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Localization of SDGs in the regions of Abai, Zhetysu, Ulytau and Kyzylorda

Result 1: «Implementation of the basic socio-economic development agenda of the Kyzylorda region in the following areas

Result 2: «Analysis of the sustainability of regional development, taking into account the «green economy» and low-carbon development of the region, identification of areas with potential for development»

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This analytical report has been prepared within the framework of the contract between the United Nations Development Programme (the «UNDP») and Economic Research Institute JSC (the «Institute»).

The purpose of the work is to analyze the basic socio-economic and environmental development agenda and identify the development prospects of Kyzylorda region and analyze the sustainability of the region taking into account the principles of «green economy» and low-carbon development, identifying areas with potential for development.

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DEFINITIONS AND ABBREVIATIONS

SDG	Sustainable Development Goals
ASPR RoK	Agency for Strategic Planning and Reforms of the Republic of Kazakhstan
TFR	Total fertility rate
LE	Life Expectancy
GRP	Gross regional product
GD	Government Decree
MDDIAI	Ministry of Digital Development, Innovations and Aerospace Industry
LLP	Limited Liability Partnership
SMEs	Small and Medium Entrepreneurship
PFH	Peasant and farmer households
MO	Microfinance organization
GVA	Gross Value Added
JSC	Joint-Stock Company
FFSA	Fund of Financial Support for Agriculture
TSA	Targeted social assistance
UGS	Ungraded schools
SMW	Solid Municipal Waste
RME	Republican State Enterprise
REM	on the Right of economic management
GHG	Greenhouse gases
IPCC	Intergovernmental Panel on Climate Change
RTA	Road traffic accident
GRP	Gross regional product
SME	Small and medium-sized enterprises
USA	United States of America
GDP	Gross Domestic Product
UN	United Nations
AIC	Agro-industrial complex
PPP	Public-Private Partnerships
MTR	Material and technical resources
DED	Design and estimate documentation
RIA	Rapid Integrated Assessment
RDP	Regional Development Plan

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INTRODUCTION

One of the main criteria for the country to achieve sustainable development is the balanced development of the regions. To ensure competitiveness, regions need to consider the main trends of the sustainable development agenda related to technological progress and digitalisation, low-carbon development and the formation of a green economy, the increasing importance of human capital and the quality of the urban environment, and the need to improve the quality and efficiency of governance.

The principles of sustainable development in Kazakhstan are reflected in strategic planning documents. The focus of Kazakhstan's regional policy is aimed at shifting from centralised management to increased regional autonomy, from regional disparities to ensuring external and internal connectivity and to stimulating business activity.

The purpose of this study is to develop recommendations to improve the development of Kyzylorda region based on the analysis of socio-economic and environmental factors of regional development.

This goal resulted in the solution of the following tasks:

- ▶ analysis of socio-economic development of Kyzylorda region;
- ▶ identification of potential features and problems in the study of international co-operation of Kyzylorda region;
- ▶ analysis of the sustainability of the region's development, based on the principles of green economy and low-carbon development;
- ▶ Rapid Integrated Assessment of the coverage of the Sustainable Development Goals (SDGs) of the Regional Development Plan;
- ▶ development of point tools to solve the most urgent problems and challenges detected in Kyzylorda region.

This Report includes 2 chapters. The first chapter covers the analysis of socio-economic development of Kyzylorda Region over the last five-year period to identify current issues in the region and determine the potential further development.

The second chapter contains an analysis of the environmental situation in the region in terms of compliance with the principles of the green economy and low-carbon development. The strategic documents of the region were also analysed for the presence of indicators aimed at improving the environmental component of the region.

1. CARRYING OUT THE BASIC SOCIO-ECONOMIC AGENDA OF DEVELOPMENT OF KYZYLORDA REGION

1.1 Social and economic development of Kyzylorda region

The region is located in the southern part of the Republic of Kazakhstan, formed on 15 January 1938. It borders with Ulytau region in the north, Aktobe region in the north-west, the Republic of Uzbekistan in the south-west and south, and Turkestan region in the east.

The main part of the territory is located within the Turan lowland, in the east there are spurs of the Karatau range, in the north-west - the sands of Priaral Karakum, in the south-west - the sands of Kyzylkum.

The climate of Kyzylorda region is sharply continental with hot dry long summer and cold short short snowy winter. Such climatic regime is conditioned by the location of the region inside the Euro-Asian continent, its southern position, peculiarities of atmospheric circulation, character of the underlying surface and other factors¹.



Figure 1. Kyzylorda Region Map

Source: Akimat of Kyzylorda Region website

As of 1 July 2022, Kyzylorda region includes 7 districts, 4 cities, of which 2 are of regional significance and 2 of district significance, 2 villages, 230 rural settlements (Figure 1).

One of the cities in the region, Baikonur, is an administrative-territorial unit of the Republic of Kazakhstan operating under lease conditions [1]. The Baikonur territory is under long-term lease agreement with the Russian Federation.

Demographic profile of the region

Kyzylorda region is one of the three major regions of the country in terms of size (following Aktobe and Karaganda regions). The total area of the region is 226.0 thousand sq km, which is 8.3% of the country's territory.

As of 1 January 2023, the population of the region is 833,500 people or 4.2% of the country's population (9th place among the country's regions). The average population density in the region (per 1 sq. km of territory) is 3.7 people;

The population of the region shows positive dynamics. Since the beginning of 2017, it increased by 7.8% (from 773.1 thousand to 833.5 thousand people); The average annual population growth rate over 6 years (considering the results of the National Census of 2021) was 1.3 per cent (Figure 2).

¹ Website of the akimat of Kyzylorda region

Kyzylorda region is one of two regions (Turkestan region) in the country where the number of men slightly exceeds the number of women. At the beginning of 2022 in the region, the share of men in the total population was 50.1 % and women 49.9 % (in the country: men - 48.8 %, women - 51.2 %;

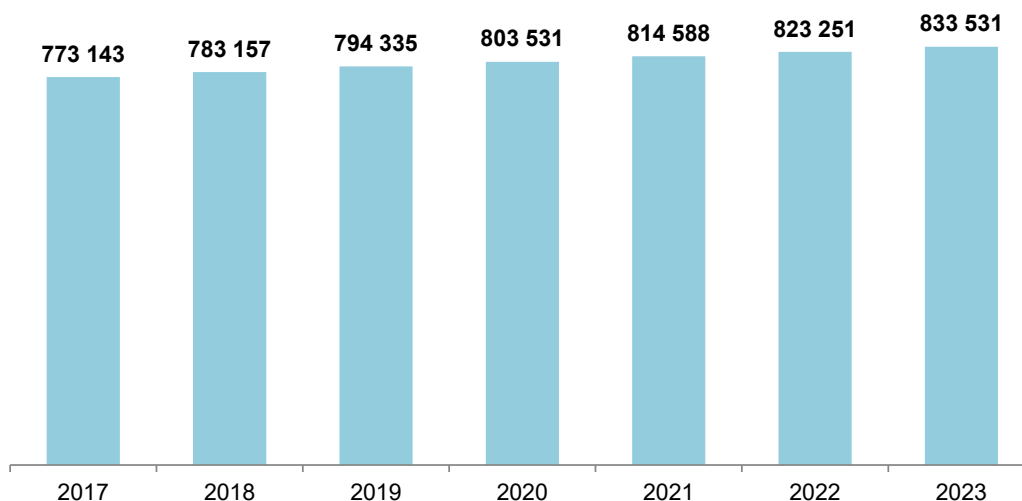


Figure 2. Population of Kyzylorda region at the beginning of 2017-2023, people.

Source: Bureau of National Statistics of the ASPR RoK

Note: Population figures for the beginning of 2022 and 2023, based on the results of the National Population Census of the Republic of Kazakhstan in 2021.

According to the most recent data, 46.9 % of the region's population lives in urban areas, which is considerably lower than the average figure for the country (61.8 %). The regional centre makes up the bulk of the region's urban population (80%). In general, a significant part of the population of the region (350.0 thousand people or 42%) is concentrated in Kyzylorda city and rural settlements under the administration of the city.

The largest rural districts in terms of population are Shieli (85.3 thousand people), Zhanakorgan (80.5 thousand people), Aralsk (78.7 thousand people) and Kazalinsk (78.6 thousand people) districts.

As mentioned earlier, the annual population growth in the region averages 1.3 %. Population growth in the region is achieved solely due to natural increase; The migration situation in the region, as in many regions of the country, is characterised by an excess of the number of people leaving over the number of people arriving (Table 2). In 2022, the migration loss of the region's population totalled 5.8 thousand people, which is 26.0% more than in 2021; Migration loss of population is observed in all parts of the region; The highest level of outflow of population (from the total number of residents) is recorded in Karmakshy, Syrdarya, Zhalagash districts and Baikonur city (Table 1). As a result of the high level of negative migration balance, Karmakshy district and Baikonur city experienced population decline, while Zhalagash and Karmakshy districts experienced insignificant growth, compared to the rest of the regions of the oblast.

In 2021, the number of births was 23,700, which is 24.5 % more than in 2017 (Table 2). The total fertility rate was 28.8 per 1,000 people, which is much higher than the country average rate (23.5 per 1,000 people).

The most accurate current characterisation of fertility is the total fertility rate (TFR), calculated as the sum of age-specific fertility rates and showing the number of children that would be born, on average, to a woman over her lifetime if fertility remained constant. This rate does not depend on changes in the structural characteristics of the population (gender, age).

Between 2017 and 2021, the country's TFR showed a yearly increase from 2.75 to 3.32. (Figure 3). More intense growth was recorded in 2020 and 2021.

In 2021, the TFR of Kyzylorda region was 4.36, which is much higher than the country average rate. Since 2017, the region's TFR has increased by 32 %, which is also higher than the average rate in the country.

In general, the birth rate in Kyzylorda region is one of the highest in the country. According to the results of 2021, only two regions of the country - Turkestan and Mangistau regions were outperforming Kyzylorda region in terms of birth rate.

During the reporting period, the marriage and divorce rates in Kyzylorda region have not changed much. Only in 2019, there has been a marked increase in divorce rates (Table 3). In 2021, the region's overall marriage rate was 7.2 and divorce rate was 2.1 per 1,000 people, slightly lower than the republican rates (7.4 and 2.5 per 1,000 people, respectively).

During 2020 and 2021, the region, as well as the whole country, experienced an increase in number of deaths, the leading cause of which was the COVID-19 pandemic. In January-December 2022, the number

of deaths in the region was 4.6 thousand people, which is 20.8% less than in January-December 2021 (5.8 thousand people). The region's death rate has declined to pre-pandemic levels (5.4 deaths per 1,000 people). In general, the death rate in the region is one of the lowest in the country.

Table 1. Population change by regional areas of Kyzylorda region, from the beginning of 2022 to 1 January 2023

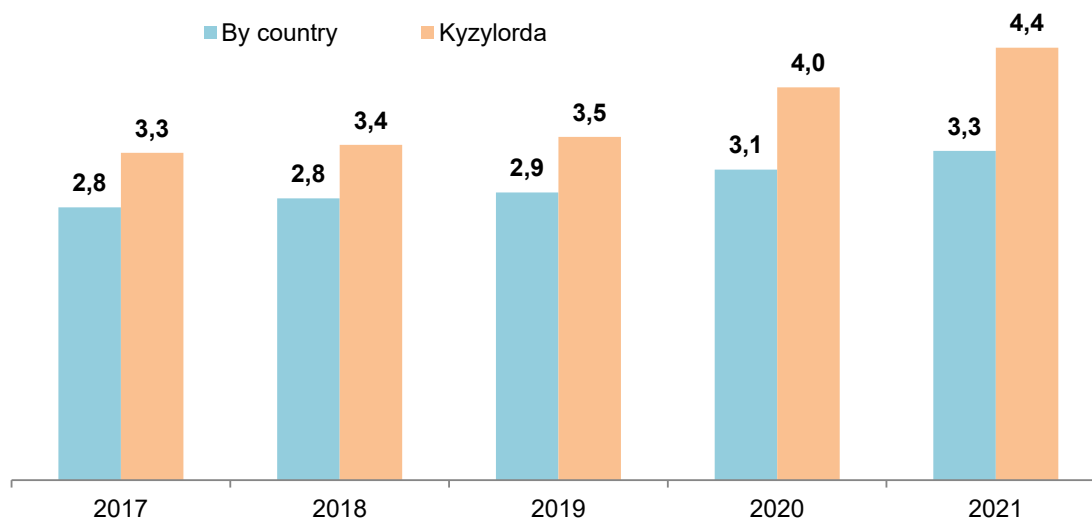
Regions	Population as of 01.01.2022	Population Growth	Natural Increase	Migration Growth	Population as of 01.01.2023
Все население					
By region	823 251	10 280	16 120	-5 840	833 531
Kyzylorda	343 242	6 728	7 224	-496	349 970
Baikonyr	34 607	-3	440	-443	34 604
Aralsk	77 948	739	1 557	-818	78 687
Zhalagash	35 737	188	618	-430	35 925
Zhanakorgan	79 535	987	1 745	-758	80 522
Kazalinsk	77 732	882	1 528	-646	78 614
Karmakshinsk	52 135	-48	872	-920	52 087
Syrdarya	37 801	50	570	-520	37 851
Shieli	84 514	757	1 566	-809	85 271
Urban population					
By region	385 564	5 544	7 826	-2 282	391 108
Kyzylorda	307 150	4 971	6 471	-1 500	312 121
Baikonyr	34 607	-3	440	-443	34 604
Aralsk	36 453	502	779	-277	36 955
Kazalinsk	7 354	74	136	-62	7 428
Rural population					
By region	437 687	4 736	8 294	-3 558	442 423
Kyzylorda	36 092	1 757	753	1 004	37 849
Aralsk	41 495	237	778	-541	41 732
Zhalagash	35 737	188	618	-430	35 925
Zhanakorgan	79 535	987	1 745	-758	80 522
Kazalinsk	70 378	808	1 392	-584	71 186
Karmakshinsk	52 135	-48	872	-920	52 087
Syrdarya	37 801	50	570	-520	37 851
Shieli	84 514	757	1 566	-809	85 271

Source: Bureau of National Statistics of the ASPR RoK

Note: Population figures for the beginning of 2022 and 2023, based on the results of the National Population Census of the Republic of Kazakhstan in 2021.

Table 2. Indicators of natural and migratory population growth (loss) in Kyzylorda region, 2017-2022

Indicators	2017	2018	2019	2020	2021	2022 January- December
Number of births, people	18 981	19 195	19 347	21 780	23 682	20 680
per 1000 people	24,4	24,3	24,2	26,9	28,8	24,7
Number of deaths, people	4 314	4 299	4 527	5 988	5 712	4 560
per 1000 people	5,5	5,5	5,7	7,4	7,0	5,4
Natural population growth, people	14 667	14 896	14 820	15 792	17 970	16 120
per 1000 people	18,9	18,9	18,6	19,5	21,9	19,2
Number of marriages	5 649	5 735	5 835	5 892	5 901	5 217
per 1000 people	7,3	7,3	7,3	7,3	7,2	6,2
Number of divorces, people	1 733	1 708	2 072	1 633	1 708	*
per 1000 people	2,2	2,2	2,6	2,0	2,1	*
Migration, total, people						
arrived	30 282	31 728	39 344	25 215	19 896	21 162
left	34 936	35 446	44 968	29 950	24 531	27 002
balance of migration	-4 654	-3 718	-5 624	-4 735	-4 635	-5 840

**Figure 3.** Total fertility rate, 2017-2021

The study of population death rate usually begins with an analysis of the causes of death, which makes it possible to conclude which diseases should be the main focus of efforts to reduce the mortality rate, as well as to assess the effectiveness of measures to combat certain diseases.

