of public involvement and a scarcity of enterprising individuals able to mobilise their communities remain as major obstacles to rural development.

This conclusion is supported by a survey of rural residents conducted by the Ministry of Culture and Public Consent in June 2002. This indicated that nearly two-thirds (62.4%) of rural people believe that individuals' initiatives to promote rural development are a waste of time; a mere 5.1% said that their initiatives were adopted by local administrations, while 9.6% said nobody was interested in their proposals.

3.3.1 Non-Governmental Organisations in rural Kazakhstan

The process of institutionalisation of civic initiatives in Kazakhstan in the form of Non-Governmental Organisations (NGOs) has just started. According to the Ministry of Culture and Public Accord, out of 3,500 registered NGOs only 8 per cent are in rural areas, with only one third actually functioning. Many of these NGOs were set up in 2000 and 2001, mostly in rayon (district) centers where, though social ties may be looser compared with other villages, there is better access to communication networks as well as more intensive co-operation between social and economic institutions.

There are various reasons for the continuing scarcity and poor development of NGOs in rural areas of Kazakhstan: some of the NGOs are simply informal decision-making groups; there remains a lack of information about NGOs; remoteness from cities complicates the registration process; basic material, financial and other conditions for NGO activity are usually lacking.

At the same time the urgency of social and economic problems in rural areas, coupled with poorly resourced local authorities, clearly call for alternative 'survival' strategies and better mobilisation of human resources in rural areas.

In some rural regions people have begun to lose trust in local government and its ability to respond to the community's needs. For example, according to a survey conducted May/June 2002 by the internal policy department of the Ministry of Culture and Public

Consent, the lowest 'approval' ratings for local akims were recorded in Karaganda (13.4%) and Kostanai (22.9%) oblasts.

The issue of abuse of power by local officials was raised by over half the respondents (51.5 per cent), with the highest figures recorded in Atyrau (67.9%), Kyzylorda (67.6%), West Kazakhstan (58.5%), Zhambyl (57.6%) and Mangistau (55%) oblasts. There is a perception that akims exceed their authority and attempt to control the level of public involvement in decision-making.

In such cases, so-called community-based organisations (CBOs) can act as catalysts for positive change in public life, advocating human rights and promoting local initiative. CBOs can put pressure on local administrations to increase accountability and transparency, reduce bureaucracy and respond more efficiently to people's needs.

Although in general NGOs tend to be concentrated in certain spheres such as gender, health, environment, agricultural producers' interests, rural NGOs are characterised by a wider range of activities targeting various rural problems. The most common NGO activities are training, awareness-raising campaigns, seminars, roundtables and other 'social' events.

Gender NGOs are among the most active rural organisations with activities ranging from rural women's adaptation to market conditions to their involvement in public life to advocacy of the interests of low-income population groups.

Health protection NGOs are often based on existing medical institutions in rayon centres. Their mission is to provide medical and social care, promote healthier lifestyles and offer professional training to medical specialists. The activities of such NGOs are becoming increasingly important as tuberculosis incidence grows in rural areas and more cases of anaemia and related diseases are recorded among women and children.

Environmental NGOs are engaged in resolving environmental protection issues in rural localities, such as water supply, water pollution, land contamination and bio-diversity preservation.

Many rural NGOs, such as farmers' associations, advocate in the interests of agricultural producers. Farmers have come to understand that combining their efforts in technical matters and the production and sale of agricultural output can bring significant economic benefits. Besides, collective decision-making brings a sense of belonging to a common cause, while the status of an association makes negotiations with administrative agencies more effective.

In the southern regions of Kazakhstan, known for irrigation-based agriculture, farmers are setting up water consumer associations aiming to make irrigation systems more efficient. The organisational form of association and other related unions offer an opportunity for the rural population to become involved in decision-making processes, as these are transparent organisations with democratic management principles and enjoy the support of local communities.

The cities that host most NGOs are critical for further development of rural NGOs. In the vast majority of cases rural NGOs develop as a result of contacts with urban NGOs, from whom they receive essential advice, information, technical and other support. In addition, urban NGOs are interested in the expansion of their rural base and creation of partner organisations to work in a related area, e.g. gender, health protection, and environment. In addition, when rural groups reach a level of development requiring establishment of a more formal status, they often follow the organisational models of urban NGOs, such as associations and public unions.

Another important source of funding and support for rural NGOs are international foundations and organisations working in the area of civil society support. These bodies offer support to rural NGOs in the form of grants, training programs in farming, entrepreneurship, agricultural marketing and management, as well as advisory and informational support.

Local authorities are also showing increasing initiative in NGO creation: firstly, because NGOs may act as partners in implementing state programs; secondly, to achieve greater efficiency in community management.

One form of effective co-operation between local authorities and rural communities are public commissions on income transfers functioning within the framework of state pro-

grams on protection of low-income groups. Members of such commissions visit people's homes to define welfare levels of households in order to draw up the 'social map' of a village. Thanks to public involvement in the process the number of complaints to local administrations has been reduced, while greater trust among the community is developed.

Social partnership is an effective way of promoting integrated, sustainable development in rural communities, based on the shared interests of various stakeholders such as local authorities, agricultural producers, entrepreneurs, public unions and associations, self-help groups, NGOs, consumer co-operatives, as well as political parties and movements.

Local authorities often encourage the creation of farmers' associations to increase the efficiency of agricultural production. For example, the Farmers' Association "Azamat" was registered in Malovodnoye Village (Yenbekshikazakh rayon, Almaty region) with the support of the Akim of Malovodnoye district, to bring together some 150 local farmers. The akimat provided an office for the association, while many of the farmers' problems - including land distribution and housing - are now resolved through co-operation between the association and the akimat. In addition, the association collects data on the cultivated land and its members take part in local authority meetings. The association also provides support to farmers on a wide range of issues from lack of equipment to negotiations with monopolistic suppliers to contacts with local and rayon authorities and foreign partners.

There are also a number of examples of successful collaboration between local authorities and communities in the following areas: support of rural schools, hospitals and clubs; provision of personal services; infrastructure development; social care for the needy; programs for fighting unemployment, crime, alcohol and drug abuse. The implementation of rural community development programs is one form of partnership.

The issues mentioned above are particularly prevalent in remote villages. The case of Karazhar village (Aktobe region, Baigany rayon) located 120 km from the rayon centre and 350 km from the oblast centre, may serve as an example. The list of issues to be addressed urgently includes loss-making agricultural producers; wages of state employees (teachers, medical specialists, as well as pensioners); the virtual absence of social infrastructure such as post office, clubs, library. The local population has very limited access to information and social problems such as alcohol abuse are widespread. A local community group, with support of the NGO "Demorda", decided to restore a local club that was the only public cultural centre in the village and local authorities (rayon akimat, maslikhat and culture department) supplied construction materials for the building.

Box 10: NGO involvement in the resolution of rural problems

In Karazhar Village (Aktobe oblast, Baigany rayon) located 120 km from the rayon center and 350 km from the oblast center the list of issues to be addressed urgently includes loss-making agricultural producers; wages of state employees (teachers, medical specialists, as well as pensioners) as the only income source; the virtual absence of social infrastructure such as post office, clubs, libraries. The local population has very limited access to information and social problems such as alcohol abuse are widespread. A local community group with the support of the NGO "Demorda" decided to restore a local club that was the only public cultural center in the village and local authorities (rayon akimat, maslikhat and culture department) supplied construction materials for the building.

In many cases local authorities provide land to facilitate small business development. For example, in Bolshaya Vladimirovka village the rayon akimat let out, on favourable terms, a building for the women's organisation "Enterprising women of Beskaragain rayon" to set up a bakery.

Given the continuing shortage of social capital, local authorities often lack administrative and practical experience in promoting public involvement. In such cases the public can assist state bodies through sharing new 'social technologies' (training, advice, projects, research), which can help define and address community needs by means of public involvement and developing community action plans. These new 'technologies' can also facilitate greater public participation in decision-making, since they value individual opinion and help foster voluntary activity, further promoting more democratic approaches in rural areas.

It is possible to conclude, therefore, that despite the many problems rural areas now face, a sound foundation is emerging for further civic development in rural communities, provided by greater economic independence, more active public involvement in decision making and the implementation of democratic reforms. In addition, certain cultural traditions of 'collectivism' and community co-operation provide a potentially supportive backdrop for the establishment of a functioning civil society in Kazakhstan's rural areas.

Nevertheless, civil society development is to a large extent dependent on a pro-active and reform-minded approach from the state, for example by creating a favourable legal and economic framework and facilitating the implementation of national and regional development programs. In addition, the state should encourage corporate charity initiatives and integration of all public forces as well as in-

ternational organisations and foundations.

The legal and economic environment in which civil society operates is currently regulated by a number of laws such "The Law on Non-commercial Organisations" adopted on 16 January 2001; "The Law on Public Unions"; "The Law on Trade Unions" adopted 9 April 1993; "The Law on Political Parties" adopted 2 July 1996; "The Law on Freedom of Faith and Religious Organisations" adopted 15 January 1992; and "The Law on Consumer Co-operatives" adopted 8 May 2001.

Significantly, the state now regards civil society organizations first of all as legitimate partners in dealing with social problems and also as "an important resource for further democratisation". "The Concept of State Support of Non-Governmental Organisations in the Republic of Kazakhstan" was adopted by the government on 23 January 2002. This document states that "the major goal of state support for non-governmental organisations is the creation of a new model of relations in implementing social policy in the Republic of Kazakhstan through active co-operation with socially-oriented NGOs, their involvement in the decision-making process, as well as offering advice, informational, methodological and technical support, in addition to support in the form of the state social procurement program".

Chapter 4. A Proposed Approach to Rural Development

The aim of this chapter is to outline the strategic directions of the development of the Kazakhstani village based on analyses of the previous chapters and to discuss the measures necessary to make market reforms *contribute to* human development rather than inhibit it.

To achieve this target, efforts should focus on some aspects of development that were previously neglected. The reform period has shown that without the active support of the state, including direct financial aid, the village is bound to be poor in market economy conditions. Secondly, rural residents account for 44% of the total population of the country. Rural development processes were historically shaped by the availability of land resources and labor skills of the population. Agricultural development defined the way of life for Kazakhs, and, subsequently, Kazakhstanis. Rural regeneration is therefore a means of preservation and development of national traditions and the national genetic base. Thirdly, a key to many current rural problems - such as unemployment, poverty and poor infrastructure – is the development of agriculture, necessitating a multi-faceted state rural policy. In the coming decade the main policy priorities should be the completion of land reforms, state support of individual households and the development of social policy in rural areas.

The listed problems can be resolved through the integrated implementation of the following three strategies:

1. Strategy of agricultural development;
2. Strategy of infrastructure development and social development policy;
3. Strategy to integrate efforts of the state and local communities in the process of rural revival.

The following sections discuss each of these strategy areas in greater detail.

4.1 Strategy of agricultural development

The major focus areas of agricultural development in the country were set out in the State Agricultural Food Production Program of the Republic of Kazakhstan for 2003–2005, passed by Presidential Decree number 889, dated June 5th 2002.

The major goal of the program is to ensure sufficient food supply for Kazakhstan by building an efficient system of agriculture and the production of competitive output.

Key priorities of agricultural development include:

-Increase in grain production with higher proportions of forage, cereals and leguminous crops.

- Introduction of advanced production technologies.

-Development of national programs for the production of the main varieties of agricultural produce.

-Development of agrarian science, training of research specialists and skilled agricultural personnel for rural areas.

Most agricultural problems can be solved if the following conditions are in place:

- State support for the sector;
- Introduction and upholding of private property rights for agricultural lands;
- Matching of farming methods with the most appropriate climatic zones and greater concentration of production;
- Revival of best farming practices;
- Co-operation among agricultural producers;

- Integration between agricultural producers and processing factories, trade companies and banks.

One recommendation is the earmarking of tax revenues from agricultural producers to a special agrarian fund that would be used to support agricultural development.

A diversified network of basic agricultural support (private or public) should be established around the country, which would be controlled by a government agency and offer services to agricultural entities at lower rates, thus reducing growth in production costs.

Simultaneously, technical and social infrastructure in villages should be restored or developed. Such construction programs would facilitate job creation and increase personal incomes in rural areas, which would improve the current economic situation.

Recovery of agriculture would stimulate similar processes in mining, processing and other sectors, which would help alleviate employment and other negative social phenomena.

A number of laws should be adopted to establish a favourable legal framework for the sector and potentially contribute to more efficient production, after an analysis of the specifics of agricultural development and the current legislative framework. Among the required laws are:

A law "On State Support of Agricultural Production", which should encourage fair conditions for production exchange between agriculture and the industry which supplies the means of production to farmers. The law should suggest mechanisms to ensure stability of the food market, reduce demand and supply and identify financial mechanisms for the agrarian sector

A law "On Agricultural Co-operatives" that would define the role of the state in the development of agricultural co-operatives.

Other important laws include "The Law on State Role in Imports of Agricultural Produce", "The Law on Agrarian Scientific Organizations", "The Law on Households", 'The Law on Agricultural Leasing", "The Law on Financial Revival of Agricultural Entities" and "The Law on Agricultural Zones of the Republic of Kazakhstan", which would define areas favorable for settlement.

To address the issue of food supply a number of laws need to be adopted, such as:

"On Food Security", which should provide a definition of food supply crisis, set numbers for the required state food reserves, define groups eligible for food aid and identify cases in which the state could ask the international community for help;

Laws "On Agricultural Co-operatives" and "On Agrarian-Financial Consortiums" would provide an opportunity for horizontal and vertical co-operation with trade, capital, the processing industry and banks;

A law "On Agricultural Production Zones" to designate the lands and the kinds of production encouraged by the state.

Adoption of the Land Code will be critical in establishing a legal framework for regulation of land relations.

The following mechanisms should be developed to facilitate the introduction of private property rights for agricultural land use:

-agricultural lands in each administrative unit should be classified according to land category, type of enterprise and property forms;

-size of land plots purchased by individuals should be in line with the Land Law provisions;

-no claims should be made against the status and size of individually-owned land plots, which should remain private property;

-ownership rights for land plots should be transferred to farmers;

-land which is part of the agricultural land reserve can be sold only to Kazakhstani citizens who have the appropriate academic background or work experience in agriculture, or to agricultural producers (on a competitive bid basis), who have the ambition to expand their production. Funds received from land sales should go to local budgets;

-The minimum market value of agricultural land plots should be estimated, based on the category of the given plot and quality of the soil. Market prices are set by demand and supply depending on the value of land for farming purposes;

-a nation-wide land survey should be carried out within the framework of state agrarian initiatives to compile a national inventory and regional lists of land owners;

-a special state body – "The Land Exchange of Kazakhstan" should be set up to act as an intermediary in land deals of all types, including ownership change and change of the category of land use;

The law "On the State Regulation of Soil Quality Preservation", defining the responsibilities of land users and the state, is to be adopted as a part of the Land Code. The law would have the important aim of ensuring soil preservation and improved fertility, which would result in higher yields. Another important part of the Land Code would be the law "On Re-distribution of Agricultural Land", as even with stable agricultural development there might be landowners who would fail to efficiently manage their land resources.

The introduction of private agricultural land ownership does not mean that such categories as permanent and temporary land use should be abandoned. When introducing private property rights room should also be left for long term or

short-term lease of lands from the special land fund. The legal liability of land owners to use land appropriately should be spelled out, with the same norms applied to publicly owned land as the state becomes a regular land market player with regular rights and liabilities.

As many kinds of agricultural output are produced in private households, time spent working there should be classified as work time. Private households have real social significance. Recognition of the social importance of household labour is viewed as an example of social equality of the rural and urban populations. People employed in the sector, should they not have a job or personal income, must be eligible to receive support from social security and social care programs. An appropriate legal framework must be developed to solve the problem by providing these individuals with rights equal to those of production sector employees.

The state can assist private households along the following lines:

offer subsidies for the purchase of livestock, poultry, seeds and saplings;

subsidise veterinary services, treatment of seeds and protection of plants;

issue micro-loans for the construction of farm buildings, leasing of equipment, purchase of fuel;

promote closer co-operation between private households on one side, and farms and co-operatives on the other;

facilitate the restoration of a rural purchasing network for agricultural produce.

Although these measures can only be taken on a temporary basis, they are nevertheless necessary, since presently 85% of farming produce, 84% of potatoes, 67% of vegetables, 71% of fruit, berries and grapes are produced by individual households. Obviously, they cannot afford to purchase pedigree livestock or high quality seeds or invest in new technology, and this affects the competitiveness of their produce. These measures will facilitate not only improvement of household produce but also bring greater incomes to rural families, which in turn will have a favorable effect on the living standards of the rural population.

Improvement in the social conditions of the rural population in the coming years might be brought about by increasing rural incomes and a stronger role of the state in carrying out social policy.

4.2 Strategy of infrastructure development and social development policy

Greater involvement of the state in carrying out social policy is possible, subject to development of the appropriate legal framework, approval of the required acts and adoption of the Minimum State Social Standard. "The Program of Integrated Rural Development, 2003–2005", mainly targeting - unlike the State Agricultural Production Program - development of the social sector in rural areas. A draft version of the program has already been developed and approved.

Growth in rural incomes will lead to increased demand for social services. Such income growth should follow on from increased employment opportunities in agriculture; increased numbers of self-employed; development of small business; higher wages, pensions, income transfers and, of course, rises in revenues from the sale of agricultural produce.

The need for a national inventory program has become clear. An inventory would allow systematic identification of the social and production infrastructure in each settlement, as well as improved knowledge of national labour resources, existing agricultural opportunities, availability of storage and processing facilities, plus quantification of land, water, power and other resources. An inventory program would enable the development of a long-term state policy on the placement of rural settlements on the territory of the republic, which will itself promote more integrated solutions to rural problems.

The need to raise living standards calls for measures targeting rural infrastructure development. The problem of transportation can be solved by organising stable, reliable bus links to villages and rayon centres, as well as by constructing and repairing rural roads. It is therefore very important to:

maintain local roads in proper condition;

take measures to promote better road safety;

earmark funds for road improvements in regions and nation-wide;

implement the state policy of borrowing from foreign investors to finance reconstruction of roads with a high freight and passenger turnover.

In the area of power supply there are a number of issues requiring resolution such as the need to reconsider the methodology of tariff calculation for power distribution through regional grids, or the advised introduction of differentiated tariffs for daytime and night time power consumption to make power a more affordable resource. Power supply in rural areas can be improved by the construction of gas turbine plants running on natural and petroleum gas. Also, renewable energy sources such as solar and wind power could be utilised, particularly in remote locations.

Gas supply to rural settlements can be

improved by the expansion of the low-medium pressure gas pipeline network to cover most of rural Kazakhstan, while the production of liquefied gas by oil refineries should be increased. The refinery located at Zhanazhol oil and gas field requires reconstruction, while the Amangeldy fields located in Zhambyl region require exploration and development.

In telecommunications there is work to be done in re-launching automatic telephone stations in rural areas; in addition, existing communication lines need to be modernised and new lines built.

One of the most significant improvements in rural living standards would be enhanced water supply. To achieve the goal of supplying the whole rural population with clean drinking water, investment in repair works and asset acquisition is required.

Another key social problem in rural areas is housing. The launch of mortgage financing schemes in rural areas should contribute to improving the housing standards of low to middle income groups: construction of new houses, purchase of real estate on the secondary market, house renovation. It would also facilitate preservation of housing resources and buildings of social and cultural significance.

The provision of emergency medical aid should be a priority for social development in rural areas as part of efforts to narrow the gap between medical care standards in villages and cities. Urgent issues in the health care sector include: improvement of resource base; purchase of transport for all rural hospitals; ensuring continuous power supply and access to communication lines; purchase of modern equipment, necessary materials and medication; wider disease prevention control; control over sanitary-epidemiological conditions in villages; re-orientation of budget allocations from hospital financing to support of ambulance stations; professional training offered to medical specialists on a continuous basis; promotion of more healthy lifestyles.

Indicating health protection as a development priority requires adequate financing from the republican and regional budgets. Spending should be planned on the basis of per capita norms, taking into account geographical remoteness and other specifics of rural settlements. Salaries in the health sector should be revised upward.

Education quality in rural areas is another vital issue. The following targets/measures aim to bring about significant improvements in education quality standards: achieve '100%' enrolment of school-age children; revise requirements to rural secondary and vocational schools to reflect the needs of the rural population; make pre-schooling obligatory for all 5-6 year olds; set up boarding schools in regional centres for gifted rural students. An effective model of a small village school should be designed, specifically for rural localities.

The resource base of rural educational institutions has to be improved through the purchase of textbooks, modern teaching materials and computers. In addition, vocational schools and community colleges should be provided with land for fieldwork and training.

Cultural development in rural areas targets the build up of the nation's historical and cultural legacy, preservation and development of national traditions, language, customs of the Kazakh people as well as of other ethnic groups living in rural areas, including ethnic minorities.

Realisation of measures to increase the efficiency of agricultural production through improvements in the state regulatory mechanism and production relations; improvements in rural infrastructure; better access to public services - all these would create conditions for better social protection and cohesion of the rural population.

Improved social protection is also subject to a number of pre-requisites. These include economic foundations for growth in wages and other monetary income; offering social protection to the most needy, i.e. targeted support; related improvements in income transfer and subsidy payments, gradually approaching the living minimum levels; inclusion of the whole working population in pension schemes. To make social protection more effective and transparent the State Minimum Social Standard may be developed. This would provide a state social guarantee, which would facilitate transition from "per category" to "per capita" financing of the social sector.

Improvements in rural living conditions and the rural lifestyle will help alleviate migration pressure and encourage more people to stay in villages.

4.3 Integration of state and local community efforts in the process of rural revival.

Stimulation of economic growth and social development in rural areas in the interests of the people is impossible without greater involvement of the state in the management of rural development. However, the state should involve itself only in those areas of the agrarian sector where market forces are unable to allocate resources efficiently or where access to basic services remains unfair. Such irregularities can be rectified in a variety of ways: a more progressive tax system; financial reforms; increased state investment to stimulate agricultural development; more adequate funds being allocated to basic education, health care and other social services. Of similar importance are improvements in the system of state administration and co-ordination of all state agencies related to rural development.

As experience in some countries, including Kazakhstan, has shown, decisions to abandon financing of public services have not always been justified by fiscal deficit. In fact this has often occurred as a result of:

a) non-transparency of institutional structures, bureaucracy, corruption and embezzlement of funds;

b) low institutional capacity and limited powers of local administrations;

c) lack of public involvement in decision-making.

In this respect, measures included in the government's program of improvements to the state regulatory system should, in the medium-term, stimulate positive change in the system of rural administration. Among the most important government plans and targets are:

Improvements in government structure and more precise definition of agency mandates;

Reducing bureaucracy with the introduction of simplified procedures for document adoption, less paperwork, electronic documentation, fewer and more efficient meetings;

Launch of an integrated multi-level medium-term planning system in all state agencies, national companies and state republican enterprises;

Enhanced status and better compensation for state employees;

An improved continuous training program for the professional development of employees;

Creation of effective mechanisms to fight corruption.

To expand powers of local administrations within the framework of administrative and budgetary reforms, the functions of state agencies at all levels should be clearly defined, with a revenue source identified for each. To achieve this target more attention will need to be paid to the question of the legal framework for effective delegation of authority, elimination of overlapping areas of control, the discharge of functions not appropriate for the state, as well as the creation of a rational and effective state management system.

A concept paper for authority delegation and improved inter-budgetary relations is to be adopted at the national level. The major goal of the document is overcoming instability and non-transparency in transfer definition methods. Within the framework of this concept paper rural akimats will be given the status of a legal entity with property transferred into their trust management and the right to acquire on their own behalf property and non-property rights and liabilities.

These measures will substantially increase the decision-making capacity of local authorities with regard to economic, social and administrative issues linked to rural development. However, given the relatively low professional level of rural administrators and the danger of improper use of funds, the delegation of authority to the 'lower' levels of state administration needs to be carried out gradually in stages, starting with key social services such as basic education, emergency medical aid and social protection, where local officials can be assisted by their local rural communities. This calls for professional capacity building on behalf of local administrators.

It is vital that a strategy of participation be developed to facilitate co-operation and joint state and local community action. This strategy should include collection of data such as an assessment of the economic, political and cultural specifics of a given region, as well as its resources, skills and the time period required to promote participation. The need for involvement of appropriate 'human resources' such as initiative groups and public organisations is growing steadily, since participation must be based on available resources and existing traditions. It is therefore advisable to forecast the potential response of local communities to requests for their involvement, potential individual contributions and the readiness of the population to assume responsibility.

State-led rural reforms will bring benefits if conditions are created for the mobilisation, involvement and development of rural communities. This means delegating authority to the local population to provide them with the opportunity to gain knowledge and experience, learn to consider alternatives, make decisions and be ready to be held accountable for their actions.

Meanwhile, forms of participation vary greatly in their level of complexity. One of the simplest forms of participation is ***awareness.*** This type of participation involves ***community gathering***, where people discuss their problems and make clear their views on various issues. Community gathering is one of the most popular forms of promoting civil rights and stimulating representative democracy in rural areas.

Community gatherings are held on a regular basis and are usually organised by local authorities. Local authorities, law enforcement agencies and other state agencies use the meetings as an opportunity to report to the population on fulfilment of their mandates as well as to legitimise their plans and decisions on various community issues.

Another form of participation is ***one-time initiatives***, i.e. events such as ***asar,*** aimed at resolving urgent community problems. *Asar* is a form of local interaction in which a community member receives help from others in, say, building his/her house, or construction of a social or religious facility. *Asar* has strong historical roots in Kazakhstan and is based on the principle of self-help. The specific feature of this form of participation is that each participant of *asar* can rely on community support in future, which strengthens social ties and develops a sense of belonging.

Overall, greater participation will promote social cohesion and stimulate alternative forms of problem solving in rural communities. In addition to traditional forms of participation such as community gatherings and *asar* some other, relatively new approaches such as advice, delegation and partnership can be established with the support of the state, private sector, international organisations and civil society.

Advice is used when the rural community acts as a consultant to an organisation intending to launch rural development programs in the area. Organisations in need of advice may include state bodies or international agencies, perhaps working within the poverty reduction programs of the UNDP, the World Bank or Asian Development Bank for example.

Delegation is a form of participation within which communities delegate the right to advocate their interests to elected representatives in the rayon *maslikhat* or parliament. The first example in Kazakhstan of authority delegation at village level is the alternative election of the akim of Shamalgan rural area of Karasai rayon. Nine candidates contested the election, but it was Kairat Baibaktinov, a resident of Shamalgan village, who emerged victorious, gaining 52.7% of the votes cast.

Partnership refers to a system of needs assessment whereby a rural community, relying on the principles of the collective approach, identifies its needs and resources or potential partners for resolution of community problems. As a result, close ties within the rural community are established, while new strategies for rural development emerge.

The introduction and promotion of such social inclusion mechanisms clearly stimulates the development of rural communities as a whole, as well as the individuals within them. Initiatives and events that may be used to facilitate these processes include:

Applied research, roundtables, presentation of state and international programs of rural development;

Creation of public foundations involving the local population, local administration and public organisations;

Social procurement programs to alleviate unemployment and develop social services by purchasing social services for the population on a competitive basis with bids accepted from any organisation, including civil society groups;

Creation and development of resource centres based on existing structures such as agricultural community committees, farmers' associations and private farms, to offer informational and advisory support and training in different areas;

Active media promotion of best practice regarding collaboration between local authorities and public organisations at the rayon level.

The Kazakhstani Village 1991-2002, In The Context Of Human Capacity Development

Analysis of human development constituents in rural areas

Human development is a critical social and economic aspect of contemporary life, which requires expanded satisfaction of human needs, the formation and realization of human potential in economic, social, cultural and political contexts, subject to the provisions of productive human activity, equal opportunities and sustainable development.

The major goal of human development is creation of political, economic, social and environmental frameworks that offer human beings an opportunity to enjoy a healthy, fulfilling and creative life over a long time period. The concept is focused on two aspects of human development: building human capacity through, for example, enhanced health and knowledge; realization of potential in one's professional sphere and leisure time.

The concept of human development considers a human being not only in the spiritual sphere of social life, but also in the social 'production' context, as it is based on the idea that the individual is both the departure and destination point of social and economic development. The social aspect of development is its dominant feature, while material aspects become conditions for the above development to occur.

A) Living standards of the rural population of Kazakhstan

In 2001 the National Statistics Agency reported the results of its household survey which showed that income per capita in urban areas is on average 1.9 times greater than in rural areas. Table 5.1 illustrates this situation in more detail in terms of Purchasing Power Parity (PPP) in US dollars. The greatest contrast between income levels in urban and rural areas is observed in the following oblasts: Mangistau (3.1 times), Karaganda (1.9), Atyrau and Kostanai (1.8 each), and Kyzylorda (1.7). A narrower gap is seen in North-Kazakhstan oblast (1.3 times), Akmola and Almaty oblasts (1.4 each), as well as in Aktobe and West-Kazakhstan oblasts (1.5 times each).

Among the core causes of the difference in urban and rural incomes are current levels of poverty and unemployment. Table 5.2 shows poverty indicators, calculated as a percentage of the population with an income below the subsistence minimum, as well as the unemployment rate for each region.

As the table indicates, the percentage of the rural population living below the poverty line is in general twice as high as in urban areas. The highest poverty levels are observed in Mangistau, Zhambyl, Atyrau, Kostanai and Aktobe regions. Although unemployment rates are generally lower in rural areas than in cities, rural areas are characterised by *underemployment* and *low wages*, which result in lower incomes. For example, of Kazakhstan's 2.5 million people employed in agriculture, around 1.5 million work part-time.

B) Access to education

The affordability and availability of education is a major problem for rural people and acts as an obstacle to securing skilled and better-paid employment. According to data of the Ministry of Education & Science in 2001 there was a 60% discrepancy between urban and rural populations with respect to student enrolment - a fact easily explained by the virtual absence of further education institutions in rural areas, as well as poorer school enrolment rates in the countryside.

Table 5.1 Income per capita in Kazakhstan by oblast, in USD at PPP, 2001

Oblast	Gross Regional Product	Monetary Income	Urban areas	Rural areas	Urban/ Rural
Akmola	4,683	7,039	8,530	5,904	1.4
Aktobe	7,214	7,537	8,795	5,731	1.5
Almaty	3,204	4,947	6,169	4,436	1.4
Atyrau	27,123	6,949	8,432	4,570	1.8
East Kazakhstan	5,468	7,588	9,194	5,410	1.7
Zhambyl	2,291	3,974	5,054	3,226	1.6
West Kazakhstan	8,452	5,971	7,513	4,993	1.5
Karaganda	7,249	7,886	8,710	4,646	1.9
Kyzylorda	4,816	6,546	8,205	4,734	1.7
Kostanai	5,189	4,753	5,759	3,185	1.8
Mangistau	18,576	8,253	9,472	3,099	3.1
Pavlodar	7,714	7,743	9,348	5,582	1.7
North Kazakhstan	4,732	7,798	9,171	6,922	1.3
South Kazakhstan	3,009	4,268	5,674	3,500	1.6
Astana City	11,538	14,767	14,767	0	-
Almaty City	13,775	12,194	12,194	0	-
Republic of Kazakhstan	6,780	6,780	8,627	4,594	1.9

Source: Statistics Agency of Kazakhstan, 2001

Table 5.2 Poverty levels and unemployment rates in Kazakhstan oblasts, in 2001 (per cent)

Oblast	Poverty level		Unemployment rate	
	Urban	Rural	Urban	Rural
Akmola	18.6	21.8	16.5	4.6
Aktobe	18.4	45.3	14.9	7.1
Almaty	35.0	41.1	11.1	11.5
Atyrau	36.4	48.2	12.0	13.6
East Kazakhstan	16.0	30.6	11.3	3.1
Zhambyl	41.0	53.4	17.3	9.2
West Kazakhstan	25.2	30.3	13.2	13.5
Karaganda	20.4	30.7	8.9	9.1
Kyzylorda	14.1	39.4	11.9	8.0
Kostanai	33.0	47.3	16.2	9.4
Mangistau	34.6	95.5	7.7	19.7
Pavlodar	11.8	21.9	12.7	4.6
North Kazakhstan	4.6	13.6	17.7	4.8
South Kazakhstan	28.0	44.1	13.0	7.4
Astana City	2.2	0.0	9.3	0.0
Almaty City	5.5	0.0	10.7	0.0
Republic of Kazakhstan	20.4	38.0	12.1	7.9

Source: Statistics Agency of Kazakhstan, 2001

Again, the most significant gap between urban and rural areas is observed in West Kazakhstan (1.8 times), Kostanai (1.7) and Pavlodar (1.7) regions. This tendency is even more striking for under-16s not enrolled in any educational institution as a percentage of the total under-16 population (see Table 5.3)

These data show that in 2001 3.9% of Kazakhstan's under-16s did not attend any school. While the numbers for urban areas indicate that school enrolment in cities exceeds the number of registered under-16 population by 11.3%, the corresponding data for rural areas show a negative gap of 18.7%. The widest negative gap is observed in Karaganda (-36.1%), Pavlodar (-31.8%), Kostanai (-29.2%), Akmola (-7.1%) and Kyzylorda (-23.2%) regions.