The main causes of death in Kyzylorda region, as well as in the country, are:

- ▶ circulatory diseases;
- ▶ tumours;
- ▶ accidents, poisonings, injuries;
- ▶ diseases of the respiratory system;
- ▶ diseases of the digestive system.

If in 2017 it was 60.2 % of all deaths in the region, in 2021 it was 47.2 % (January-December 2022 - 52.0 %) (Table 3).

Table 3. Those who died by main classes of causes of death in Kyzylorda region in 2017-2022, in %

Cause of death	2017	2018	2019	2020	2021	2022 January- December
By country						
Number of deaths, total, people	129 009	130 448	133 128	161 333	182 403	134 709
Deaths from cardiovascular disease	24,4	23,4	22,7	22,5	23,6	22,6
From accidents, poisoning and injuries	9,7	9,3	9,1	6,7	6,2	8,4
From tumours	12,0	11,6	11,3	9,4	7,9	10,3
From diseases of the respiratory system	12,9	12,2	12,2	14,3	11,3	9,7
From diseases of the digestive system	9,0	8,8	8,9	7,9	7,0	8,0
From diseases of the digestive system	32,0	34,6	35,8	39,1	44,0	41,1
Kyzylorda region						
Number of deaths, total, people	4 314	4 299	4 527	5 988	5 712	4 560
Deaths from cardiovascular disease	22,3	20,7	20,2	19,7	19,9	20,9
From accidents, poisoning and injuries	6,4	6,5	6,8	5,0	6,1	8,4
From tumours	11,2	11,3	10,6	8,5	8,1	9,1
From diseases of the respiratory system	14,3	12,3	11,6	18,4	8,4	8,2
From diseases of the respiratory system	5,8	6,5	6,2	5,1	4,8	5,4
From diseases of the digestive system	39,8	42,7	44,6	43,3	52,8	48,0
From other causes						

Source: Bureau of National Statistics of the ASPR RoK

Of all the above-mentioned causes, the death rate from diseases of the circulatory system (in most cases people die from ischaemic heart disease and from sudorific brain damage) is the highest. In 2021, 1,136 people (19.9 %) died due to a blood circulatory system disorder. If in 2017 the number of deaths due to this cause was 123.5 per 100,000 people, in 2021 it will be 138.3 deaths per 100,000 people (Figure 4).

The second place in the death rate profile is taken by deaths from diseases of the respiratory system. Respiratory diseases were the causes of 479 deaths in the region in 2021, and 1,103 deaths a year earlier (in 2020). The death rate per 100,000 people due to this cause decreased to 58.3 deaths in 2021.

It should be noted that a dramatic increase in death rate in 2020 from circulatory and respiratory diseases has been implicated by the COVID-19 pandemic.

Tumour is the third most frequent cause of death that occurs in the region, approximately 500 people died from that cause each year. The number of deaths per 100,000 people from a relevant cause in 2021 was 56.0, which is much lower than in previous years.

During the reporting period, deaths from external causes (accidents, poisoning and injuries) increased slightly in the region. In 2021, the number of deaths caused by this factor in the region was 347, more than a third of which were deaths from transport accidents. The rate of deaths from this cause per 100,000 people increased from 35.7 deaths in 2017 to 42.3 deaths in 2021.

There were no significant changes in death rates from diseases of the digestive system during the reporting period. In 2021, the number of deaths from the related cause was 276 (33.6 cases per 100,000 people).

During the reporting period for all main causes of death, the death rate in Kyzylorda region was much lower than in the country. Only in 2020, which was the year of the acute phase of the COVID-19 pandemic, the death rate from diseases of the respiratory system in the region exceeded the average rate in the country.

Life expectancy (LE) is the most important integral demographic indicator characterising the level of mortality and health of the population.

It should be noted that in most countries, LE at birth showed annual increases to varying degrees before the pandemic. The same trend was reported in Kazakhstan, where life expectancy at birth increased by 4.8 y.o. between 2009 and 2019 (from 68.4 to 73.2 y.o.) . But in 2020-2021, it decreases by 3 years (from 73.2 to 70.2 years) due to the impact of the COVID-19 pandemic.

Between 2017 and 2021 in Kyzylorda region, the highest LE was recorded in 2018, which was 73.0 y.o. for both sexes, 69.2 y.o. for men and 76.8 y.o. for women (Figure 5). In 2021, Kyzylorda region was the only

region in the country where LE showed positive dynamics compared to the previous year. In 2021 (70.8 y.o.), the region is inferior to Astana (72.9 y.o.) and Almaty (72.0 y.o.).

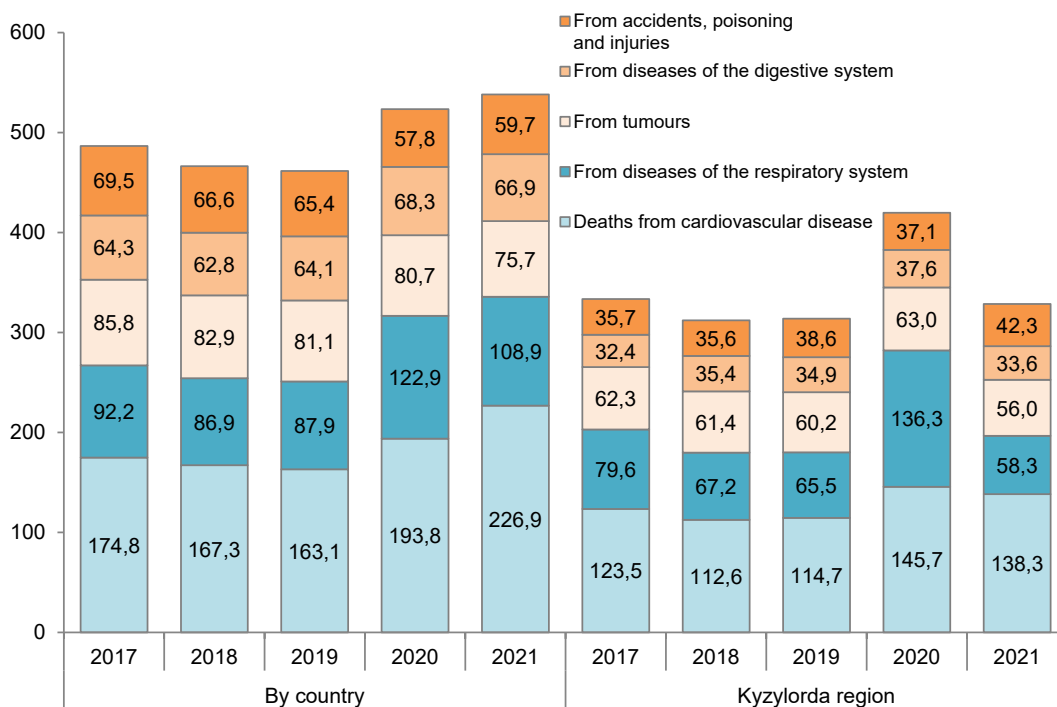


Figure 4. Death rate by major cause of death, per 100,000 people, 2017-2021

Source: Bureau of National Statistics of the ASPR RoK

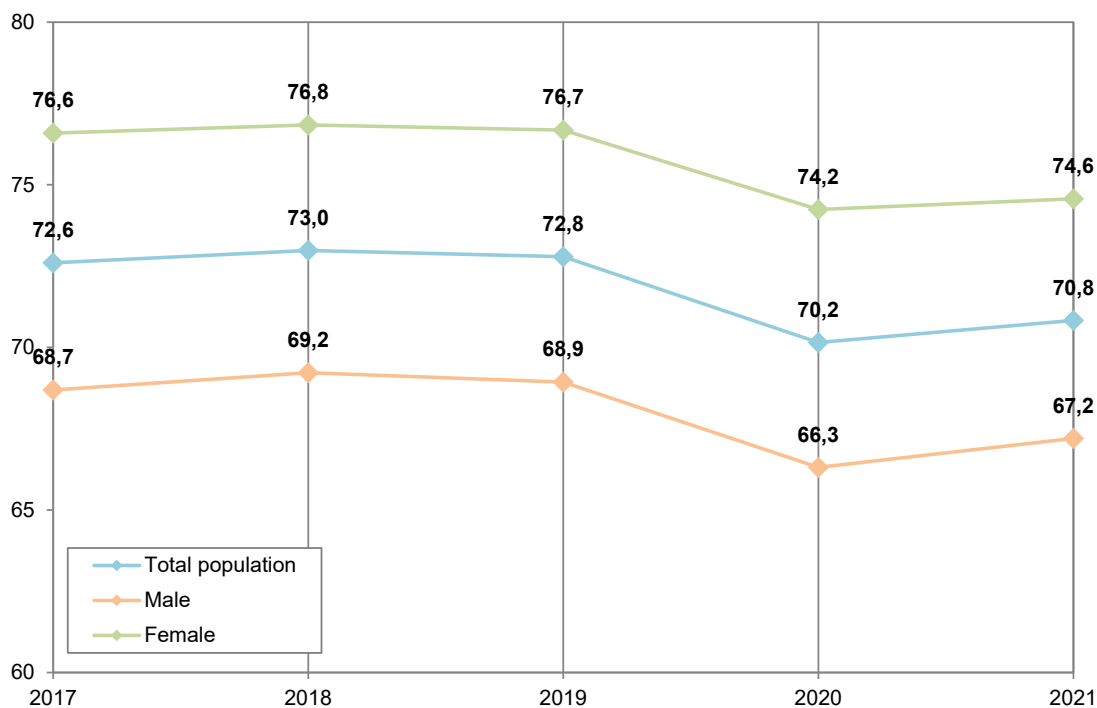


Figure 5. Life expectancy at birth, Kyzylorda region, 2017-2021

Source: Bureau of National Statistics of the ASPR RoK

The difference in LE between men and women has narrowed slightly in the region, as well as in the country. In 2017-2020, the gender difference in LE was between 7.6 and 7.9 y.o., but in 2021 it was 7.4 y.o., which is slightly lower than the republican rate (7.7 y.o.).

One of the main reasons for the gender difference in LE is behavioural factors, particularly in the health context.

The region experienced an increase in infant death rate over the considered period until 2020 (164 deaths in 2017 and 227 deaths in 2020), which made the region's rate in 2020 (10.6 per 1,000 live births) the highest among the country's regions (Figure 6). In 2021, the infant death rate decreased slightly to 9.7 per 1,000 births. That said, the infant death rate in the region remains high and slightly exceeds the average rate in the country (8.4 cases per 1,000 births in 2021).

There has been a significant difference in infant death rates between urban and rural areas in the region in recent years. In 2021, the infant death rate was 15.3 per 1,000 births in urban areas and 4.7 per 1,000 births in rural areas. In January-December 2022, the same trend is observed despite the decrease.

The region's infant death rate shows the majority (53.6% in 2021) of infant deaths are due to deaths from selected conditions occurring in the perinatal period (up to 7 days). The other main causes of infant deaths are congenital anomalies (17.9 %), infectious and parasitic diseases (6.7 %), diseases of the respiratory system (3.6 %) and accidents, poisoning and injuries (1.3 %).

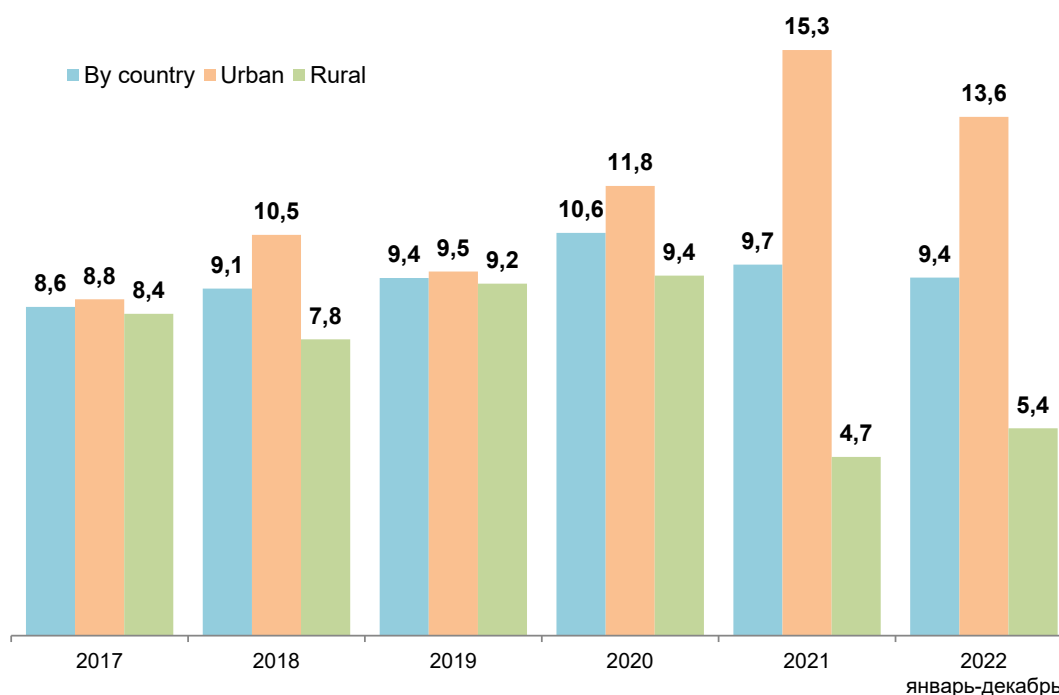


Figure 6. Infant death rate (per 1,000 births), Kyzylorda region, 2017-2021

Source: Bureau of National Statistics of the ASPR RoK

Conclusions:

- ▶ Kyzylorda region is one of the three major regions of the country in terms of size (following Aktobe and Karaganda regions). The total area of the region is 226.0 ths sq km, which is 8.3 % of the country's territory;
- ▶ As of January 1, 2023, 833,500 people or 4.2% of the country's population live in the region (9th place among the country's regions);
- ▶ The average population density in the region (per 1 sq. km of territory) is 3.7 people;
- ▶ The population of the region shows positive dynamics. Since the beginning of 2017, it increased by 7.8% (from 773.1 thousand to 833.5 thousand people);
- ▶ Kyzylorda region is one of two regions (Turkestan region) in the country where the number of men slightly exceeds the number of women. At the beginning of 2022 in the region, the share of men in the total population was 50.1 % and women 49.9 % (in the country: men - 48.8 %, women - 51.2 %);
- ▶ Urban areas are inhabited by 46.9 % of the region's population, which is markedly lower than the average rate in the country (61.8 %);
- ▶ The regional centre has the major part of the urban population of the region (80%);
- ▶ A significant part of the population of the region (350.0 thousand people or 42%) is concentrated in the city of Kyzylorda and rural settlements under the administration of the city;
- ▶ The largest rural districts in terms of population are Shieli (85.3 thousand people), Zhanakorgan (80.5 thousand people), Aralsk (78.7 thousand people) and Kazalinsk (78.6 thousand people);