Table 5.3 Percentage of Kazakhstan's population aged 6-24 enrolled in educational institutions, by oblast, for 2002

Oblast	Total, %	Urban,%	Rural, %	Urban/ rural
Akmola	63.1	77.1	52.8	1.5
Aktobe	76.9	97.6	55.9	1.7
Almaty	62.0	83.6	54.5	1.5
Atyrau	78.3	91.2	61.8	1.5
East Kazakhstan	67.0	80.2	52.0	1.5
Zhambyl	65.2	76.7	57.6	1.3
West Kazakhstan	72.1	104.5	54.6	1.9
Karaganda	71.1	77.8	48.3	1.6
Kyzylorda	67.7	72.9	49.9	1.5
Kostanai	63.9	87.5	48.8	1.8
Mangistau	85.7	90.5	69.6	1.3
Pavlodar	71.8	88.4	49.4	1.8
North Kazakhstan	64.4	86.7	53.0	1.6
South Kazakhstan	71.0	96.3	58.4	1.6
Astana City	93.5	93.5	0.0	-
Almaty City	102.9	102.9	0.0	-
Republic of Kazakhstan	71.3	87.7	54.6	1.6

Note: data does not include informal education.
Source: Statistics Agency of Kazakhstan, 2001

C) <u>Life expectancy as a human development factor</u>

Data on life expectancy for the rural population proves interesting from a human development standpoint. According to the 1999 census, life expectancy for both males and females in rural areas is greater than in cities, and is tending to grow. In principle this should indicate better social and economic conditions in villages. However, analysis of rural living standards does not tally with this conclusion. From 1990 to 1998 average life expectancy fell from 68.6 to 64.4 years, (from 63.8 to 59.0 for men, and from 73.1 to 70.4 for women). Since 1999 life expectancy has tended to grow, reaching 65.4 years in 2000 (59.8 for males, 71.3 for females).

One possible explanation for the above is that transition to a market economy had had greater adverse effect on urban populations. During the Soviet period urban areas received more attention than villages. As a result, the collapse of the Soviet structures told more on living conditions of urban residents. Research has shown that alcohol and drug abuse have become frequent phenomena in cities, combined with psychological traumas caused by loss of jobs, social status and the numerous changes caused by rapid reform.

In general, basic human development indicators are less positive for rural areas. The whole population has faced difficulties during the reform period, with rural communities no exception. Indeed, the village is still experiencing the adverse effects of reform, which is reflected in the following processes:

continuing immigration and migration of population that has affected the rural network and changed the social fabric of most villages;

the breakdown of rural social services, increasingly unable to provide even basic public services, primarily education and health care;

a deterioration of demographic indicators and increased impact of these changes on cities;

rising crime rates;

continuing deterioration in living standards of the rural population;

high unemployment and under-employment rates;

low population densities;

remoteness from highways, cities, regional and local centres;

various environmental problems, including limited access to clean drinking water in many regions.

All the above phenomena, characteristic of the modern Kazakhstani village, affect human development and it is therefore vital to assess the impact of social, economic and political processes on the quality of life of the rural population in particular.

There have been many attempts to develop

indicators most fully reflecting the impact of external factors on human beings. Among these is the Human Development Index (HDI), developed by the UNDP, which aims to offer a comprehensive assessment of human development based on several key indicators such as life expectancy, education and quality of life. The HDI offers an overall evaluation, which is important for the purposes of benchmarking human development, comparison, and decision-making processes. However, we have to acknowledge its limitations in using it beyond its design potential.

Presented below is an analysis of the HDI in relation to Kazakhstan, including a breakdown by oblast.

Assessment of human development in the Republic of Kazakhstan and rural areas

The Human Development Index takes into account three basic constituents of human development – life expectancy, education and quality of life. Each of the above components covers several important human capacities. Thus, life expectancy accounts for an ability to live a long and healthy life; education represents the ability to gain knowledge, socialise and participate in public activities; quality of life correlates to access to the resources required to live a fulfilling, healthy life, with the scope to enjoy spatial and social mobility, etc.

For a comprehensive evaluation of human development it is necessary to obtain data on the following basic indicators of the human condition, calculated both on aggregate and along gender axes:

average life expectancy at birth; proportion of people dying before a given age (say, 40 or 60);

level of education of the adult population (percentage of educated population older than 15), literacy rates (or functional literacy level) of the adult population;

aggregate proportion of people aged 5 to 24 (in Kazakhstan, aged 6 to 24) enrolled in educational institutions;

income per capita (GDP per capita in USD at purchasing power parity).

The HDI therefore provides a comprehensive evaluation of human development. The index takes values from 0 to 1 and is computed as the average of three other indices defining most important human capacities: life expectancy, education level and income per capita (see appendices for more detail).

According to the UNDP's 2002 Global Human Development Report, Kazakhstan, with an overall HDI of 0.75, was ranked 79th among 173 nations, a 'rise' of 4 places compared to the previous year rankings. According to research for this report, in 2000 Kazakhstan's HDI was at 0.762, on a par with Thailand, then ranked 70th.

Significant inequality in terms of access to education and income levels of urban and rural populations yields different HDI values for cities and villages, with an average 11% difference between the two across the country as a whole (see Table 5.4). Thus, HDI values for Kazakhstan's rural areas do not exceed 0.750, with the exception of Atyrau and Mangistau oblasts, while HDIs for urban areas are all above this level, except in Zhambyl oblast.

Kazakhstan's HDI dynamics over the last decade, as presented in Table 5.5, show that the greatest deterioration has taken place in the indicator for life expectancy at birth. Overall, this has decreased by 1.9 years, which has resulted in a net reduction the life expectancy index by 32 points.

The data for student enrolment has been re-estimated to account for informal education. This indicator, which remained below 1991 levels throughout the 1992-1999 period, finally overtook it in 2000 and 2001 by 1-2 points. This, combined with a rise in adult literacy levels (97.8% in 1991 and 99.5% in 2001) has resulted in an 18-point rise in the indicator for access to education. Over the same period, Kazakhstan's GDP per capita has grown by 1,024 USD at PPP, representing a 28 point increase in the income index.

Over the period 1991-1995 Kazakhstan's HDI decreased by 42 points. The decrease can be broken down into the following components: a 4.1 year reduction in life expectancy (a fall of 54%); 1,249 USD (at PPP) reduction in GDP per capita (-32%); and a 7 point (-14%) fall in education enrolment levels, given a rise in the adult literacy level of 0.9 points.

However, from 1996-2001 the HDI *rose* by

Table 5.4 Human Development Index for locality types in Kazakhstan, by oblast, 2001

Oblast	Overall	Urban	Rural	Urban /Rural
Akmola	0.773	0.769	0.707	1.09
Aktobe	0.773	0.769	0.730	1.09
Almaty	0.726	0.775	0.709	1.09
Atyrau	0.852	0.875	0.806	1.09
East Kazakhsta	0.748	0.783	0.707	1.11
Zhambyl	0.703	0.737	0.678	1.09
West Kazakhstan	0.783	0.815	0.748	1.09
Karaganda	0.765	0.785	0.703	1.12
Kyzylorda	0.746	0.770	0.701	1.10
Kostanai	0.743	0.786	0.702	1.12
Mangistau	0.842	0.853	0.765	1.11
Pavlodar	0.776	0.804	0.725	1.11
North Kazakhstan	0.737	0.775	0.714	1.09
South Kazakhstan	0.738	0.774	0.708	1.09
Astana City	0.834	0.834	-	-
Almaty City	0.842	0.842	-	-
Republic of Kazakhstan	0.773	0.804	0.725	1.11

Source: Statistics Agency of Kazakhstan, 2001

Table 5.5 HDI Dynamics for Kazakhstan (1991 to 2001)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Life expectancy, years	67.6	67.4	65.4	64.9	63.5	63.6	64.0	64.5	65.4	65,4	65,7
Adult literacy, %	97.8	98.0	98.3	98.5	98.7	98.9	99.1	99.3	99.5	99.5	99.5
Aggregate proportion of enrolled students from 6 to 24 years, %	80.0	80.0	77.0	75.0	73.0	75.0	76.0	77.0	79.0	81.0	82.0
GDP per capita, USD at PPP	5,756	5,561	5,204	4,711	4,508	4,682	4,921	4,269	5,224	5,855	6,780
Index of life expectancy	0.710	0.707	0.673	0.665	0.642	0.643	0.650	0.658	0.673	0.673	0.678
Index of access to education	0.919	0.920	0.912	0.907	0.901	0.909	0.914	0.919	0.927	0.933	0.937
Index of income per capita	0.676	0.671	0.660	0.643	0.636	0.642	0.650	0.652	0.660	0.679	0.704
Index of human development (HDI)	0.768	0.766	0.748	0.738	0.726	0.732	0.738	0.743	0.753	0.762	0.773

Source: Statistics Agency of Kazakhstan, 2001

47 points, driven by 49% growth in GDP per capita of 2,272 USD (at PPP); a 25% increase in enrolment (9 points) and a simultaneous rise in adult literacy by 0.8 points; and, finally, a 2.2 year (26 point) rise in life expectancy.

Calculations show that an increase in life expectancy from 65.7 to 75 years (for 34 countries this indicator lies between 75 to 80 years) would secure a rise in the life expectancy index of 155 points (from 0.678 to 0.833). Similarly, a 100 per cent increase in GDP per capita (to 13,560 USD) would result in the income per capita index rising by 116 points (from 0.704 to 0.819). Lastly, a school enrolment rate of 100% of 6 to 24 year-olds would produce a 60-point increase (from 0.9937 to 0.997).

The potential improvements described above would result in a cumulative rise of 110 points in Kazakhstan's HDI to 0.883, a value currently equal to Cyprus at 26th place in the world HDI rankings, followed by South Korea and Portugal. These goals can be achieved over the next 15 to 20 years. However, one has to keep in mind that other countries will also develop.

Overall, analysis of Kazakhstan's HDI dynamics leads to the following conclusions:

1) Kazakhstan's HDI trends are characterised by two distinct time periods:

1992-1995, when overall HDI fell by 42 points, due to falling life expectancy, GDP per capita and school enrolment levels.

1996-2001, when HDI climbed back up by 47 points, driven by a 49% increase in GDP per capita, significant gains in school enrolment and adult literacy rates, as well as a 2.2 year rise in average life expectancy.

2) Kazakhstan could set specific goals with respect to improvement in basic indicators over the next 15 to 20 years:

- increase in life expectancy from 65.7 to 75 years (the National Development Strategy to 2010 has set a goal of increasing life expectancy by 4 years for men and 2 years for women);
- doubling GDP per capita (as specified in the National Development Strategy to 2010);
- a 100% rate of school enrolment for 6 to 24 year olds (this target should also be included in the National Long-term Education Development Strategy 2010-2015).

3) Differences in school enrolment levels in different regions were as much as 60 per cent. Almost 1 in 5 of rural under-16s are not enrolled, with some moving to study in cities.

4) Income per capita in cities is, on average, 1.9 times higher than income per capita in rural areas. This is explained by higher unemployment in rural areas and a decrease in the ratio of wages in agriculture to wages in industry from 78% in 1991 to 29% in 2001.

5) Inequality in terms of income levels and access to education results in highly contrasting HDI values for Kazakhstan's urban and rural areas: Kazakhstan's urban HDI values of 0.804 are equal to the 50th country in the world rankings, whereas its rural HDI average of 0.725 is equivalent to only 96th place in the world HDI list.

6) Increased prevalence of poverty, especially in rural areas. The proportion of the rural population living below the poverty line (38%) is almost twice as high as in urban areas (20.4%). Nevertheless, in five oblasts over one third of the *urban* population can be classified as poor.

7) The **Human Development Index as a composite indicator, offers a comprehensive assessment of human development for a given time period, for a given territory, population group and gender.**

The HDI allows us to benchmark the dynamics of human development, evaluate the impact of different components of human development and to shape decision-making processes accordingly. Nevertheless, as with any statistical indicator, it has its limitations. HDI is, at best, a convenient simplification enabling us to make some simple comparisons of countries. We must therefore be careful in using it beyond its design potential, i.e. when applying it to oblasts rather than the whole country. It would be unwise to draw conclusions regarding human development solely on the basis of the HDI value. Deep analysis of human development calls for thorough research into economic, social, political and administrative conditions specific for each setting. This report is an attempt to comprehensively analyse the rural economy, the social sector and rural administration as major factors influencing rural development in Kazakhstan.

Conclusion

This report demonstrates that Kazakhstan's rural areas face greater development handicaps than urban areas. For example, the difference between urban and rural areas in terms of percentages of youth enrolled in educational institutions was as high as 60%, while in some oblasts, namely Karaganda and Kostanai, the percentage of the rural under-16 population not enrolled in any educational institution is around 30 per cent. Income per capita in cities is, on average, 1.9 times greater than in rural areas, while in 2001 some 38 per cent of the rural population was living below the poverty line compared with 20.4 per cent in urban areas.

Market reforms in rural areas have been limited to several "privatization waves" with no market institutions established, no finance allocation or monitoring system developed, with the result that sizable state investment in the rural economy has so far proved ineffective. For similar reasons, both domestic and foreign investors consider Kazakhstan's agriculture to be a risky sector for investment. Moreover, it seems that an unfortunate stereotype may have formed in the public mind of rural areas and the agriculture sector as rather conservative, clumsy and backward-looking. This has resulted in discrimination against the village, which has contributed to broader and deeper rural poverty, both in terms of incomes and opportunities.

This report demonstrates the degradation of social infrastructure in rural areas, as well as poorer access to education, health care and cultural facilities. These factors contribute to substantial human development inequality between Kazakhstan's rural and urban areas: in 2001 the urban HDI average was 0.804, significantly higher than the rural figure of 0.725.

Under these deteriorating conditions, Kazakhstan's rural population shrank by nearly half a million between 1989-1999. Out-migration peaks coincided with the start of privatization in rural areas (1994) and a program of social sector cutbacks, carried out within a wider "optimization" framework (1997). Both 'village-to-city' migration and emigration abroad are still significant, calling for the adoption of a more effective rural policy.

Comparative analysis of rural policies in CIS countries such as Russia, Uzbekistan and Belarus indicates similar development trends in the former Soviet republics and points out to an urgent need for the establishment of a clear legal framework for agricultural reforms, as well as the creation of required market institutions. An effective rural policy would be one setting out clearly-defined objectives and offering targeted assistance based on the classification of all rural areas and rayons nationwide. Should these provisions be met, human capacity development in rural areas, as well as demographic dynamics nationwide, would receive a favorable and timely stimulus. This is of particular importance at present, due to the depopulation trends observed in some areas.

A balanced decentralization policy and greater involvement of rural communities themselves in decision-making processes would also contribute to the rehabilitation of economic and social conditions in rural areas. This report indicates that the Kazakhstani village has real potential to change its current situation radically. Positive and sustainable change will be achieved when society as a whole realizes the importance of the village to the country's future, and if state agencies at various levels work together with local communities to promote the strategic goal of revival of Kazakhstan's rural areas.

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ANNEXES

TECHNICAL NOTES

1. The Human Development Index

The human development index is calculated as an arithmetic mean of three other indices: longevity, as measured by the life expectancy at birth, educational attainment and standard of living, as measured by real per capita GDP (PPPUSD). Educational attainment is measured by a combination of adult literacy (two-thirds weight), and access to education (one-third weight).

Four components are used in calculating the HDI. To construct the index, fixed minimum and maximum values have been established for each of these indicators:

Indices	Minimum	Maximum
Average life expectancy at birth, years	25	85
Adult literacy rate, %	0	100
Total share of students among the age group of 6 to 24, %	0	100
Real per capita GDP, USD (according to purchasing power parity)	100	40,000

Individual indices can be computed according to the general formula:

$I = (Actual\ x_i\ value - Minimum\ x_i\ value)/(Maximum\ x_i\ value - Minimum\ x_i\ value)$

If actual per capita GDP exceeds the global average income rate then the adjusted value of real is used when calculating per capita income index. The 1999 Human Development Report presented a new formula for the construction of the index. Natural logarithms of per capita GDP are used in numerator and denominator of the formula:

$I = (ln(Actual\ x_i\ value) - ln(Minimum\ x_i\ value))/(ln(Maximum\ x_i\ value) - ln(Minimum\ x_i\ value))$

Illustration of the HDI methodology:

The calculation of the HDI is illustrated here by the example of Kazakhstan. In 2001 the values of indicators in Kazakhstan were:

According to the aforementioned formula:

Indicators:	Values:
Life expectancy, years	65.7
Adult literacy rate, %	99.5
The aggregate share of students aged 6-24, %	82
Real GDP per capita, PPP USD	6,780

$$Life\ expectancy\ index = \frac{65.7 - 25}{85 - 25} = \frac{40.7}{60} = 0.678$$

$$Adult\ literacy\ index = \frac{99.5 - 0}{100 - 0} = 0.995$$

Taking into account the aggregate share of students of gross primary, secondary and tertiary enrolment as 82% and the index as 0.82

$$Overall\ index\ of\ the\ educational\ level = \frac{0.995 * 2 + 0.82}{3} = 0.937$$

Adjusted real per capita GDP index =

$$= \frac{\ln(6780) - \ln(100)}{\ln(40000) - \ln(100)} = \frac{8.822 - 4.605}{10.597 - 4.605} = \frac{4.217}{5.991} = 0.704$$

The calculation of human potential development index based on these three indices will constitute 0.773:

$$\frac{0.678 + 0.937 + 0.704}{3} = 0.773$$

2. HDI for Kazakhstan for different locality types (urban/rural)

To calculate HDI values for different locality types one needs to have the basic indicators for each locality type (urban/rural). Despite some difficulties in computing indicators for each locality type, it was made possible recently to arrive at all desired figures, except GDP per capita.

For the purposes of breaking down GDP values between urban and rural areas in the present report, we used the procedure applied when computing GDP values for the gender dimension. When computing GDP values by gender, national output is distributed between males and females in proportion to the wages received; accordingly, to compute GDP values for urban and rural areas we used income per capita numbers for urban and rural residents as the best proxy.

The rural share of GDP (S_r) is computed according to the following formula:

$$S_r = d_r \times I_r / (d_r \times I_r + d_u).$$

where d_r and d_u – percentage of, correspondingly, rural and urban residents to the total population of the country.

I r – index of per capita nominal monetary income of rural residents to per capita monetary income of urban residents.

Taking into account the structure of population (urban/rural) with regard to locality type, we arrive at income (GDP) per resident in rural and urban areas:

$$GDP\ r = GDP \times Sr / d\ r,$$
$$GDP\ u = GDP \times (1\text{-}Sr) / d\ u,$$

where GDP, GDP_r, GDP_u – denote GDP per capita for the nation, for rural areas and for urban areas, correspondingly.

Let us consider the example of computation the value of GDP per capita for Kazakhstan in 2001. The proportion of rural and urban population were 0.4392 and 0.5608, respectively, while the ratio of per capita nominal monetary income of rural residents to per capita nominal monetary income of urban residents was 0.53251 (per capita income for rural residents 38,600 tenge, for urban residents 72,487 tenge). Then, the share of GDP (S_r) allocated for rural areas equals:

$$S_c = 0.4392 \times 0.53251 / (0.4392 \square 0.53251 + 0.5608) = 0.294341.$$

As the national GDP per capita in 2001 was 198,038.2 tenge, we arrive at GDP per capita values for rural and urban residents:

$$GDP\ r = 198{,}038.2 \times 0.294341 / 0.4392 = 132{,}707.6\ tenge,$$
$$GDP\ u = 198{,}038.2 \times (1\text{-}0.294341) / 0.5608 = 249{,}211.8\ tenge.$$

3. Human Poverty Index

Due to varying socio-economic development of countries, varied ranges of HPI indicators can be chosen. In the Human Development Report 1997, the HPI suggested for developing countries included all three components of the HDI: longevity, education and living standards.

The first dimension relates to deprivation of a long and healthy life and is presented by the percentage of people not expected to survive to age 40. The second dimension, education deprivation, is measured by adult illiteracy. The third dimension is related to low living standards and presented by the percentage of the population lacking access to safe water, health services, and the percentage of children under five who are moderately or severely underweight

The HPI, in case of equality of weight for each indicator, can be found using the following formula:

$$HPI = P(б) = [1/3(P_1^{б} + P_2^{б} + P_3^{б})]^{1/б}$$

When б =1 (the case of absolute inter-substitution of the weighted indicators) combined indicator P(б) is equal to an arithmetical average of three indicators. When б = eternity (zero substitution of indicators), the combined indicator P(б) is equal to the maximum value of one of the three indicators. For HPI calculation, the value of 3 has been chosen.

Taking into account the completely different socio-economic development conditions in industrialised countries, UNDP, in the Human Development Report 1999 offered another formula for calculating the HPI of these countries.

Longevity is presented, as the share of the population not expected to survive to age 60 (for developing countries age 40 is accepted). Education deprivation is measured by the adult functional illiteracy rate

Lack of decent living standards is measured by the percentage of people having incomes below the median level of average incomes in a given country and deprivation in social inclusiveness by long term unemployment.

The HPI for industrialised countries can be found as follows:

$$HPI\text{-}2 = [1/4(P_1^3 + P_2^3 + P_3^3 + P_4^3)]^{1/3}$$

Where P_1 - the share of the population not expected to survive to age 60;
P_2 - deprivation in knowledge as measured by the adult functional illiteracy rate;
P_3 - the percentage of people having incomes below the median level of average incomes in the country; and
P_4 - the share of the economically active population affected by long term unemployment.

In this report, the HPI for Kazakhstan was calculated using the following formula:

$$HPI\text{-}3 = [1/4(P_1^3 + P_2^3 + P_3^3 + P_4^3)]^{1/3}$$

Where P_1 - the share of the population not expected to survive to age 60;
P_2 - the share of uneducated youth aged 16;
P_3 - the share of the population whose incomes lie below the subsistence minimum;
P_4 - the officially registered level of unemployment (the share of the economically active population who do not have a job and are officially registered).

As an example we calculate HPI for Kazakhstan as of 2001. Basic data is as follows: P1 = 30.8%, P2 = 10%, P3 = 28.4%, P4 = 10.2%.

If the formula of arithmetic average was used then the result would constitute 19,9%. In the case of cubic formula HPI is 23.8%. This means that 23.8% of population lives in miserable conditions according to four human development indicators chosen for integral assessment of poverty.

4. Information on the survey conducted for the NHDR

The survey was conducted by the group of the report's authors in June-July 2002. As part of the fieldwork respondents from 1,800 households were interviewed in 38 villages located in 16 rayons of Almaty, Atyrau, East Kazakhstan, Karaganda and North Kazakhstan oblasts. Respondents were men and women aged over sixteen. 190 agricultural experts in local akimats were also polled. A questionnaire was designed to interview 250 household respondents who classified themselves as 'poor'.

The process of sampling was multi-stage. First, rayons were identified on the basis of cross-departmental typology, i.e. rayons were sampled with good, mediocre and weak performance in the proportion of "2 : 1 : 2". During the second stage, in each of the three categories recommendations of rayon akimats were followed to choose settlements typical of each category - with good, mediocre and poor performance.

The final stage was based on route sampling.

STATISTICAL TABLES

1. Kazakhstan: basic data

	1994	1995	1996	1997	1998	1999	2000	2001
Area, million square km*	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9
Population density, persons per square km	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.5
Population, million people (as of beginning of the year)	16.3	16.0	15.7	15.5	15.2	14.9	14.8	14.8
Children, %	32.6	32.3	32.1	31.6	31.2	30.7	29.6	29.3
Population older than employable age, %	12.1	12.3	12.4	12.5	11.8	12.5	12.4	12.4
Rural population, %	44	44	44	44	44	44	44.2	43.6
Urban population, %	56	56	56	56	56	56	55.8	56.4
Male, %	48	48	48	48	48	48.1	48.2	48.2
Female, %	52	52	52	52	52	51.9	51.8	51.8
Kazakhs, %	46.0	47.9	49.4	50.6	52.0	53.4	55.0	55.1
Russians, %	35.0	33.8	32.9	32.2	31.4	30.0	28.9	28.3
Others, %	19.0	18.3	17.7	17.2	16.6	16.6	16.1	16.6
Infant mortality (per 1,000 new-born)	27.1	27.0	25.4	24.9	21.6	20.7	19.2	19.4
Natural growth, 1000 people	145.3	107.4	87.1	72.2	68.1	65.9	69.0	73.2
Migration growth, million people	- 0.5	- 0.4	- 0.3	- 0.4	-0.3	-0.2	-0.1	-0.1
Employable population, million people	9.0	8.8	8.7	8.6	8.4	8.3	8.7	8.7
Employed, million people	6.6	6.6	6.5	6.4	6.1	6.1	6.2	6.7
Official unemployment rate, % (as of end of year)	1.1	2.1	4.1	3.8	3.7	3.9	12.8	10.4
Disabled receiving social benefits (% of the total population)	2.1	2.4	2.5	2.5	2.5	2.4	2.6	2.6

** Data of the committee on management of land resources under the Ministry of agriculture of Kazakhstan*

2. Human Development Index

	Human Development Index	Income per capita, (GAV)USD, PPS	Life Expectancy, years	Aggregated share of students aged 6-24, %
Kazakhstan				
1994	0.738	4,711	64.9	65.8
1995	0.726	4,508	63.5	65.6
1996	0.732	4,682	63.6	65.9
1997	0.738	4,921	64.0	65.9
1998	0.743	4,969	64.5	66.9
1999	0.753	5,224	65.5	67.9
2000	0.762	5,855	65.4	69.9
2001	0.773	6,780	65.6	71.3
Akmola*				
1994	0.713	3,133	64.8	47.1
1995	0.707	3,376	63.1	44.3
1996	0.704	3,013	63.5	44.5
1997	0.709	3,163	63.9	46.0
1998	0.719	3,665	63.9	47.3
1999	0.751	5,582	65.1	65.8
2000	0.752	5,203	64.2	68.9
2001		7,043		70.7
Aktobe				
1994	0.741	4,828	65.0	67.7
1995	0.734	5,000	36.8	63.2
1996	0.731	4,223	64.6	63.5
1997	0.744	5,331	64.4	67.7
1998	0.751	5,646	64.0	69.5

	Human Development Index	Income per capita, (GAV)USD, PPS	Life Expectancy, years	Aggregated share of students aged 6-24, %
1999	0.760	5,326	65.2	72.5
2000	0.761	6,012	63.8	75.4
2001		7,214		76.9
Almaty				
1994	0.693	2,016	66.4	62.3
1995	0.694	2,277	65.7	60.0
1996	0.714	2,935	66.0	60.8
1997	0.719	2,963	66.6	62.5
1998	0.715	2,695	66.5	62.9
1999	0.714	2,535	67.7	62.8
2000	0.717	2,729	67.0	62.1
2001		3,204		62.0
Almaty city				
1994	0.784	6,761	65.2	80.0
1995	0.768	5,262	64.5	78.1
1996	0.805	9,525	65.0	81.5
1997	0.825	11,197	66.5	86.5
1998	0.829	10,973	67.3	88.9
1999	0.837	12,371	68.6	93.4
2000	0.837	12,425		97.1
2001	0.842	13,775		102.9
Atyrau				
1994	0.753	8,154	63.3	67.1
1995	0.764	10,185	62.8	65.7
1996	0.776	11,275	63.1	67.1
1997	0.788	12,385	63.2	71.9
1998	0.782	10,010	63.6	70.7
1999	0.799	12,596	64.8	71.3
2000	0.837	22,501	64.4	75.3
2001	0.837	27,123		78.3
Eastern Kazakhstan				
1994	0.738	5,166	64.1	65.1
1995	0.724	4,996	62.4	61.1
1996	0.719	4,347	62.6	60.9
1997	0.725	4,788	62.8	63.8
1998	0.735	5,214	63.0	65.4
1999	0.748	5,373	64.2	66.1
2000	0.746	5,238	64.5	67.5
2001		5,468		67.0
Zhambyl				
1994	0.675	1,641	65.0	60.4
1995	0.664	1,566	64.4	58.3
1996	0.698	2,521	64.9	58.8
1997	0.691	2,199	64.8	59.6
1998	0.690	2,003	65.4	60.8
1999	0.696	1,906	66.6	62.2
2000	0.693	1,978	65.3	64.2
2001	0.707	2,291		65.2
Western Kazakhstan				
1994	0.709	2,926	64.8	65.2
1995	0.704	2,992	63.9	61.8
1996	0.702	2,708	63.9	61.6
1997	0.732	4,108	64.9	64.5
1998	0.732	4,090	64.6	66.3
1999	0.748	4,956	65.8	68.9
2000	0.775	7,542	65.2	71.1
2001		8,452		72.1
Karaganda				
1994	0.769	8,922	63.9	65.7
1995	0.745	7,343	62.0	62.5
1996	0.725	5,194	61.3	62.4

	Human Development Index	Income per capita, (GAV)USD, PPS	Life Expectancy, years	Aggregated share of students aged 6 24, %
1997	0.734	5,780	62.0	64.6
1998	0.733	5,646	61.7	65.7
1999	0.753	6,403	62.8	67.5
2000	0.763	7,237	63.6	70.3
2001		7,249		71.1
Kyzylorda				
1994	0.695	2,185	63.5	72.3
1995	0.696	2,691	62.0	68.7
1996	0.714	3,198	63.3	64.6
1997	0.717	3,271	64.3	65.9
1998	0.704	2,775	63.7	65.4
1999	0.708	2,573	64.9	66.8
2000	0.731	3,804	63.6	66.9
2001		4,816		67.7
Kostanai				
1994	0.755	5,466	66.4	64.8
1995	0.731	4,265	64.4	62.4
1996	0.731	3,962	64.7	62.9
1997	0.750	5,601	64.8	64.8
1998	0.739	4,964	64.3	65.2
1999	0.743	5,115	65.5	62.8
2000	0.735	4,432	64.8	64.4
2001		5,189		63.9
Mangystau				
1994	0.780	10,228	65.3	63.9
1995	0.778	11,778	64.1	62.0
1996	0.788	13,886	63.9	65.6
1997	0.777	10,772	63.6	73.3
1998	0.778	8,189	64.0	74.6
1999	0.801	10,797	65.2	76.6
2000	0.828	16,652	64.6	79.8
2001		18,576		85.7
Pavlodar				
1994	0.764	8,396	64.3	64.2
1995	0.756	8,401	63.1	61.5
1996	0.757	7,297	63.9	63.1
1997	0.742	5,376	64.0	66.7
1998	0.783	10,632	63.8	68.1
1999	0.757	6,402	65.0	68.7
2000	0.764	7,714	64.8	71.5
2001				71.8
Northern Kazakhstan				
1994	0.757	5,891	65.8	92.3
1995	0.745	5,669	64.2	88.0
1996	0.753	6,214	64.2	88.6
1997	0.738	4,799	64.4	88.3
1998	0.711	3,500	63.6	89.0
1999	0.724	3,858	64.8	62.0
2000	0.722	3,693	64.5	64.5
2001		4,732		64.4
Southern Kazakhstan				
1994	0.678	1,365	66.9	64.4
1995	0.678	1,653	65.4	62.2
1996	0.702	2,356	65.5	63.6
1997	0.710	2,378	66.1	65.2
1998	0.706	2,166	66.2	66.2
1999	0.719	2,410	67.4	66.0
2000	0.718	2,279	67.4	68.1
2001		3,009		71.0