- ▶ Population growth in the region is achieved solely due to natural increase;
- ▶ The migration situation in the region, as in many regions of the country, is characterised by an excess of the number of people leaving over the number of people arriving. Migration loss of population is observed in all parts of the region;
- ▶ In 2022, the migration loss of the region's population totalled 5.8 thousand people, which is 26.0% more than in 2021;
- ▶ In 2021, the number of births was 23,700, which is 24.5 % more than in 2017 (Table 2). The total fertility rate was 28.8 per 1,000 people, noticeably higher than the average rate in the country (23.5 per 1,000 people);
- ▶ Between 2017 and 2021, the country's TFR showed an annual increase from 2.75 to 3.32. More intense growth was recorded in 2020 and 2021;
- ▶ The birth rate in Kyzylorda region is one of the highest in the country. According to the results of 2021, only two regions of the country - Turkestan and Mangistau regions outperformed Kyzylorda region in terms of birth rate;
- ▶ In 2021, the total fertility rate in Kyzylorda region was 4.36, which is much higher than the country average rate;
- ▶ In 2021, the region's overall marriage rate was 7.2 and divorce rate was 2.1 per 1,000 people, slightly lower than the country rates (7.4 and 2.5 per 1,000 people, respectively);
- ▶ The region has one of the lowest death rates in the country;
- ▶ In 2020 and 2021, the region, as well as the whole country, experienced an increase in death rate, the leading cause of which was the COVID-19 pandemic;
- ▶ In January-December 2022, the number of deaths in the region was 4.6 thousand people, which is 20.8% less than in January-December 2021 (5.8 thousand people);
- ▶ During the reporting period for all main causes of death, the death rate in Kyzylorda region was much lower than in the country. Only in 2020, which was the year of the acute phase of the COVID-19 pandemic, the death rate from diseases of the respiratory system in the region exceeded the average rate in the country.
- ▶ In recent years, the region's death rate from transport accidents has been slightly higher than the country average rate;
- ▶ In 2021, Kyzylorda region was the only region in the country where LE showed positive dynamics compared to the previous year. In 2021 (70.8 y.o.), the region is inferior to Astana (72.9 y.o.) and Almaty (72.0 y.o.).
- ▶ In 2017-2020, the gender difference in LE was between 7.6 and 7.9 y.o., but in 2021 it was 7.4 y.o., which is slightly lower than the republican rate (7.7 y.o.).
- ▶ That said, the infant death rate in the region remains high and slightly exceeds the average rate in the country (8.4 cases per 1,000 births in 2021).
- ▶ There has been a significant difference in infant death rates between urban and rural areas in the region in recent years. In 2021, the infant death rate was 15.3 per 1,000 births in urban areas and 4.7 per 1,000 births in rural areas. In January-December 2022, the same trend is observed despite the decrease.

Volume and structure of gross regional product

The volume of produced Gross Regional Product (GRP) of Kyzylorda region in 2021 was 1,926.0 bln. KZT and compared to the corresponding period of the previous year increased by 17.1%, which is slightly less than the country average rate (18.8% growth). The volume of GRP produced in the first 9 months of 2022 was 1,655.4 billion KZT, which was 2.5% of the country's GRP (65,487.8 billion KZT).

In the GRP profile of Kyzylorda region, the dominant part is the share of industry. The average contribution of industry to GRP over the five-year period was 573,696.3 million KZT, which averaged 32.1 per cent (Table 4). This dominant presence of the industrial sector in the GRP profile, in fact, leads to disproportionate development. Unresolved disproportionality leads to the emergence of instability of the economic system, which, as the structural-parametric antagonisms increase, develops into a crisis state [34].

Other significant components of the region's GRP are transport and warehousing (average 12%), wholesale and retail trade (average 10.5%), real estate operations (average 6.0%) and education (average 5.2%). The smallest contribution comes from arts, entertainment and recreation (0.8%).

Table 4. Regional gross product profile by types of economic activity in dynamics over 5 years, %

Types of economic activities	2017		2019		2021	
	By country	Kyzyl. region	By country	Kyzyl. region	By country	Kyzyl. region
GRP, total bln KZT	54 378,9	1 431,0	69 532,6	1 828,9	83 951,6	1 926,0
Agriculture, forestry and fishing	3,9	4,5	4,5	4,8	5,0	6,7
Industry	36,4	26,9	27,6	34,2	29,6	29,5
Construction	4,9	5,5	5,5	7,7	5,7	5,1
Wholesale and retail trade; cars and motorcycles repair	8,4	16,8	17,0	8,4	16,8	9,5
Transportation and warehousing	14,7	8,2	8,0	13,6	6,8	14,8
Accommodation and catering services	1,1	1,2	1,1	0,9	1,0	0,9
Information and telecommunication	0,5	2,0	1,9	0,5	2,3	0,6
Financial and insurance activities	2,2	3,7	3,2	2,0	2,9	2,2
Real estate transactions	5,8	8,3	7,5	5,1	6,5	5,1
Professional, scientific and technical activities	2,4	4,5	4,4	2,3	3,7	2,4
Activities in the area of administrative and support services	0,8	2,3	2,3	0,8	2,1	0,8
Public administration and defence; compulsory social security	3,0	1,7	1,7	3,0	1,8	3,7
Education	5,1	2,8	2,7	4,7	3,9	6,9
Health and social services	3,2	2,0	1,9	3,0	2,9	3,7
Arts, entertainment and recreation	0,8	0,8	0,7	0,9	0,9	0,7
Provision of other types of services	0,6	3,1	3,0	0,6	2,3	1,5
Net taxes	6,3	5,9	7,0	7,7	5,8	5,9

Source: Bureau of National Statistics of the ASPR RoK

According to Table 4, in 2017, the GRP of the region totalled 1,430,980.1 million KZT. In 2018, the increase is 15.1 % compared to a previous year. In 2019, the region's GRP increased by 11.0 % compared to the previous year, but decreased by 10.0 % in 2020 compared to 2019. In 2021, the GRP growth is fixed on the level of 17.1 %.

Among the components of GRP, Wholesale and Retail Trade has a positive trend of contribution to GRP since 2018 (up 0.6 % in 2019, 12.4 % in 2020 and 1.2 % in 2021); Health and Social Services since 2017 (up 52.0 % in 2018, 0.3 % in 2019, 20.2 % in 2020 and 2.8 % in 2021).

The number of companies in the industry increased slightly over the five-year period from 355 in 2017 to 361 in 2021. The largest number of companies is registered in Kyzylorda city - 5-year average rate is 56 % (Aralsk, Zhanakorgan, Kazalinsk and Shieli - 7 % each).

The average value of industrial output of Kyzylorda region for the five-year period was 797,829 million KZT. The largest specific weight of the production volume accounts for Kyzylorda city - on average for five years the production volume totalled 631,909 million KZT or 79.2%. The next significant areas are Zhanakorgan with an average of 86,906 million KZT or 10.9 % and Shieli with an average of 36,347 million KZT or 4.6 %. The smallest contribution for 5 years was made by Baikonur city - 0.02%, Karmakshy district and Syrdarya districts - 0.4% respectively (Figure 7, Table 5).

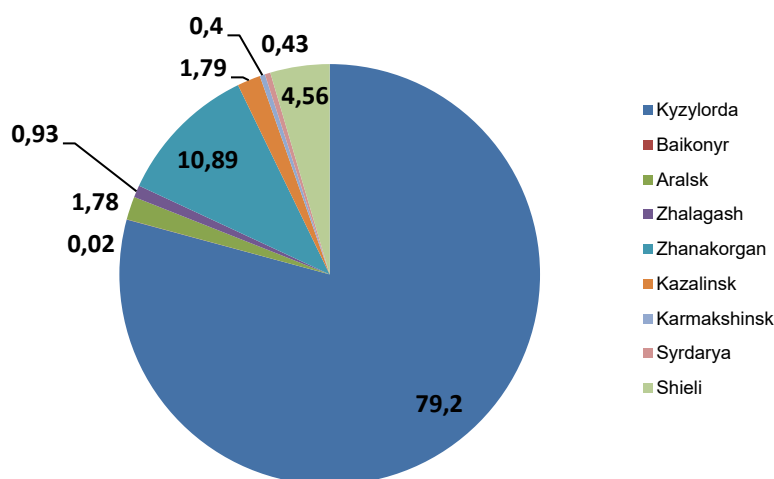


Figure 7. Share in industrial output (goods and services), 5-year average, %

Note: calculations are based on the data of the Bureau of National Statistics of ASPR of RoK

Table 5. Volume of industrial production (goods, services) in the context of districts of Kyzylorda region, million KZT

	2017	2018	2019	2020	2021	Average value	Share, %
By region	731 408	943 740	852 147	653 270	808 580	797 829	100,0
Kyzylorda	591 397	801 798	694 477	479 702	592 170	631 909	79,2
Baikonyr	6,4	249,7	182,2	147,1	151,7	147,42	0,02
Aralsk	9 968	12 431	15 577	15 716	17 407	14 220	1,8
Zhalagash	4 387	5 636	8 651	7 557	11 015	7 449	0,9
Zhanakorgan	87 411	82 345	82 419	83 495	98 861	86 906	10,9
Kazalinsk	10 970	12 315	14 218	16 061	17 742	14 261	1,8
Karmakshinsk	3 059	2 755	2 850	3 626	3 613	3 181	0,4
Syrdarya	1 370	1 897	2 366	4 869	6 540	3 408	0,4
Shieli	22 839	24 313	31 406	42 095	61 080	36 347	4,6

Note: calculations are based on the data of the Bureau of National Statistics of ASPR of RoK

According to Table 5, the growth in industrial output was 23.8 % in 2021. Increase in industrial production occurred in almost all areas excluding Karmakshy district, where production decreased from 3,626 million KZT in 2020 to 3,613 million KZT in 2021. The highest growth of industrial production was recorded in the Zhalagash, Shieli and Syrdarya districts, where the increase in production was 45.8 %, 45.1 % and 34.3 %, respectively, in relation to the previous period.

In 2022, industry remains the leading sector in GRP. Thus, for 9 months of 2022, the volume of industry amounted to 540,330.0 million KZT, which was 32.6% and approximately equal to the country average rate 31.4%. This type of economic detail at the country level is also the most significant. Next are transport and warehousing, 10.6 %; education, 8.2 %; net taxes, 8.5 %; and wholesale and retail trade, 8.4 % (Table 6).

Table 6. Gross regional product profile by types of economic activity, for 9 months of 2022

Types of economic activities	By country		Доля Кызыл. области, %	Kyzylorda region	
	Volume, KZT mln.	Share, %		Volume, KZT mln.	Share, %
Agriculture, forestry and fishing	3 396 125,2	5,2	2,7	92 414,1	5,6
Industry	20 527 934,3	31,4	2,6	540 330,0	32,6
Construction	3 436 765,0	5,3	2,7	91 863,7	5,6
Wholesale and retail trade; cars and motor-cycles repair	9 304 243,7	14,2	1,5	138 336,0	8,4
Transportation and warehousing	3 778 785,5	5,8	4,6	175 498,4	10,6
Accommodation and catering services	460 970,7	0,7	1,7	8 035,2	0,5
Information and telecommunication	1 159 971,7	1,8	0,6	6 710,8	0,4
Financial and insurance activities	2 284 550,7	3,5	1,5	34 993,8	2,1
Real estate transactions	4 430 798,5	6,8	1,9	86 163,7	5,2
Professional, scientific and technical activities	1 935 803,2	3,0	2,1	40 048,9	2,4
Activities in the area of administrative and support services	1 230 774,6	1,9	0,9	10 458,8	0,6
Public administration and defence; compulsory social security	1 340 726,6	2,1	5,0	66 830,4	4,0
Education	2 860 028,3	4,4	4,8	136 304,2	8,2
Health and social services	1 555 558,1	2,4	3,7	57 325,7	3,5
Arts, entertainment and recreation	449 989,8	0,7	1,2	5 561,6	0,3
Provision of other types of services	1 725 367,5	2,6	1,4	23 693,8	1,4
Net taxes	5 609 404,5	8,6	2,5	140 894,1	8,5
Total	65 487 797,9	100,0	2,5	1 655 463,2	100,0

Note: calculations are based on the data of the Bureau of National Statistics of ASPR of RoK

According to the data of Table 6, the largest share of the region in the country's volume is accounted for by public administration and defence - 5.0%; education - 4.77%, transport and warehousing - 4.6%. In general, the contribution of Kyzylorda region to the country's volume on average remains relatively low and does not exceed 5 %.

The average value of Gross Regional Product per capita in Kyzylorda region for the five-year period was 2,118 thousand KZT, while the average value of GRP per capita in the republic for the same period was 3,667 thousand KZT. The factors influencing the dynamics of the indicator are both the growth of GRP of the region and changes in the population of the region. So the growth of GRP for 5 years made 34,6% from 1 430 980,1 to 1 926 000,2 million KZT. The population of the region also increased slightly from 803,531 at the beginning of 2020 to 833,531 at the beginning of 2023 (Table 7).

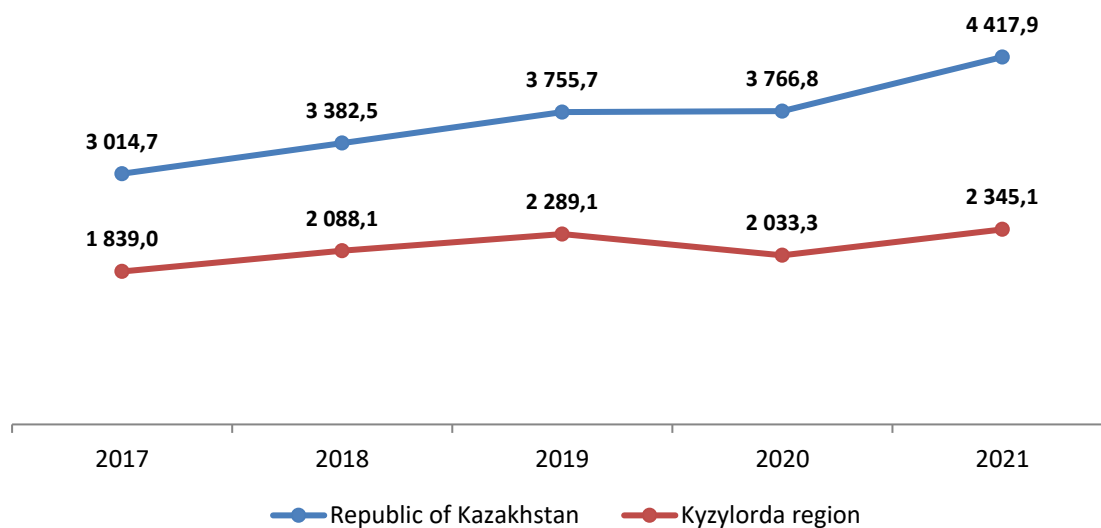
Table 7. Gross regional product per capita in dynamics for 5 years, KZT ths.

Regions	2017	2018	2019	2020	2021
By country	3 014,7	3 382,5	3 755,7	3 766,8	4 417,9
Akmola region	2 107,8	2 301,0	2 621,2	3 102,5	3 644,9
Aktobe region	2 749,7	3 136,0	3 396,8	3 329,8	3 982,1
Almaty region	1 235,8	1 378,2	1 585,5	1 805,2	2 201,1
Atyrau region	9 685,1	12 465,5	14 584,4	11 883,2	16 037,4
West Kazakhstan region	3 628,4	4 295,8	4 501,2	4 151,2	5 323,6
Zhambyl region	1 210,0	1 366,3	1 518,8	1 675,8	1 976,9
Karaganda region	3 100,9	3 431,9	3 911,0	4 431,7	5 419,3
Kostanay region	2 108,9	2 367,0	2 815,9	3 314,5	4 082,8
Kyzylorda region	1 839,0	2 088,1	2 289,1	2 033,3	2 345,1
Mangistau region	5 058,8	5 682,5	5 352,8	4 335,1	4 966,5
Pavlodar region	3 134,3	3 641,1	4 023,3	4 151,4	5 185,0
North Kazakhstan region	1 985,9	2 177,7	2 505,9	2 877,7	3 313,8
Turkestan region ¹⁾	***	838,2	1 008,1	1 174,2	1 363,1
East Kazakhstan region	2 289,5	2 598,8	2 929,2	3 369,8	3 723,0
Astana	5 766,2	6 359,5	7 075,8	6 873,6	7 361,9
Almaty	6 694,2	6 635,9	7 183,9	6 913,0	7 495,8
Shymkent ¹	***	2 217,1	2 152,1	2 360,3	2 442,9

Note: - calculations are based on the data of the Bureau of National Statistics of ASPR of RoK

- from 1990 to 2018, Turkestan region and Shymkent city were part of South Kazakhstan region

Since 2017, there has been a gradual increase in GRP per capita: from 1,839.0 thousand KZT to 2,345.1 thousand KZT in 2021. The change in the dynamics of GRP per capita growth in the region corresponds to the change in the dynamics of GDP per capita in the country (Figure 8).

**Figure 8.** GRP per capita growth dynamics, KZT ths.

Source: Bureau of National Statistics of the ASPR RoK

However, in terms of GRP per capita Kyzylorda region does not have the best positions (Figure 9). For 9 months of 2022, GRP per capita of Kyzylorda region was 2,001.6 thousand KZT, which is below the average country's rate by 1,340 thousand KZT. This indicator places the region in the category of «poor» areas. The value of the rate is also inferior to the GRP per capita of the newly created regions - Ulytau and Abay.

In general, despite the relatively low level of GRP per capita, Kyzylorda region is characterised as one of the dynamically developing regions with a prevailing industrial structure. The defining sector of regional

policy is the oil and gas sector. The mining industry has a significant share of production, dominated by crude oil and natural gas. The share of manufacturing industry in the structure of industrial production is insignificant.

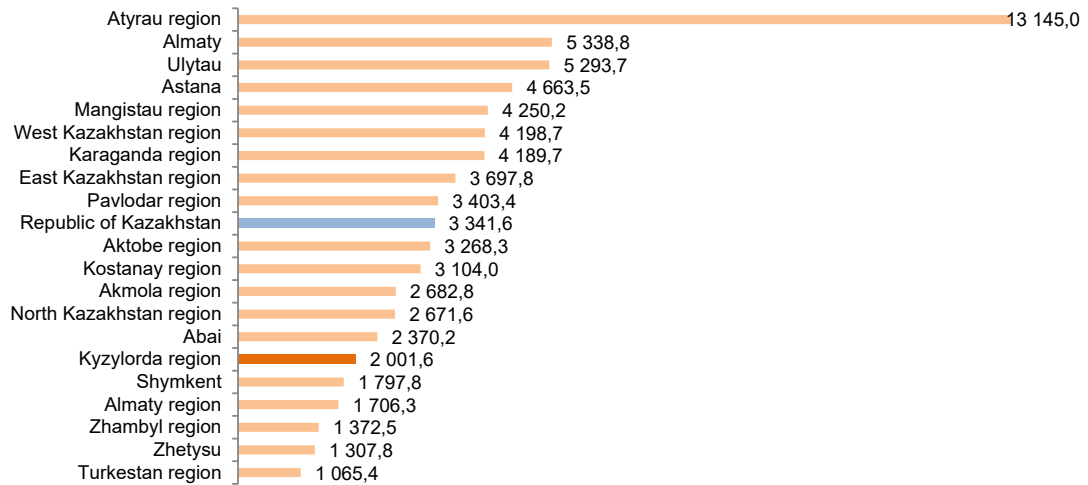


Figure 9. Gross regional product per capita for 9 months of 2022, by regions of the country, thousand KZT

Source: Bureau of National Statistics of the ASPR RoK

Conclusions:

- ▶ The volume of GRP of Kyzylorda region for 5 years increased by 34.6% from 1,431 in 2017 to 1,926 billion KZT in 2021;
- ▶ Industry takes a significant share in the GRP structure of the region, averaging 34%;
- ▶ In the GRP profile by types of economic activities, the predominant share is represented by industry (29.5 per cent), transport and warehousing (14.8 per cent) and others;
- ▶ According to the results of 9 months of 2022, the GRP of the region is one of the lowest in the country (15th place among the regions of the country);
- ▶ Other key economic activities are wholesale and retail trade (9.5%), education (6.9%), agriculture, forestry and fishery (6.7%), real estate operations (5.1%).

Sectoral composition of the economy

Considering the findings of the review of the GRP structure by economic activity, as well as given the terms of reference, further analyses are presented for the following sectors:

- ▶ industry;
- ▶ transport;
- ▶ construction;
- ▶ agriculture, forestry and fishing;
- ▶ services and telecommunication;
- ▶ energy;
- ▶ digitalization.

Industry

Industry of Kyzylorda region is the main direction of economic activity. According to the data, at the end of 2022, the industrial production index was 98.2 %. The total number of registered companies in the field of industry as of 2021 was 361 companies. The average value of industrial output for the five-year period was 797,360,059 thousand KZT. Thus, the biggest volume of industrial production (goods, services) belongs to Kyzylorda city - about 80.0 % (Table 8).

Table 8. Volume of industrial output (goods, services)

By region	Number of industrial products in 2021	2017		2019		2021	
		KZT mln.	%	KZT mln.	%	KZT mln.	%
By region	361	731 408,3	100,0	852 146,8	100,0	808 580,0	100,0
Kyzylorda	194	591 397,1	80,9	694 477,0	81,5	592 170,4	73,2
Baikonyr	1	6,4	0,0	182,2	0,0	151,7	0,0
Aralsk	30	9 968,2	1,4	15 576,7	1,8	17 406,7	2,2
Zhalagash	14	4 387,3	0,6	8 651,2	1,0	11 014,9	1,4
Zhanakorgan	29	87 410,6	12,0	82 419,4	9,7	98 860,9	12,2
Kazalinsk	32	10 970,5	1,5	14 218,0	1,7	17 742,1	2,2
Karmakshinsk	16	3 058,6	0,4	2 850,3	0,3	3 613,3	0,4
Syrdarya	16	1 370,4	0,2	1 365,9	0,2	6 540,4	0,8
Shieli	29	22 839,3	3,1	31 406,0	3,7	61 079,6	7,6

Source: Bureau of National Statistics of the ASPR RoK

According to the data in Table 8, the average value of industrial output for the five-year period was 797,360,059 thousand KZT. The highest specific weight belongs to Kyzylorda city - an average of 631,579,328 thousand KZT, which is 79.2 %. Despite the fact that the industry is a city-forming industry, at the same time it negatively affects the development of other districts of the city, as it leads to the outflow of population and negatively affects the environment of the city.

We must mention that in dynamics for 5 years, the production of industrial output in Kyzylorda city gradually decreases from 591,397,132 thousand KZT (81%) in 2017 to 592,170,373 thousand KZT (73%) in 2021. In 2021, the city recorded 194 companies in industry, which was 53.7 %. The next significant industrial region is Zhanakorgan district. There are 29 industrial companies operating in the district, the volume of industrial output increased 1.1 times from 87,410,578 thousand KZT in 2017 to 98,860,884 thousand KZT in 2021.

According to the results of 2022, the index of physical volume of industry amounted to 98.2%, in monetary terms 1031.3 billion KZT, which is 1.8% lower than last year (2021 - 808.6 billion KZT). In January-December 2022, 4,020.4 thousand tonnes of oil was produced, a 92.7% decrease of 317.7 thousand tonnes compared to the same period in 2021.

Besides, for 12 months of 2022, the production in the amount of 241.7 billion KZT was made by the manufacturing companies. Compared to the same period last year, the growth was 5.6% (2021 - 192.5 billion KZT). The following branches of manufacturing industry in particular recorded growth: metallurgical production by 4.7%, rubber and plastic products by 17.5%, production of other non-metallic mineral products by 8.1%, light industry by 46.6% food production by 6.3%.

Transport

For the period 2018-2022, the average transportation volume was 102,800.1 million tonnes. In 2022, the region will transport 123.8 million tonnes of freight, an increase of 36.3% over the 2021 level. Cargo turnover was 45,014.3 million tonnes-km (an increase of 30,525.7 million tonnes compared to 2021).

The average cargo turnover was 20,518.72 million tonnes-km, showing a 3 times growth from 14,488.6 million tonnes to 45,014 million tonnes in 2022 compared to the previous year.

The number of passenger transportations shows a downward trend. The average number of passengers over the five-year period was 219,603.3 thousand and decreased by 77.7 %, i.e. approximately 4.5 times. This decrease is due to the rapid decrease in bus services (in 2019, 385,435.17; in 2020, 103,146.76; in 2022, 60,616.35), and the introduction of taxi services in 2019, which gradually increased (Table 9).

Table 9. Passenger transport performance indicators in dynamics over 5 years

Indicator	2018	2019	2020	2021	2022
Passengers transported, thousand people, incl.	397 447,4	405 715,6	118 203,1	88 179,5	88 471,1
Road and urban electric transport	397 447,4	405 715,6	118 203,1	88 179,5	86 930,4
bus transport 1)	397 447,4	385 435,2	103 146,8	65 296,8	60 616,4
Share of bus transport in road and urban electric transport, %	100	95,0	87,3	74,0	69,7
taxi services*	-	20 280,4	15 056,4	22 882,7	26 314,0
Share of taxi services in road and urban electric transport, %	-	5,0	12,7	26,0	30,3

Source: Bureau of National Statistics of the ASPR RoK

The number of passenger turnover decreased by 2.9 times (from 6,997.0 million pkm in 2018 to 2,426.9 million pkm in 2022). This decrease is due to a rapid reduction in bus services in 2020 and the introduction of taxi services in 2019 (Table 10).

Table 10. Passenger turnover indicators in dynamics over 5 years

Indicator	2018	2019	2020	2021	2022
Passenger turnover, mln pkm, including	6 977,0	6 992,5	2 064,7	1 340,7	2 426,9
Road and urban electric transport	6 977,0	6 992,5	2 064,7	1 340,7	1 216,1
bus transport 1)	6 977,0	6 885,4	2 002,9	1 237,8	1 141,4
Share of bus transport in road and urban electric transport, %	100,0	98,5	97,0	92,3	93,9
taxi services*	-	107,1	61,8	102,8	74,7
Share of taxi services in road and urban electric transport, %	-	1,5	3,0	7,7	6,1

Source: Bureau of National Statistics of the ASPR RoK

In general, it can be mentioned that in the transport system of Kyzylorda region the number of freight traffic is growing, which also positively affects the freight turnover, and the number of passenger traffic is decreasing, which accordingly decreased and reduced the passenger turnover (Figure 10).

Roads in Kyzylorda region are repaired every year. The length of roads is almost 3,400 kilometres and due to quality repair and maintenance 70% of them are in proper condition. Streets, bridges and other road facilities are also being repaired in the region.

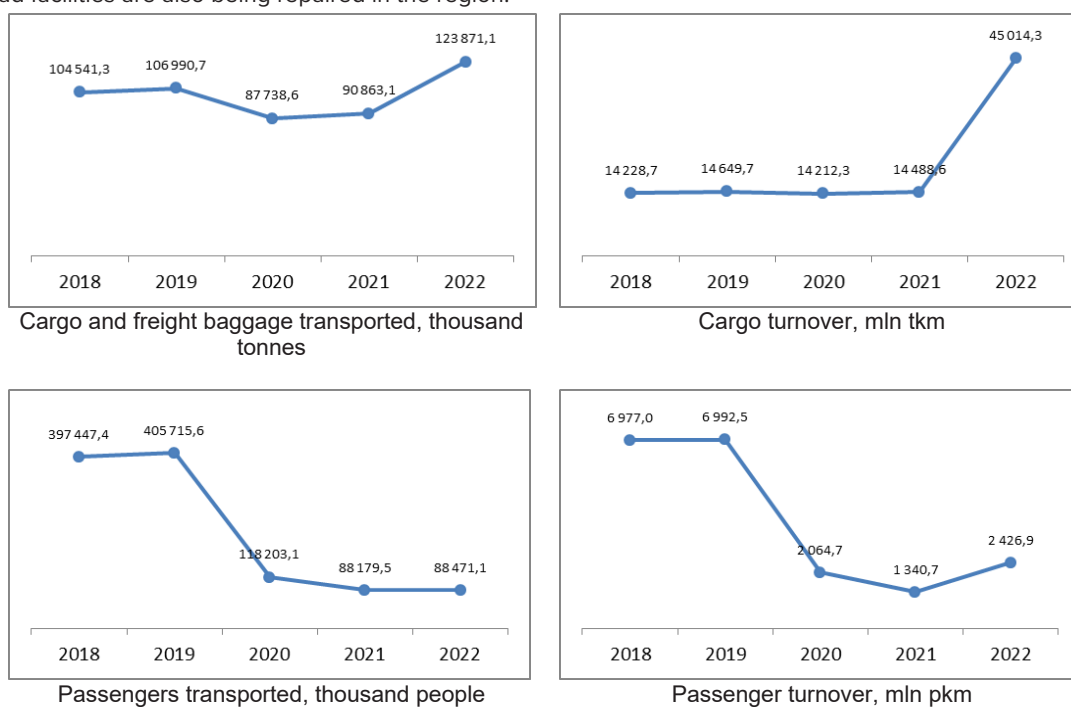


Figure 10. Key transport performance indicators by type of economic activity

Source: Bureau of National Statistics of the ASPR RoK

The total length of motor roads in Kyzylorda region is 3,397 km. 1,016 kilometres of these are road of republican subordination, the rest are local subordination. This development of the sector is partly due to the implementation of the « 2021-2023 Road Map» programme, which includes road repair projects in the streets of cities and towns.

Housing construction, commissioning

Over the last three years there has been an increase in total housing completions from 608,917 in 2020 to 683,214 square metres in 2022. Thus, the greatest specific weight belongs to Kyzylorda city - about 60 % (Table 11).

Table 11. Housing commissioning, total area and share of commissioning in the regional volume

Region	2018		2019		2020		2021		2022	
	sq.m.	%	sq.m.	%	sq.m.	%	sq.m.	%	sq.m.	%
By region	699 599	100,0	761 385	100,0	608 917	100,0	661 178	100,0	683 214	100,0
Kyzylorda	473 209	67,6	536 026	70,4	371 314	61,0	397 369	60,1	407 389	59,6
Baikonyr	16 078	2,3	н/д	н/д	н/д	н/д	н/д	н/д	н/д	н/д
Aralsk	21 109	3,0	21 610	2,8	24 799	4,1	27 515	4,1	28 378	4,2
Zhalagash	13 653	2,0	14 644	1,9	15 709	2,6	17 536	2,7	19 716	2,9
Zhanakorgan	49 424	7,1	48 420	6,4	49 506	8,1	53 491	8,1	57 596	8,4
Kazalinsk	39 057	5,6	50 716	6,6	51 119	8,4	53 043	8,0	54 022	7,9
Karmakshinsk	23 850	3,4	25 570	3,4	26 000	4,3	28 581	4,3	31 000	4,5
Syrdarya	18 003	2,6	15 652	2,1	17 779	2,9	23 728	3,6	24 168	3,5
Shieli	45 216	6,5	48 747	6,4	52 691	8,6	59 915	9,1	60 945	9,0

Source: Bureau of National Statistics of the ASPR RoK

At the end of 2022, 81,219 million KZT was allocated for housing construction, which is 16.4 % more than in 2021. The average actual cost of construction of 1 square metre of total floor area of residential buildings was 103.0 thousand KZT. Since the beginning of the year, 3,079 buildings have been completed, of which 2,811 are residential* and 268 non-residential.