* *Akmola Oblast including the city of Astana*

3. Main human development indicators

Indicators	1994	1995	1996	1997	1998	1999	2000	2001
Life expectancy, years	64.9	63.5	63.6	64.0	64.5	65.7	65.4	65.6
Literacy of adult population, %	98.5	98.7	98.9	99.1	99.3	99.5	99.5	99.5
Aggregated share of students aged 6-24, %	65.8	65.6	65.9	65.9	66.9	67.9	69.9	71.3
GDP in current prices, billion tenge	423.5	1,014.2	1,415.71	1,672.1	1,733.3	2,016.5	2,599.9	3,285.4
GDP, billion USD	11.84	16.64	21.04	22.17	22.14	16.85	18.29	22.39
Agriculture (% of GDP)	14.9	12.3	12.1	11.5	8.6	9.9	8.1	8.7
Industry (%of GDP)	29.1	23.5	21.2	21.4	24.4	28.2	33.3	32.0
Construction	9.6	6.5	4.4	4.2	4.9	4.7	5.2	5.4
Services (%of GDP)	42.9	52.5	56.4	57.5	56.1	51.5	47.4	48.3
Consumption								
Individual (% of GDP)	83.7	79.2	75.1	77.4	79.1	79.0	70.4	84.5
State, % of GDP	4.6	5.5	5.1	5.5	5.0	5.0	6.7	7.7
Gross accumulation, % of GDP	28.7	23.3	16.1	15.6	15.8	17.8	17.8	25.8
Gross Domestic Savings, % of GDP	11.7	15.3	19.8	17.1	15.9	16.0	22.9	24.9
Tax accumulations, % of GDP	14.8	15.8	12.6	12.2	12.4	16.4	20.2	19.4
Common state services, % of GDP	2.3	0.8	1.0	1.8	1.8	1.4	1.4	1.5
Export, % of GDP	37.1	39.0	35.3	34.9	30.3	42.5	48.8	46.3
Import, % of GDP	47.1	43.5	36.0	37.4	34.9	40.1	49.3	48.7
Index of physical volume of GDP, % of previous year	87.4	91.8	100.5	101.7	98.1	102.7	109.8	113.2
State expenditures for education (%of GDP)	3.2	4.5	4.6	4.4	4.0	3.9	3.3	3.2
State expenditures for health care (%of GDP)	2.2	3.0	2.5	2.1	1.5	2.2	2.1	1.9
Book publishing, total number of items	1148	1115	1226	1015	1341	1301		
International conversations, units per capita	12.9	19.3	22.1	24.6	25.9	25.8		
Wealth, poverty and social investments								
GDP per capita, USD	733.4	1052.4	1350.7	1445.9	1468.8	1129.1	1230.2	1509.7
GDP per capita, tenge	26,227.8	64,123.1	90,880.2	109,045.2	114,991.3	135,087.8	174,853.8	221,521.3
Ratio of incomes of highest 20% of households to lowest 20%	...	...	4.3	6.4	6.9	6.8	7.1	7.0
State expenses in social sector, % of GDP	0.8	0.8	0.7	1.6*)	3.1	7.9	6.6	5.7
Total expenses for education, % of GDP	3.2	4.5	4.6	4.4	4.0	3.9	3.3	3.2
Total expenses for health care, % of GDP	2.2	3.0	2.5	2.1	1.5	2.2	2.1	1.9

** 1997 social protection including social insurance*

4. Population dynamics and population densities in rural areas

№	Name of oblast and rayon	Name of rayon center	Population			Population density per sq. km.
			1999	2000	2001	2001
Akmola			**837,400**	**796,100**	**751,200**	**3,6**
1	Akkolsky	Akkol	19678	19148	18695	3,6
2	Arshalynsky	Arshaly	22544	22241	21874	4,9
3	Astrakhansky	Astrakhanka	33109	32265	31996	4,3
4	Atbasarsky	Atbasar	28772	28189	27752	5,5
5	Bulandynsky	Makinsk	22932	22298	21869	7,8
6	Yegindykolsky	Yegindykol	10147	9673	9306	1,7
7	Yenbekshildersky	Stepnyak	18925	17912	17208	2,1
8	Yereymentausky	Yereymentau	27321	26411	25744	2,2
9	Yessilsky	Yessil	22205	21230	21144	4,5
10	Zhaksynsky	Zhaksy	30955	29711	29200	3,0
11	Zharkainsky	Derzhavinsk	16658	15941	15433	1,9
12	Zerendinsky	Zerenda	45707	44500	43590	6,2
17	Korgalzhinsky	Korgalzhin	16841	16332	15878	1,7
13	Sandyktausky	Balkashino	28839	28112	27820	3,2
14	Tselinogradsky	Koktal	50751	51429	42360	5,4
15	Sjortandinsky	Shortandy	20740	20466	19248	6,9
16	Schouchinsky	Schouchinsk	30955	30664	30619	13,4
Aktobe			**683,100**	**678,200**	**671,700**	**1,0**
1	Aytekebiysky	Komsomolskoye	34618	34331	34001	0,9
2	Alginsky	Alga	21596	21664	21681	4,9
3	Bayganinsky	Bayganin	24613	24756	24780	0,4
4	Irgizsky	Irgyz	5326	5385	5367	0,4
5	Kargalinsky	Batamshinsky	13769	13671	13568	3,7
6	Martyksky	Martyk	31077	30928	30501	4,6
7	Mugalzharsky	Kandyagash	22890	22757	24390	2,3
8	Temirsky	Shubarkuduk	18633	17341	19404	2,9
9	Uilsky	Uil	20833	20856	20896	1,8
10	Khobdinsky	Khobda	27665	27370	26922	1,9
11	Khromtausky	Khromtau	19954	19927	19766	3,4
12	Shalkarsky	Shalkar	20381	20481	20523	0,8
Almaty			**1,559,500**	**1,560,900**	**1,559,100**	**4,7**
1	Aksusky	Zhansugurov	32042	31319	30859	3,5
2	Alakolsky	Usharap	61824	61558	61167	3,4
3	Balkhashsky	Bakanas	30999	30976	30982	0,8
4	Yenbekshikazakhsky	Yessik	171285	171879	172300	24,6
5	Yeskeldinsky	Karabulak	33696	33481	33036	11,1
6	Zhambylsky	Uzynagash	102597	102828	103244	5,5
7	Iliisky	Otegen batyr	74354	75084	75467	15,8
9	Karasaisky	Kaskelen	117150	118986	120449	69,1
8	Karatalsky	Ushtobe	242556	24212	24060	1,9
10	Kerbulaksky	Saryuzek	41396	41106	41093	4,6
11	Koksusky	Balpyk	28023	27951	27823	5,6
12	Panfilovsky	Zharkent	80244	80231	81530	10,8
13	Raiymbeksky	Kegen	81771	81394	81424	5,8
14	Sarkandsky	Sarkand	28709	28457	28296	1,9
15	Talgarsky	Talgar	89424	89998	90629	35,4
16	Uigursky	Chundzha	62971	63187	63643	7,3
Atyrau			**439,300**	**442,400**	**446,100**	**1,6**
1	Zhylyusky	Kulsary	9321	9450	8960	2,0
2	Indersky	Inderborsky	17562	17703	17842	2,7

№	Name of oblast and rayon	Name of rayon center	Population			Population density per sq. km.
			1999	2000	2001	2001
3	Issataysky	Akkistau	22704	23120	23411	1,6
4	Kurmangazinsky	Ganyushkino	49984	50452	50908	2,7
5	Kysylkoginsky	Miyaly	30827	31011	31084	1,2
6	Makatsky	Makat	25133	25525	25873	5,3
7	Makhamabetsky	Makhambet	25410	25712	25875	2,7
East Kazakhstan			**1,532,500**	**1,517,700**	**1,501,700**	**2,5**
1	Abayski	Karaaul	17933	17905	17697	0,9
2	Ayagozsky	Ayagoz	38611	38166	37035	0,9
3	Beskaragaysky	Bolshaya Vladimirovka	28150	27906	27464	2,4
4	Borodulikhinsky	Borodulikha	37389	36713	35905	6,8
5	Glubokovsky	Glubokoye	40240	40315	40010	9,1
6	Zharminsky	Georgiyevka	38033	37629	37092	2,5
7	Zaissansky	Zaissan	23554	23542	23590	3,8
8	Katon-Karagaysky	Bolshe-Narymskoye	45177	44837	44302	3,4
9	Kokpetinsky	Kokpekty	45856	45200	44221	3,0
10	Kurchumsky	Kurchum	45123	44574	43932	1,9
11	Tarbagataysky	Aksuat	58207	57886	57410	2,7
12	Ulansky	Molodezhny	35751	35218	34953	4,6
13	Urdzharsky	Urdzhar	95493	94765	93966	4,0
14	Sheminaikhinsky	Shemonaikha	24204	23957	23738	14,1
15	Zyryanovsky	Zyryanovsk	*	*	22854	*
Zhambyl			**984,200**	**983,600**	**981,900**	**3,6**
1	Baysaksky	Sarykemer	68573	69485	70513	15,8
2	Zhambylsky	Assa	69791	70418	71261	16,6
3	Zhualinsky	After B.Momyshuly	48434	48820	49317	11,7
4	Kordaysky	Korday	99280	99906	100446	11,8
5	Merkensky	Merke	63677	63654	68522	10,4
6	Moiynkumsky	Moiynkum	26110	26068	25988	0,7
7	Sarussysky	Zhanatas	22749	22620	22370	1,5
8	Talassky	Karatau	24466	24355	24110	4,3
9	Turar Ryskulov	Kulan	51539	51831	51909	6,8
10	Shusky	Shu	57104	57202	57312	7,9
West Kazakhstan			**618,400**	**610,400**	**603,600**	**2,4**
1	Akzhaiyksky	Chapayev	49458	49094	48394	1,9
2	Bokeyordinsky	Saikhin	19299	19166	19044	1,0
3	Burlinsky	Aksai	17117	17081	17424	9,3
4	Jangalinsky	Jangala	23561	23597	23645	1,1
5	Zhanibeksky	Zhanibek	19538	19344	19118	2,3
6	Zelenovsky	Peremetnoye	56623	55309	53624	7,2
7	Kaztalovsky	Kaztalovka	38769	38537	38332	2,1
8	Karatobinsky	Karatobe	21247	20860	20663	2,1
9	Syrymsky	Zhymlity	30871	30446	29676	2,5
10	Taskalinsky	Kamenka	20666	20438	20148	2,5
11	Terektinsky	Fedorovka	44554	44442	43685	5,2
12	Chingirlausky	Chingirlau	21906	21537	20852	2,9
Karaganda			**1,413,700**	**1,394,200**	**1,370,900**	**0,6**
1	Abaysky	Abay	16377	16196	15898	9,6
2	Aktogaysky	Aktogay	17356	16927	16349	0,4
3	Bukhar-Zhyrausky	Botakara	55921	54982	53782	4,6
4	Zhanaarkinsky	Atasu	16427	16211	15851	0,6
5	Karkaralinsky	Karkaralinsk	37965	37573	37099	1,4
6	Nurinsky	Kiyevka	31324	30639	30037	0,8
7	Ossakarovsky	Ossakarovka	29510	28898	28110	3,8

№	Name of oblast and rayon	Name of rayon center	Population			Population density per sq. km.
			1999	2000	2001	2001
8	Ulytausky	Ulytau	13336	13038	12692	0,2
9	Shetsky	Aksu-Ayuly	28551	28033	27580	0,8
Kostanai			**1,022,300**	**991,400**	**962,600**	**2,3**
1	Altynsarinsky	Ubaganskoye	20467	19662	19122	3,5
2	Amangeldinsky	Amangeldy	23292	22783	22576	0,8
3	Auliyekolsky	Auliyekol	38674	38391	38184	4,9
4	Denissovsky	Denissovka	29412	28453	27560	4,1
5	Jangeldinsky	Torgay	20594	20463	20275	0,5
6	Zhitikarinsky	Zhitikara	18205	17691	17373	7,3
7	Kamystinsky	Kamysty	23265	21921	21107	1,8
8	Karabalyksky	Karabalyk	32095	31617	30951	6,1
9	Karasusky	Karasu	37521	36031	35355	2,8
10	Kostanaisky	Zatobolsk	46782	45683	44529	9,2
11	Mendykarinsky	Borovskoy	29661	29521	29257	5,9
12	Naurzumsky	Karamendy	18101	17217	16556	1,1
13	Sarykolsky	Sarykol	20859	20508	20459	4,9
14	Taranovsky	Taranovskoye	31628	30352	28849	4,7
15	Uzunkolsky	Usunkol	28777	28323	27971	4,3
16	Fedorovsky	Fedorovka	30502	29628	29190	5,0
Kyzylorda			**595,700**	**600,600**	**603,800**	**1,1**
1	Aralsky	Aralsk	25149	25403	25632	1,3
2	Zhalagashsky	Zhalagash	25015	25354	20571	1,8
3	Zhanakorgansky	Zhanakorgan	44944	45545	46165	4,5
4	Kazalinsky	Aiteke bi	27963	28322	28808	1,9
5	Karmakshinsky	Zhossaly	20369	20569	20816	1,5
6	Syrdaryinsky	Terenosek	29653	29865	30070	1,4
7	Shiyeliisky	Shyeli	45176	45737	46371	2,3
Mangistau			**316,300**	**317,800**	**323,000**	**0,5**
1	Beineukski	Beineu	26472	26931	27526	0,7
2	Karakiyanski	Kyruk	4554	4556	4523	0,4
3	Mangistausky	Shetpe	29045	29045	28723	0,6
4	Tupkaragansky	Fort-Shevchenko	6821	7050	7116	1,4
Pavlodar			**807,400**	**790,600**	**773,100**	**2,9**
1	Aktogaysky	Aktogay	21125	20694	20262	2,1
2	Bayanaulsky	Bayanaul	22856	22679	22306	1,7
3	Zhelezinsky	Zhelezinka	26348	25719	24944	3,3
4	Irtyshsky	Irtyshsk	33242	32607	31723	3,1
5	Kachirsky	Kashyr	31773	30956	29952	4,4
6	Lebyazhinsky	Lebyazhye	19639	19596	19397	2,4
7	Maysky	Koktobe	16901	16554	16100	0,9
8	Pavlodarsky	*	32405	31941	31602	5,2
9	Uspensky	Uspenka	21502	20390	19181	3,5
10	Sharbaktinsky	Sharbakty	29007	28148	27375	4,0
North Kazakhstan			**726,900**	**713,800**	**703,000**	**3,6**
1	Aiyrtausky	Saumalkol	58464	57318	56267	5,9
2	Akzharsky	Talshik	23208	22526	21964	3,2
3	Akkaiynsky	Smirnovo	24314	24038	23630	6,5
4	Yessilsky	Yavlenka	38365	37652	37121	7,3
5	Zhambylsky	Presnovka	36990	36499	36123	4,8
6	Magzhan Zhumabayev rayon	Bulayevo	40103	39581	39273	6,2
7	Kysylzharsky	Bishkul	50168	50143	49899	8,1
8	Mamlyutsky	Mamlyutka	20006	19710	19554	7,0
9	Taiynshinsky	Taiynsha	53990	52077	50760	5,6

№	Name of oblast and rayon	Name of rayon center	Population			Population density per sq. km.
			1999	2000	2001	2001
10	Timiryazevsky	Timiryazevo	20166	19706	19435	4,3
11	Ualikhanovsky	Kishkenekol	18054	17622	17385	2,0
12	Tselinny	Novoishimsky	44552	43534	42925	4,8
13	Shal Akyna	Sergeyevka	22910	22709	22477	6,5
South Kazakhstan			1,973,700	1,995,700	2,019,100	11
1	Arysskу	Arys	25108	25503	25848	*
2	Baydibeksky	Chayan	50454	51080	51677	7,2
3	Kazygurtsky	Kazygurt	87620	89381	91293	22,3
4	Maktaaralsky	Zhetysai	171699	175229	179060	138,9
5	Ordanasynsky	Temirlanovka	80587	81822	83048	30,5
6	Otyrarsky	Shaulder	53956	54691	55230	3,1
7	Sayramsky	Aksu	216823	221794	226593	131,7
8	Saryagashsky	Saryagash	184459	187656	191546	28,9
9	Sosaksky	Chulakkurgan	40991	41481	41991	1,2
10	Tolebiysky	Lenger	86313	87306	88642	34,3
11	Tyulkubassky	After Turar Ryskulov	71345	72386	73551	38,0
12	Shardarinsky	Shardara	38835	39586	40443	5,2

Source: Statistics Agency of Kazakhstan

5. Basic development indicators in rural areas

№	Name of oblast and rayon	Proportion of water supply from stand-alone units, with quality below microbiological standards (infectious diseases)	Proportion of water supply from stand-alone units, with quality below chemical standards (somatic diseases)	Availability of centralized water supply in rural areas (%)	Mortality rate (number of deaths per 1,000 of population)	Infant mortality (number of children dying before 12 months per 1,000 live births)	Number of the officially registered unemployed (people)	Number of low income population with average income below poverty line (people)	Monthly monetary income per capita (tenge)
National level		9,1	19,3		8,4	19,2	244210	1635000	5571
Akmola		12,3	30,9	70,6	11,8	16,4	9035	86900	5215
1	Akkolsky	0,6	18,6	63,2	11,6	11,7	626	3600	4126
2	Arshalynsky	49,5	79,1	75,4	11,4	19,7	638	3500	4629
3	Astrakhansky	9,5	54,5	66,8	12,4	16,5	270	7100	5359
4	Atbasarsky	"0	32,6	82,6	12,3	19,2	1427	6700	6363
5	Bulandynsky	8,0	16,8	63,1	13,5	15,7	779	3800	3622
6	Yegindykolsky	22,2	0	97,0	8,7	6,9	157	2200	9020
7	Yenbekshildersky	5,8	4,2	11,8	11,6	13,5	230	3500	3057
8	Yereymentausky	23,3	51,3	73,2	10,3	14,1	565	4900	3843
9	Yessilsky	3,8	20,2	94,0	12,4	9,8	412	7300	8483
10	Zhaksynsky	2,9	27,1	57,0	10,6	22,2	716	3400	4007
11	Zharkainsky	26,0	41,8	46,0	10,5	20,7	312	5100	6117
12	Zerendinsky	14,3	4,7	48,1	10,4	21,1	385	4400	5610
13	Korgalzhinsky	34,9	38,0	73,0	8,3	4,3	200	5200	2158
14	Sandyktausky	2,7	5,9	78,1	11,8	27,9	220	4300	5621
15	Tselinogradsky	7,5	0	67,0	7,9	15,3	917	5300	6856
16	Sjortandinsky	9,4	0	79,0	9,3	11,4	329	3100	4324
17	Schouchinsky	9,9	82,6	91,4	14,3	15,8	852	13500	5468

№	Name of oblast and rayon	Proportion of water supply from stand-alone units, with quality below microbiological standards (infectious diseases)	Proportion of water supply from stand-alone units, with quality below chemical standards (somatic diseases)	Availability of centralized water supply in rural areas (%)	Mortality rate (number of deaths per 1,000 of population)	Infant mortality (number of children dying before 12 months per 1,000 live births)	Number of the officially registered unemployed (people)	Number of low income population with average income below poverty line (people)	Monthly monetary income per capita (tenge)
Aktobe		**9,8**	**15,5**	**73,6**	**9,9**	**19,0**	**7561**	**75600**	**4710**
1	Aytekebiysky	n/a	25,0	34,4	8,3	21,4	228	5100	2924
2	Alginsky	8,1	7,8	53,5	12,0	25,5	624	4800	2669
3	Bayganinsky	5,5	9,6	19,0	7,1	21,1	909	8600	1925
4	Irgizsky	20,0	12,5	33,5	7,6	34,7	129	4700	1958
5	Kargalinsky	3,8	n/a	56,0	11.1	22,9	552	3700	3946
6	Martyksky	12,5	21,9	28,8	9,7	19,5	464	6800	2288
7	Mugalzharsky	1,5	33,8	36,2	11,2	23,2	419	3400	2247
8	Temirsky	23,0	n/a	83,0	8,1	19,1	965	7300	10455
9	Uilsky	8,8	16,1	60,6	7,6	33,5	596	8900	12374
10	Khobdinsky	5,9	3,5	27,4	6,7	21,7	738	6900	1863
11	Khromtausky	26,5	21,2	66,0	10,5	21,2	833	3300	10183
12	Shalkarsky	n/a	4,2	68,0	8,3	25,1	1104	12100	3684
Almaty					**8,6**	**13,6**	**14977**	**148900**	**3639**
1	Aksusky	n/a	n/a	41,8	9,2	17,2	672	6000	2567
2	Alakolsky	2,1	n/a	40,1	8,2	16,6	732	15500	2113
3	Balkhashsky	18.1	n/a	18,1	6,8	0,1	301	6300	2103
4	Yenbekshikazakhsky	0,5	n/a	82,7	8,1	0,2	1330	34000	2820
5	Yeskeldinsky	2,9	13,9	70,0	9,9	8,1	807	6000	2286
6	Zhambylsky	3,5	3,1	25,0	7,4	6,4	1540	1500	3079
7	Iliisky	n/a	n/a	98,9	8,6	16,8	1063	7000	16640
8	Karasaisky	11,7	6,8	36,9	10,8	8,1	1607	4500	3312
9	Karatalsky	3,0	n/a	100,0	8,7	10,7	1163	10000	6390
10	Kerbulaksky	n/a	n/a	87,0	7,0	11,3	405	8300	2352
11	Koksusky	22,5	3,7	82,5	8,6	17,1	623	2900	2421
12	Panfilovsky	n/a	n/a	66,0	7,0	14,4	1222	11000	1897
13	Raiymbeksky	n/a	6,6	85,2	4,8	17,6	451	13000	1713
14	Sarkandsky	n/a	n/a	52,3	10,6	12,1	1031	4000	1953
15	Talgarsky	n/a	3,5	85,0	9,4	7,3	1136	8200	4655
16	Uigursky	n/a	n/a	42,3	6,1	12,6	894	10700	1922
Atyrau		**1,7**	**4,2**	**62,7**	**8,8**	**18,6**	**6712**	**55550**	**5557**
1	Zhylyusky	n/a	n/a	68,7	7,1	13,1	1505	10600	46848
2	Indersky	n/a	n/a	39,5	8,6	20,3	1117	9800	5735
3	Issataysky	n/a	n/a	31,7	7,5	18,3	644	3100	37285
4	Kurmangazinsky	n/a	30,7	32,3	8,0	15,9	1005	15400	5704
5	Kysylkoginsky	1,9	2,5	4.4	7,9	20,6	1060	11600	12308
6	Makatsky	n/a	n/a	100	9,1	16,5	728	450	41014
7	Makhamabetsky	n/a	n/a	9,2	18,5	19,7	653	4600	20293
East Kazakhstan		**3,09**	**14,1**	**56,0**	**12,3**	**19,8**	**14921**	**162975**	**4844**
1	Abayski	n/a	n/a	34,0	7,9	34,1	206	3554	4041
2	Ayagozsky	n/a	3,8	68,5	7,5	13,8	1419	12601	5245
3	Beskaragaysky	12,5	12,1	28,3	13,6	15,3	516	6839	2992

№	Name of oblast and rayon	Proportion of water supply from stand-alone units, with quality below microbiological standards (infectious diseases)	Proportion of water supply from stand-alone units, with quality below chemical standards (somatic diseases)	Availability of centralized water supply in rural areas (%)	Mortality rate (number of deaths per 1,000 of population)	Infant mortality (number of children dying before 12 months per 1, 000 live births)	Number of the officially registered unemployed (people)	Number of low income population with average income below poverty line (people)	Monthly monetary income per capita (tenge)
4	Borodulikhinsky	n/a	13,0	67,0	12,3	14,3	688	8959	8517
5	Glubokovsky	20,6	21,7	50,2	17,5	26,7	1003	17429	11732
6	Zharminsky	n/a	6,79	39,4	9,1	21,4	1230	10220	5291
7	Zaissansky	1,89	0,81	52,5	9,4	21,7	616	6786	3131
8	Katon-Karagaysky	6,5	n/a	44,4	10,7	18,0	549	7634	2784
9	Kokpetinsky	n/a	n/a	22,6	10,3	15.7	852	8661	2795
10	Kurchumsky	n/a	11,8	17,1	9,1	21,0	701	7025	2998
11	Tarbagataysky	n/a	0,62	22,5	7,5	12,6	1423	10068	2188
12	Ulansky	n/a	n/a	44,0	11,4	12,2	1090	9510	4592
13	Urdzharsky	4,08	1,4	27,1	8,6	21,8	2306	15597	2192
14	Sheminaikhinsky	25,0	30,0	92,6	16,5	14,9	846	14168	9321
15	Zyryanovsky	3,0	84,6	85,4	17,6	28,0	1476	23924	*
Zhambyl		**12,1**	**7,3**	**54,4**	**9,1**	**24,3**	**9722**	**93989**	**3326**
1	Baysaksky	7,6	3,5	n/a	7,4	15,8	1370	18804	3329
2	Zhambylsky	2,6	13,1	19,5	7,1	18,9	647	10604	8195
3	Zhualinsky	6,2	n/a	50,5	7,8	26,2	714	10682	2022
4	Kordaysky	n/a	n/a	67,7	9,1	12,4	226	5632	2616
5	Merkensky	n/a	n/a	69,0	8,5	13,2	389	9984	2664
6	Moiynkumsky	3,8	4,0	87,8	8,9	13,5	304	7599	2011
7	Satussysky	8,5	n/a	30,5	9,8	15,6	2040	4866	9135
8	Talassky	23,3	6,7	61,8	8,1	22,3	1142	10795	3803
9	Turar Ryskulov	n/a	n/a	31,7	9,1	16,1	2000	8329	2973
10	Shusky	n/a	n/a	31,0	10,3	18	890	6694	5029
West Kazakhstan		**5,8**	**4,9**	**58,2**	**10,5**	**17,8**	**9695**	**30600**	**3226**
1	Zelenovsky	11,5	0,9	22,1	11,2	20,4	608	3100	3192
2	Taskalinsky	31,2	10,2	65,4	9,7	18,3	448	2000	3453
3	Terektinsky	9,7	7,1	23,0	9,3	15,0	562	6500	3712
4	Chingirlausky	7,8	35,2	14,0	9,4	18,2	213	1100	2656
5	Burlinsky	16,6	3,7	80,5	9,9	15,4	774	300	10981
6	Akzhaiyksky	n/a	3,1	1,7	7,8	10,1	673	2900	2732
7	Zhanibeksky	50,0	1,6	5,5	8,2	20,1	3030	600	2167
8	Kaztalovsky	5,4	12,2	27,7	7,5	15,9	984	4700	2003
9	Syrymsky	26,6	15,5	33,4	7,0	37,1	530	3500	1749
10	Zhangalinsky	8,7	1,7	8,9	7,7	29,9	441	2000	2506
11	Karatobinsky	2,0	5,0	38,5	7,2	19,3	554	1800	1693
12	Bokeyordinsky	n/a	n/a	42,5	7,8	32,7	878	2100	1870
Karaganda		**6,3**	**26,1**	**88**	**11,96**	**19,10**	**5159**	**45965**	**5182**
1	Abaysky	20,0	22,0	80	13,57	21,40	654	3209	6068
2	Aktogaysky	n/a	n/a	55	8,80	25,70	344	4032	8004
3	Bukhar-Zhyrausky	8,5	16,2	70	9,72	17,30	564	5918	3707
4	Zhanaarkinsky	3,1	7,6	60	8,65	17,40	413	4833	3101
5	Karkaralinsky	7,1	21,3	45	7,68	18,40	1500	9573	2188

№	Name of oblast and rayon	Proportion of water supply from stand-alone units, with quality below microbiological standards (infectious diseases)	Proportion of water supply from stand-alone units, with quality below chemical standards (somatic diseases)	Availability of centralized water supply in rural areas (%)		Mortality rate (number of deaths per 1,000 of population)	Infant mortality (number of children dying before 12 months per 1,000 live births)	Number of the officially registered unemployed (people)	Number of low income population with average income below poverty line (people)	Monthly monetary income per capita (tenge)
6	Nurinsky	7,4	n/a	61		8,28	18,60	310	5655	4580
7	Ossakarovsky	n/a	1,6	91,1		11,62	21,60	555	4431	5395
8	Ulytausky	n/a	n/a	58		8,27	16,60	115	2965	8242
9	Shetsky	8,4	38	62		8,10	7,70	704	5349	5357
Kostanai		**16,0**	**37,4**	**59,6**		**11,7**	**23,1**	**8799**	**32112**	**5771**
1	Altynsarinsky	13,8	15,6	47,5		11,2	17,3	347	985	5550
2	Amangeldinsky	26,4	50,0	54,9		6,2	21,4	2153	5773	1896
3	Auliyekolsky	10,7	12,5	43,7		11,3	23,9	490	2349	6649
4	Denissovsky	9,6	88,5	51,6		10,6	31,1	136	910	6971
5	Jangeldinsky	2,7	3,0	8,0		8,6	35,0	1084	4359	1701
6	Zhitikarinsky	28,0	45,0	82,0		13,5	24,6	1180	2336	7651
7	Kamystinsky	13,6	11,9	38,0		9,6	14,9	49	1410	7123
8	Karabalyksky	10,8	42,0	34,7		11,3	24,4	221	1230	4917
9	Karasusky	n/a	42,8	30,0		11,3	43,2	333	2001	7482
10	Kostanaisky	23,2	46,5	14,0		11,0	28,1	915	3719	7885
11	Mendykarinsky	9,4	11,4	20,3		12,0	21,0	368	1466	4396
12	Naurzumsky	20,8	7,5	n/a		9,7	13,1	252	878	3478
13	Sarykolsky	15,1	78,7	n/a		10,6	27,9	453	890	6682
14	Taranovsky	8,3	18,6	70,1		11,7	30,5	382	862	6450
15	Uzunkolsky	25,4	16,0	30,4		12,8	25,5	242	1440	6807
16	Fedorovsky	16,6	15,0	22,0		13,8	22,0	194	1504	6703
Kyzylorda*		**9**	**49,7**	**19,3**	**74,1**	**7,4**	**23,0**	**22006**	**92200**	**3876**
1	Aralsky	26,5	38	12,0	81,7	8,5	23,0	8794	21800	3704
2	Kazalinsky	15,1	99,1	18,8	66,5	7,6	20,5	5062	14400	4994
3	Karmakhisnky	20	54,1	21,8	58,2	8,6	21,7	1872	14200	5187
4	Zhalagashsky	10,1	54,5	38,1	61,8	7,5	17,6	877	700	3768
5	Syrdaryinsky	11,8	9	36,3	63,6	6,2	20,4	1030	7300	3983
6	Shieliisky	13,6	14,4	22,0	62,2	6,2	24,8	1679	11600	3332
7	Zhanakorhansky	67,9	29	28,7	71,2	5,4	21,4	2692	22200	2165
Mangistau		**10,8**	**7,2**	**69,2**		**7,9**	**26,1**	**3893**	**22500**	**15813**
1	Beineukski	n/a	n/a	23,6		6,4	22,2	1793	8700	11953
2	Karakiyanski	n/a	n/a	n/a		7,4	29,7	556	4000	21316
3	Mangistausky	19,0	8,7	36,3		6,4	19,8	608	6600	12217
4	Tupkaragansky	9,6	6,1	26,6		7,1	30,3	936	3200	17764
Pavlodar		**15,3**	**18,5**	**74,7**		**10,6**	**26,5**		**18251**	**3023**
1	Aktogaysky	15,4	8,0	n/a		8,9	18,2	2012	5762	2361
2	Bayanaulsky	3,8	2,6	35,9		8,5	38,0		1844	6176
3	Zheleznsky	16,6	0,0	58,1		11,1	14,3		1189	2398
4	Irtyshsky	77,7	23,0	31,0		9,1	25,9		1125	2578
5	Kachirsky	0,0	6,1	57,8		11,0	20,6		1751	2474
6	Lebyazhinsky	0,0	0,0	40,8		10,5	47,2		1229	2383
7	Maysky	16,0	n/a	34,7		9,1	31,9		2033	2316
8	Uspensky	1,2	0,0	57,1		10,0	19,5		556	2956

№	Name of oblast and rayon	Proportion of water supply from stand-alone units, with quality below microbiological standards (infectious diseases)	Proportion of water supply from stand-alone units, with quality below chemical standards (somatic diseases)	Availability of centralized water supply in rural areas (%)	Mortality rate (number of deaths per 1,000 of population)	Infant mortality (number of children dying before 12 months per 1,000 live births)	Number of the officially registered unemployed (people)	Number of low income population with average income below poverty line (people)	Monthly monetary income per capita (tenge)
9	Sharbaktinsky	45,7	0,0	43,9	9,9	40,4		1152	2705
10	Pavlodarsky	20,9	38,1	19,0	10,8	21,2		1610	3878
North Kazakhstan		**10,7**	**34,2**	**48,3**	**12,5**	**16,2**	**5270**	**45400**	**2255**
1	Aiyrtausky	20,2	30,8	26,7	13,2	26,5	529	2200	2338
2	Akzharsky	42	17,9	49,6	7,8	15,4	402	4300	1839
3	Akkaiynsky	22,2	46,2	54,8	12,6	0,0	323	3900	3096
4	Yessilsky	2,3	64	14,2	11,8	13,6	460	4300	1840
5	Zhambylsky	8,2	43	31,2	11,6	14,2	440	2900	2101
6	Magzhan Zhumabayev rayon	0	91,3	24,2	13,5	12,6	207	3800	2543
7	Kysylzharsky	6,2	40,3	34,3	12,5	18,4	404	4300	1624
8	Mamlyutsky	3,8	5,8	10,3	12,5	19,7	340	2800	2248
9	Taiynshinsky	5,6	41,4	10,4	10,8	12,6	867	5700	1885
10	Timiryazevsky	2	14,8	71,8	10,6	28,8	141	1900	4112
11	Ualikhanovsky	18,9	9,8	33,6	9,1	14,6	360	3000	1835
12	Tselinny	14,2	74,5	49,1	12,2	14,5	648	4100	2562
13	Shal Akyna	4,8	18,2	29	11,9	14,5	149	2200	1289
South Kazakhstan		**8,1**	**7,2**	**63,0**	**6,9**	**19,9**	**9998**	**119400**	**2787**
1	Arysky	n/a	n/a	80,0	4,7	17,1	893	6000	
2	Baydibeksky	1,9	7,6	33,7	5,1	19,4	698	2300	1569
3	Kazygurtsky	22,2	2,3	24,3	5,7	21,3	469	9100	1305
4	Maktaaralsky	n/a	n/a	92,1	5,7	14,8	1119	20500	3044
5	Ordanasynsky	6,5	3,6	51,8	5,6	16,4	625	6200	1490
6	Otyrarsky	n/a	3,8	27,3	5,4	17,9	561	6900	1597
7	Sayramsky	27,3	18,2	87,1	6,1	20,1	1604	19700	2229
8	Saryagashsky	n/a	19,7	12,1	6,0	15,1	1194	16000	2131
9	Sosaksky	4,5	n/a	27,6	6,3	25,7	762	13100	8597
10	Tolebiysky	n/a	3,4	62,3	7,7	14,0	702	5900	2938
11	Tyulkubassky	13,4	2,7	65,0	7,5	20,3	735	8400	2791
12	Shardarinsky	n/a	n/a	35,5	7,4	15,9	636	5300	2967

** - data on water supply in rural areas provided for centralized and decentralized units.*

Source: the Ministry of Health protection, the Sanitary-Epidemiological Department of the Ministry of Health protection, the Ministry of Labor and Social Protection, the Ministry of State Revenues, the Statistics Agency of the RK, 2001.