According to Table 11, the average value of housing commissioning was 678,674 square metres. A significant share falls on Kyzylorda city - 437,061 square metres or 64.4%. Zhanakorgan, Kazalinsk and Shieli districts cover 7.6 %, 7.3 % and 7.9 %, respectively. The steady growth of construction in dynamics over 5 years is noted in Karmakshy and Shieli districts - 1.3 % each.

As of 2022, 5.2 billion KZT has been allocated from the state budget for the construction of social facilities. These funds were used to build 25 social facilities in the following areas: education - 12 facilities (7 schools, 2 educational buildings, 2 kindergartens, 1 Schoolchildren's House), health care - 6 facilities, culture - 4 facilities, sports - 1 facility, government bodies - 1 facility, Business Road Map - 1 facility. Including the construction of 2 social facilities (1 medical outpatient clinic, 1 sports facility) under the «Auyl - El Besigi» programme.

Agriculture, forestry and fishing

Gross output of products (services) of agriculture, forestry and fisheries in January-December 2022 as a whole in the region amounted to 180.1 billion KZT, which is higher than the level of the corresponding period of the previous year by 1.8%.

The growth of agricultural, forestry and fishery production in January-December 2022 is due to an increase in live weight slaughter of livestock and poultry by 2.8 %, raw cow's milk yield by 1.5 % and hen's eggs by 2.2 %(Table 12).

Table 12. Gross output of agricultural, forestry and fishery products (services)

Region	2018		2019		2020		2021		2022	
	KZT mln.	%	KZT mln.	%	KZT mln.	%	KZT mln.	%	KZT mln.	%
By region	97 716,1	101,6	120 551,0	104,3	142 635,7	101,9	166 839,6	100,3	180 141,3	101,8
Kyzylorda	6 530,8	104,0	8 216,8	103,0	9 431,5	102,0	13 322,1	106,9	13 227,4	100,3
Aralsk	6 583,4	101,2	7 890,9	102,3	10 017,6	102,1	10 304,5	102,1	13 437,2	104,2
Zhalagash	15 253,8	100,4	18 923,1	105,2	22 297,2	100,7	25 770,2	92,8	26 315,1	100,1
Zhanakorgan	13 995,4	103,4	18 055,4	102,4	21 826,9	102,5	24 030,3	100,3	28 862,5	105,3
Kazalinsk	11 497,8	100,5	14 116,2	102,7	16 003,7	100,6	18 954,9	102,9	21 229,2	100,4
Karmakshinsk	10 378,4	96,9	12 960,4	101,9	15 205,3	100,4	18 023,2	100,4	18 248,2	100,0
Syrdarya	12 147,7	103,8	14 602,4	104,6	16 319,9	101,8	22 000,0	100,6	19 852,7	100,2
Shieli	21 328,8	103,3	25 785,8	103,4	31 533,6	102,7	34 434,4	100,9	39 569,0	103,1

Source: Bureau of National Statistics of the ASPR RoK

Agriculture is one of the most important sectors of the region's economy. This year, 192,400 hectares will be sown with agricultural crops. Including cereals - 97.2 thousand, oilseeds - 5.3 thousand, melons - 19.8 thousand hectares, rice - 86.5 thousand hectares.

Currently, work has begun in preparation for spring seeding. Besides, last year, on the instructions of the Akim of the region, appropriate measures were taken to provide the local population with crops. These works will continue this year, 2054.6 hectares will be allocated to 8 thousand families in Kyzylorda and all districts.

The region has all the conditions for the dynamic development of the agricultural sector. That, in turn, will be a great support for further development of the agricultural industry. Last year, thanks to government support, the agricultural sector produced 178.0 billion KZT, an increase of 1.8 %, while food production totalled 72.6 billion KZT, up 6.3 % compared to last year. Totally, the results of last year's harvest yielded 464.3 thousand tonnes of grain crops, rice - 444.8 thousand tonnes, oilseeds - 5.8 thousand tonnes, fodder crops - 299 thousand tonnes, potatoes, vegetables, melons - 418.7 thousand tonnes. Also, 793 hectares of crops were sown in the direction of crop diversification using water-saving technologies. It is planned to increase the sown area to 17.2 thousand hectares by 2025.

Energy

Energy complex of Kyzylorda region according to the Bureau of National Statistics of the Republic of Kazakhstan is represented by gas networks, thermal power plants, fuel and energy resources (data available up to 2018), and electricity balance of the region (data available up to 2014). Due to the availability of recent data, the energy complex of the region is represented by the level of gasification of urban and rural areas (Table 13).

Table 13. Length of street gas network

Indicator	2019	2020	2021
Length of street gas network, km.			
By region	1366,4	1366,4	1367,7
Kyzylorda	1366,4	1366,4	1367,7
Length of street gas network in urban areas, km.			
By region	1 194,7	1 194,7	1 196,0
Kyzylorda	1 194,7	1 194,7	1 196,0
Length of street gas network in rural areas, km			
By region	171,7	171,7	171,7
Kyzylorda	171,7	171,7	171,7
Number of gas regulating points, units			
By region	56	56	70
Kyzylorda	56	56	70

Source: Bureau of National Statistics of the ASPR RoK

According to the data in Table 7, in 2019, the length of the street gas network was 1,366.4 kilometres, where urban areas account for a large share of 87.4 per cent (1,194.7 kilometres) and rural areas 12.6 per cent (171.7 kilometres). Number of gas regulating points totalled 56 units. In 2020, additional 1.3 kilometres of street gas networks were installed in urban areas and the number of gas regulating points increased by 14 units to 70 units.

Digitalization

Digital projects are being implemented in Kyzylorda region in the areas of agriculture, education, medicine, housing and utilities. All this became possible due to the introduction of the «Digital Kazakhstan» state programme. In 2020, the region was on the 8th place in the rating of «smart» Kazakhstan cities. With increasing digitalization, the digital literacy level of the region is also increasing (Table 14).

Table 14. Key indicators of digitalization in Kyzylorda region, 2017-2021.

Indicator	2017	2018	2019	2020	2021
Share of computer users (personal computer, tablet, laptop) despite the place of use, %					
6 y.o. and older	80,3	81,6	81,7	83,1	89,5
6-74 y.o.	81,7	83,1	83,3	84,5	90,6
6-15 y.o.	77,4	76,4	76,7	78,2	90,3
16-74 y.o.	83,1	85,3	85,4	86,7	90,7
Share of Internet users* despite the place of connection, %					
6 y.o. and older	74,9	76,3	76,5	78,8	88,4
6-74 y.o.	76,2	77,7	77,9	80,0	89,2
6-15 y.o.	65,7	64,7	65,9	71,9	85,7
16-74 y.o.	79,4	81,8	81,9	82,7	90,5
Level of computer literacy of the population, %					
Total, including by levels	91,6	91,9	93,5	97,5	99,4
new user	25,2	21,8	21,8	21,2	27,47
standard user	59,4	62,7	64,2	67,7	62,64
advanced user	7,0	7,4	7,5	8,6	9,24
Level of digital literacy of the population, %					
6 y.o. and older	н/д	68,2	79,1	82,4	88,1
6-74 y.o.	н/д	69,4	80,1	83,0	89,3
6-74 y.o.	н/д	н/д	н/д	50,7	84,0
16-74 y.o.	н/д	н/д	н/д	93,9	91,2
Age structure of ICT users					
6-14 y.o.	20,8	21,5	21,5	22,2	23,3
15 y.o.	1,5	1,5	1,8	1,8	1,8
16-24 y.o.	17,5	16,2	15,6	14,9	14,3
25-74 y.o.	59,4	60,6	60,3	60,0	59,3
75 y.o. and older	0,8	0,3	0,8	1,1	1,2
Distribution of ICT users by level of education, %					
Higher education	29,8	33,5	29,9	30,0	28,1
Postgraduate education	0,9	0,8	0,9	1,3	1,2
Post-secondary education	21,7	20,0	21,4	19,6	17,9
Secondary education	25,9	25,1	24,6	24,6	27,5
Basic secondary education	13,8	13,3	12,8	12,4	14,0
Primary education	6,2	6,9	9,6	11,2	10,3
No primary education	1,6	0,3	0,6	0,7	0,6
Preschool education and training	-	0,2	0,2	0,2	0,5
Distribution of ICT users by employment status, %					
Hired (paid) employee	37,7	37,0	36,0	35,6	35,2
Self-employed worker	16,2	16,1	13,5	13,4	14,5
Unemployed	5,5	4,6	9,2	8,6	7,1
Student	6,6	6,8	7,3	6,8	5,2
Retired	7,9	9,0	7,4	8,3	8,4
Dependant	26,0	26,4	26,4	26,8	29,2
Other	0,1	0,1	0,2	0,4	0,4
Share of households using ICT, %					
Fixed telephone line	39,8	36,9	31,9	29,9	28,8
Mobile phone	100,0	99,9	100,0	100,0	100,0
Cable Television	3,6	3,4	3,7	2,8	3,1

Indicator	2017	2018	2019	2020	2021
Satellite television	66,5	61,7	54,1	52,9	53,0
Digital terrestrial television	3,6	8,6	9,8	9,6	8,2
Internet Protocol television (IPTV)	3,3	4,1	4,4	4,5	4,8
Digital terrestrial television	73,8	75,7	44,7	47,1	37,8
Desktop computer	48,9	52,4	76,6	81,8	68,0
Portable computer (laptop, netbook, ultrabook)	42,3	43,3	53,0	53,6	50,5
Personal Access Display Device	39,8	36,9	44,3	44,7	43,8
Share of households with Internet access, %	98,8	99,6	99,7	99,7	98,0

Source: Bureau of National Statistics of the ASPR RoK

According to Table 14, over the five-year period, the percentage of computer users of the total population aged 6 years and above increased from 80.3 % in 2017 to 89.5 % in 2021, with an average of 83.26 %. At the same time, the largest increase is among users aged 6 to 15 years old, from 77.4 % to 90.3 %.

Over the reporting period, the proportion of internet users irrespective of connectivity location increased on average from 74.05 % in 2017 to 88.45 % in 2021. The predominant age category is Internet users aged 16-74.

As digitalisation improves, so does the level of computer literacy of the population. Thus, the percentage of novice users increased from 25.2% in 2017 to 27.47% in 2021, regular users from 59.4% to 62.64%, and experienced users from 7% to 9.24%.

In the age structure of information and telecommunication technology users, the predominant category remains the age group from 25 to 74 years old - about 60 %, followed by the age group from 6 to 14 years old - about 22 % and the category from 16 to 24 years old - 15.7 %.

In the distribution of users of information and communication technologies by level of education, users with higher education - 30.26 % and secondary education - 25.54 % are still the predominant users.

In terms of employment status, the largest users are employed (paid) workers - 36.3 %, dependents - 27.0 %, and self-employed workers - 14.7 %.

If we consider the structure of users, 100% of the population in the region uses mobile phones, 68% have a desktop computer, 50% have a personal computer, 43.8% of the population have a tablet, 53% have satellite TV, 37.8% have digital terrestrial TV and 28.8% have a fixed telephone line. The share of households with Internet access is 98.0 %.

Information and telecommunication

In Kyzylorda region in 2021, revenues from postal and courier services increased by 9.6% to 614.2 million KZT. Other postal services account for the largest volume of services. Revenues from telecommunication services in 2021 increased by 11.1 % to 7111.3 million KZT (Table 15).

Table 15. Dynamics of development of telecommunication services, million KZT

Indicator	2017	2018	2019	2020	2021
Income from postal and courier services	409,6	446,3	523,9	560,5	614,2
Postal services related to letters	69,0	x	139,3	157,2	170,4
Postal services related to parcels	95,8	93,3	114,8	126,9	127,1
Postal services related to newspapers and other periodic publications	128,0	126,3	x	x	x
other postal services	108,4	117,1	129,9	147,5	203
EMS postal services	9,8	16,6	x	x	x
special postal services	78,8	78,0	x	x	x
Postal services for the delivery of large-size parcels	6,8	4,9	x	x	x
Direct Mail postal services	0,8	0,7	x	x	x
courier services					
Income from postal and courier services	160,5	161,7	166,7	163,4	160,3
Income from telecommunication services	4875,5	5390,7	5464	6324,1	7111,3
from long-distance and international telephone services	391,5	368,0	337,7	309,5	307,4
international	21,1	17,4	14,1	8,1	5,9
local telephone telecommunication services	998,4	910,2	838,6	816,3	809

data transmission services	87,1	74,9	77,0	64,2	126,3
equipment rental services	x	115,5	x	145,4	204,0
programme distribution services over cable, wireless and satellite infrastructure	413,0	364,1	405,2	448,7	509,8
Internet services	2326,0	2765,3	2814,8	3083	3346,8
other telecommunication services	659,1	908,1	990,6	1602,4	2012,1
Income from telecommunication services	2824,9	2960,8	3292,3	3651,2	4232,5

Source: Bureau of National Statistics of the ASPR RoK

Примечание: x - confidential data

BDigitalisation plays an important component in the region's service sector. The digitalisation of the region is carried out within the framework of the national project «Technological breakthrough through digitalisation, science and innovation» (Decree of the Government of the Republic of Kazakhstan dated 12 October 2021 N° 727) and the Reference Standard of «Smart» cities (order of Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan dated 1 July 2022 N° 227/NK).

In education sphere

In the region all 294 schools are connected to the Internet through the channels of telecommunication operators «Kazakhtelecom», «Transtelecom» and «Satti». 5,700 lessons and more than 140,000 worksheets in 42 subjects are available on the Online School platform of BilimLand digital educational content. In addition, the platform works with the Kundelik e-journal to eliminate bureaucracy and improve the quality of education.

The Safe School project is being implemented in preschool and secondary education organisations to improve the safety of children and prevent juvenile delinquency. There are currently 294 public schools across the region, of which:

- ▶ 100 % of schools (294) are provided with video surveillance cameras,
- ▶ 76.5 % of schools (225) are connected to Operations Control Centre;
- ▶ 58 % of schools (170) have turnstiles installed;
- ▶ 33 % of schools (97) have alarm buttons installed;
- ▶ 15 % of schools (45) are provided with specialised security services.

In the healthcare sector

Currently, all health care organisations up to and below the district level are 100 % provided with computers and at least 4 megabit/second internet connection at 93.2 %.

All medical organisations are provided with the Damu-Med integrated medical information system. The electronic health passport of the region's residents is 100% complete. To date, 47 % of attachments to a doctor and appointments are made electronically through the «Damu-Med» system.

Telemedicine systems have been installed in 15 medical organisations in the region, including eight district, one city and six regional medical organisations. At the end of 2022, the number of telemedicine consultations was 870. The number of consultations with republican centres was 18, with medical organisations at the regional level - 242, with the multidisciplinary regional hospital - 610.

In order to prevent cases of loss of research results, as well as repeated research, medical documents require long-term and permanent storage, therefore the project «implementation of PACS system for transfer and archiving of DICOM images» was implemented. The system has been implemented in all medical organisations out of 37 subordinated to the Health Department of Kyzylorda region, which allowed to unite subdivisions of a medical institution into a single environment for diagnostics and treatment of patients.

Currently, the main challenge in the area of digitalisation of health care is the integration of the information systems of the Ministry of Health and its subordinate organisations. To address this problem, the transition to a new digital e-Health architecture is currently underway, with plans to ensure the formation of a national electronic health passport for citizens, the transition to a microservice architecture and the creation of a reference database.

In the field of security:

The «Unified Register of Administrative Offences», «Electronic Criminal Case (E-CC)» projects have been implemented in stages since 2018.

In 2020-2021 in order to ensure road safety in Kyzylorda city 20 stationary speed meters «Arkan» were installed, all of them are currently in use.

As part of the creation of a unified video monitoring system to expand the video surveillance system to prevent crimes and administrative offences, reduce criminal activity in Kyzylorda city, on the streets

and in public places, it is planned to install video cameras - 500 city cameras, 10 intelligent cameras at intersections, 35 stationary speed cameras.

To date, there are 2807 cameras of educational organisations, 1688 cameras of health care organisations, 998 cameras of apartment buildings in Kyzylorda city. They are all integrated into the Operational Control Centre.

In the field of transport:

The work on implementation of the project «Installation of electronic ticketing system on public transport of Kyzylorda city» is underway. The project is implemented by AlemPay LLP within the framework of public-private partnership through private investments.

Currently, out of 430 intra-city public transport services, 199 have fixed validators and e-ticketing system terminals. Today passengers use Kaspi.kz, Halyk bank applications, applications of mobile operators Activ and Kcell (cashback - 25 KZT), Beeline (cashback - 10 KZT), as well as online payment via transport cards and SMS. At the end of 2022, in buses where validators are installed, 80% of the total number of tickets sold are non-cash payments (i.e. out of 4,393,588 fare instances where validators are installed, 3,534,221 are paid by transport cards, mobile applications).

Conclusions:

Strengths:

the region's transport sector is one of the developing sectors and is represented by passenger traffic and cargo turnover indicators. In the dynamics for 5 years there is a tendency of reduction of passenger transportations, which is connected with the reduction of the number of transportations by buses due to the introduction of taxi services. The introduction of taxis improves the quality of passenger journeys and reduces the load on bus lines, which has a positive impact on service users. The opposite trend in cargo turnover. In 2022, cargo turnover increased 3 times from 14,448.5 to 45,014.3 million tonnes. At the same time, annual construction and reconstruction of motor roads is noted in the region;

- ▶ housing construction and commissioning sector has an upward trend. Over the last three years, the increase in the total area of housing commissioning has occurred from 608,917 in 2020 to 683,214 square metres in 2022, with privileged construction in Kyzylorda (60%);
- ▶ the region is well equipped with digital services. The population 100% owns mobile phones. The percentage of Internet users is 88.45%, the percentage of users having a desktop computer is 68% and personal computer is 50%. Digital and computer literacy is on the rise.

Weaknesses:

- ▶ Industry of Kyzylorda region is the main direction of economic activity. The large concentration of industry reduces the development of other industries in the region. In dynamics over 5 years, the growth of industrial output was 110.5%. Kyzylorda city is the main contributor to the development of industry in the region;
- ▶ The services and telecommunications sector is represented by postal and courier services and is underdeveloped due to the high development of digital services. Revenues from postal services in 2021 increased by 9.6% to 614.2 million KZT.

Opportunities:

- ▶ agriculture is one of the most important sectors of the region's economy. The region actively carries out works on preparation and cultivation of grain crops. The region is a leader in rice cultivation, which presents great opportunities for the development of related industries.

Barriers:

- ▶ energy complex is predominantly represented by the level of gasification of urban and rural areas. Over the three years, the length of the street gas network increased by 1.3 km due to increased gasification in urban areas. The number of gas regulator points increased by 14 units from 56 to 70. Despite the fact that the level of gasification in the region is 68%, this sector requires development until settlements are fully equipped with gas. Thus, 12 settlements are still without gas supply. The reason for the shortage is that gas is being shipped out of the region.

General conclusion:

- ▶ In general, based on the above analysis, Kyzylorda region has a significant potential in the development of agriculture. In particular, within the framework of the rice plant to promote the opening of enterprises for the production of rice flour, rice noodles, rice oil and others; to ensure the breeding of breeding livestock, production of sausage and dairy products. In addition, it is recommended to weaken the centralisation of industrial production in Kyzylorda city by transferring and increasing industrial production to other regions of the oblast.

Development of SMEs in the region

The number of registered small and medium-sized enterprises (SMEs) in Kyzylorda region as of 1 January 2023 was 71.8 thousand, of which the number of operating SMEs - 67.1 thousand units (93.5). Compared to the previous similar period, the number of operating SMEs in the region increased by 31.5%.

The absolute majority of operating SMEs in the region, as in the country as a whole, are individual entrepreneurs (70.2 per cent), 19.9 per cent are peasant or private farms, 9.8 per cent are small business legal entities, and 0.1 % are medium-sized business legal entities (Figure 11).

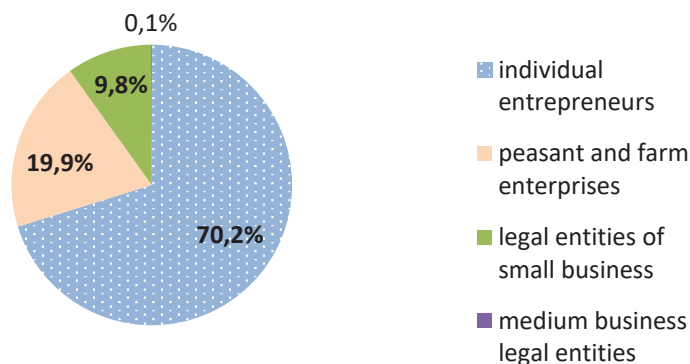


Figure 11. Number of operating SMEs as of 1 January 2023

Source: Bureau of National Statistics of the ASPR RoK

Table 16. Number of SMEs in Kyzylorda region at the beginning of 2023

Regions	Total	including			
		small business	medium business	individual entrepreneur	PFH
Registered SMEs					
By region	71 823	8 414	65	49 539	13 805
Kyzylorda city	35 411	6 230	47	26 758	2 376
Baikonyr city	841	74		767	
Aralsk	6 038	278		4 507	1 253
Zhalagash	3 084	218	4	1 525	1 337
Zhanakorgan	6 605	330	1	3 747	2 527
Kazalinsk	6 121	302	4	4 189	1 626
Karmakshinsk	4 200	285	2	2 851	1 062
Syrdarya	2 980	132	2	1 310	1 536
Shieli	6 543	565	5	3 885	2 088
Operating SMEs					
By region	67 145	6 544	65	47 159	13 377
Kyzylorda city	32 369	4 795	47	25 254	2 273
Baikonyr city	799	67		732	
Aralsk	5 751	225		4 323	1 203
Zhalagash	2 913	159	4	1 450	1 300
Zhanakorgan	6 349	278	1	3 617	2 453
Kazalinsk	5 917	237	4	4 073	1 603
Karmakshinsk	3 921	194	2	2 719	1 006
Syrdarya	2 853	102	2	1 244	1 505
Shieli	6 273	487	5	3 747	2 034

Source: Bureau of National Statistics of the ASPR RoK

Over the five-year period, the SME profile of Kyzylorda region has undergone minor changes. The share of individual entrepreneurs decreased by 3.2%, small business legal entities by 3.1%, and medium business legal entities by 0.1% (values as of 1 January 2018 73.4%, 12.9% and 0.2% respectively). The share of peasant and private farms, on the contrary, increased from 13.5 % to 19.9 %, or by 6.4 %.

The largest number of operating individual entrepreneurs and legal entities of small business is concentrated in the regional centre (30.1 thousand or 44.8% of the total number). The most active peasant or farm households are concentrated in Kyzylorda city (17 %), Zhanakorgan (18.3 %) and Shieli districts (15.2 %) (Table 16).

The dynamics of SME development in the region reflects positive dynamic growth. Between 2011 and 2022, the number of registered SMEs almost doubled from 37,400 to 71,800, and the number of operating SMEs almost doubled from 21,800 to 67,100.

Since 2017, the number of registered SMEs has increased from 50,000 to 71,800 (43.6 %) and the number of operating companies from 37,500 to 67,100 (78.9 %) (Figure 12). A rapid increase is recorded between 2020 and 2022. Financial support contributed to the increase in the number of registered and operating SMEs in the region. Thus, in 2022, 20 billion KZT was allocated from all sources, which is twice as much as in 2020 (in 2020 - 10 billion KZT, in 2021 - 12 billion KZT). Within the framework of the «National Project on Entrepreneurship Development», 9.5 billion KZT have been allocated.

Qualitative changes have occurred in the performance of operating SMEs, while in 2011 the share of operating SMEs in the number of registered SMEs was 58.2 %, in 2017 it will be 75 % and in 2022 it will be 93.5 %. Among active SMEs in the region in 2021, 48.5 % are headed by women (24751). The largest share of women individual entrepreneurs is 1,688 or 76.1 % of all women entrepreneurs.

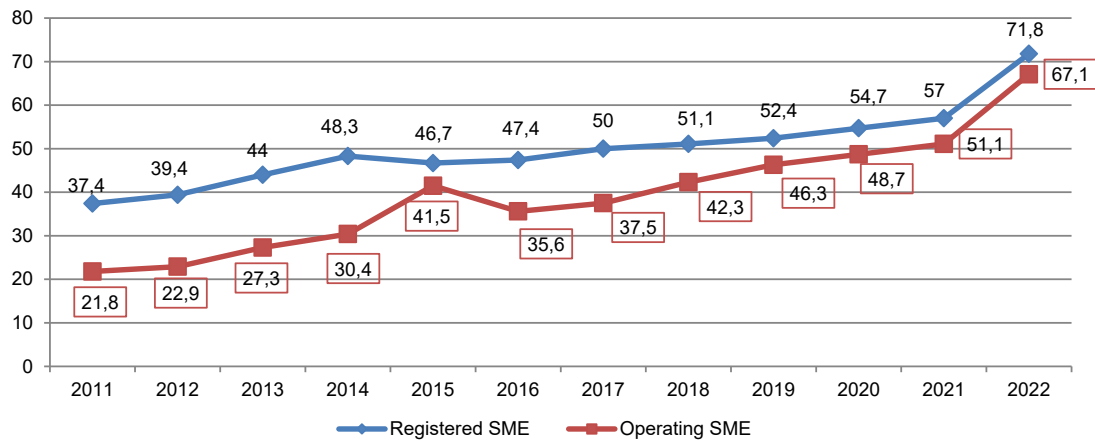


Figure 12. Dynamics of the number of registered and operating SMEs from 2011 to 2022, thousand units.

Source: Bureau of National Statistics of the ASPR RoK

Despite the growth in the number of SMEs in the region, at the regional level, the area is in the range of 3.3%-3.7% in terms of the share of active SMEs in the country between 2017 and 2022. According to this value, Kyzylorda region ranks 9th place after Almaty city (16.1%), Astana city (11.2%), Turkestan region (10.1%), Almaty region (6.4%), Zhambyl region (5.1%), Karaganda region (5.1%), Aktobe region (4.5%), Mangistau region (4.1%) (Table 2). This fact is due to the fact that the number of SMEs at the country level also has a positive trend with an increase of 37% from 2017 to 2022 (from 1,145,994 units to 1,818,764 units).

Таблица 17. Доля действующих субъектов МСП регионов в РК за 2017-2022 года, ед.

Regions	2017	2018	2019	2020	2021	2022
By country	100	100	100	100	100	100
Abay	-	-	-	-	-	2,7
Akmola region	3,6	3,6	3,4	3,4	3,4	3,0
Aktobe region	4,4	4,4	4,4	4,6	4,6	4,5
Almaty region	9,6	9,3	9,2	9,1	9,1	6,4
Atyrau region	3,7	3,8	3,8	3,6	3,6	3,5
West Kazakhstan region	3,2	3,3	3,2	3,1	3,1	2,9
Zhambyl region	5,1	5,1	5,3	5,0	5,0	5,1
Zhetysu region	-	-	-	-	-	2,9
Karaganda region	6,9	6,8	6,6	6,7	6,7	5,1
Kostanay region	4,2	4,2	3,9	3,8	3,8	3,4
Kyzylorda region	3,3	3,5	3,5	3,6	3,6	3,7
Mangistau region	4,1	4,1	4,0	3,9	4,0	4,1
Pavlodar region	3,6	3,5	3,4	3,3	3,2	2,9
North Kazakhstan region	2,4	2,4	2,3	2,1	2,1	1,8
South Kazakhstan region	15,5	-	-	-	-	-
Turkestan region	-	10,1	10,7	10,1	10,0	10,1
Ulytau	-	-	-	-	-	1,0
East Kazakhstan region	7,0	7,2	6,7	6,7	6,7	3,4
Astana	8,5	9,6	10,1	11,4	11,3	11,2
Almaty	14,8	14,4	14,3	14,4	14,4	16,1
Shymkent	-	4,7	5,2	5,3	5,3	6,1

Source: Bureau of National Statistics of the ASPR RoK

y type of economic activity, wholesale and retail trade accounts for more than a third of the region's operating SMEs (32.3%). Agriculture, forestry and fisheries employ 21 % of operating SMEs. The number of operating SMEs in agriculture in 2022 compared to 2021 increased by 36.2 % to 29,236 units. Accommodation and catering services saw a 17.2 % decrease in the number of SMEs in 2022 compared to 2021 (Table 18).

Table 18. Number of operating SMEs by type of economic activity in 2018-2022, units

Types	2018	2019	2020	2021	2022	Amendments			
						2019	2020	2021	2022
Total	92 758	95 506	98 770	104 858	138 968	103,0	103,4	106,2	132,5
Wholesale and retail trade	26 045	26 019	26 589	29 620	44 883	99,9	102,2	111,4	151,5
Agriculture, forestry and fishing	15 254	17 202	20 024	21 462	29 236	112,8	116,4	107,2	136,2
Industry, including	7 052	7 605	7 998	8 149	11 960	107,8	105,2	101,9	146,8
Manufacturing	4 407	5 377	5 816	5 959	11 395	122,0	108,2	102,5	191,2
Construction	10 021	8 748	9 605	10 397	6 303	87,3	109,8	108,2	60,6
Transportation and warehousing	7 021	6 167	5 838	5 152	5 608	87,8	94,7	88,2	108,9
Real estate transactions	2 908	3 228	2 856	2 987	3 859	111,0	88,5	104,6	129,2
Provision of accommodation and food services	2 730	3 185	3 015	3 132	2 593	116,7	94,7	103,9	82,8
Provision of other types of services	17 320	17 975	17 029	18 000	23 131	103,8	94,7	105,7	128,5

Source: Bureau of National Statistics of the ASPR RoK

Output of products (goods and services) by SMEs of the region in 2021 totalled KZT 456,056 million. In 2020, the region saw a decrease in SME output by 8.6 per cent compared to 2019, amounting to KZT 397,732 million. However, in 2021, the value of output increased by 23.3 per cent compared to 2020.