6. Characteristics of agricultural lands (in `000 hectares)

№	Name of oblast and rayon	Total area	Including					Total agricultural land	Average yield class score
			Ploughed lands		Fallow lands	Hayfields	Pastures		
			Total	Irrigated					
Akmola									
1	Akkolsky	943,7	140,6		111,1	22,3	550,3	824,7	33
2	Arshalynsky	584,8	210,7		22,9	6,6	298,6	538,9	24-32
3	Astrakhansky	737,8	250,7		177,8	37,1	237,0	702,7	32-35
4	Atbasarsky	1063,5	376,8		66,6	45,1	529,3	1018,7	27-37
5	Bulandynsky	508,3	233,4		46,1	11,3	155,0	446,0	40-51
6	Yegindykolsky	541,2	232,2	3.4	113,9	0,9	177,5	518,6	30-33
7	Yenbekshildersky	1098,9	155,2		136,1	1,6	721,3	1014,6	35-44
8	Yereymentausky	1778,8	122,0		115,7	23,0	1415,6	1676,4	23
9	Yessilsky	796,7	548,6			1,4	216,3	766,8	38
10	Zhaksynsky	969,3	355,6		176,9	18,6	393,8	945,1	25-30
11	Zharkainsky	1205,9	356,0	0.4	263,4	15,1	526,5	1161,3	30
12	Zerendinsky	780,8	237.3		122,4	3,1	278,6	642,6	56
13	Korgalzhinsky	931,1	107,8		137,8	28,2	382,7	656,5	26
14	Sandyktausky	638,3	384,3		136,1	1,6	721,3	546,2	35-45
15	Tselinogradsky	788,8	319,8		35,6	32,9	348,7	737,3	31
16	Sjortandinsky	467,6	250,8		36,0	2,6	147,3	436,9	35-39
17	Schouchinsky	594,5	210,4		20,7	4,0	220,0	458,0	56
Aktobe									
1	Aytekebiysky	3588,9	169,7		106,6	19,3	3174,4	3470,2	25-35
2	Alginsky	750,7	63,3		58,0	4,6	599,8	726,3	25-35
3	Bayganinsky	6103,9				19,3	5198,5	5217,9	до 15
4	Irgizsky	4151,2			1,1	48,9	3368,4	3418,7	до 15
5	Kargalinsky	499,8	118,7		16,4	3,2	334,5	473,2	35-45
6	Martyksky	1402,9	51,8		36,3	18,1	1252,1	1358,5	20-25
7	Mugalzharsky	660,5	111,2		24,2	5,2	488,4	629,5	35-40
8	Temirsky	2786,2	30,2		10,4	54,8	2517,8	2613,8	25
9	Uilsky	1261,9	16,7			36,1	1140,4	1194,2	15-25
10	Khobdinsky	1145,7	4,2		1,3	51,5	1025,6	1082,8	20
11	Khromtausky	1292,1	76,5		46,5	15,8	1098,7	1237,9	25-35
12	Shalkarsky	6185,1			0,3	35,9	5318,7	5355,3	до 15
Almaty									
1	Aksusky	1259,3	50,8	26,8	54,1	56,2	950,8	1112,7	25-35
2	Alakolsky	2367,3	67,4	16,0	30,1	86,9	1459,9	1645,5	15-25
3	Balkhashsky	3739,1	28,7	28,6	13,8	64,0	1734,2	1840,9	до 20
4	Yenbekshikazakhsky	829,7	87,2	71,0	8,7	16,8	527,7	650,8	25-35
5	Yeskeldinsky	429,3	66,3	28,4	0,7	14,6	223,6	307,8	30
6	Zhambylsky	1932,1	154,2	18,6	89,6	12,8	1510,8	1769,0	25-35
7	Iliisky	780,3	141,9	23,9	10,0	1,7	465,5	621,8	25-35
8	Karasaisky	227,4	46,2	17,2	0,4	6,1	100,0	160,8	30-35
9	Karatalsky	2422,2	23,5	19,2	2.9	15,9	2108,3	2152,6	25
10	Kerbulaksky	1149,3	146,7	3,0	26,1	20,7	758,6	952,7	25-30
11	Koksusky	706,7	35,7	19,7	10,7	8,5	609,7	665,4	25-30
12	Panfilovsky	1058,3	40,9	40,9	8,5	19,3	587,6	658,4	20-25
13	Raiymbeksky	1422,2	73,4	31,5	49,8	41,1	849,1	1013,5	35-45
14	Sarkandsky	2440,4	69,0	26,7	9,7	68,9	1740,3	1889,0	35-45
15	Talgarsky	378,6	34,5	26,5	7,2	3,7	180,5	233,2	35-45
16	Uigursky	875,7	21,1	20,5	23,6	29,5	492,1	547,5	20-25

№	Name of oblast and rayon	Total area	Including					Total agricultural land	Average yield class score
			Ploughed lands		Fallow lands	Hayfields	Pastures		
			Total	Irrigated					
Atyrau									
1	Zhylyusky	2935,2	0,4		2,2	17,1	2189,5	2209,4	20
2	Indersky	1087,6	0,2		10,5	3,4	973,3	987,8	20
3	Issataysky	1469,5			1,5	13,5	1222,0	1237,1	20
4	Kurmangazinsky	2086,1	0,1		5,0	27,8	1790,9	1824,3	20
5	Kysylkoginsky	2488,4			0,3	53,4	2222,1	2276,0	20
6	Makatsky	487,5					324,9	324,9	до 15
7	Makhamabetsky	961,7	0,8		16,0	9,9	799,5	827,2	20
East Kazakhstan									
1	Abayski	2009,4	0,4		50,9	42,4	1827,4	1921,1	15-20
2	Ayagozsky	4958,8	11,3	0,5	115,6	142,4	4182,8	4452,9	15-20
3	Beskaragaysky	1140,9	39,6		85,5	54,6	535,0	715,3	15-20
4	Borodulikhinsky	698,9	128,4		230,6	13,3	191,8	565,3	30-35
5	Glubokovsky	730,2	104,7	2,0	1,4	29,8	109,6	248,2	30-35
6	Zharminsky	2340,4	13,1	0,6	217,7	128,2	1809,8	2169,8	20-25
7	Zaissansky	1044,4	10,7	10,3	23,8	53,8	748,5	837,1	20-25
8	Katon-Karagaysky	1319,1	43,4	4,0	48,3	65,1	666,4	826,3	30-35
9	Kokpetinsky	1457,5	65,1	11,3	169,1	80,2	866,1	1212,5	20
10	Kurchumsky	2319,9	23,3	12,2	47,4	83,6	1434,0	1588,5	30-35
11	Tarbagataysky	2374,2	10,0	10,0	64,4	89,0	1954,1	2118,2	35-40
12	Ulansky	962,5	70,1	2,9	124,2	51,2	520,7	766,8	25-35
13	Urdzharsky	2341,4	101,6	9,4	239,8	83,9	1540,8	1968,2	20-25
14	Shemonakhainsky	396,0	141,0	2,1	0,5	21,6	98,3	262,1	20-25
15	Zyryanovsky	1056,1	76,1	0,5	3,5	47,6	337,3	466,5	30-35
Zhambyl									
1	Baysaksky	446,4	63,8	30,8		6,6	339,2	411,2	20-25
2	Zhambylsky	429,3	66,6	36,8		8,6	335,7	412,8	20-25
3	Zhualinsky	421,3	106,7	9,4		7,4	215,8	330,8	15-25
4	Kordaysky	897,3	146,9	43,6		11,8	643,9	804,7	20-25
5	Merkensky	908,7	148,1	11,3		19,8	667,1	835,6	20
6	Moiynkumsky	705,7	98,6	23,2		8,2	532,6	640,6	20-25
7	Sarussysky	5045,1	8,8	8,8		75,4	2481,1	2565,5	до 15
8	Talassky	3136,1	23,9	4,5		62,2	2285,9	2372,3	до 15
9	Turar Ryskulov	1220,5	25,6	12,8		25,1	982,4	1033,6	20-25
10	Shusky	1203,0	160,3	32,7		5,5	912,6	1079,0	20-25
West Kazakhstan									
1	Akzhaiyksky	2524,9	0,2	3,4	6,2	272,6	2088,6	2369,6	15-25
2	Bokeyordinsky	1921,4	0,8	0,8	2,1	8,0	1376,7	1560,1	до 15
3	Burlinsky	556,6	566,6	50,5	4,7	212,3	22,2	232,5	15-25
4	Jangalinsky	2076,1	1,8	0,8	13,6	139,3	1768,5	1923,4	до 15
5	Zhanibeksky	821,3	11,1	1,8	21,5	29,2	735,1	797,0	20-25
6	Zelenovsky	742,1	134,4	20,5	246,1	32,1	257,7	673,7	30-35
7	Kaztalovsky	1860,6	1,2	1,0	102,4	200,8	1472,6	1777,3	15-25
8	Karatobinsky	997,5	11,3		34,4	92,7	826,4	963,9	до 15
9	Syrymsky	1188,8	37,4	1,0	91,0	42,8	951,1	1122,6	15-25
10	Taskalinsky	806,8	30,5	0,2	104,1	126,2	526,6	787,7	25
11	Terektinsky	843,5	72,6	13,8	182,6	45,6	452,4	754,6	25
12	Chingirlausky	722,9	62,5	1,1	158,2	38,6	428,0	6877,5	25
Karaganda									
1	Abaysky	653,0	33,1	7,7	68,7	16,6	494,4	613,3	15-20

№	Name of oblast and rayon	Total area	Including					Total agricultural land	Average yield class score
			Ploughed lands		Fallow lands	Hayfields	Pastures		
			Total	Irrigated					
2	Aktogaysky	5199,7	20,2	0,4	22,7	40,2	4029,5	4112,8	15-20
3	Bukhar-Zhyrausky	1457,7	159,1	9,6	249,4	37,9	927,1	1369,9	20-25
4	Zhanaarkinsky	5088,3	86,8	1,2	71,2	20,6	3635,7	3814,5	15-20
5	Karkaralinsky	3547,2	71,2		85,0	60,7	3000,5	3218,1	20-25
6	Nurinsky	4632,6	259,0	0,6	160,7	66,3	3996,7	4485,1	20
7	Ossakarovsky	1126,1	291,5	10,1	222,8	8,3	542,4	1065,7	25-35
8	Ulytausky	12293,1	37,4		48,5	84,5	11512,0	11682,5	до 15
9	Shetsky	6569,4	95,3	0,5	124,5	46,0	4778,4	5044,6	20-25
Kostanai									
1	Altynsarinsky	544,9	232,9			5,5	208,2	446,7	30
2	Amangeldinsky	2776,3	123,9		72,4	99,8	2371,8	2667,9	"10-15
3	Auliyekolsky	1110,8	324,4			17,7	628,5	971,3	18-20
4	Denissovsky	676,9	362,8	0,1			258,7	621,6	34-39
5	Jangeldinsky	3759,6	27,8			90,1	3380,4	3498,4	"6-15
6	Zhitikarinsky	731,2	315,4	1,4		1,4	387,9	705,7	30-35
7	Kamystinsky	1205,4	420,3	0,1		9,6	716,3	1146,6	25-32
8	Karabalyksky	686,2	330,0	0,3		35,6	9,2	601,2	40-45
9	Karasusky	1278,2	1278,2	858,1	0,3		367,4	1229,3	35-40
10	Kostanaisky	698,7	341,2	9,3		3,9	272,4	622,1	40-45
11	Mendykarinsky	661,7	328,7	0,4		7,8	250,5	587,6	40
12	Naurzumsky	1519,8	205,1			44,4	1187,8	1437,4	18-28
13	Sarykolsky	611,6	301,1			4,6	258,4	564,1	45
14	Taranovsky	761,0	329,4	3,5		4,7	355,9	691,0	22-25
15	Uzunkolsky	715,6	335,3			4,3	275,3	615,3	45-50
16	Fedorovsky	721,0	416,0	0,1		11,9	227,5	656,3	45
Kyzylorda									
1	Aralsky	5521,3	0,6	0,6	2,7	9,4	2019,3	2032,4	до 15
2	Zhalagashsky	2293,2	21,6	21,6	18,9	11,4	1185,2	1239,2	20
3	Zhanakorgansky	1543,4	23,9	23,9	18,6	9,4	613,7	669,6	20
4	Kazalinsky	3759,7	13,7	13,7	15,8	27,9	1596,4	1657,5	20
5	Karmakshinsky	3104,0	16,4	15,7	14,7	23,9	2071,3	2128,5	20
6	Syrdaryinsky	2905,2	22,6	22,6	25,4	14,2	1654,9	1719,0	20
7	Shiyeliisky	3239,7	19,7	19,7	20,4	11,3	1200,2	1262,4	20
Mangistau									
1	Beineuski	4051,9				286,0	2936,2	2936,5	"8-10
2	Karakiyanski	6583,6					5156,8	5157,1	"8-10
3	Mangistausky	4759,6					3750,8	3751,2	"8-10
4	Tupkaragansky	1037,4					735,1	735,2	"8-10
Pavlodar									
1	Aktogaysky	977,8	21,1	0,2	279,9	334,2	575,5	911,2	20
2	Bayanaulsky	1850,8	45,1		156,8	9,9	1486,0	1697,8	20
3	Zhelezinsky	766,8	63,7		195,3	9,3	403,4	672,1	"15-20
4	Irtyshsky	1019,0	242,0		164,6	19.8	496,8	923,3	25
5	Kachirsky	675,2	162,2	3,3	37,7	25,7	385,0	611,0	"15-20
6	Lebyazhinsky	806,5	88,1	0,8	52,1	40,6	427,1	608,3	15
7	Maysky	1810,7	47,1		1448,3	43,3	1409,9	1648,9	15
8	Pavlodarsky	605,3	145,4	4,0	105,2	43,1	242,9	537,8	20
9	Uspensky	549,4	124,4	0,3	172,0	6,7	189,3	486,6	20
10	Sharbaktinsky	684,9	168,5	1,6	17,8	11,0	360,7	558,0	20

№	Name of oblast and rayon	Total area	Including					Total agricultural land	Average yield class score
			Ploughed lands		Fallow lands	Hayfields	Pastures		
			Total	Irrigated					
North Kazakhstan									
1	Aiyrtausky	960,4	387,8	0,1	21,7	12,0	311,6	734,1	48
2	Akzharsky	804,3	390,4	0,7	59,1	4,0	381,8	735,5	40
3	Akkaiynsky	470,7	233,7	0,8			158,7	393,4	43
4	Yessilsky	510,9	285,2		18,6	8,8	134,4	447,2	"45-50
5	Zhambylsky	746,5	207,8		130,7		277,5	616,5	43
6	Magzhan Zhumabayev rayon	780,7	462,9				173,5	637,2	49
7	Kysylzharsky	618,6	217,9	3,8		14,1	213,6	447,6	46
8	Mamlyutsky	410,0	177,5		0,7		146,4	325,2	46
9	Taiynshinsky	1143,4	509,9	1,0	202,4	0,2	350,1	1063,3	45
10	Timiryazevsky	451,2	243,4		24,7		145,8	414,1	43
11	Ualikhanovsky	1287,7	181,2		152,3	1,0	772,1	1107,1	26
12	Tselinny	1108,7	636,1	1,3	117,6	1,1	288,4	1043,7	48
13	Shal Akyna	484,1	225,8	5,8	30,5	1,0	157,2	415,0	49
South Kazakhstan									
1	Baydibeksky	721,9	76,5	7,5	47,2	36,1	460,1	620,4	15-20
2	Kazygurtsky	409,3	94,9	10,3	3,2	32,0	216,9	349,5	15-20
3	Maktaaralsky	176,9	121,8	119,8	0,5		10,3	136,8	20-23
4	Ordanasynsky	272,6	670,9	27,1	22,6	1,5	151,9	246,5	до 15
5	Otyrarsky	1807,0	10,3	10,3	20,0	15,6	1645,7	1691,8	15-20
6	Sayramsky	172,0	93,1	28,9	3,1	2,6	45,9	151,9	15-20
7	Saryagashsky	761,3	52,3	37,2	52,1	1,5	617,1	731,9	15-20
8	Sosaksky	4105,0	8,8	4,4	14,1	11,8	3504,3	3539,3	до 15
9	Tolebiysky	315,1	69,7	11,9	0,2	8,5	139,7	221,0	15-20
10	Tyulkubassky	233,8	64,4	12,8		7,6	96,8	173,7	30
11	Shardarinsky	1295,7	51,5	51,2	13,7	1,5	1095,2	1162,4	15-20

Source: Agency on Land Resources of the RK, Astana, 2001

7. Morbidity rates for rural population of Kazakhstan
(number of first time patients per 100,000 population)

Oblast	All diseases							
	Overall		Adults		Teenagers		Children	
	2000	2001	2000	2001	2000	2001	2000	2001
The Republic of Kazakhstan	32090,0	34481,7	25772,4	228519,9	40917,8	43879,9	2261,0	43900,4
Akmola	24170,2	26666,9	18111,5	21195,2	45900,0	48551,9	3540,2	34718,4
Aktobe	19781,3	33367,7	19194,3	32000,0	11419,5	14526,0	2248,0	39006,9
Almaty	36541,8	40628,8	28521,0	31133,2	38775,2	43092,9	1834,9	61983,0
Atyrau	24184,0	25259,9	18265,2	25065,5	26663,6	29200,0	3467,6	24971,0
East Kazakhstan	48711,8	50122,0	37234,9	39349,7	68433,5	72309,9	0618,1	69978,4
Zhambyl	35259,8	34396,2	30870,8	28479,9	42512,7	48158,7	1412,3	42237,3
West Kazakhstan	44693,2	51287,6	33440,0	42942,0	57036,3	60836,8	4849,5	66159,9
Karaganda	59434,0	63694,2	52768,9	58250,3	74741,5	69690,1	9238,4	72884,6
Kyzylorda	45640,7	48759,8	39168,8	41395,8	48464,5	56802,5	4740,0	58258,5
Kostanai	17321,7	18049,8	13879,3	14252,7	31077,6	32410,0	2772,1	24094,1
Mangistau	28329,4	40582,4	18447,2	32655,9	26707,3	37804,9	1782,6	51559,1

Oblast	All diseases							
	Overall		Adults		Teenagers		Children	
	2000	2001	2000	2001	2000	2001	2000	2001
Pavlodar	31154,2	33870,2	23454,2	25498,1	58736,2	63088,1	3010,8	46860,0
North Kazakhstan	24393,3	23238,3	18543,5	18125,3	31448,7	32391,3	7326,5	33963,1
South Kazakhstan	22478,0	22312,8	18294,6	19415,7	27538,0	29724,4	7481,1	25172,2

Source : Ministry of Health Protection of Kazakhstan, Statistics Bulletin "Health of the Population in Kazakhstan and activity of health care organizations in 2001", Astana Almaty, 2002.

8. Basic health indicators of the rural population of Kazakhstan, 2001 (dependent on climatic and environmental factors)

Oblast	Cases of Disease per 100,000 population										
	Infectious and parasitic diseases	Neoplasms	Blood diseases, affecting immune mechanism		Endocrine	Blood system	Respiration organs	Digestion organs	Urino-genital system	Inborn anomalies, deformations and chromosomic i regularities	
			Total	Children						Total	Children
Republic of Kazakhstan	1433,2	208,7	1606,6	520,2	445,9	1242,1	14282,9	2664,8	2525,8	77,8	138,0
Akmola	1676,9	235,2	806,5	41,6	340,5	943,8	11349,7	1217,3	2097,6	42,7	93,6
Aktobe	834,4	125,0	1926,0	24,8	446,8	1516,1	12743,2	2155,8	2764,1	43,6	88,2
Almaty	838,6	160,9	1748,5	623,4	302,7	1462,0	19789,6	3409,2	2850,5	121,1	201,8
Atyrau	1351,3	156,7	1437,4	30,0	297,3	817,1	12889,3	1418,7	1267,9	55,1	75,6
East Kazakhstan	1460,5	304,5	1698,9	394,6	661,8	1276,3	21674,6	3010,0	3735,2	57,4	142,6
Zhambyl	1412,8	187,0	1265,7	2,7	622,3	1396,9	13641,0	2239,0	2538,0	89,0	183,4
West Kazakhstan	4323,2	294,6	2596,3	1222,0	1003,4	2546,3	15506,8	5210,7	3333,3	120,1	259,3
Karaganda	2542,4	288,4	2064,5	111,5	706,0	2069,6	23245,9	3063,7	5202,4	112,6	246,4
Kyzylorda	1777,6	65,6	4942,3	2705,2	644,4	1999,6	18094,2	5967,2	3510,0	38,6	78,1
Kostanai	585,2	253,2	288,1	285,6	280,8	755,1	6978,7	1006,6	1619,1	48,4	105,2
Mangistau	2522,8	177,7	2663,3	32,3	367,1	758,7	13900,3	2950,9	2118,5	47,7	71,7
Pavlodar	3286,0	213,1	1236,2	513,0	324,2	1213,5	13905,4	1867,7	2388,7	72,8	145,0
North Kazakhstan	960,5	548,7	576,4	47,8	231,4	709,3	8993,3	2345,9	1951,8	129,7	136,7
South Kazakhstan	785,3	55,6	1617,1	701,3	367,7	789,4	9410,7	2215,0	1581,4	51,9	90,5

Source : Ministry of Health Protection of Kazakhstan, Statistics Bulletin "Health of the Population in Kazakhstan and activity of health care organizations in 2001", Astana Almaty, 2002.

9. Technical characteristics of school buildings in rural areas

2000-2001 academic year

Oblast and rayon	Schools, total	Schools, located in standard buildings	Schools, located in adapted buildings	School buildings in emergency state and requiring repair works
Republic of Kazakhstan	**6629**	**3436**	**3394**	**1233**
Akmola	**668**	**429**	**239**	**40**
Akkolsky	35	26	9	1
Arshalynsky	35	16	19	
Astrakhansky	39	26	13	
Atbasarsky	42	35	7	
Bulandynsky	48	35	13	
Yegindykolsky	14	9	5	2
Yenbekshildersky	47	25	22	4
Yereymentausky	40	20	20	
Yessilsky	32	24	8	
Zhaksynsky	38	29	9	
Zharkainsky	27	21	6	3
Zerendinsky	80	41	39	10
Korgalzhinsky	24	11	13	4
Sandyktausky	40	25	15	
Tselinogradsky	44	28	16	9
Sjortandinsky	30	23	7	7
Schouchinsky	53	35	18	
Aktobe	**414**	**148**	**266**	**108**
Aytekebiysky	42	12	30	1
Alginsky	36	19	17	15
Bayganinsky	28	8	20	5
Irgizsky	23	3	20	10
Kargalinsky	24	12	12	7
Martyksky	39	15	24	7
Mugalzharsky	39	15	24	12
Temirsky	46	17	29	23
Uilsky	32	6	26	
Khobdinsky	25	7	18	14
Khromtausky	46	20	26	3
Shalkarsky	34	14	20	11
Almaty	**679**	**433**	**246**	**254**
Aksusky	46	23	23	2
Alakolsky	50	32	18	7
Balkhashsky	27	16	11	4
Yenbekshikazakhsky	75	50	25	30
Yeskeldinsky	30	25	5	18
Zhambylsky	63	35	28	5
Iliisky	38	23	15	15
Karasaisky	46	36	10	18
Karatalsky	27	19	8	8
Kerbulaksky	51	22	29	19
Koksusky	24	13	11	14
Panfilovsky	49	29	20	31
Raiymbeksky	54	39	15	23
Sarkandsky	31	22	9	10
Talgarsky	37	29	8	30

				2000-2001 academic year
Oblast and rayon	Schools, total	Schools, located in standard buildings	Schools, located in adapted buildings	School buildings in emergency state and requiring repair works
Uigursky	31	20	11	20
Atyrau	134	70	64	18
Makhambetsky	17	11	6	4
Zhylyuysky	20	15	5	
Indersky	16	7	9	2
Issataysky	14	8	6	
Kyzylkoginsky	17	10	7	3
Kurmaganzinsky	38	11	27	9
Makatsky	12	8	4	
East Kazakhstan	615	309	306	106
Abayski	13	10	3	6
Ayagozsky	57	22	35	5
Beskaragaysky	27	15	12	7
Borodulikhinsky	40	23	17	9
Glubokovsky	33	27	6	18
Zharminsky	64	17	47	6
Zaissansky	30	22	8	6
Katon-Karagaysky	55	21	34	7
Kokpetinsky	59	25	34	9
Kurchumsky	56	22	34	10
Tarbagataysky	51	22	29	6
Ulansky	38	24	14	8
Urdzharsky	60	34	26	4
Shemonakhainsky	32	25	7	5
Zhambyl	398	209	189	82
Baysaksky	43	29	14	15
Zhambylsky	39	19	20	
Zhualinsky	43	16	27	20
Kordaysky	47	30	17	3
Merkensky	44	18	26	
Moiynkumsky	37	19	18	2
Sarussysky	31	19	12	4
Talassky	28	17	11	11
Turar Ryskulov	38	19	19	9
Shusky	48	23	25	18
West Kazakhstan	461	169	282	177
Akzhaiyksky	57	16	41	43
Bokeyordinsky	24	8	16	11
Burlinsky	32	19	13	20
Jangalinsky	27	10	17	11
Zhanibeksky	23	4	19	18
Zelenovsky	65	32	33	6
Kaztalovsky	54	15	29	5
Karatobinsky	25	8	17	5
Syrymsky	35	13	22	18
Taskalinsky	32	14	18	2
Terektinsky	57	20	37	33
Chingirlausky	30	10	20	5
Karaganda	404	197	207	13
Abaysky	38	19	19	
Aktogaysky	27	13	14	

2000-2001 academic year

Oblast and rayon	Schools, total	Schools, located in standard buildings	Schools, located in adapted buildings	School buildings in emergency state and requiring repair works
Bukhar-Zhyrausky	61	37	24	
Zhanaarkinsky	36	12	24	
Karkaralinsky	61	25	36	4
Nurinsky	46	31	15	6
Ossakarovsky	54	26	28	
Ulytausky	19	12	7	3
Shetsky	62	22	40	
Kostanai	**643**	**400**	**243**	**11**
Altynsarinsky	27	16	11	
Amangeldinsky	31	19	12	
Auliyekolsky	46	25	21	
Denissovsky	37	29	8	5
Jangeldinsky	34	13	21	
Zhitikarinsky	29	28	1	2
Kamystinsky	28	21	7	
Karabalyksky	52	31	21	
Karasusky	46	33	13	
Kostanaisky	54	32	22	
Mendykarinsky	47	26	21	
Naurzumsky	22	10	12	
Sarykolsky	37	23	14	
Taranovsky	44	27	17	
Uzunkolsky	49	28	21	
Fedorovsky	60	39	21	4
Kyzylorda	**228**	**103**	**125**	**62**
Aralsky	46	8	38	14
Zhalagashsky	21	17	4	12
Zhanakorgansky	41	24	17	14
Kazalinsky	41	16	25	8
Karmakshinsky	22	11	11	6
Syrdaryinsky	17	13	4	3
Shiyelüsky	40	14	26	5
Mangistau	**54**	**34**	**20**	**13**
Beineuski	17	10	7	2
Karakiyanski	12	9	3	10
Mangistausky	19	10	9	1
Tupkaragansky	6	5	1	
Pavlodar	**320**	**194**	**126**	**117**
Aktogaysky	32	14	18	9
Bayanaulsky	33	18	15	14
Zhelezinsky	43	18	25	10
Irtyshsky	39	20	19	4
Kachirsky	39	22	17	12
Lebyazhinsky	25	14	11	14
Maysky	16	15	1	9
Pavlodarsky	30	26	4	17
Uspensky	25	20	5	6
Sharbaktinsky	38	27	11	22
North Kazakhstan	**713**	**396**	**317**	**135**
Aiyrtausky	85	40	45	9
Akzharsky	30	25	5	5

				2000-2001 academic year
Oblast and rayon	Schools, total	Schools, located in standard buildings	Schools, located in adapted buildings	School buildings in emergency state and requiring repair works
Akkaiynsky	37	16	21	9
Yessilsky	55	23	32	4
Zhambylsky	65	23	42	22
Magzhan Zhumabayev rayon	67	44	23	3
Kysylzharsky	65	27	38	8
Mamlyutsky	43	24	19	1
Taiynshinsky	92	65	27	20
Timiryazevsky	26	18	8	22
Ualikhanovsky	35	23	12	0
Tselinny	68	49	19	8
Shal Akyna	45	19	26	24
South Kazakhstan	**792**	**282**	**510**	**45**
Baydibeksky	54	14	40	
Kazygurtsky	68	18	50	
Maktaaralsky	116	48	68	16
Ordanasynsky	60	17	43	17
Otyrarsky	45	16	29	5
Sayramsky	103	42	61	5
Saryagashsky	135	40	95	
Sosaksky	36	10	26	
Tolebiysky	67	27	40	2
Tyulkubassky	54	25	29	
Shardarinsky	54	25	29	

Source: Ministry of Education and Science of Kazakhstan, Astana, 2001.