The decline in output was influenced by the pandemic. 70 % of businesses were affected, and about 10,000 retail, wholesale, hospitality and catering enterprises suspended operations. This has significantly impacted the decline in business economic activity, job losses and reduced output. On the initiative of the Akim of the region, the Plan of Economic Development of the region until 2023 was implemented, within the framework of which 265 projects worth KZT 270 billion were offered to businesses. To support entrepreneurship, tax breaks, deferred payments, and the possibility of refinancing loans on favourable terms were provided. Within the framework of the plan approved by the Akim of the region, the activities of 128 restaurants and banquet halls were redirected. Efforts are underway to make efficient use not only of the buildings but also of the area around these institutions. In 2021, 15 restaurants changed their direction [2].

A significant increase in output in 2021 is observed in Aralsk district by 88.7% from 8,335 million KZT to 15,726 million KZT compared to 2020. In Syrdarya district for the same period there was an increase in output by 34.3 per cent from KZT 11,146 million to KZT 14,955 million (table 19).

Table 19. Output by all SMEs in 2018-2022, KZT million

Types	2018	2019	2020	2021	Amendments		
					2019	2020	2021
By region	380 617	435 276	397 732	456 056	114,4	91,4	114,7
Kyzylorda	283 521	305 814	256 167	308 399	107,9	83,8	120,4
Baikonyr	541	1 168	732	858	215,9	62,7	117,2
Aralsk	10 924	9 484	8 335	15 726	86,8	87,9	188,7
Zhalagash	9 245	11 440	12 181	14 444	123,7	106,5	118,6
Zhanakorgan	33 425	36 503	36 035	43 203	109,2	98,7	119,9
Kazalinsk	15 464	16 521	22 182	16 836	106,8	134,3	75,9
Karmakshinsk	3 235	9 940	12 681	9 670	307,3	127,6	76,3
Syrdarya	6 201	9 370	11 146	14 955	151,1	119,0	134,2
Shieli	18 044	35 036	38 273	31 965	194,2	109,2	83,5

Source: Bureau of National Statistics of the ASPR RoK

The largest share of output of the region is accounted for Kyzylorda city 67.6 %, Zhanakorgan district - 9.5 % and Shieli district - 7 %.

By types of economic activity in Kyzylorda region, the construction sector produces 32.4 per cent of SME output in the region.

The second in terms of output is industry - 24.1 per cent. The share of wholesale and retail trade is 17.7 % (Figure 13).

There are 4 metallurgical companies in the region (Baiken-U LLP, Semizbay-U LLP, Kyzylkum LLP, RU-6 LLP).

It should be noted that only one company, Baiken-U LLP, is engaged in uranium oxide processing. Also, Baiken-U LLP has a major share in the metallurgical industry profile. In 2021, the company will process 1,820.0 tonnes of uranium oxide, which is 90 tonnes more than in 2020 (2020-1,730.0 tonnes).

The region has a special potential of raw materials for the production of building materials:

- ▶ dolomites, clay sand and limestone for the production of cement, lime, concrete and crushed stone of various fractions, quartz sands;
- ▶ loamy, bentonite and kaolin clays for the production of brick and building blocks and ceramic products.

The greatest contribution to output is made by small businesses - 60.8% (277,223 million KZT), 15.7% by medium-sized businesses (71,703 million KZT), 14.8% by individual entrepreneurs (67,638 million KZT), 8.7% by peasant and private farms (39,492 million KZT).

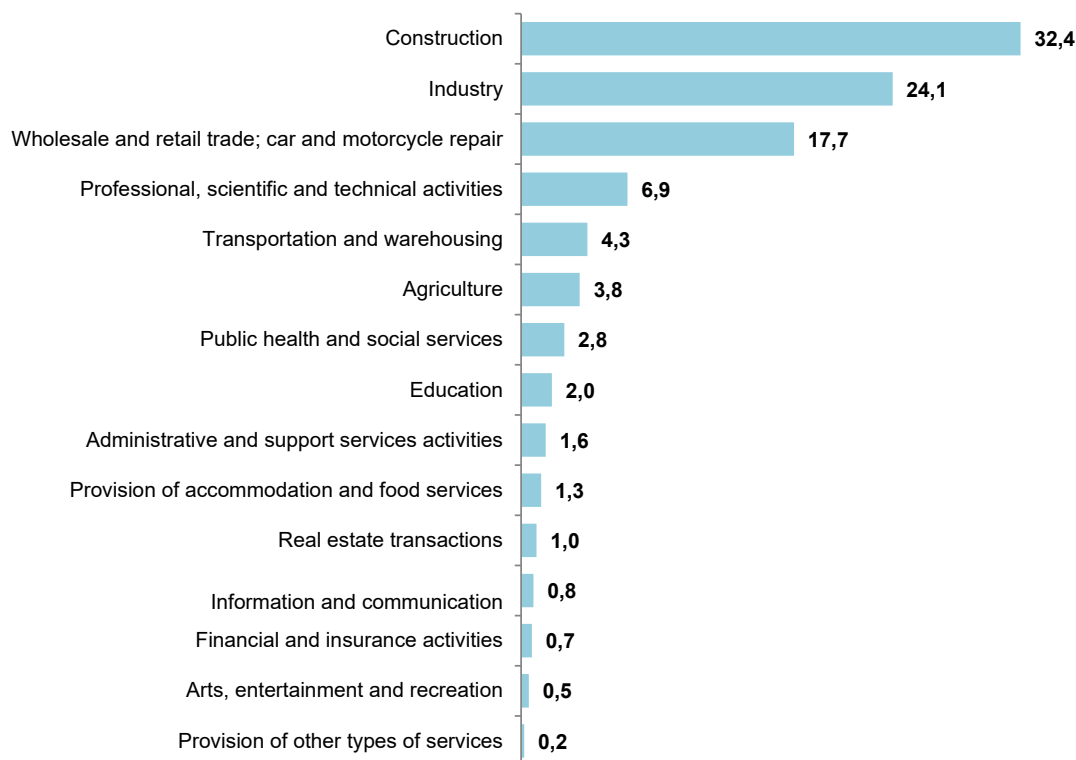


Figure 13. Structure of SME output by type of economic activity in 2021, %

Source: Bureau of National Statistics of the ASPR RoK

One of the factors of entrepreneurship development is access to financial resources. The second tier banks are not investing in micro projects, especially in rural areas. On the instructions of the President of the country, Atameken MFI was established in 2021 by NPP Atameken and Akimat of the region.

By the end of 2021, the region accounts for only 1.1% of the total output (goods and services) of SMEs in the country. The gross value added (GVA) of SMEs in Kyzylorda region was 306,949.7 million KZT in 2021 (16.3 % of GRP) (Table 20).

The number of people actively employed in SMEs in the region in 2021 totalled 104,858, whose share in total employment was 31.8 % and whose share in the economically active population was 30.2 % (Table 21). Between 2017 and 2021, the number of people employed in SMEs increased by 18.4 % from 85,610 to 104,858.

SME development in the region is supported through the implementation of the Roadmap 2025 and the Yenbek Programme for the Development of Productive Employment and Mass Entrepreneurship.

Activities within the framework of business development incentives are aimed at:

- ▶ Provision of grants to SMEs;
- ▶ subsidising interest rates on loans;
- ▶ to provide SME credits in regional centres and single-industry cities;
- ▶ to create institutional structures to support SME development;
- ▶ information and counselling education for SMEs.

In 2021, 34.6 billion KZT were allocated to support entrepreneurship, and more than 3 thousand projects were implemented.

In total, in 2021, 4,173.13 million KZT 4,173.13 million is allocated for the implementation of the Roadmap 2025 programme, of which 2,372.25 million KZT for subsidising the interest rate on the loan, 1,550.25 million KZT for partial guarantee, and 250.0 million KZT for grant funding.

In 2021, 3,760.0 million KZT was allocated under the state programme for the development of productive employment and mass entrepreneurship «Yenbek», which resulted in 836 projects receiving loans. 2,731.5 million KZT for entrepreneurs in rural areas for the implementation of 741 projects, 1,028.5 million KZT for entrepreneurs in Kyzylorda city, 95 projects were financed (Annex 1).

Also, through the Regional Investment Centre Kyzylorda LLP, 202 projects of small entrepreneurs were provided with microcredit in the amount of 1,504.0 million KZT. 13 production-oriented projects totalling 325.0 million KZT were financed at 2% interest rate

In 2020, entrepreneurs were trained on the Entrepreneurship Development Fund DAMU «Business Connections», components «Senior Seniors», «Business Advisor»

Table 20. Gross value added of the country's SMEs in 2019-2021, units

Regions	2019		2020		2021	
	GVA	share in GRP	GVA	share in GRP	GVA	share in GRP
	KZT mln.	%	KZT mln.	%	KZT mln.	%
By country	21 226 579,7	30,8	22 335 916,9	31,6	27 399 000,3	33,3
Akmola region	549 520,6	28,5	603 723,6	26,2	721 440,7	28,2
Aktobe region	622 996,3	20,5	706 340,9	23,8	870 392,7	24,3
Almaty region	1 050 141,9	32,5	1 150 821,7	32,7	1 647 866,4	37,5
Atyrau region	2 030 929,5	22,2	1 533 417,5	19,7	2 346 914,1	23,5
West Kazakhstan region	1 090 580,3	36,8	888 385,9	32,7	1 112 278,7	32,7
Zhambyl region	354 027,1	20,9	458 342,2	23,8	505 904,0	21,5
Karaganda region	880 889,0	16,5	1 018 468,0	16,4	1 191 837,5	15,5
Kostanay region	741 596,4	30,7	834 030,9	29,8	909 806,5	27,2
Kyzylorda region	307 816,8	16,8	281 003,2	16,7	306 949,7	16,3
Mangistau region	851 487,3	23,5	939 696,4	30,2	1 130 218,1	31,6
Pavlodar region	526 172,5	18,8	541 023,7	17,9	644 009,3	17,8
North Kazakhstan region	427 072,1	31,4	450 524,3	29,0	560 766,0	31,4
Turkestan region	420 789,8	23,1	502 092,7	21,3	727 010,5	26,0
East Kazakhstan region	777 249,6	19,0	827 325,0	17,5	1 026 698,3	19,7
Astana	4 056 405,0	57,9	4 470 585,0	57,2	5 635 558,3	66,9
Almaty	5 843 481,5	40,5	6 350 573,9	45,6	6 937 664,9	46,5
Shymkent	695 423,9	31,2	779 561,9	34,0	1 123 684,4	42,3

Source: Bureau of National Statistics of the ASPR RoK

Table 21. Number of employed in small and medium-sized enterprises, people

Name	2017	2018	2019	2020	2021
Kyzylorda region	85 610	92 758	95 506	98 770	104 858

Source: Bureau of National Statistics of the ASPR RoK

However, it should be noted that there were some difficulties in the implementation of the Productive Employment and Mass Entrepreneurship Development Programme «Yenbek». Thus, 39.69 million KZT allocated to partially guarantee microcredits under the «Yenbek» programme were returned to the budget. In particular, in accordance with the regulations, Fund for Financial Support of Agriculture JSC is defined as an authorised agent for granting microcredits, Entrepreneurship Development Fund «Damu» JSC is defined as a guarantor [3]. In turn, in accordance with the requirements, there is no provision for the Damu Fund to guarantee microcredits issued by Fund for Financial Support of Agriculture JSC.

There is still a problem with mortgaged properties. There is a low valuation of real estate by independent appraisal companies when SMEs obtain loans [4].

The Economy of Simple Things programme provides funding for at least 40 projects each year. At the end of 2021, only 15 projects worth 1.4 million KZT were financed under the programme. The reason was that no funds were allocated for the procedure of obtaining a state guarantee by the Agrarian Credit Corporation for the implementation of the programme «Economy of Simple Things».

From 2017 to 2021, there is a decrease in funding for women's entrepreneurship in Kyzylorda region. The share of the number of loans to women decreased from 76.5 % to 58.6 % of total loans. The amount of funding allocated to women also decreased from 1976 million KZT (31.9 per cent) to 677 million KZT (20 %) (table 22).

Table 22. Information on loans granted to women entrepreneurs in Kyzylorda region

Types	2017	2018	2019	2020	2021
Total quantity	647	1 141	1 335	1 158	457
Number of loans granted to women	495	719	-	697	268
Share of loans granted to women, %	76,5	63,0	-	60,2	58,6
Amount of loans granted, KZT mln.	6 199	7 011	7270	5 106	3 394
Amount of loans granted to women, million KZT	1 976	1 296	-	1 843	677
Share of loans granted to women, %	31,9	18,5	-	36,1	20,0

Source: According to Damu Entrepreneurship Development Fund JSC

In 2022, a Women's Entrepreneurship Development Centre was opened in Kyzylorda region. As a pilot project in 2021, Women's Entrepreneurship Development Centres were opened in Turkestan, Almaty and Mangistau regions. The initiative is funded by the Asian Development Bank and implemented by the United Nations Development Programme in Kazakhstan. The centres are aimed at developing women's entrepreneurship, stimulating their economic activity through training, cooperation and the formation of the necessary competencies, as well as providing preferential loans and grants under business support programmes, ensuring women's employment, and promoting the development of markets for goods and services produced by women and their organisations.

There is a potential for tourism development in the region. During the pandemic caused by Covid-19 tourists had no outbound travel options. Domestic tourism was developed during this period. In 2019, the «State Register of Tourist Routes and Trails» was developed and approved by the Tourism Department. The main tourist objects of the region include: ecological zones in the Aral district, the space complex «Baikonur», places of ancient towns, places of recreation on the beaches. Currently there are 4 resort centres in the region. All resort centres are located in Zhanakorgan district. However, the development of tourism in the region can also be associated with factors affecting its development. For example, in 2021, the shoreline of the recreation area on the shores of Kambash Lake recreation area has receded, causing the lake to develop foul odours. This has had a negative impact on the development of beach tourism. In the Kamystybas recreation area, entrepreneurs lease a land plot for two years on a contractual basis. Due to the short-term agreement, entrepreneurs are not investing heavily in building holiday homes in the recreation area.

It is worth noting that in regional organisations of higher and secondary vocational education the speciality «Tourism and Management» remains in short supply. This year, only 10 students graduated with a specialisation in tourism.

Recently, stable government support of the agro-industrial complex has had a good effect, including in the formation of food security in the region and the creation of new production facilities for processing agricultural products. There is a deficit of a number of food and non-food products in the region. For example, there is 100% regional demand for sunflower oil, margarine, sugar, chocolate products, buckwheat groats, condensed milk and others. 96.2 % for pasta, 96 % for eggs, etc. For the most common household products laundry and toilet soap, washing powder, dishwashing detergents, etc. there is 100% demand.

Conclusions:

Strengths:

- ▶ In the region, including all state support measures, the number of operating SMEs in 2021 increased by 31.5% compared to 2020. As a result, despite the impact of the effects of the pandemic, the region is poised to see an 18.2 % growth in manufacturing between 2019 and 2021;
- ▶ in 2021, 48.5 % of SMEs are headed by women. 76.1 % are female individual entrepreneurs. In order to support women's entrepreneurship in the region, a Women's Entrepreneurship Development Centre was established in 2022, whose activities are designed to accumulate non-financial support measures;
- ▶ the share of those actively employed in SMEs in total employment was 31.8 %, the share in the economically active population was 30.2 %;
- ▶ SME development in the region is supported through the implementation of the Roadmap 2025 and the Yenbek Programme for the Development of Productive Employment and Mass Entrepreneurship. The implementation of measures implies financial and non-financial support

measures. Within the framework of support from all sources financed in 2020 - 10 billion KZT, in 2021 - 12 billion KZT, in 2022 - 22 billion KZT.