10. Data on public cultural and sports centers in rural areas in 2001

						Number		
№	Oblast	Libraries	Cultural centers and clubs	Movie theatres and projectors	Sports centers	Stadiums	Sports halls	Sports grounds and courts	Swimming pools and other units
1	Akmola	346	158	33	4	13	453	594	3
2	Aktobe	125	82	1	-	11	201	588	18
3	Almaty	49	35	1	1	12	519	-	-
4	Atyrau	97	65	-	-	2	81	298	1
5	East Kazakhstan	199	127	-	1	10	411	-	-
6	Zhambyl	171	57	-	-	12	224	-	-
7	West Kazakhstan	361	212	-	-	-	193	133	-
8	Karaganda	297	114	-	15	19	592	-	-
9	Kyzylorda	308	109	-	4	119	417	-	-
10	Kostanai	178	141	-	-	6	118	-	-
11	Mangistau	31	27	-	-	1	36	68	-
12	Pavlodar	23	7	-	-	10	236	-	-
13	North Kazakhstan	263	66	16	1	27	517	1059	7
14	South Kazakhstan	355	72	-	-	19	-	-	-

Source: Social and economic oblast passports, 2001

11. Public and political organizations in rural areas

Oblast	Parties	Public organizations and movements	National and cultural centers	Religious groupings
Akmola	35	169	30	143
Aktobe	13	6	14	67
Almaty	7	88	23	426
Atyrau	9	78	11	8
East Kazakhstan	11	5	41	150
Zhambyl	15	12	21	297
West Kazakhstan	7	4	11	17
Karaganda	14	51	16	191
Kyzylorda	12	137	13	105
Kostanai	12	3	6	111
Mangistau	8	4	19	19
Pavlodar	12	690	27	131
North Kazakhstan	10	3	13	163
South Kazakhstan	12	3	18	401

Source: Social and economic oblast passports

12. Classification of rural rayons of Kazakhstan (from preceding tables)

№	Oblast	High potential	Stable	Low potential
1	**Akmola**	Schouchinsky Zerendinsky Yegindykolsky Astrakhansky Arshalinsky Bulandinsky Yessilsky Zharkainsky Atbassarsky Tselinogradsky Shortandinsdky	Zhaksynsky Yereimentausky Akkolsky Sandyktausky	Yenbekshildersky Korgalzhinsky
Total		11	4	2
2	**Aktobe**	Martuksky Algimsky Kargalinsky Aitekebiysky Shalkarsky	Mugalzharsky Khromtausky	Uilsky Temirsky Issataysky Irgizsky Bayganinsky
Total		5	2	5
3	**Almaty**	Karassaysky Iliisky Koksussky Sarkandsky Talgarsky Yenbekshikazakhsky Yeskeldinsky Kerbulaksky Uigursky Alakolsky Karatalsky	Zhambylsky Panfilovsky	Raymbeksky Aksusky Balkhashsky
Total		11	2	3
4	**Atyrausky**		Issataysky Zhylyusky Makatsky Makhambetsky Indersky Kurmangazinsky Kyzylordinsky	

№	Oblast	High potential	Stable	Low potential
Total			7	
5	East Kazakhstan	Borodulikhinsky Glubokovski	Ayagozsky Kurchumsky Shemonaikhninsky Zharminsky Urdzharsky Zyryanovsky	Ulansky Zaissansky Kokpetinsky Tarbagataysky Abaysky Beskaragaysky Katon-Karagaysky
Total		2	6	7
6	Zhambyl	Merkensky Baisaksky After T. Ryskulov	Talassky Moiynkusky Zhambylsky Kordaysky Shusky	Zhualinsky Sarususky
Total		3	5	2
7	West Kazakhstan	Taskalinsky	Zelenovsky Terektinsky Burlinsky Akzhaiksky Zhanybeksky Bokeyordinsky Zhangalinsky Chingirlausky	Karatobinsky Kaztalovsky Syrymsky
Total		1	8	3
8	Karaganda	Ossakarovsky Nurinsky Bukhar-Zhyrausky	Ulytausky Abaysky Shetsky Zhanaarkinsky Aktogaysky	Karkaralinsky
Total		3	5	1
9	Kostanai	Kamystinsky Taranovsky Altynsarinsky Karasusky Fedorovski Karabalyksky Zhetykarinsky Denisovsky	Uzynkolsky Kostanaisky Sarykolsky Mendykarinsky Naurzumsky Zhangeldinsky Auliyekolsky	Amangeldinsky
Total		8	7	1
10	Kyzylorda		Syrdaryinsky Zhalagashsky Kazalinsky Karmakshinsky	Aralsky Shiyelsky Zhanakorgansky
Total			4	3
11	Mangistau		Karakiyansky Tupkargansky Beyneusky Mangistausky	
Total			4	
14	Pavlodar	Irtyshsky Uspensky Kachirsky	Sharbaktinsky Pavlodarsky Bayanaulsky	Lebyazhinsky Maysky Zhelezinsky Aktogaysky
Total		3	3	4
12	North Kazakhstan	Timiryazevsky Yessilsky	Aiyrtausky Taiynshinsky	Akkaiynsky

№	Oblast	High potential	Stable	Low potential
		Kyzylzharsky After M.Zhumabayev Mamlyutsky Shal Akyna Tselinny Akzharsky	Zhambylsky Ualikhanovsky	
Total		8	4	1
13	**South Kazakhstan**	Tyulkubassky Sarygaashsky Tolebiysky Maktaaralsky Sayramsky Shardarinsky Ordabasinsky	Baydibeksky Otyrarsky Kazygurtsky Sozaksky Aryssky	
Total		7	5	

MAPS

Characteristics of rural areas of Kazakhstan according to the results of a survey

Glossary:

Region – a territorial unit that includes several settlements and is formed and governed in the national interests. Examples of a region are oblast, rayon and aul okrug as main units of the administrative-territorial division of the Republic.

Cities (towns):

Of republican subordination - cities that are of the strategic state importance or whose population exceeds one million;

Of oblast subordination – cities that are major economic and cultural centers with developed production and social infrastructure and whose population exceeds 50,000;

Of rayon subordination – towns that have industrial production, public utility units, public housing sectors, a developed network of educational, cultural, healthcare and trade units; whose population exceeds 10,000 with industrial and service sector employees and their family members accounting for more than two thirds of the total population.

Aul (village) – a settlement whose population exceeds 50, with agricultural sector employees and their family members accounting for more than half of the total population.

Settlement –territory, densely populated as a result of economic or other public activities, with population exceeding 50, which is registered according to the relevant laws and regulations and is governed by local representative and executive bodies.

Settlements, located on the territory of the Republic of Kazakhstan can be classified as urban and rural. Cities (towns) of republican, oblast and rayon subordination as well as *poselki* are classified as urban type settlements. All other settlements are classified as rural, regardless of their administrative subordination.

Poselki – settlements at industrial enterprises, construction sites, railway stations, and other economically important sites, whose population exceeds 3,000 with industrial and service sector employees accounting for more than two thirds of the total population. Settlements located in recreational zones are also classified as *poselki* as well as countryside settlements (dacha settlements) where over 25% of the adult population are engaged in agricultural activities.

Group water supply network – a system of centralized water supply, delivering water for household and drinking needs to residents of several settlements from one source, with water characteristics satisfying the existing bacteriological, chemical and organic standards.

Stand-alone water supply sources – wells, springs, artesian wells without distribution networks.

The share of water from stand-alone sources unacceptable by microbiological standards

low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards

low — average* — high

*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Akmola oblast

- KOKSHETAU — Oblast center
- Arshaly — Rayon center
- Rayon borders
- Railways
- Automotive roads

Access of rural rayons to water pipelines

high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

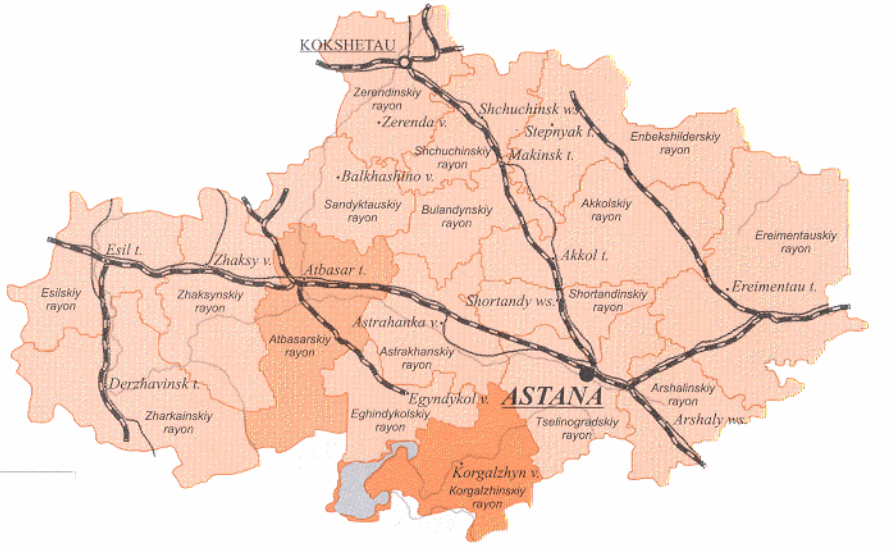
Poverty level in rural areas

low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons



low — average* — high

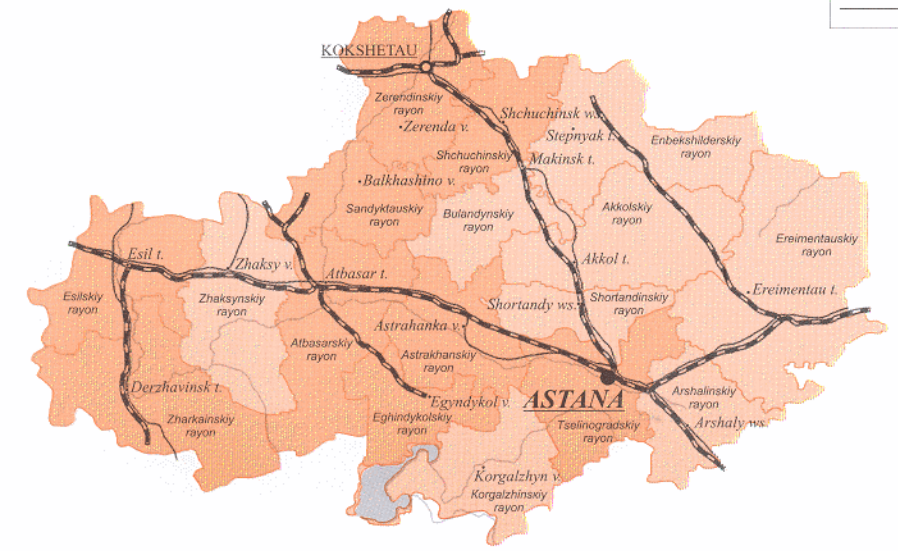
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Akmola oblast

KOKSHETAU	Oblast center
Arshaly	Rayon center
	Rayon borders
	Railways
	Automotive roads

Income per capita



high — average* — low

*National level 5571. Oblast level - 5215

Source: Ministry of State Revenues of the RK, 2001

Technical characteristics of primary and secondary education buildings

Total number of schools 668

429 - Schools in standard buildings

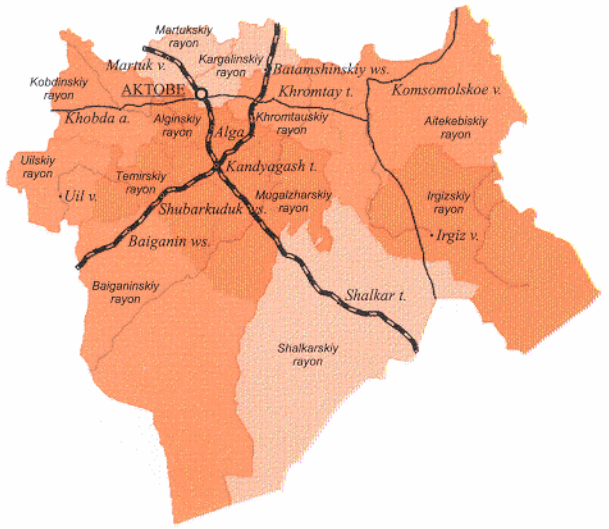
239 - Schools in the adjusted buildings

40 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

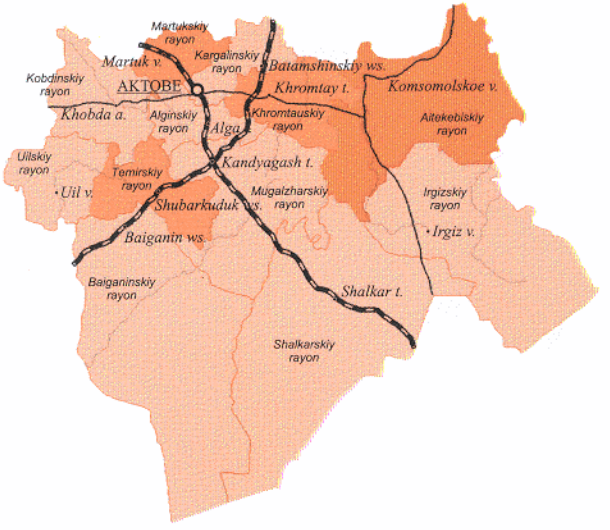


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

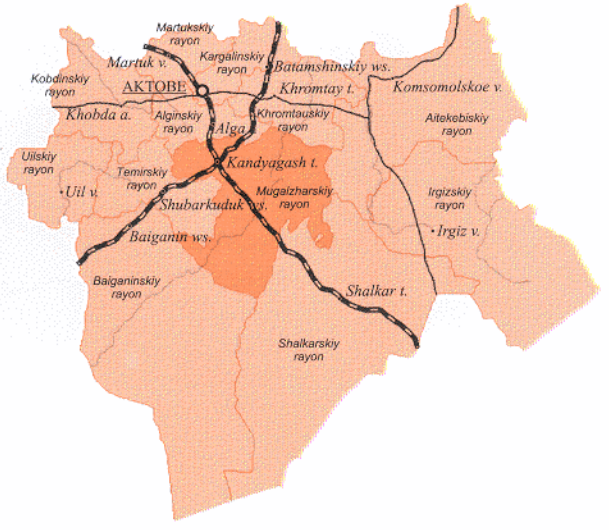
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Aktobe oblast

- AKTOBE — Oblast center
- *Shalkar* — Rayon center
- Rayon borders
- Railways
- Automotive roads

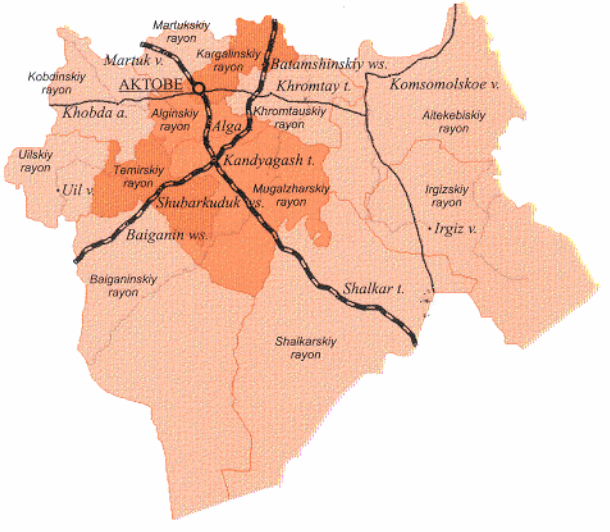
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

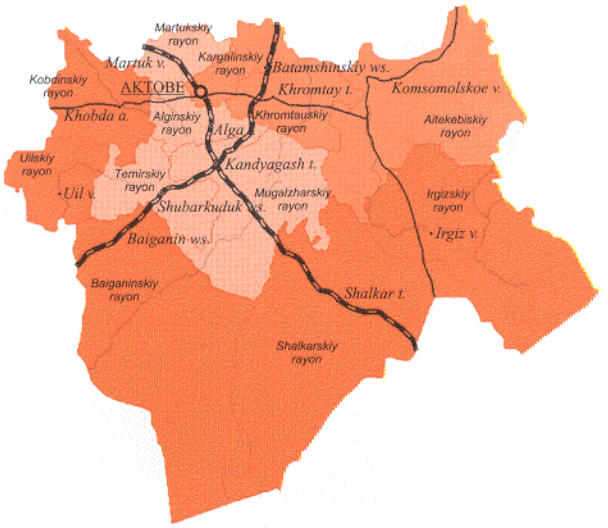


good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

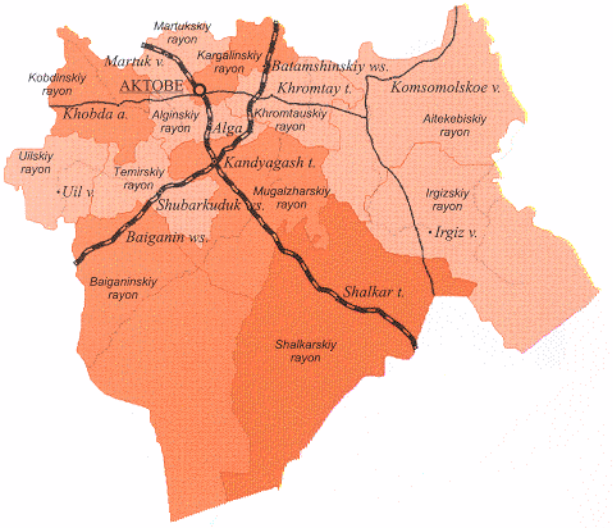


low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons



low — average* — high

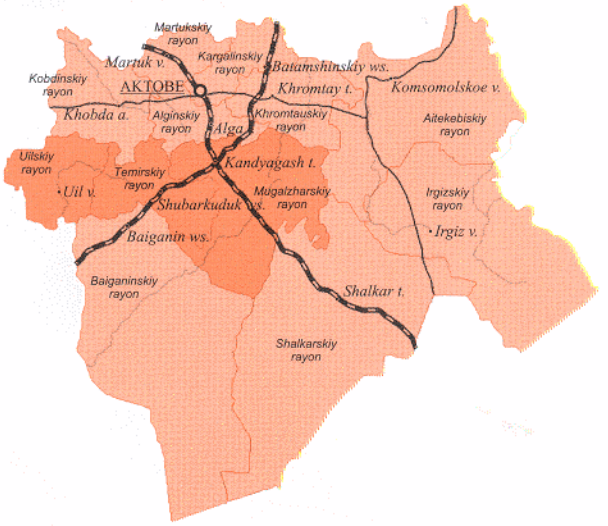
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Aktobe oblast

- AKTOBE — Oblast center
- *Shalkar* — Rayon center
- Rayon borders
- Railways
- Automotive roads

Income per capita

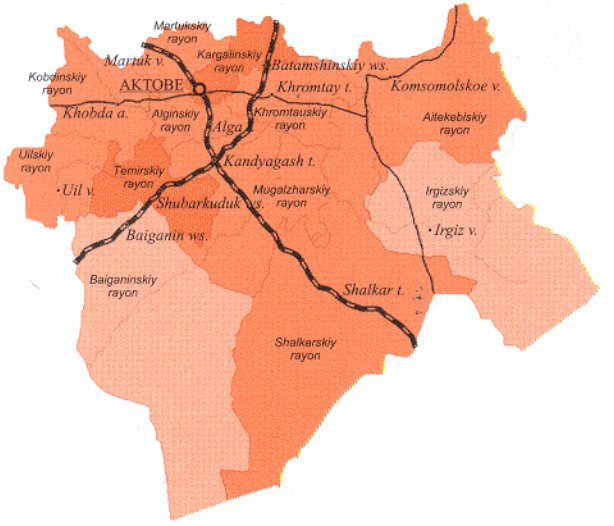


high — average* — low

*National level 5571. Oblast level - 4710

Source: Ministry of State Revenues of the RK, 2001

Technical characteristics of primary and secondary education buildings



Total number of schools 414

148 - Schools in standard buildings

266 - Schools in the adjusted buildings

108 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards

low — average* — high

*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Almaty oblast

- TALDYKORGAN — Oblast center
- Kegen — Rayon center
- Rayon borders
- Railways
- Automotive roads

Access of rural rayons to water pipelines

high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons

low — average* — high

*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001

Almaty oblast

- TALDYKORGAN — Oblast center
- Kegen — Rayon center
- Rayon borders
- Railways
- Automotive roads

Income per capita

high — average* — low

*National level 5571. Oblast level - 3639

Source: Ministry of State Revenues of the RK, 2001

Technical characteristics of primary and secondary education buildings

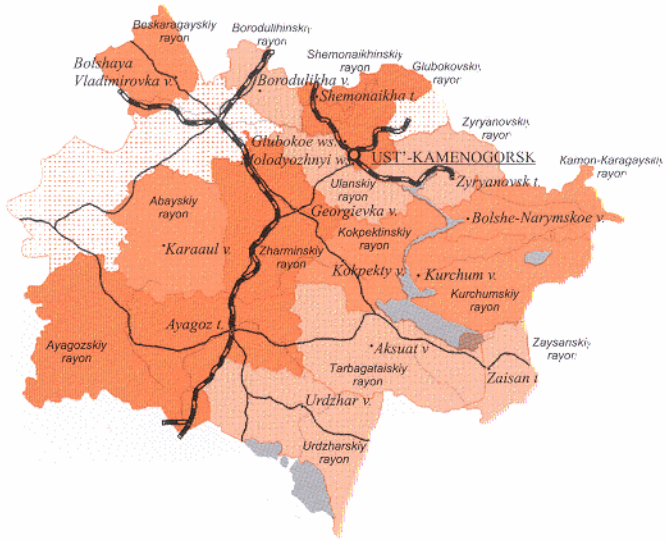
Total number of schools 679

433 - Schools in standard buildings
246 - Schools in the adjusted buildings
254 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001

The share of water from stand-alone sources unacceptable by microbiological standards

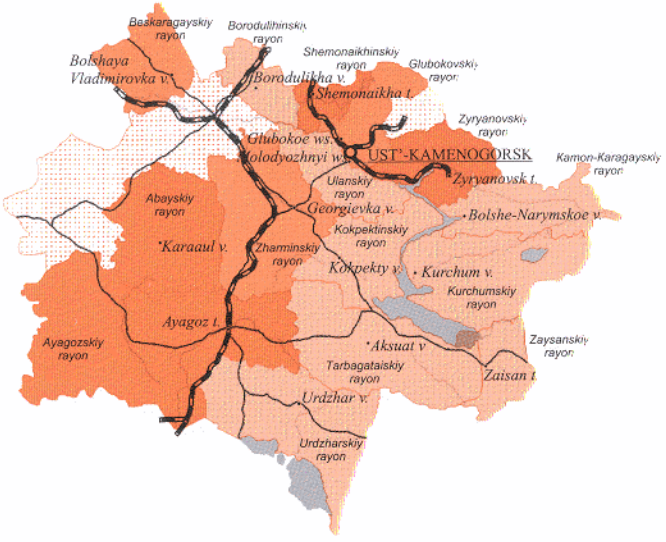


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

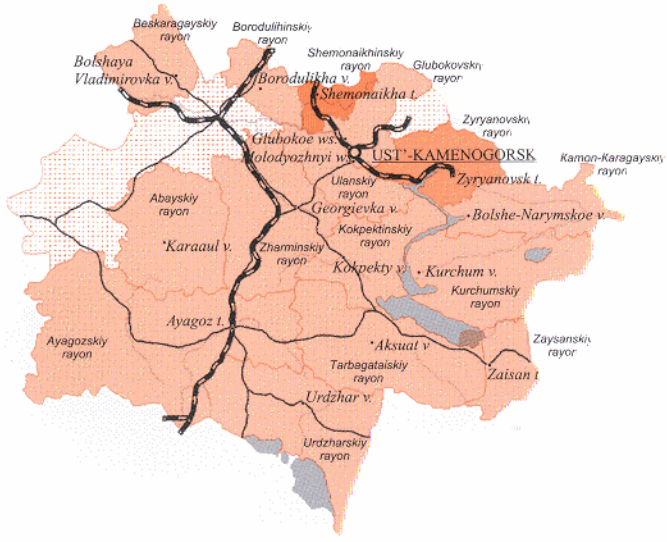
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Eastern Kazakhstan oblast

- UST'-KAMENOGORSK — **Oblast center**
- Zaisan — **Rayon center**
- **Rayon borders**
- **Railways**
- **Automotive roads**
- **Rural areas subordinated to towns**

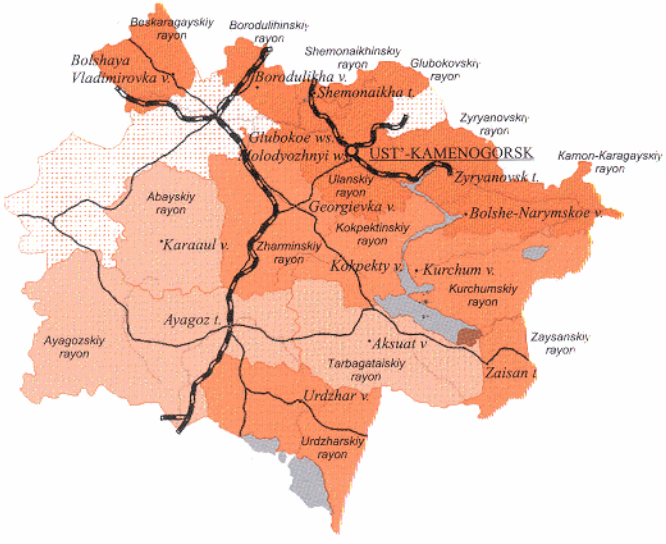
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

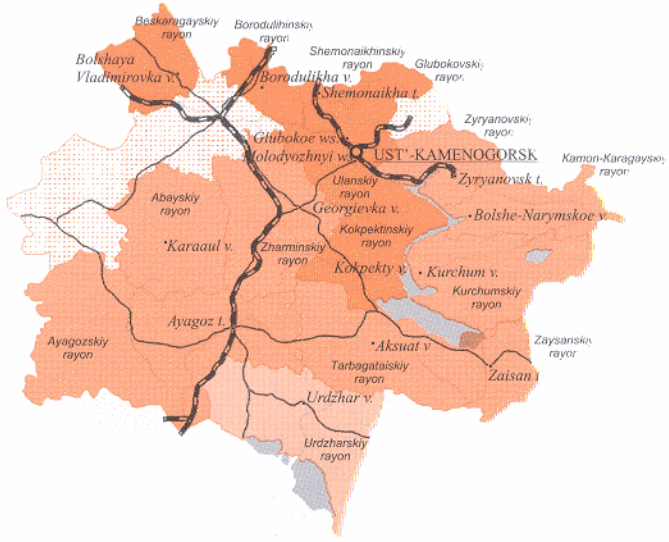


good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas



low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons

low — average* — high

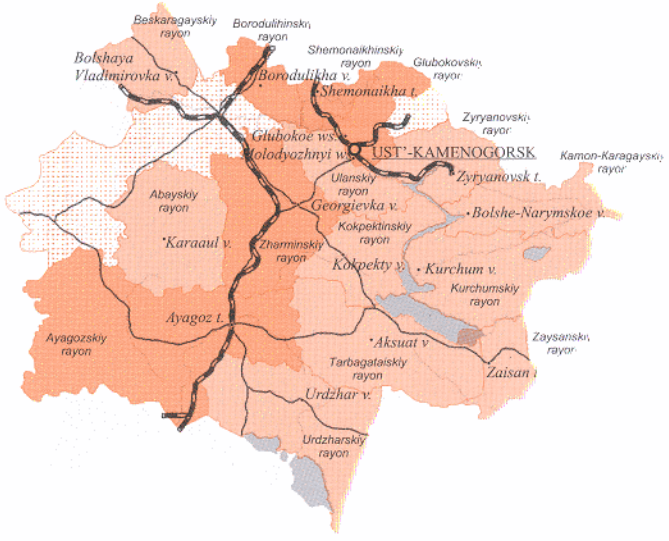
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Eastern Kazakhstan oblast

- UST'-KAMENOGORSK — Oblast center
- Zaisan — Rayon center
- Rayon borders
- Railways
- Automotive roads
- Rural areas subordinated to towns

Income per capita

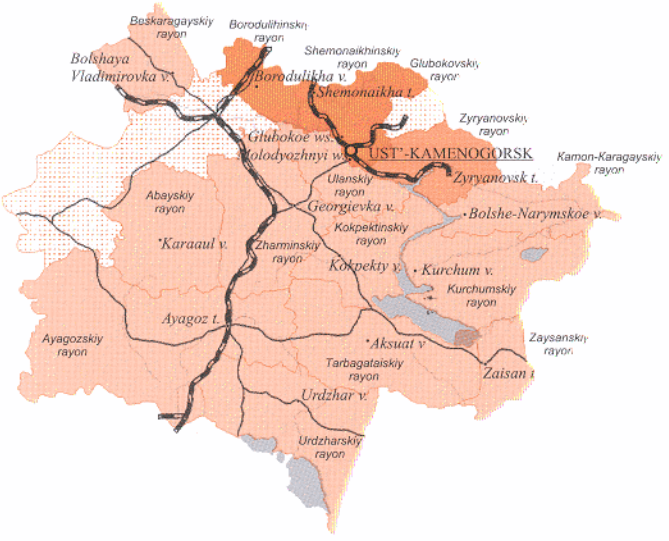


high — average* — low

*National level 5571. Oblast level - 4844

Source: Ministry of State Revenues of the RK, 2001

Technical characteristics of primary and secondary education buildings



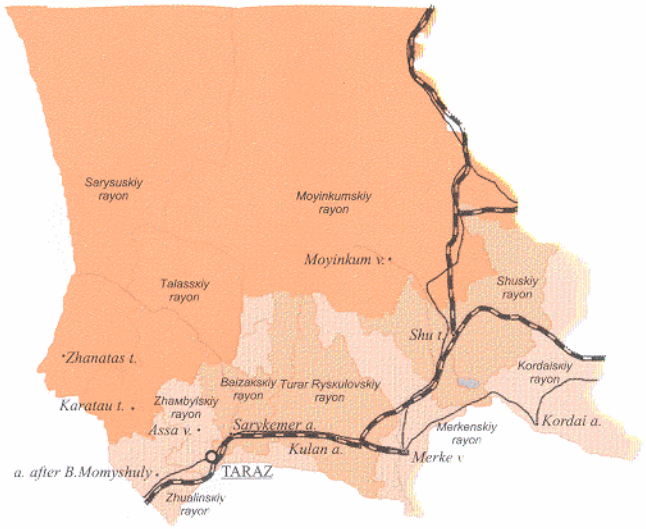
Total number of schools 615

309 - Schools in standard buildings
206 - Schools in the adjusted buildings
106 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

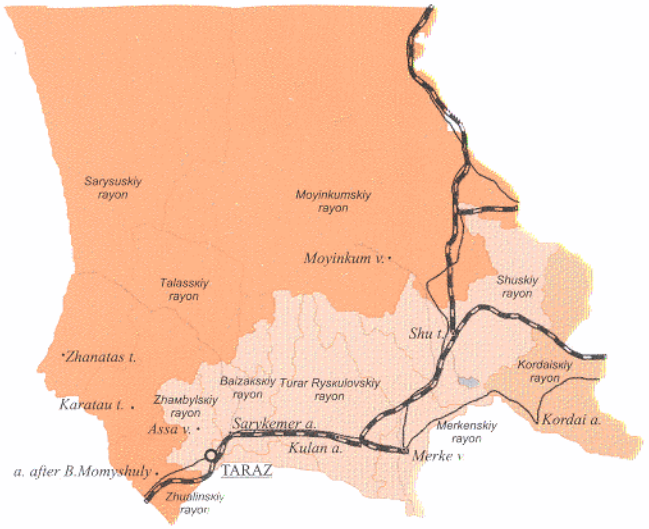


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Zhambyl oblast

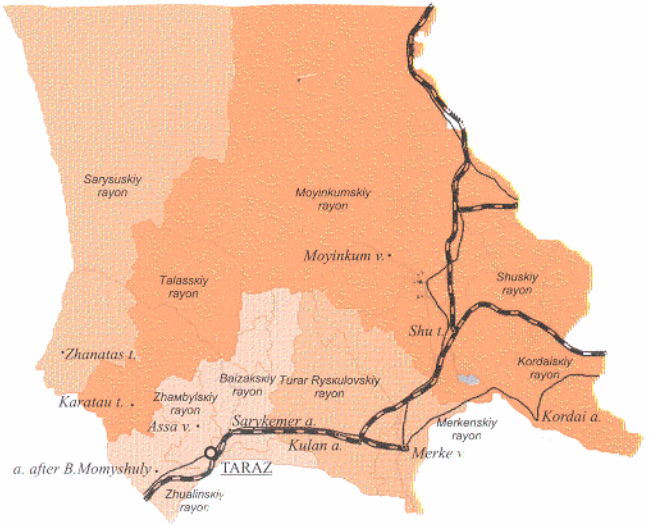
- TARAZ — Oblast center
- Korday — Rayon center
- Rayon borders
- Railways
- Automotive roads

Access of rural rayons to water pipelines

high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

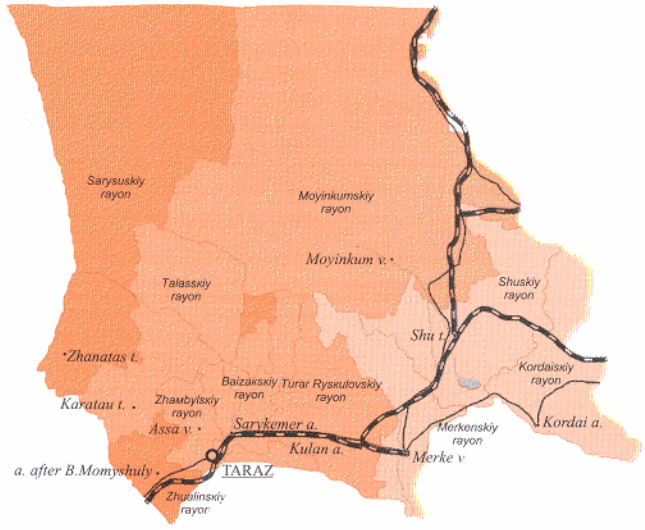


good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

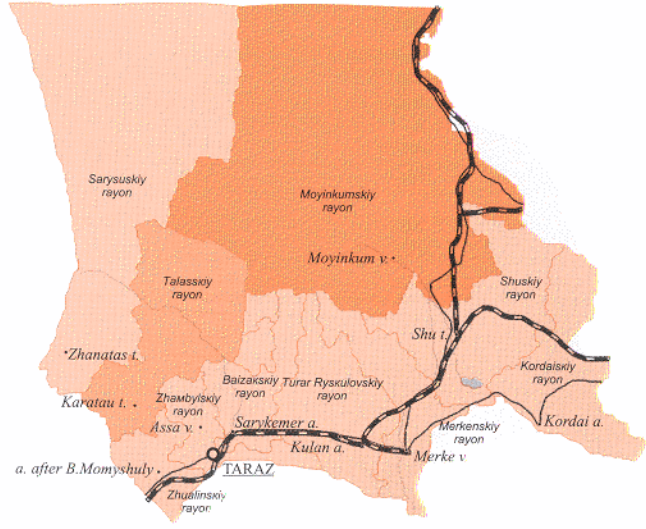


low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons



low — average* — high

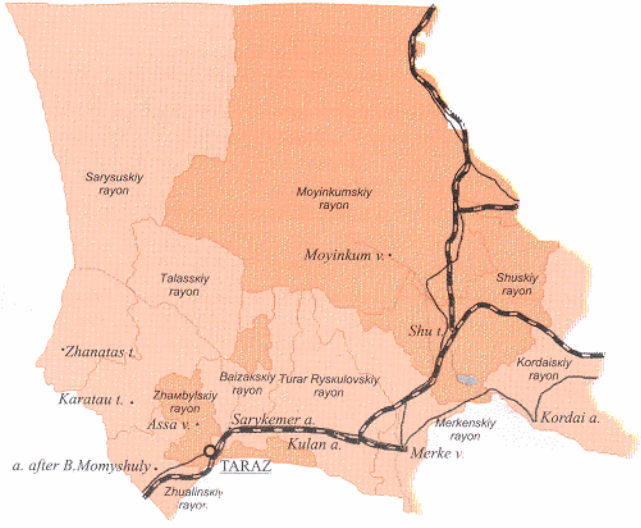
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Zhambyl oblast

- TARAZ — Oblast center
- Kordai — Rayon center
- Rayon borders
- Railways
- Automotive roads

Income per capita

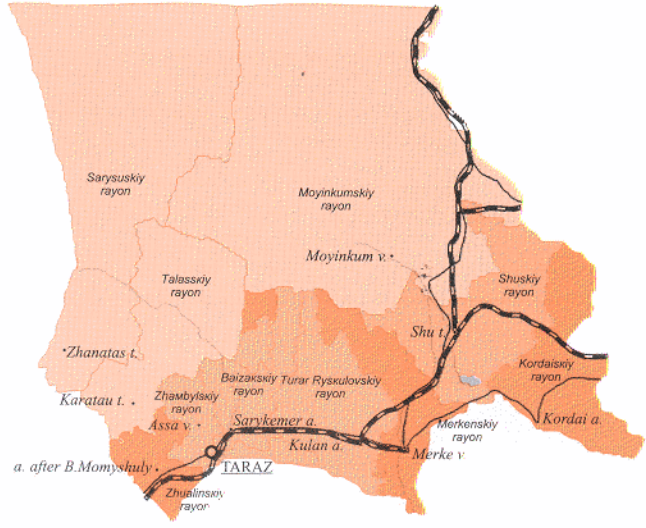


high — average* — low

*National level 5571. Oblast level - 3326

Source: Ministry of State Revenues of the RK, 2001

Technical characteristics of primary and secondary education buildings



Total number of schools 398

209 - Schools in standard buildings

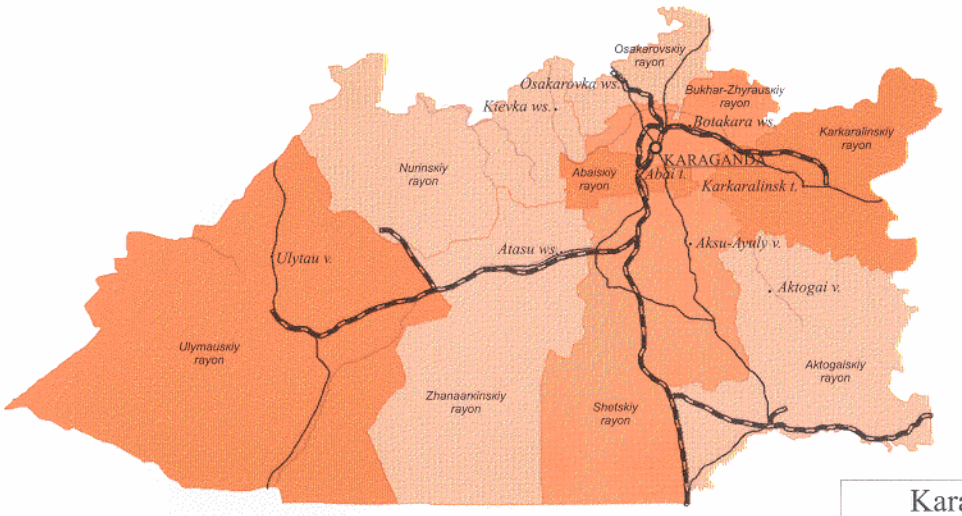
189 - Schools in the adjusted buildings

82 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

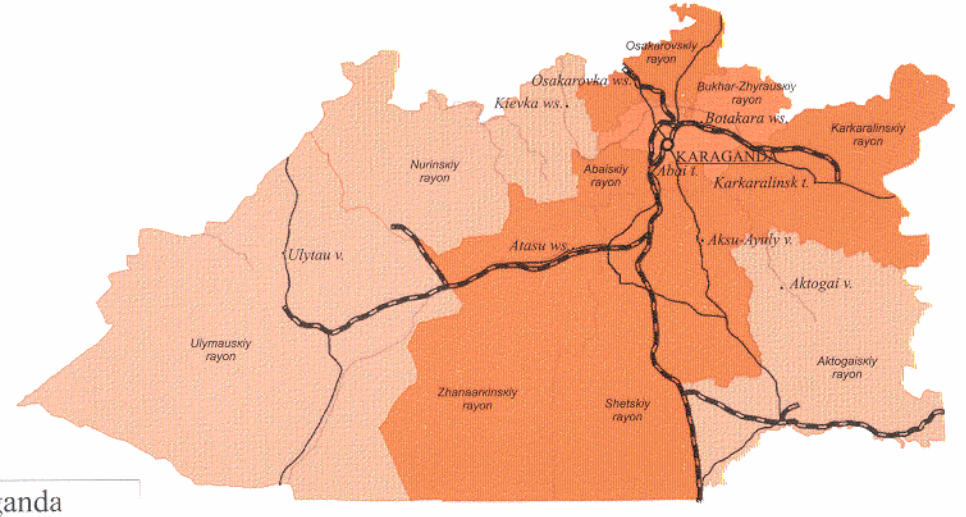


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

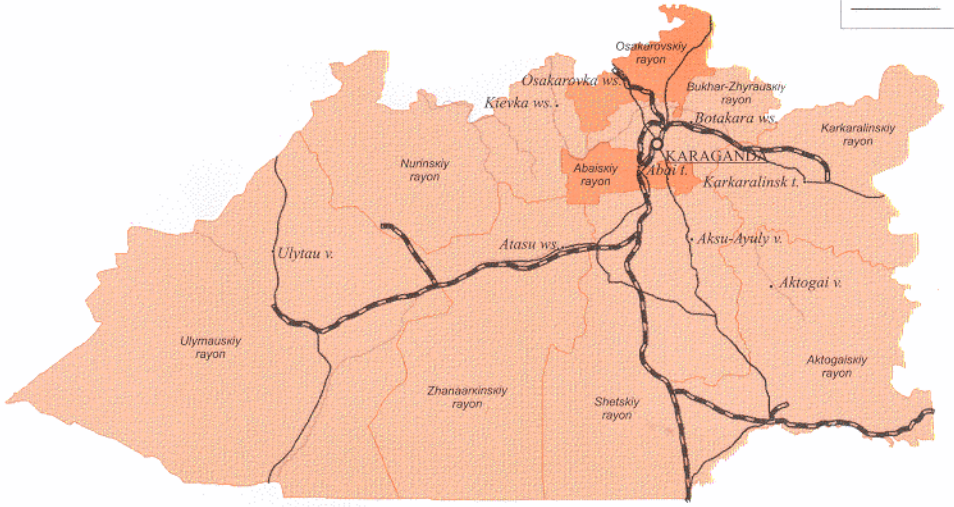
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Karaganda oblast

KARAGANDA	Oblast center
Aktogai	Rayon center
	Rayon borders
	Railways
	Automotive roads

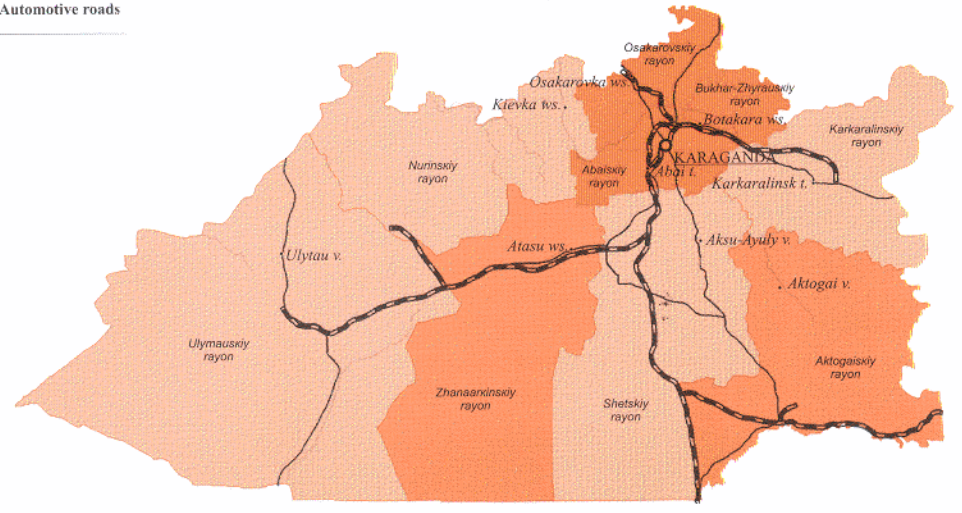
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

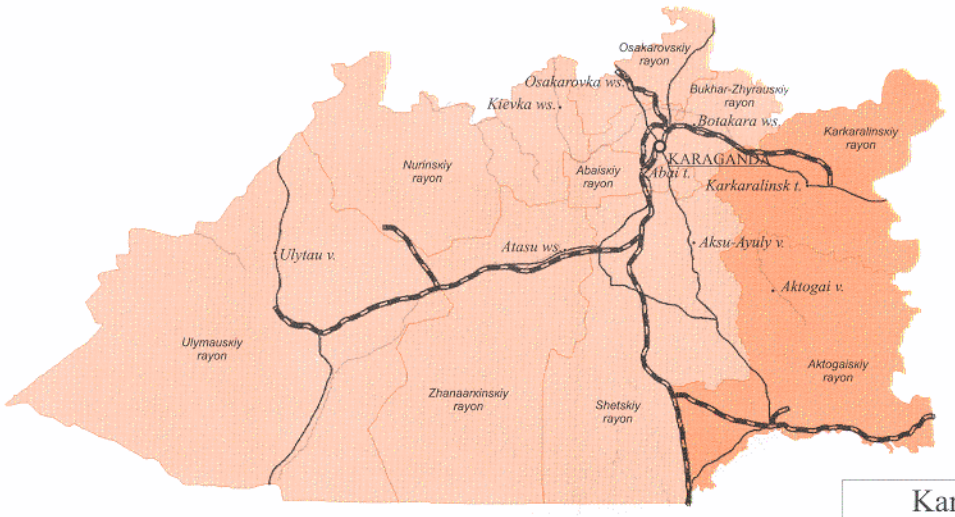


good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

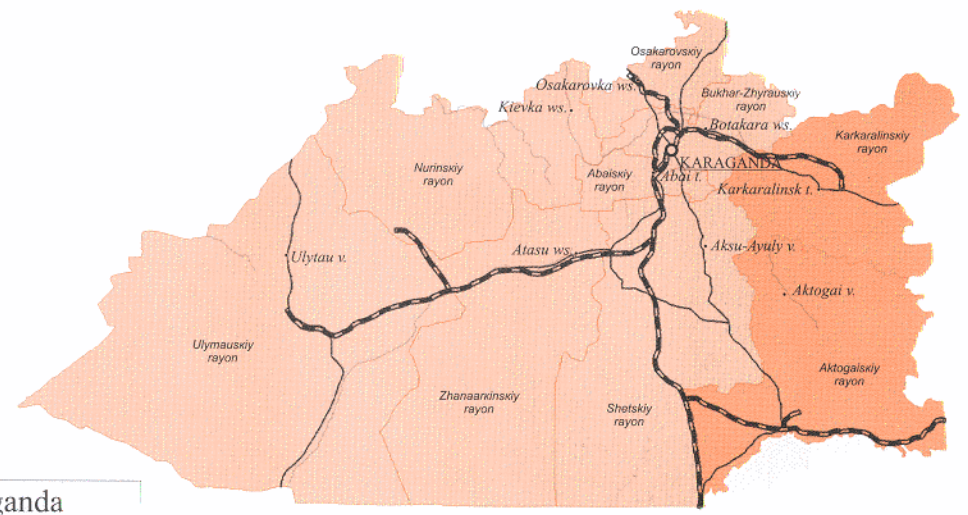


low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons



low — average* — high

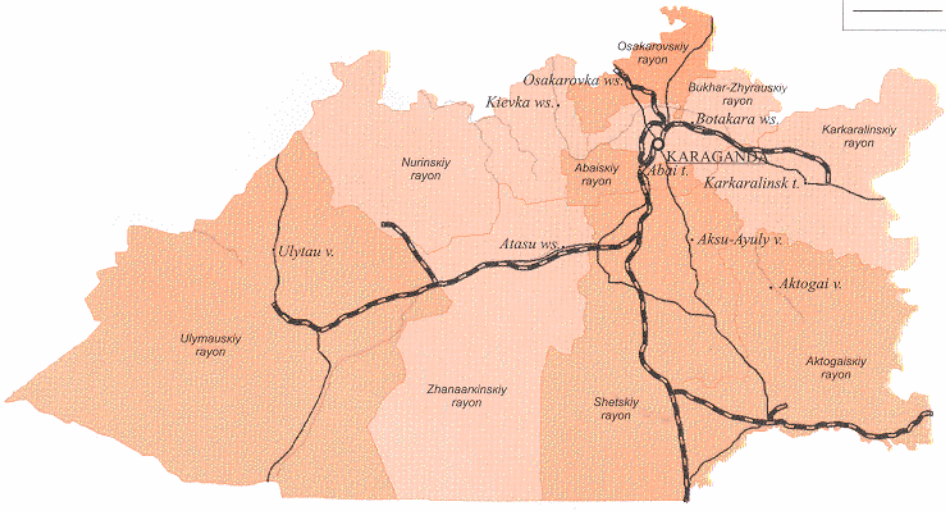
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Karaganda oblast

KARAGANDA	Oblast center
Aktogai	Rayon center
	Rayon borders
	Railways
	Automotive roads

Income per capita

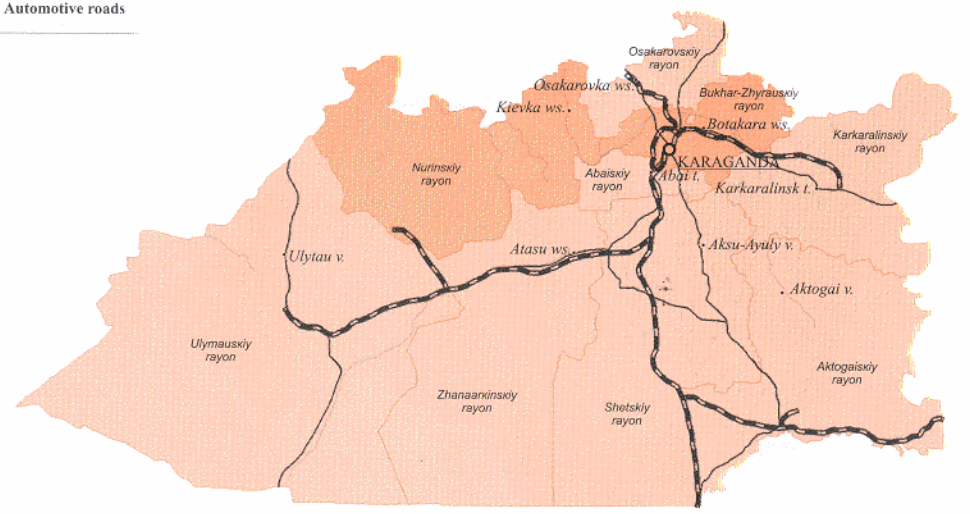


high — average* — low

*National level 5571. Oblast level - 5182

Source: Ministry of State Revenues of the RK, 2001

Technical characteristics of primary and secondary education buildings



Total number of schools 404

197 - Schools in standard buildings

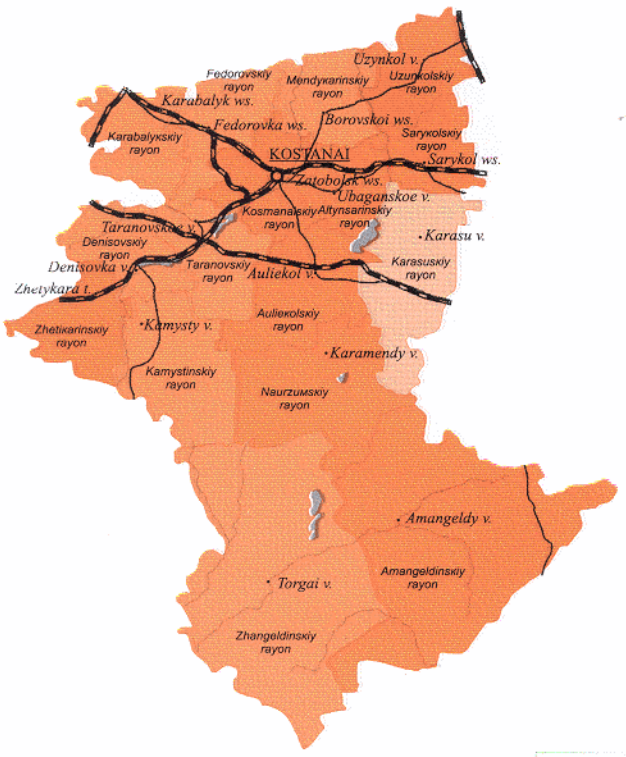
207 - Schools in the adjusted buildings

13 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

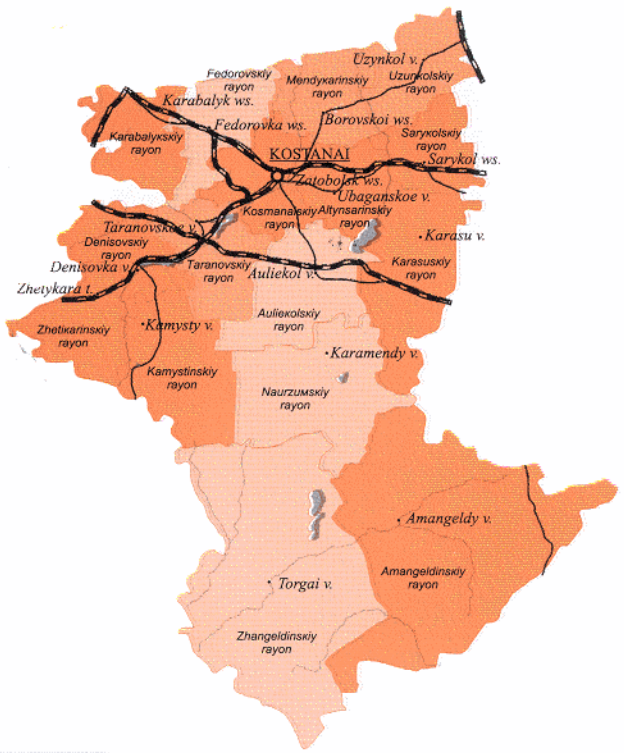


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

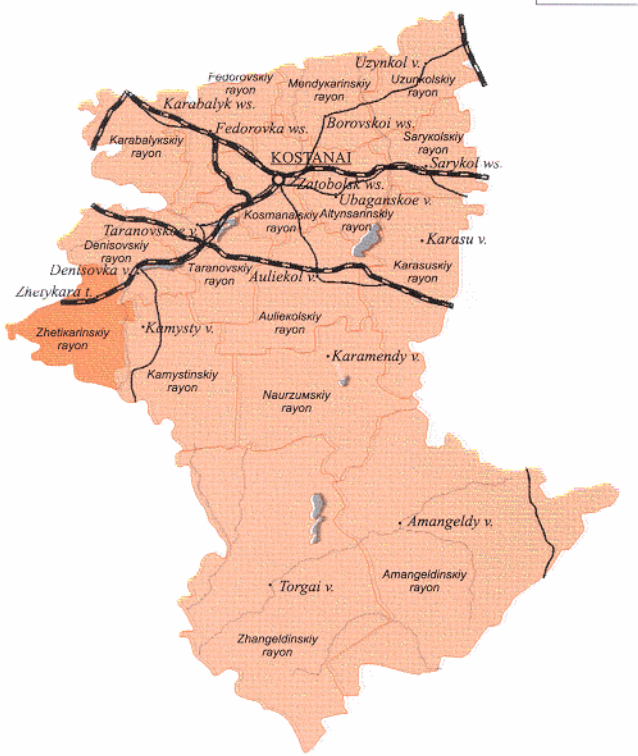
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Kostanai oblast

KOSTANAI	Oblast center
Torgai	Rayon center
	Rayon borders
	Railways
	Automotive roads

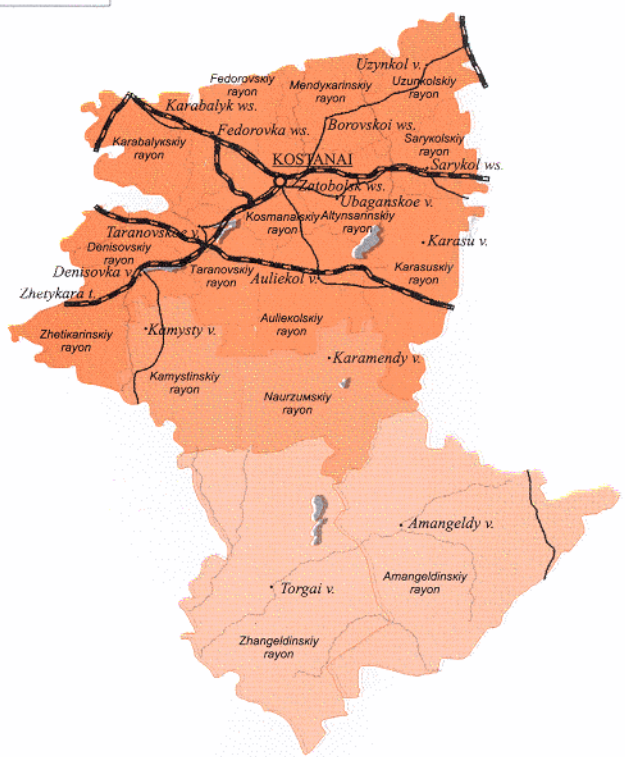
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Health situation in the rural areas according to the mortality rate (per 1 000 persons)



good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001.

Rate of registered unemployment by rayons

low — average* — high

*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Kostanai oblast

KOSTANAI	Oblast center
Torgai	Rayon center
	Rayon borders
	Railways
	Automotive roads

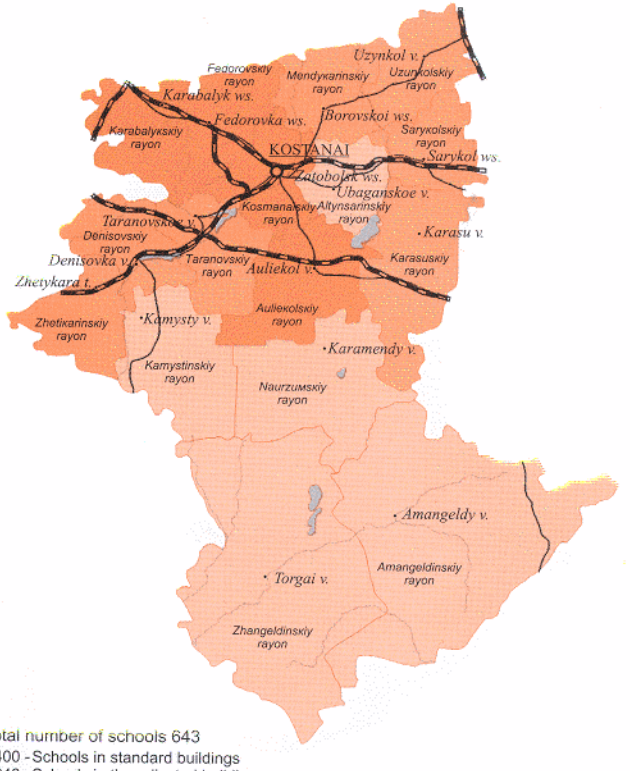
Income per capita

high — average* — low

*National level 5571. Oblast level - 5771

Source: Ministry of State Revenues of the RK, 2001.

Technical characteristics of primary and secondary education buildings



Total number of schools 643

400 - Schools in standard buildings

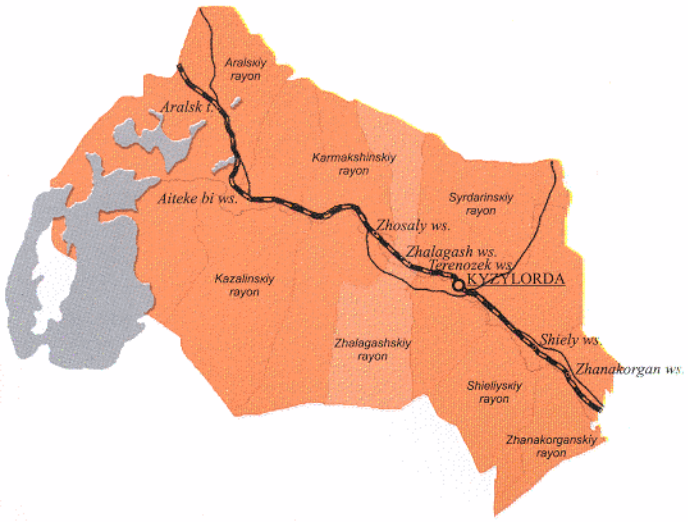
243 - Schools in the adjusted buildings

11 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

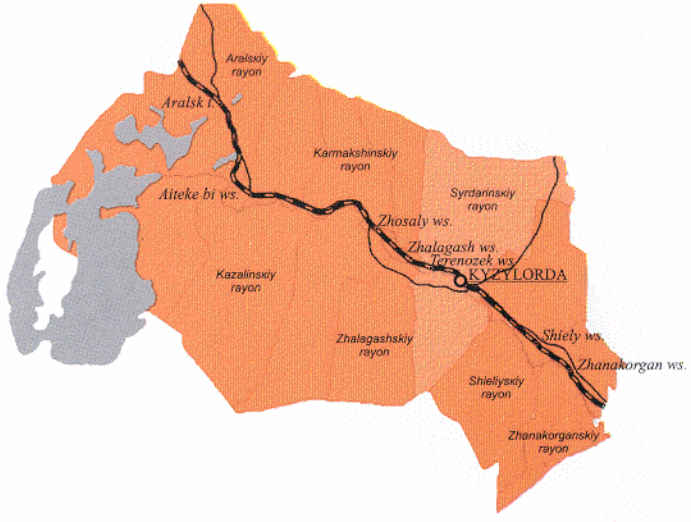


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

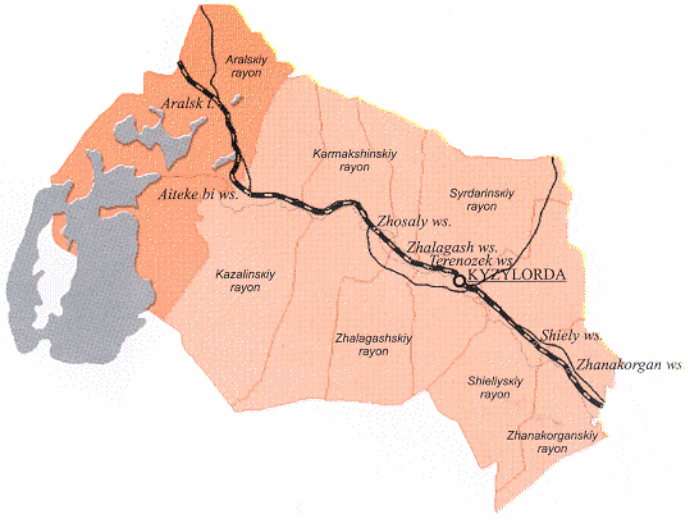
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Kyzylorda oblast

KYZYLORDA	Oblast center
Shiely	Rayon center
	Rayon borders
	Railways
	Automotive roads

Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001.

Rate of registered unemployment by rayons

low — average* — high

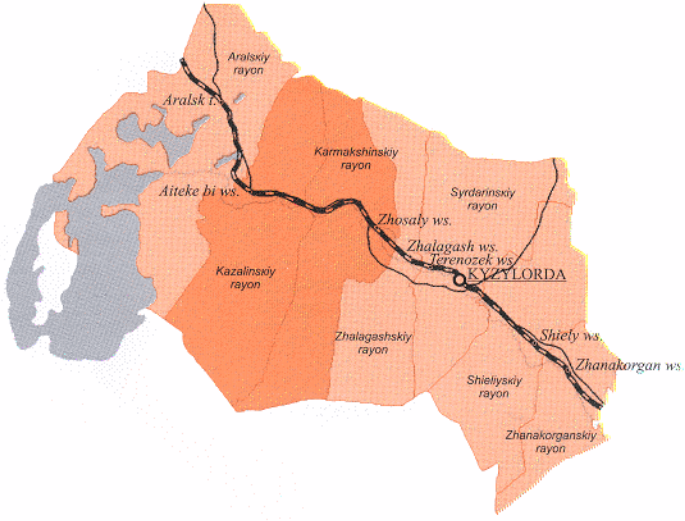
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Kyzylorda oblast

KYZYLORDA	Oblast center
Shiely	Rayon center
	Rayon borders
	Railways
	Automotive roads

Income per capita

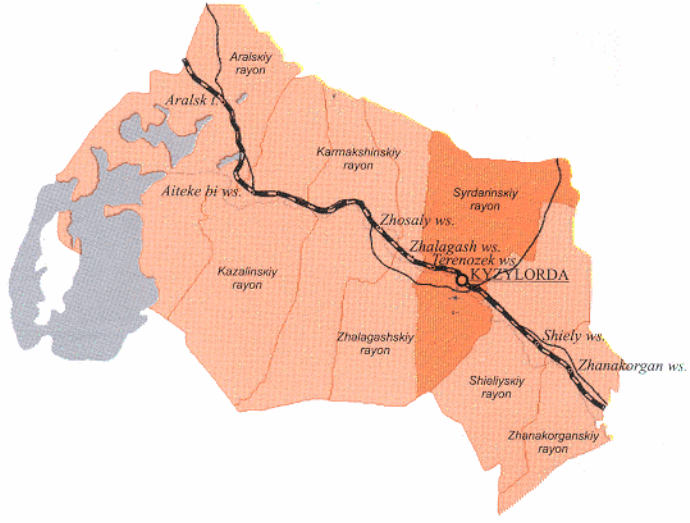


high — average* — low

*National level 5571. Oblast level - 3876

Source: Ministry of State Revenues of the RK, 2001.

Technical characteristics of primary and secondary education buildings



Total number of schools 228

103 - Schools in standard buildings

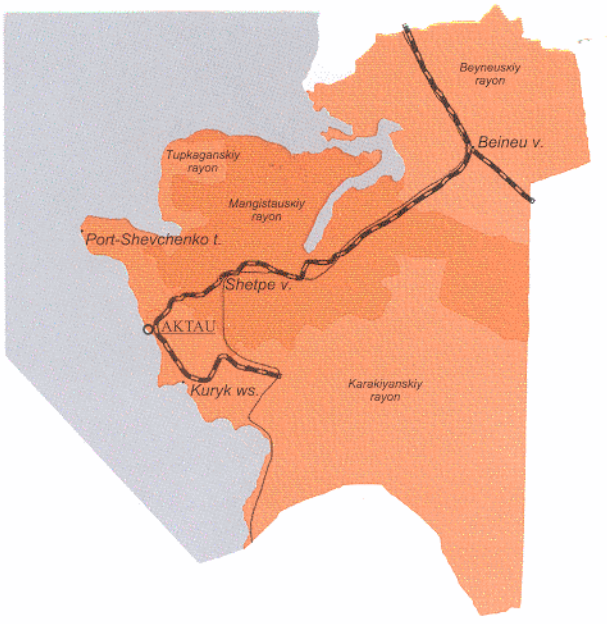
125 - Schools in the adjusted buildings

62 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards



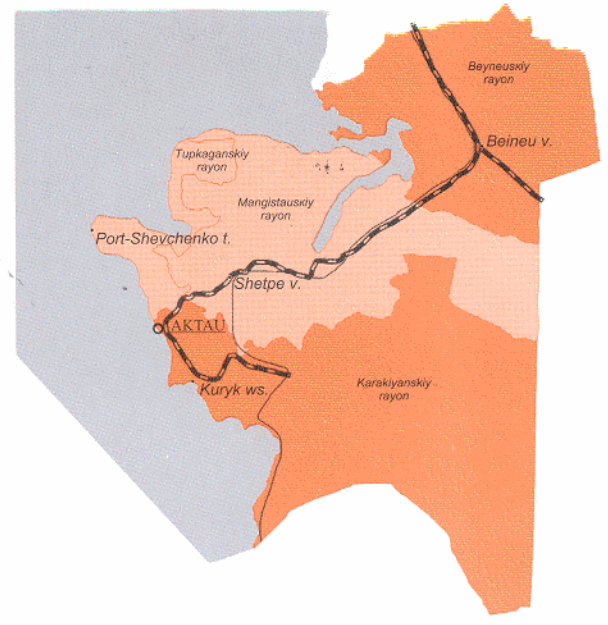
high average low

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Access of rural rayons to water pipelines

The share of water from stand-alone sources unacceptable by chemical standards



low average high

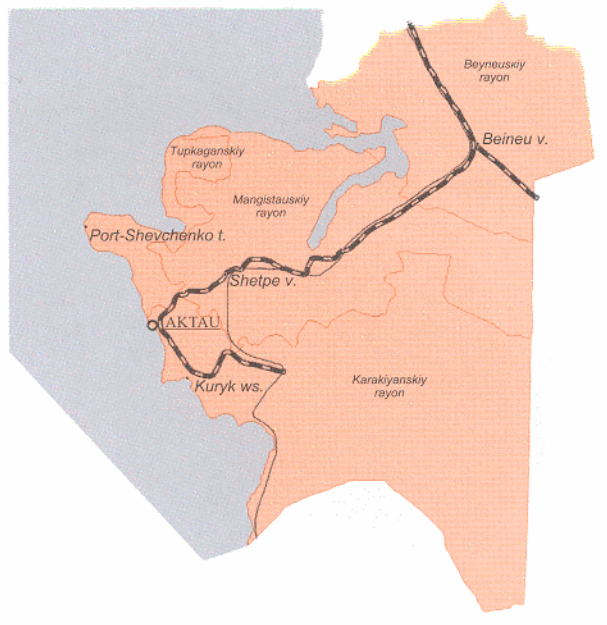
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

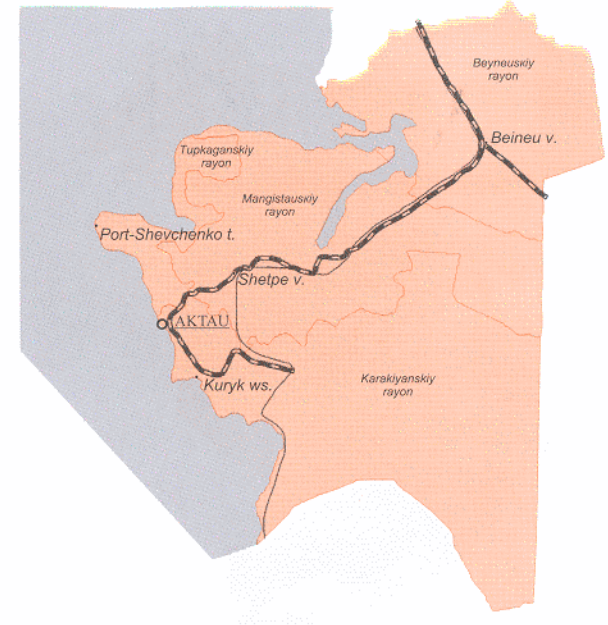
Mangystau oblast

- AKTAU — Oblast center
- *Kuryk* — Rayon center
- Rayon borders
- Railways
- Automotive roads



high average low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001



good average bad

*National level 8,4

Source: Ministry of Health of the RK, 2001

Poverty level in rural areas

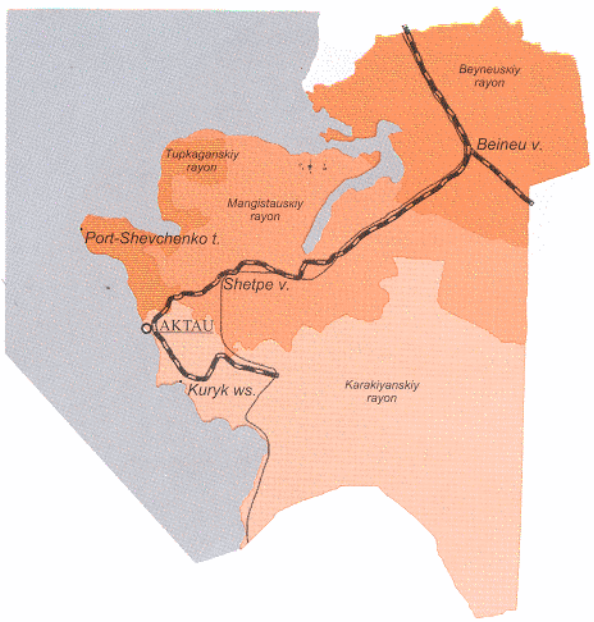
low — average — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Income per capita

Rate of registered unemployment by rayons



low — average — high

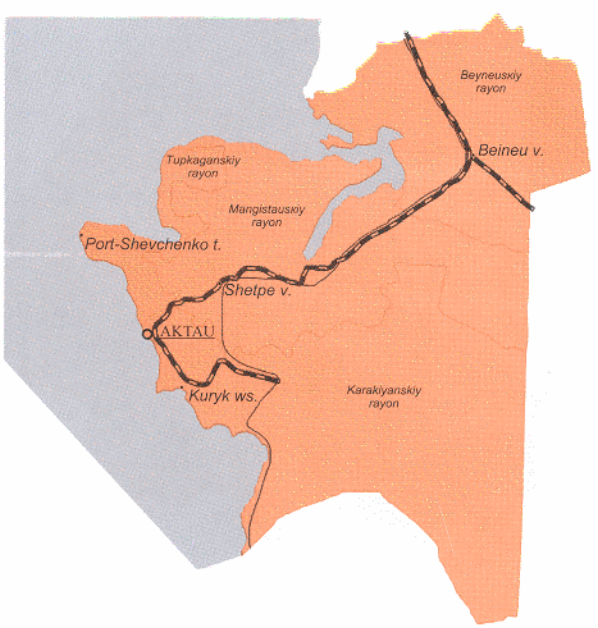
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001

Technical characteristics of primary and secondary education buildings

Mangystau oblast

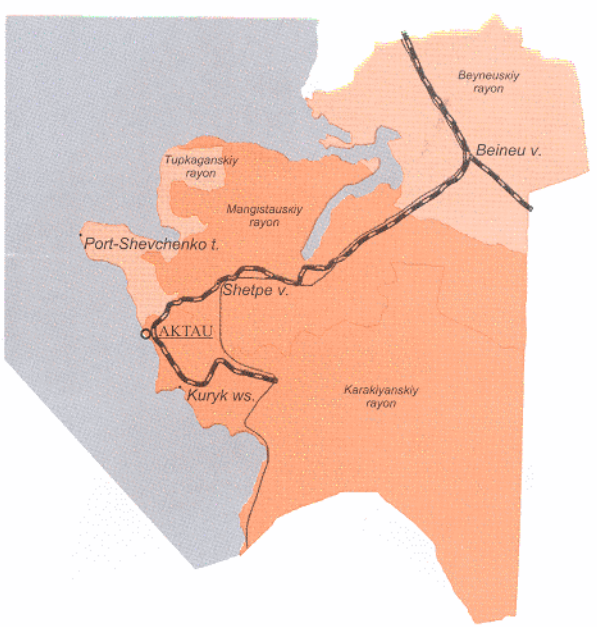
- AKTAU — Oblast center
- Kuryk — Rayon center
- Rayon borders
- Railways
- Automotive roads



high — average — low

*National level 5571. Oblast level - 15813

Source: Ministry of State Revenues of the RK, 2001.



Total number of schools 54

34 - Schools in standard buildings

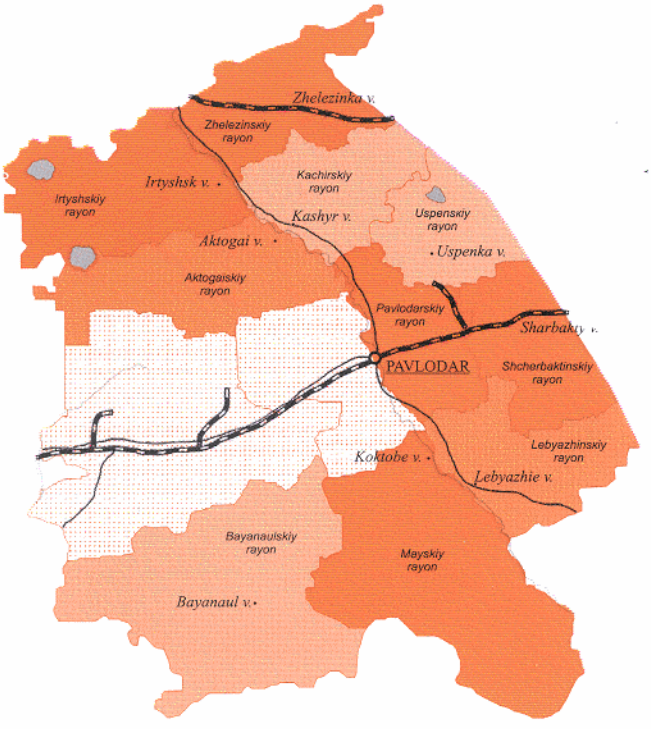
20 - Schools in the adjusted buildings

13 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

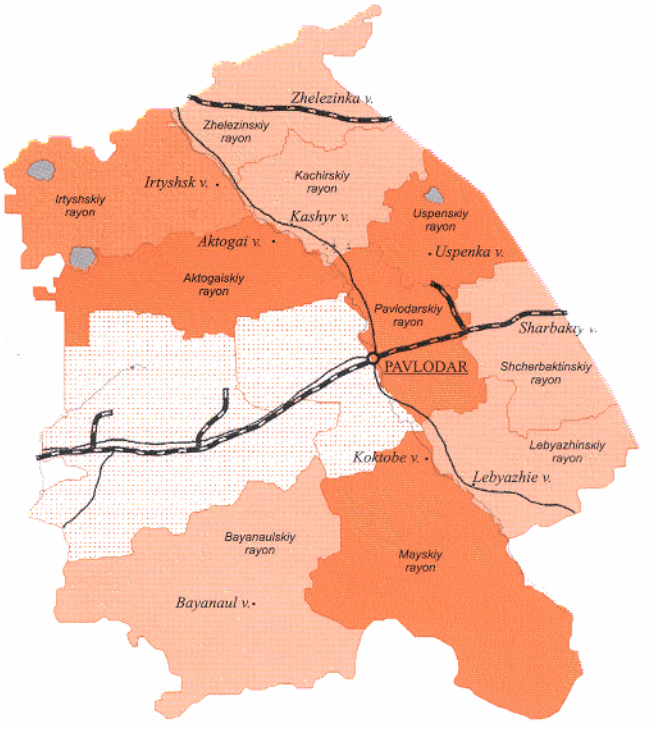


low average high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

The share of water from stand-alone sources unacceptable by chemical standards



low average high

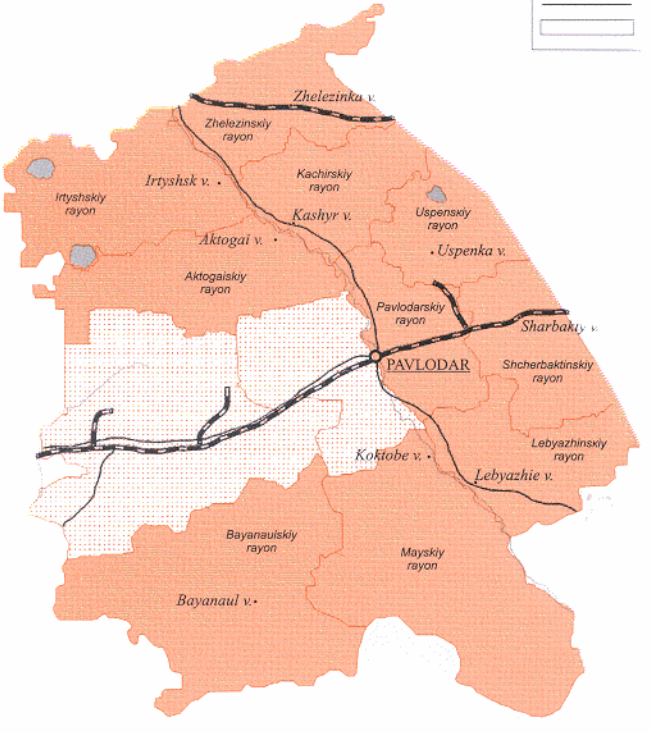
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Pavlodar oblast

PAVLODAR	Oblast center
Koktobe	Rayon center
	Rayon borders
	Railways
	Automotive roads
	Rural areas subordinated to towns

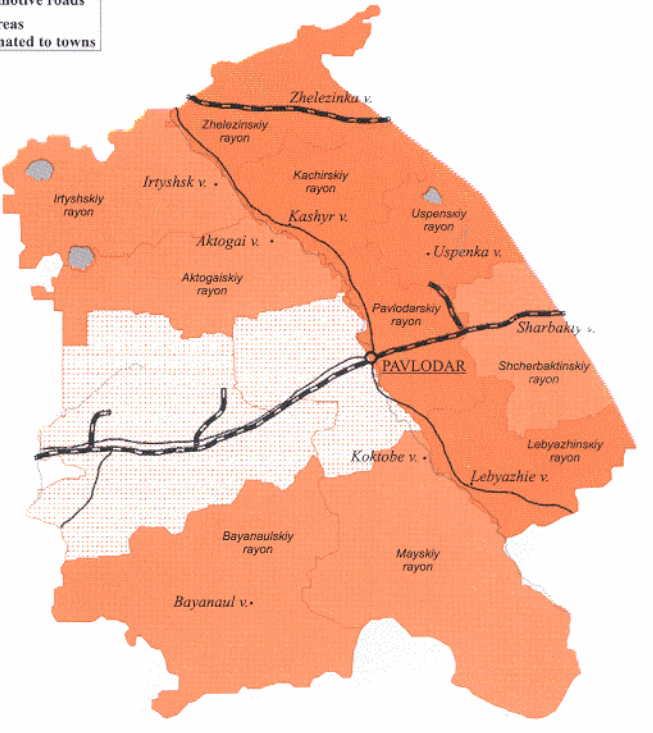
Access of rural rayons to water pipelines



high average low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

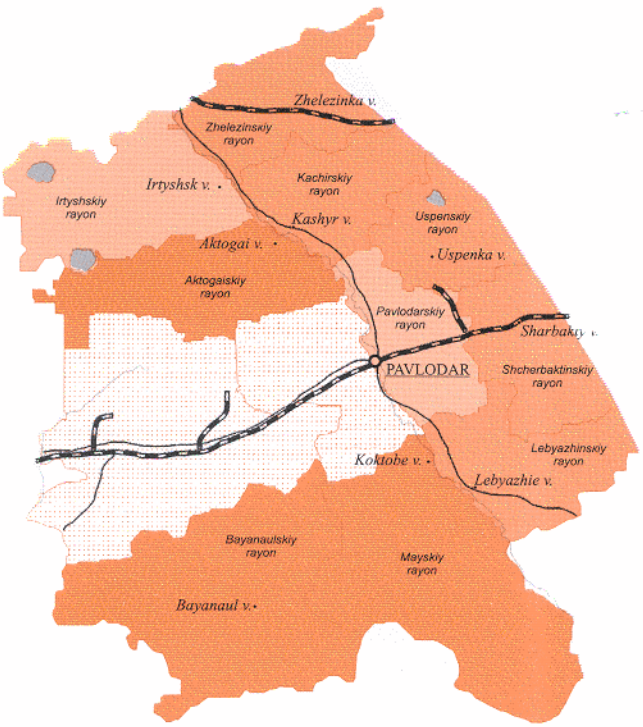


good average bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

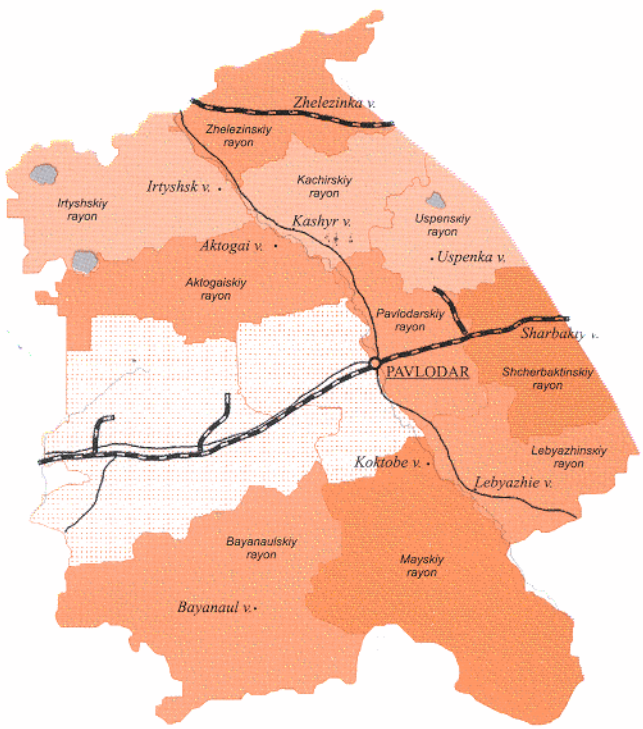


low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons



low — average* — high

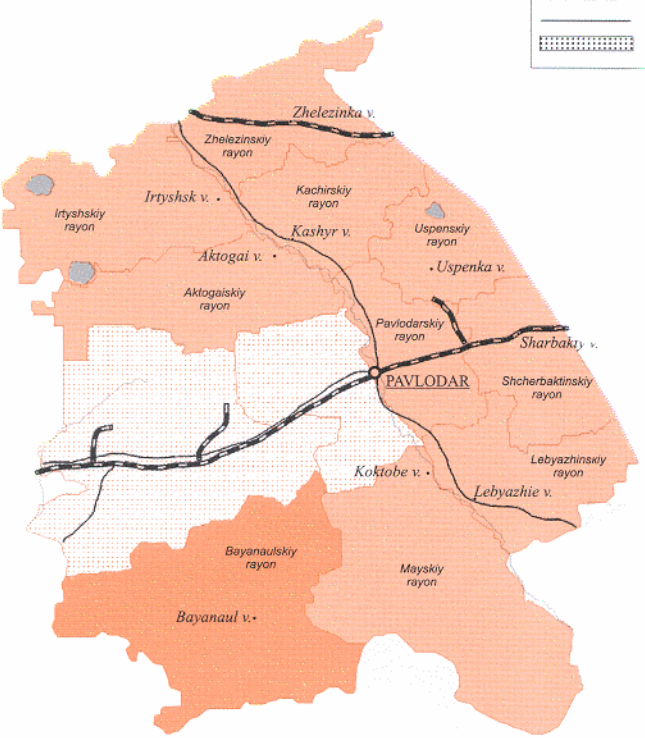
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001

Pavlodar oblast

PAVLODAR	Oblast center
Koktobe	Rayon center
	Rayon borders
	Railways
	Automotive roads
	Rural areas subordinated to towns

Income per capita

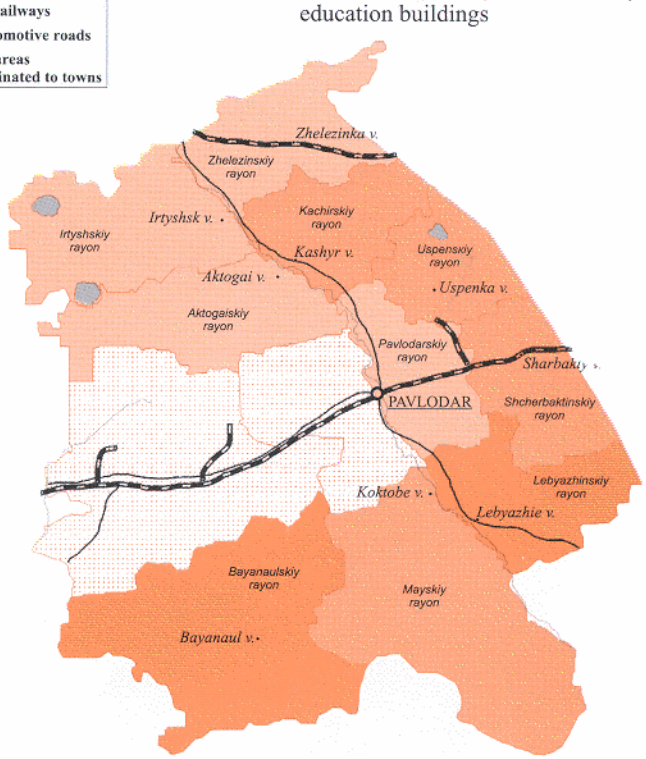


high — average* — low

*National level 5571. Oblast level - 3023

Source: Ministry of State Revenues of the RK, 2001.

Technical characteristics of primary and secondary education buildings



Total number of schools 320

194 - Schools in standard buildings

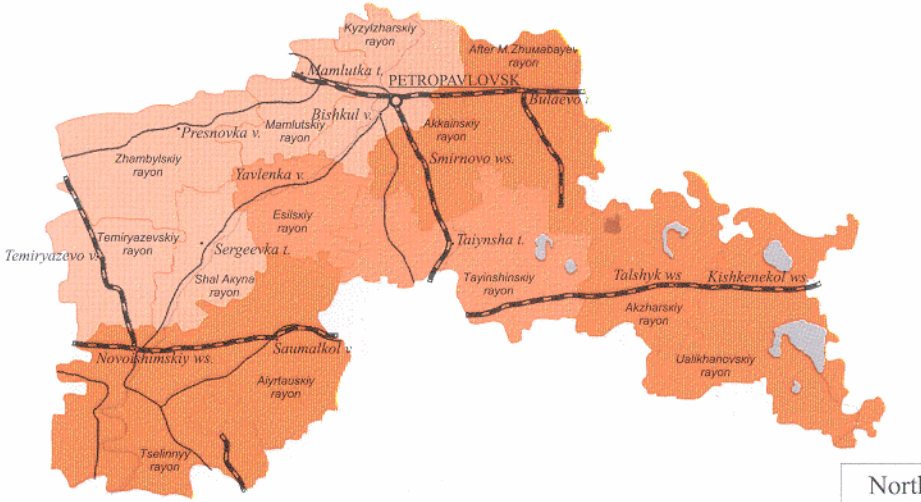
126 - Schools in the adjusted buildings

117 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001

The share of water from stand-alone sources unacceptable by microbiological standards

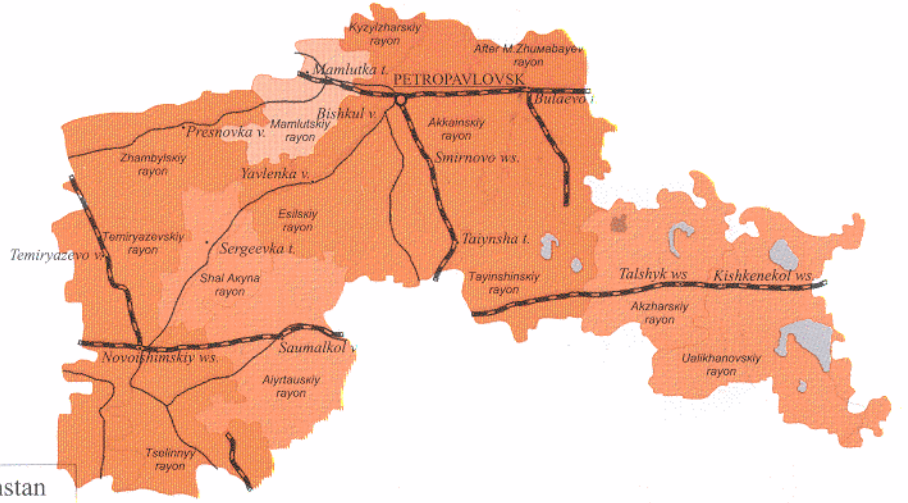


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

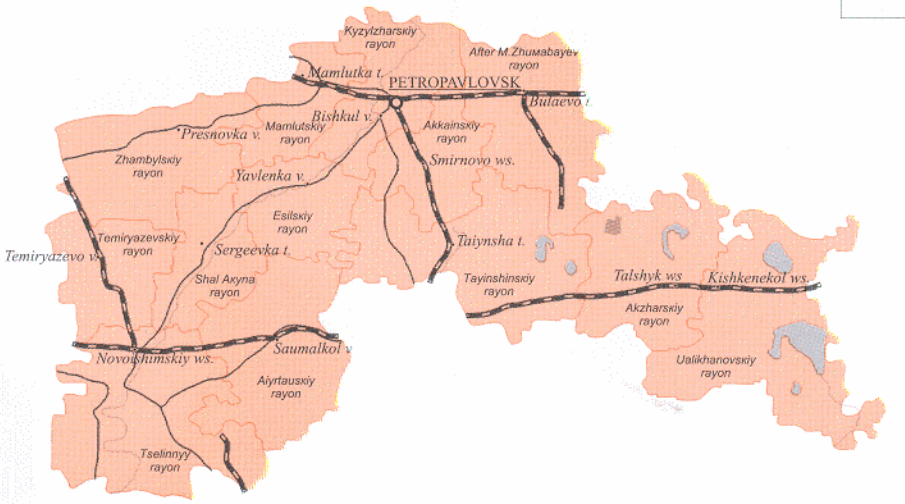
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Northern Kazakhstan oblast

PETROPAVLOVSK	Oblast center
Talshyk	Rayon center
	Rayon borders
	Railways
	Automotive roads

Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

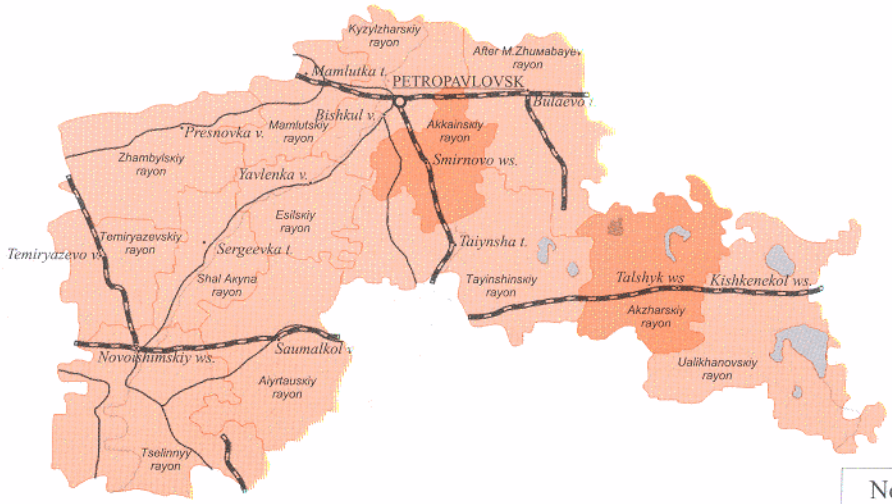
Health situation in the rural areas according to the mortality rate (per 1 000 persons)

good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

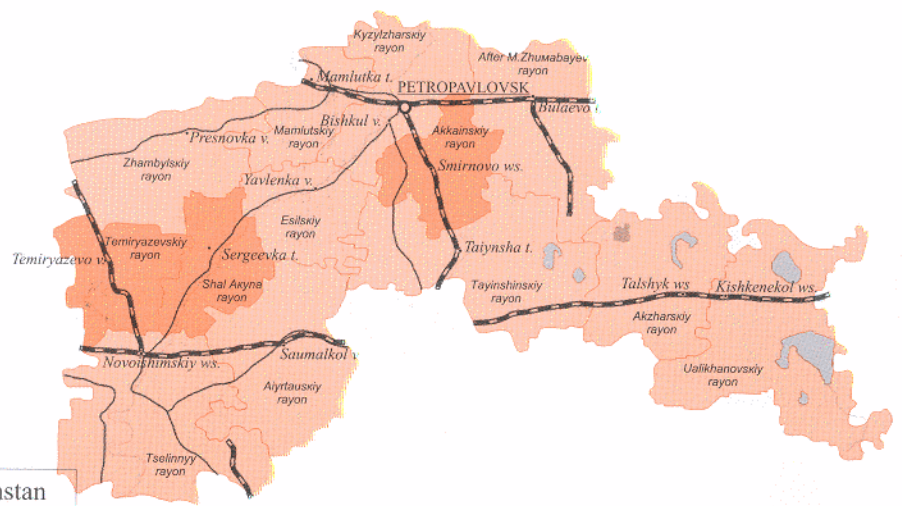


low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001.

Rate of registered unemployment by rayons



low — average* — high

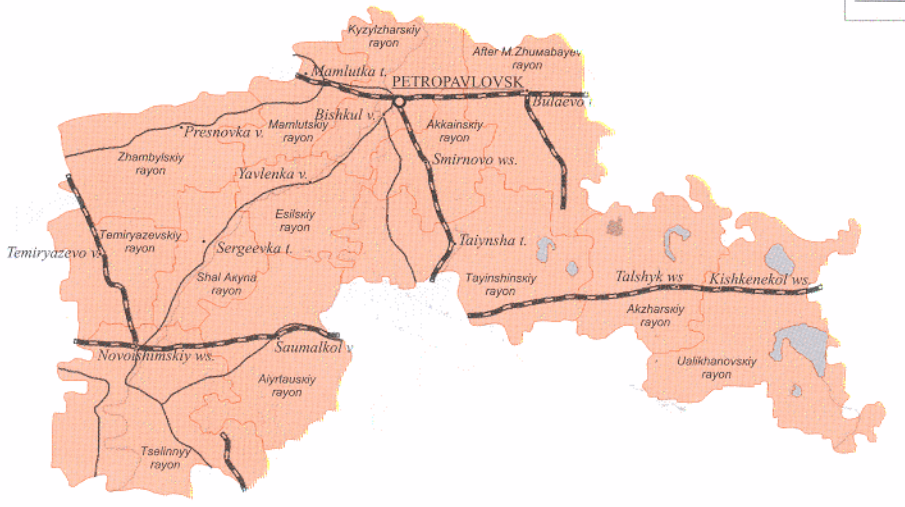
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Northern Kazakhstan oblast

PETROPAVLOVSK	Oblast center
Talshyk	Rayon center
	Rayon borders
	Railways
	Automotive roads

Income per capita

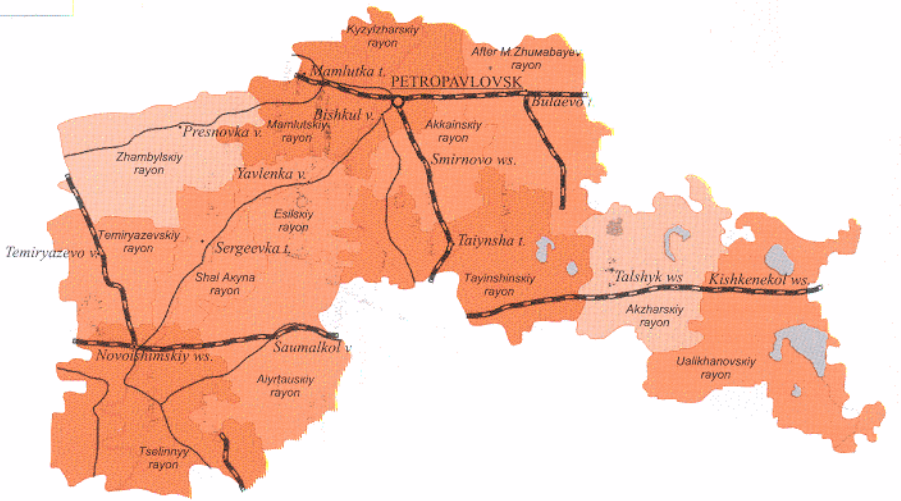


high — average* — low

*National level 5571. Oblast level - 2255

Source: Ministry of State Revenues of the RK, 2001.

Technical characteristics of primary and secondary education buildings



Total number of schools 713

396 - Schools in standard buildings

317 - Schools in the adjusted buildings

135 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

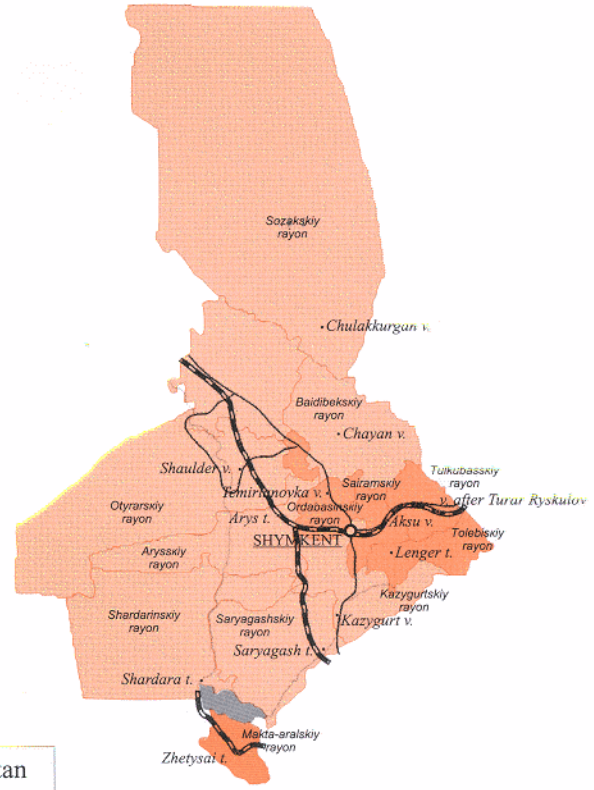
The share of water from stand-alone sources unacceptable by microbiological standards

low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

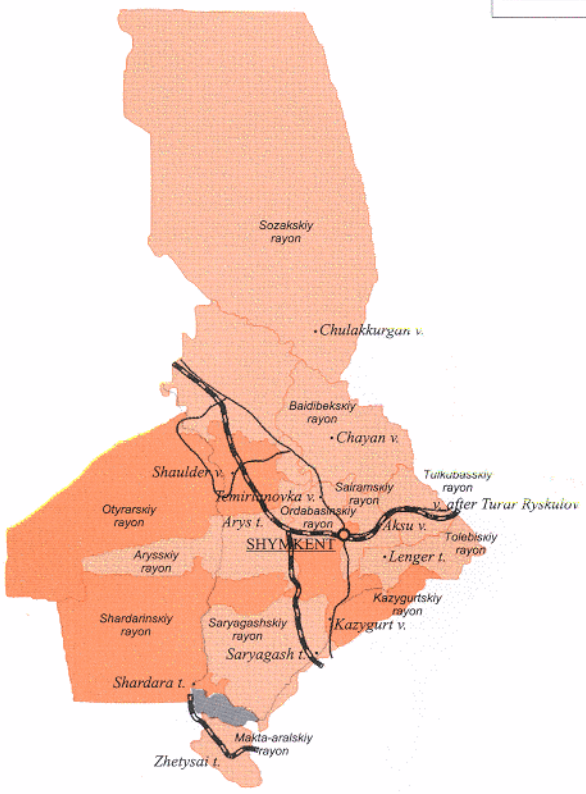
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Southern Kazakhstan oblast

SHYMKENT	Oblast center
Aksu	Rayon center
	Rayon borders
	Railways
	Automotive roads

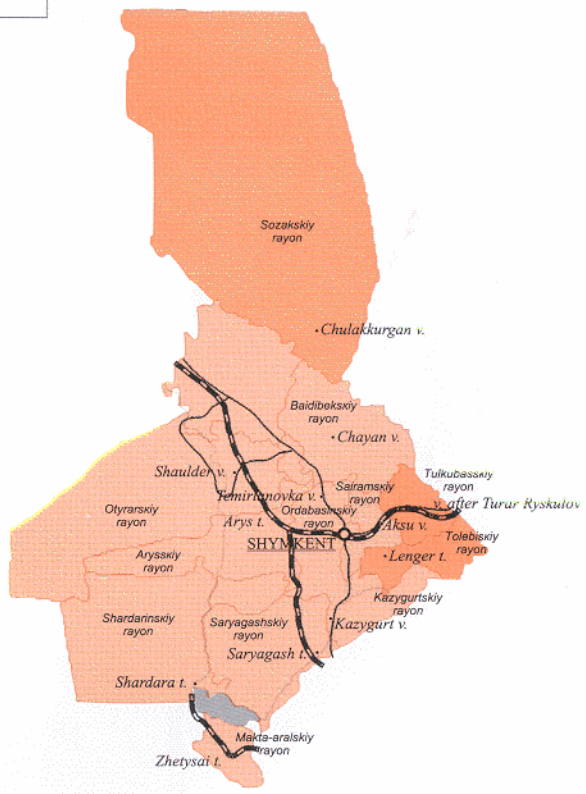
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

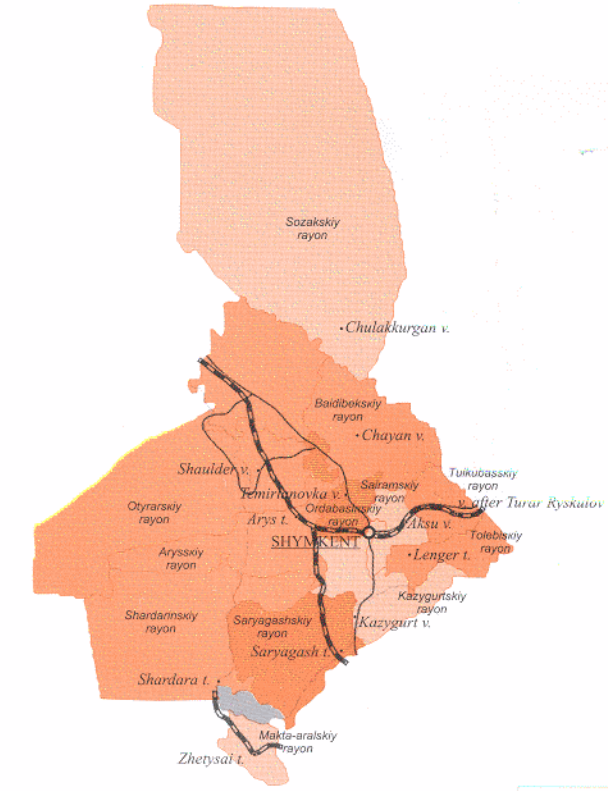


good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

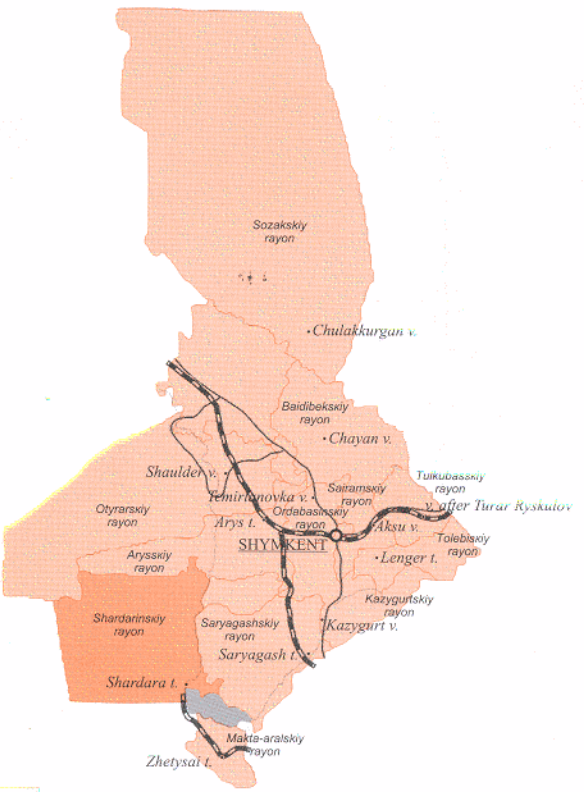


low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001.

Rate of registered unemployment by rayons



low — average* — high

*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Southern Kazakhstan oblast

SHYMKENT	Oblast center
Aksu	Rayon center
	Rayon borders
	Railways
	Automotive roads

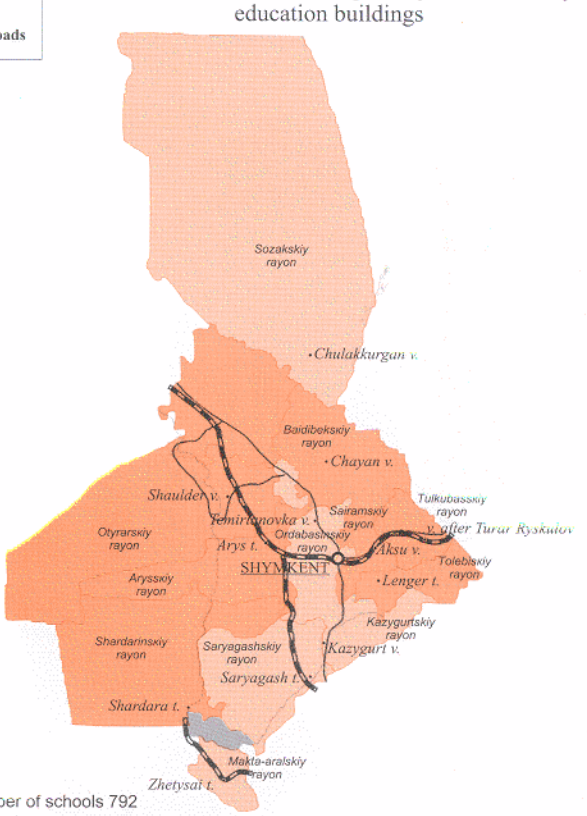
Income per capita

high — average* — low

*National level 5571. Oblast level - 2787

Source: Ministry of State Revenues of the RK, 2001.

Technical characteristics of primary and secondary education buildings



Total number of schools 792

282 - Schools in standard buildings

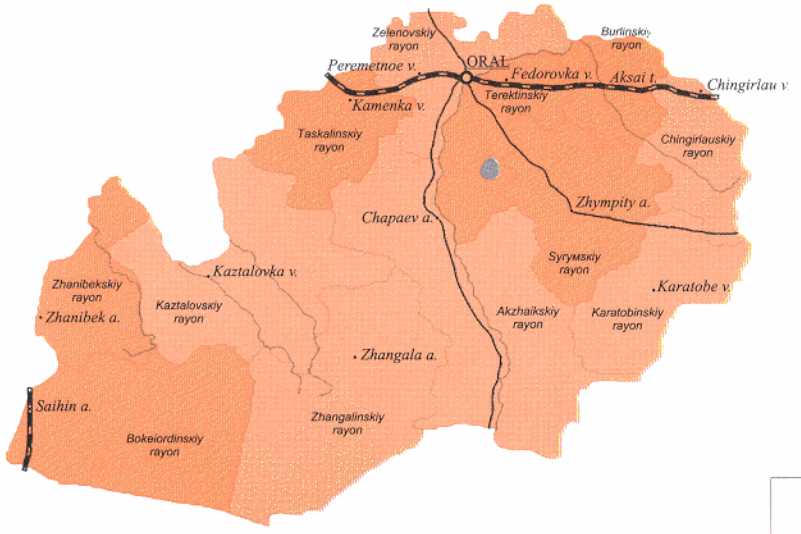
510 - Schools in the adjusted buildings

45 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

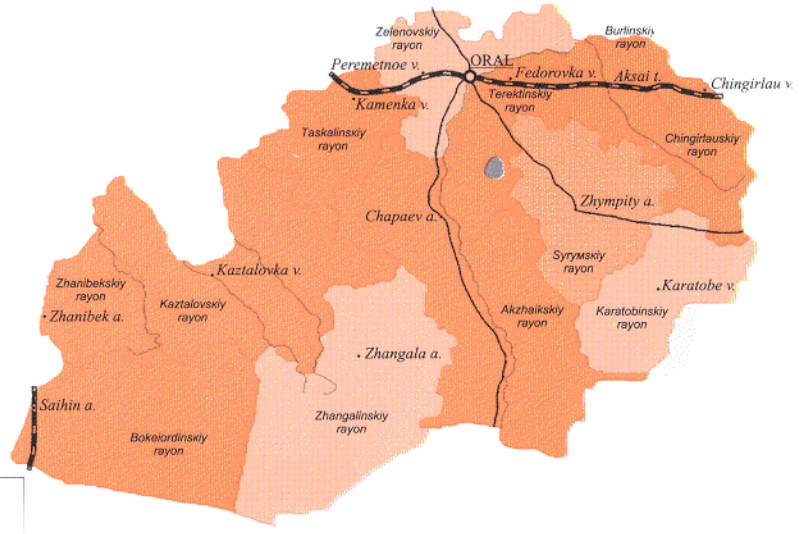


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

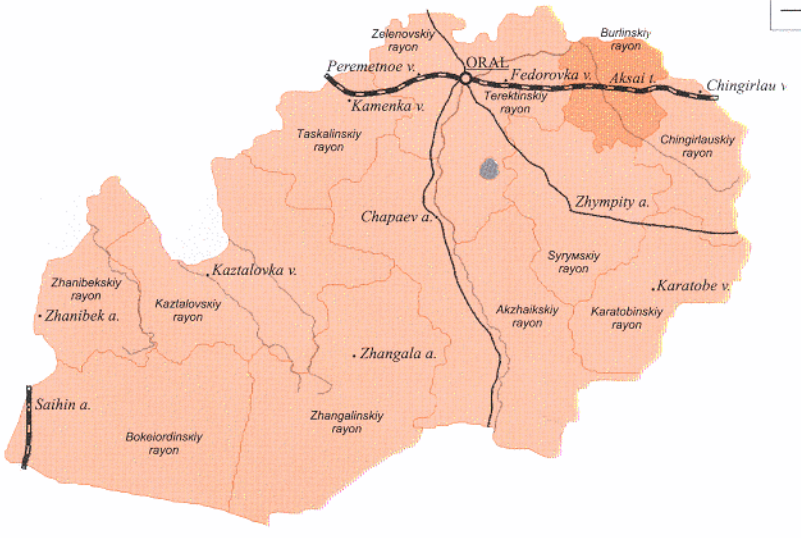
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Western Kazakhstan oblast

ORAL	Oblast center
Karatobe	Rayon center
	Rayon borders
	Railways
	Automotive roads

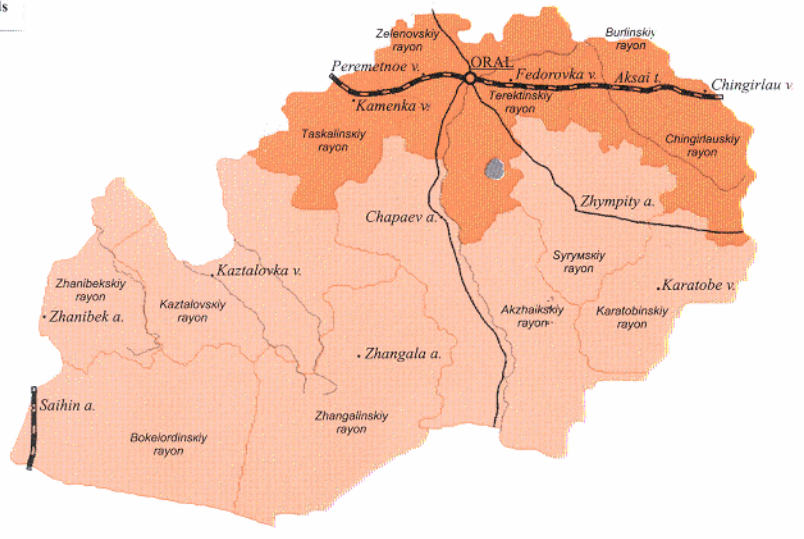
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

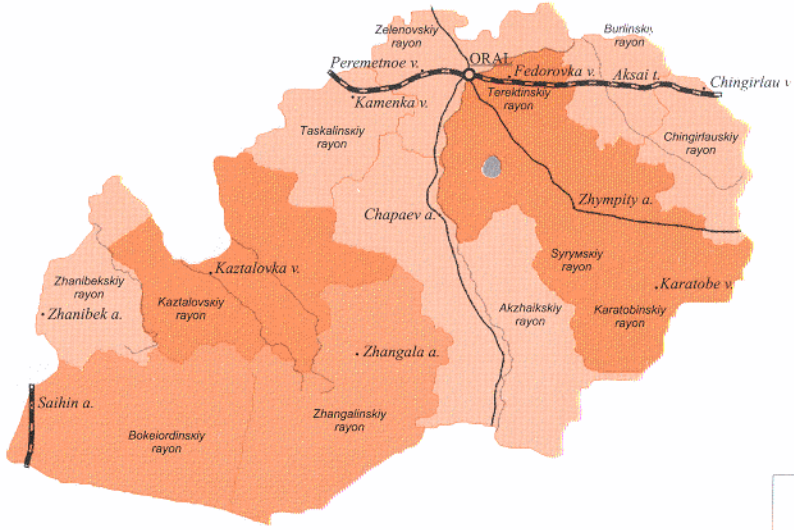


good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

Poverty level in rural areas

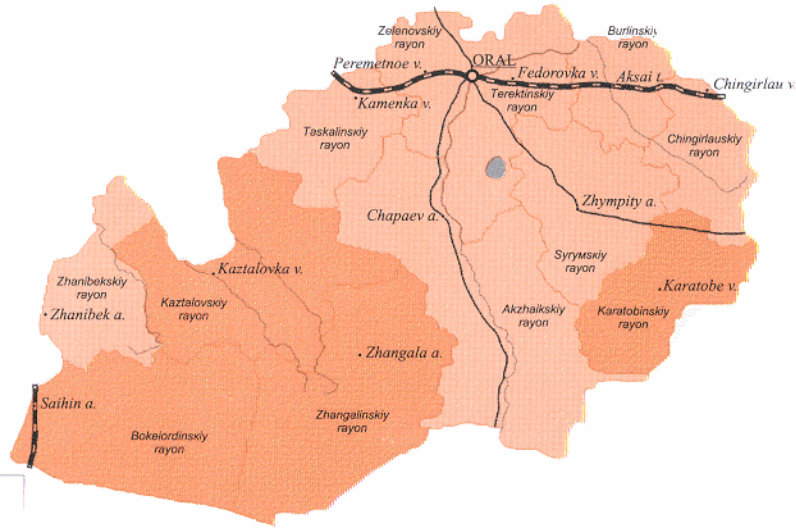


low — average* — high

*National level (poverty line) 1838 tenge

Source: Ministry of Labour and Social Protection of the RK, 2001

Rate of registered unemployment by rayons



low — average* — high

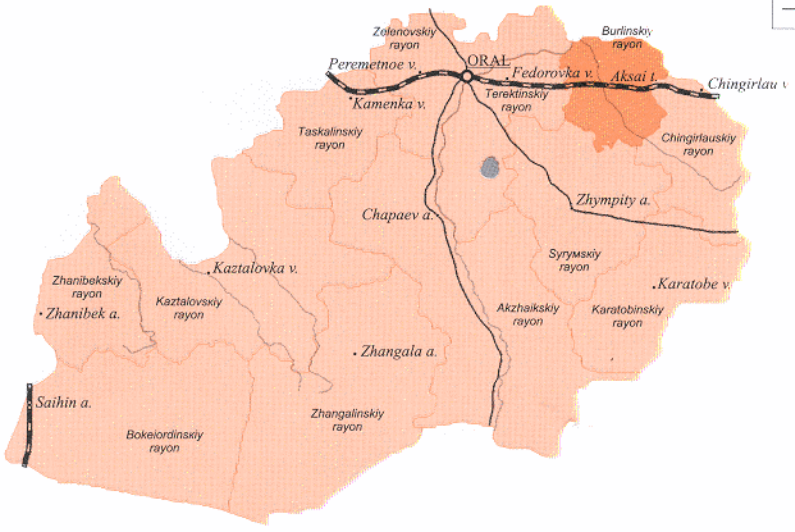
*National level 10,4

Source: Ministry of Labour and Social Protection of the RK, 2001.

Western Kazakhstan oblast

- ORAL — Oblast center
- Karatobe — Rayon center
- Rayon borders
- Railways
- Automotive roads

Income per capita

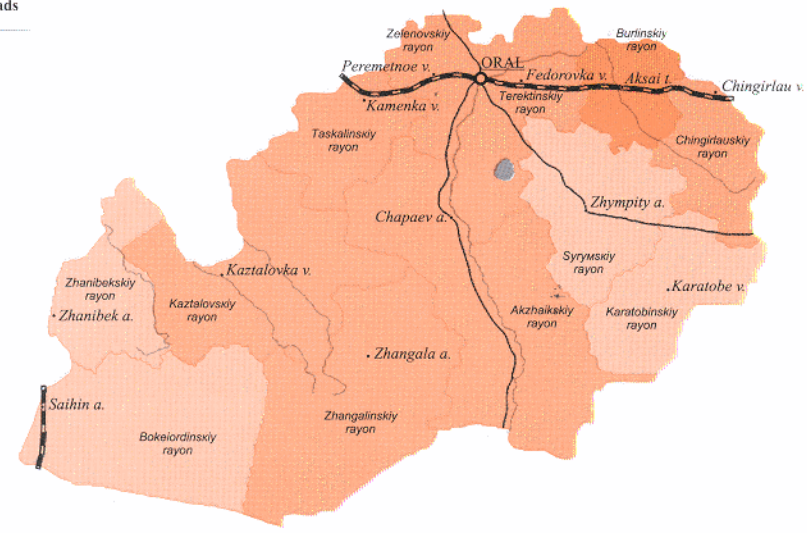


high — average* — low

*National level 5571. Oblast level - 3226

Source: Ministry of State Revenues of the RK, 2001

Technical characteristics of primary and secondary education buildings



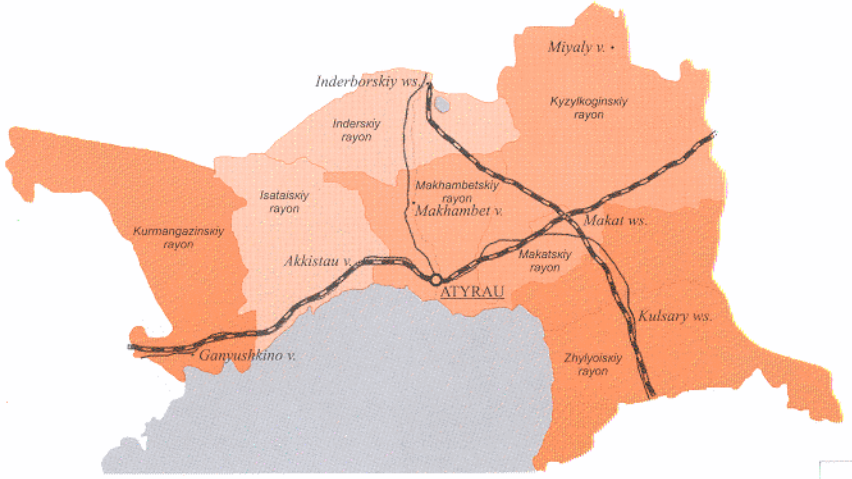
Total number of schools 461

169 - Schools in standard buildings
282 - Schools in the adjusted buildings
177 - Schools in the unacceptable buildings and in need of major repair

good — average — bad

Source: Ministry of Education and Science of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards



low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards

low — average* — high

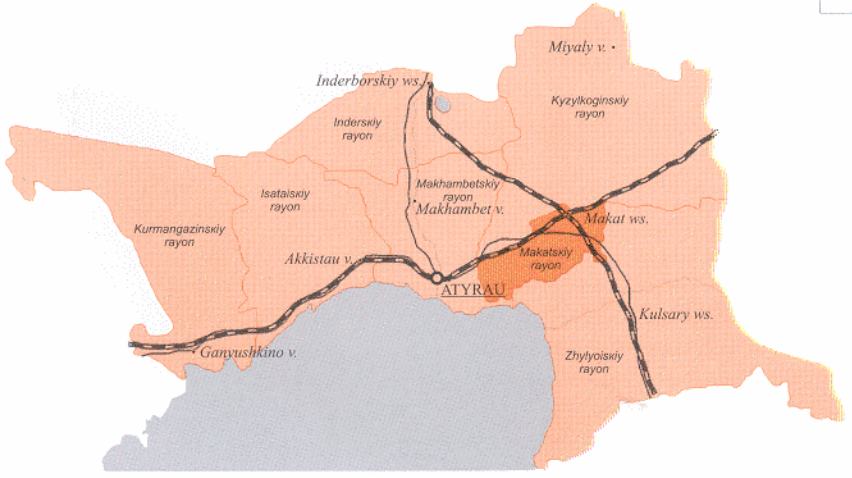
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Atyrau oblast

- ATYRAU — Oblast center
- Kulsary — Rayon center
- Rayon borders
- Railways
- Automotive roads

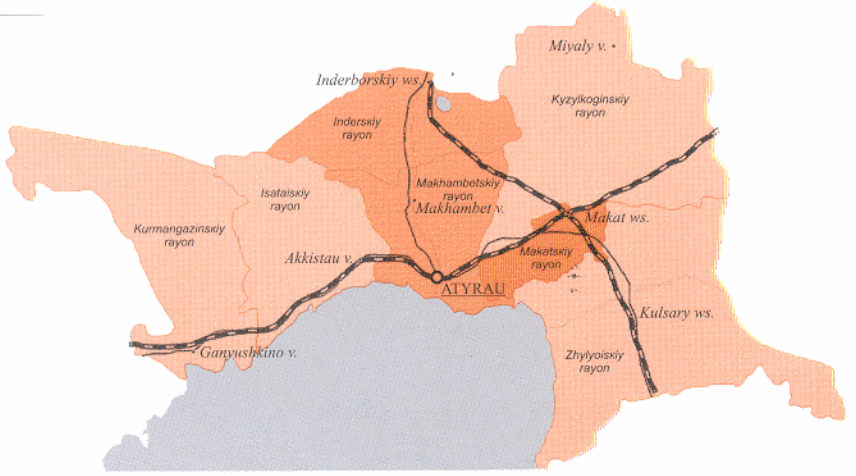
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)

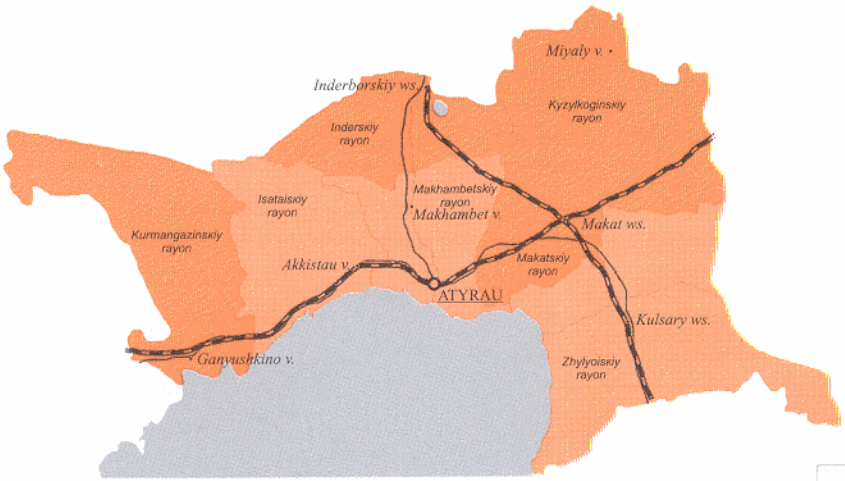


good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

The share of water from stand-alone sources unacceptable by microbiological standards

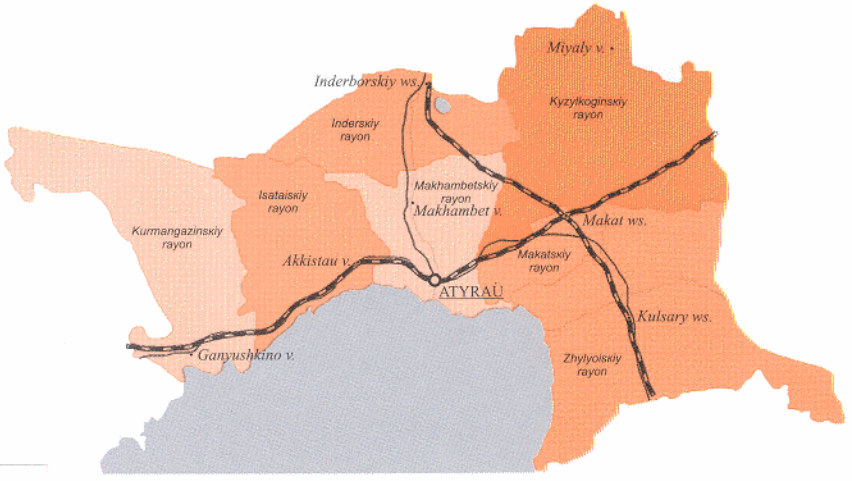


low — average* — high

*National level 9,1

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

The share of water from stand-alone sources unacceptable by chemical standards



low — average* — high

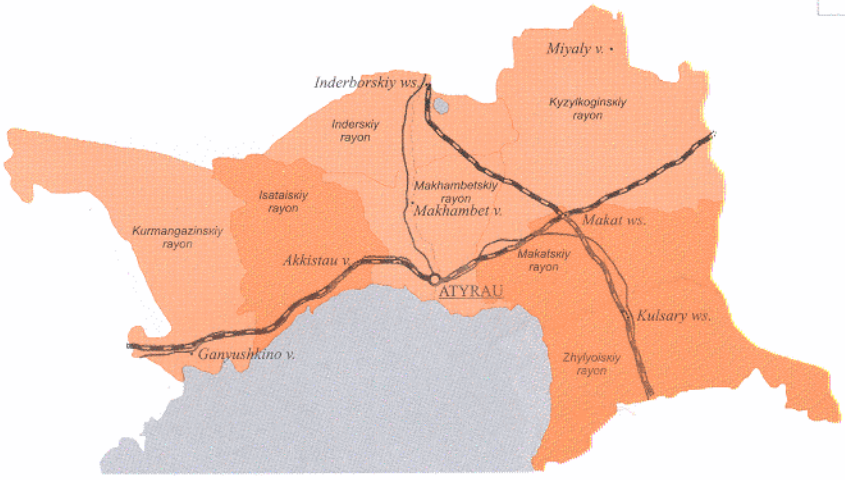
*National level 19,3

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001.

Atyrau oblast

- ATYRAU — Oblast center
- Kulsary — Rayon center
- Rayon borders
- Railways
- Automotive roads

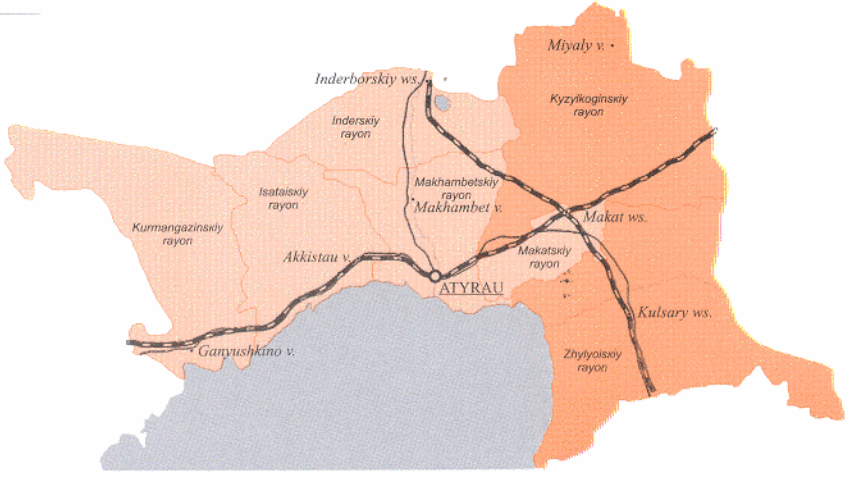
Access of rural rayons to water pipelines



high — average — low

Source: Department of Sanitary-epidemiology Service of the Ministry of Health of the RK, 2001

Health situation in the rural areas according to the mortality rate (per 1 000 persons)



good — average* — bad

*National level 8,4

Source: Ministry of Health of the RK, 2001.

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Photos taken during fieldwork in rural areas of Kazakhstan within the framework of the NHDR - 2002 preparation
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Photo "Kazakhstan-2030" is made by A. Nekrasov