Weaknesses:

- ▶ Most operating SMEs operate in wholesale and retail trade - 32.3 %. In agriculture, forestry and fisheries is 21%. In 2021, though, the industry recorded a significant increase (by 31.8 %) in the number of operating SMEs compared to the corresponding date of the previous year. The growth in the number of operating SMEs is still insignificant, as the number of SMEs in industry is only 8.6 %. However, it should be noted that in terms of output by SMEs, industry has the largest share of 24.1 %;
- ▶ The overwhelming majority of the region's SMEs are individual entrepreneurs - 70.2 %. 39.9% of individual entrepreneurs are engaged in wholesale and retail trade;
- ▶ the share of SMEs in the region's GRP (16.3%) is significantly lower than the country average rate (33.3%);
- ▶ the region's contribution to the total output of products (goods and services) by SMEs in the country is insignificant (1.1%);

Opportunities:

- ▶ The largest share of SME output in 2021 is in construction - 32.4 %, industry - 24.1 % and wholesale and retail trade - 17.7 %. The region has the potential of raw materials for the production of construction materials, such as dolomites, sandy loam and limestone for the production of cement, lime, concrete and crushed stone of various fractions, quartz sands; loamy, bentonite and kaolin clays for the production of brick and building blocks and ceramic products. The region has the potential for the development of medical tourism. There are 4 resort centres on the territory of the region, i.e. there is a potential for the development of medical tourism. According to the national company Kazakh Tourism, there are at least four potential points for the development of medical tourism in Kazakhstan - these are Almaty, Nur-Sultan, Shymkent and Ust-Kamenogorsk. Each of these destinations can be combined with grand routes in the Almaty region, Saryarka, the Great Silk Road and Altai [5]. In turn, the Great Silk Road passes through the territory of Kyzylorda region;
- ▶ The development of tourism activities in the region is accompanied by a number of government measures. In 2022, the Regulations on subsidising part of the costs of business entities, developed by the Ministry of Culture and Sports of the Republic of Kazakhstan, came into force. Pursuant to the Concept, an entrepreneur can receive subsidies from the state in 7 areas of tourism. 10% of costs for construction, reconstruction of tourist service facilities, as well as construction of roadside service facilities will be reimbursed. Up to KZT 83,300 per month will be paid to business entities for the cost of maintaining sanitation and hygiene networks. Entrepreneurs providing tourist services are subsidised up to 25% of the cost of purchasing a vehicle with a capacity of 8 or more seats, not including the driver's seat, as well as the cost of purchasing equipment and machinery for ski resorts. Tour operators will be paid KZT 15,000 for each foreign tourist arriving on a tourist package. For air transportation of underage passengers within the country, the cost of a children's air ticket included in a tourist product will be subsidised by 100%;
- ▶ the share of peasant and private farms, on the contrary, increased from 13.5 % to 19.9 %, or by 6.4 %. This fact indicates an increase in water consumption. In turn, the region is dependent on water. For the last consecutive years, the region has been experiencing low water levels. The Shardara reservoir loses about 500 million cubic metres of water annually due to evaporation, and another 1-1.5 billion cubic metres are lost in the riverbed from Shardara to Aralsk due to evaporation and filtration. Water losses in main and inter-farm canals amount to 15-20 per cent, and another 40-50 per cent is lost in on-farm networks. According to experts, if the water situation in the region improves, it would be optimal to plant 70-75 thousand hectares of rice in the region. This will ensure the country's need for its product and exports [6]. Also, at large enterprises of Kyzylorda region it is necessary to increase the volume of output, so that the region will be able to create related industries. The rice mill is to set up related enterprises for bagging, rice noodles, rice flour, rice oil, rice straw. Products made from Kazakhstani raw materials are imported into the republic «already several times more expensive» [7];
- ▶ in the region, as the analysis has shown, there is an increase in the number of peasant farms. It is necessary in the region to scale the experience of Zhambyl region on increasing the population's income, which has been implemented since 2019. The project has several directions: efficient use of homestead plots for growing crop, livestock and poultry products and utilisation of land resources owned by villagers outside the settlements. Lending directly to Social-Entrepreneurial Corporation «Taraz» JSC. Established cooperatives finance the purchase of seeds, fertilisers and chemical protection products by villagers. Under the Trade-in project, old agricultural machinery is renewed and restored on favourable terms for farmers.

Реализация проекта продемонстрировала высокую эффективность. На первом этапе пилотного проекта в Жамбылской области:

- ▶ the number of individual entrepreneurs increased by 2,282;
- ▶ over 5 years of the project implementation economic efficiency will amount to KZT 14.9 billion (per year KZT 2.98 billion);
- ▶ the number of unemployed decreased by 194 persons (from 528 to 334);
- ▶ 589 new jobs were created;
- ▶ the number of TSA recipients decreased by 1,058 families or 65 per cent (from 1,615 to 557 families). Savings on TSA payments totalled KZT 1,039 million;
- ▶ average monthly income of participants increased from 44 thousand tenge to KZT 73 thousand or by 165% [8].

To implement these measures in Kyzylorda region it is necessary to conduct a detailed screening of the sphere of agro-industrial complex in the region.

Barriers:

The development of tourism activities in the region is hampered by the lack of water in the region. For example, in 2021, the shoreline of the recreation area on the shores of Lake Kambash recreation area has receded, causing the lake to have unpleasant odours. This has had a negative impact on the development of beach tourism. In the Kamastybas recreation area, entrepreneurs lease a land plot for two years on a contractual basis. Due to the short-term nature of the contract, entrepreneurs are not investing heavily in building holiday homes in the recreation area;

Undeveloped mechanisms regulating support to entrepreneurs may create certain conditions for under-receipt of services by entrepreneurs. These include: untimely allocation of funds, inconsistency in the activities of structures (when guaranteeing financing, «Fund for Financial Support of Agriculture» JSC is defined as an authorised agent for providing microcredits, “Damu” Entrepreneurship Development Fund” JSC as a guarantor) [9]. In turn, in accordance with the requirements, there is no provision for the Damu Fund to guarantee microcredits issued by the Fund for Financial Support of Agriculture JSC).

Level and quality of life of the population

Differentiation of the population’s income

According to the sample survey data in Kyzylorda region, the share of the population with incomes below the subsistence minimum in the period 2018-2021 increased from 4.9 per cent to 5.5 per cent (Table 23), This indicator of the region was slightly higher than the national average (5.2 per cent in 2021). At the same time, for Q3 2022 the indicator of Kyzylorda region (4.9 per cent) was lower than the average republican level (5.3 per cent)

Table 23. Households and population with incomes below the subsistence minimum for 2018-2021 and Q3 2022

Indicators	By country			Kyzylorda region		
	2018	2021	2022 (Q3)	2017	2021	2022 (Q3)
Value of subsistence minimum, average per capita per month, KZT	27 072	37 266	46 671	21 813	35 140	41 116
Number of households, units	135 243	172 416	180 937	5 565	6 617	6 033
population, persons	790 958	992 111	1 034 700	36 727	43 471	39 395
Share of population with incomes below the subsistence minimum, %	4,3	5,2	5,3	4,9	5,5	4,9
in urban areas, %	2,5	3,8	4,0	4,6	5,2	3,8
in rural areas, %	6,7	7,2	7,3	5,1	5,7	5,8

Source: Bureau of National Statistics of the ASPR RoK

In 2021, the gap between the region’s urban and rural population on this indicator was negligible. If in the country in rural areas the share of the population with incomes below the subsistence minimum exceeded the urban indicator almost 2 times, in Kyzylorda region - only by 9.6 per cent. It should be noted that in 2019 and 2020, the urban-rural difference was 71.4 per cent and 80.0 per cent respectively.

In the region in 2021, compared to 2018, the value of the indicators of depth and severity of poverty, which characterise the average deviation of the income level of the poor population from the subsistence minimum, increased from 0.5% to 0.7% and from 0.1% to 0.2%, respectively. The value of these indicators

in the region is slightly better than the national average (Table 24). Also in the region, the Gini coefficient indicators for 10% and 20% of the population groups are noticeably lower than the national average.

In the country, the incomes of the top 10 per cent of the population are almost 6 times higher than the incomes of the bottom 10 per cent of the population. In Kyzylorda region this gap is noticeably lower and is at the level of 4 times.

The bottom 40 per cent of the region's population account for more than 25 per cent (26.0 per cent in 2021) of total household income, compared to a national average of about 23 per cent.

Table 24. Poverty and income differentiation indicators for 2018-2021 and Q3 2022

Indicators	По стране			Kyzylorda region		
	2018	2021	2022*	2017	2021	2022*
Depth of poverty, in %	0,7	0,8	0,9	0,5	0,7	0,4
Severity of poverty, in %	0,2	0,2	0,3	0,1	0,2	0,1
Gini coefficient, by 10 per cent of population groups	0,289	0,294	0,282	0,248	0,230	0,225
Gini coefficient, by 20 per cent of population groups	0,275	0,279	0,267	0,235	0,218	0,213
Ratio of the top 10 per cent of the population to the bottom 10 per cent (fund ratio), times	6,0	6,0	5,6	4,5	4,2	3,6
Share of income of the least wealthy 40% of the population, % in total population income	22,34	22,30	23,00	25,04	25,99	26,27

Source: Bureau of National Statistics of the ASPR RoK

Monetary income and costs of the population

In Kyzylorda region in 2021, per capita cash income of the population averaged KZT 690.5 thousand, which is 38.6 per cent higher than in 2018. The volume of money income of the population of Kyzylorda region is noticeably lower than the average republican level (KZT 829.3 thousand in 2021) and is one of the lowest in the country. Below only in Turkestan region (KZT 517.4 thousand in 2021), Zhambyl region (KZT 623.1 thousand) and Shymkent city (KZT 626.8 thousand). The same situation was observed in Q3 2022 (Table 25).

At the same time, the monetary incomes of the rural population in the region, as a result of more intensive growth, have become slightly higher than the national average in recent years. Also, Kyzylorda region is the only region where rural incomes exceed urban incomes.

In the region in the structure of monetary incomes, on average, the overwhelming part of the income falls on employment (more than 60%). The share of income from self-employment and entrepreneurial activity has slightly decreased. While its share was 12.3 per cent in 2018, it will be 8.9 per cent in 2021.

Pension income in the region, as well as in the country, ranks second in the structure of money income. In 2021, the share of cash income from pension reached 18.7 per cent (20.9 per cent in urban areas and 17.2 per cent in rural areas), allowance 7.4 per cent and other income 1.2 per cent. The share of material assistance from relatives and acquaintances, alimony, and property income has slightly decreased.

In general, during the period under review, the structure of money incomes of the region's population did not undergo noticeable changes.

Table 25. Structure of money income of the population, average per capita for 2018-2021 and Q3 2022, in %

Виды доходов	По стране			Кызылординская область		
	2018	2021	2022*	2018	2021	2022*
Total						
Cash income, total	629 033	829 333	245 477	498 204	690 497	202 506
labour income	74,2	70,0	73,5	73,4	69,8	70,9
employment income	63,3	60,7	64,0	61,1	60,9	61,4
income from self-employment and entrepreneurial activity	10,9	9,3	9,5	12,3	8,9	9,5
pensions	18,3	21,4	18,3	16,3	18,7	16,7
benefits	2,8	3,9	3,7	4,3	7,4	7,7
TSA and housing assistance	0,0	0,0	0,1	0,1	0,1	0,1
scholarships	0,4	0,5	0,4	1,1	1,1	1,0
material assistance from relatives and acquaintances, alimony	2,9	2,4	2,3	3,1	1,7	2,2
property income	0,5	0,4	0,4	1,0	0,0	0,1
other cash receipts	0,8	1,5	1,4	0,7	1,2	1,3
In urban areas						
Cash income, total	726 475	926 994	270 332	547 330	680 138	195 255
labour income	74,0	69,8	73,0	73,8	67,2	69,1
employment income	66,1	62,5	65,6	63,8	58,3	58,1
income from self-employment and entrepreneurial activity	7,9	7,3	7,4	10,0	8,9	11,0
pensions	18,7	21,6	18,7	17,4	20,9	18,6
benefits	2,5	3,4	3,2	3,2	7,7	7,2
TSA and housing assistance	0,0	0,0	0,1	0,1	0,2	0,2
scholarships	0,4	0,5	0,4	1,0	1,0	1,0
material assistance from relatives and acquaintances, alimony	3,0	2,6	2,6	1,9	1,6	2,4
property income	0,6	0,5	0,5	2,0	0,0	0,1
other cash receipts	0,8	1,4	1,4	0,7	1,3	1,5
In rural areas						
Cash income, total	495 882	687 095	205 535	463 450	698 058	208 344
labour income	74,7	70,2	74,5	73,1	71,6	72,3
employment income	57,8	57,0	60,8	58,8	62,7	64,0
income from self-employment and entrepreneurial activity	16,9	13,2	13,7	14,3	8,9	8,3
pensions	17,5	20,8	17,2	15,5	17,2	15,3
benefits	3,6	4,8	4,7	5,1	7,1	8,1
TSA and housing assistance	0,0	0,0	0,1	0,1	0,0	0,1
scholarships	0,4	0,6	0,5	1,2	1,2	0,9
material assistance from relatives and acquaintances, alimony	2,6	1,9	1,6	4,1	1,7	2,1
property income	0,2	0,2	0,2	0,2	0,1	0,1
other cash receipts	0,9	1,5	1,3	0,7	1,1	1,2

Source: Bureau of National Statistics of the ASPR RoK

According to the results of a sample survey of households in 2021, the monetary expenditures of the population of the region in average per capita amounted to KZT 659.4 thousand, which is 38.0% higher compared to 2018 (KZT 477.6 thousand). The level of expenditures of the region's population is also noticeably lower than the national average (Table 26)..

Table 26. Money costs of the population, average per capita for 2018-2021 and Q3 2022, in %

Types of expenses	By country			Kyzylorda region		
	2018	2021	2022*	2018	2021	2022*
Total						
Cash costs, total	614 373	809 277	236 398	477 647	659 384	192 633
Consumer costs, of which:	93,0	93,0	92,7	92,3	90,4	88,8
food products	48,6	52,8	50,7	52,7	51,5	49,1
non-food products	23,5	23,7	25,4	23,1	24,1	25,5
paid services	21,0	16,5	16,5	16,5	14,8	14,2
Financial aid to relatives and acquaintances, alimony	2,7	1,9	1,7	3,4	2,6	2,6
Taxes, fees and other payments	0,2	0,1	0,2	0,1	0,1	0,2
Loan and debt repayment	4,1	4,9	5,4	4,3	6,9	8,4
In urban areas						
Cash costs, total	711 552	908 195	259 052	535 697	673 146	188 873
Consumer costs, of which:	92,8	92,8	92,4	94,6	91,2	88,3
food products	46,8	51,1	49,1	54,4	53,1	49,9
non-food products	22,3	23,4	25,0	21,5	21,5	22,2
paid services	23,8	18,2	18,3	18,7	16,6	16,2
Financial aid to relatives and acquaintances, alimony	2,6	1,8	1,6	2,2	1,3	0,8
Taxes, fees and other payments	0,2	0,2	0,2	0,1	0,1	0,2
Loan and debt repayment	4,4	5,2	5,8	3,1	7,4	10,6
In rural areas						
Cash costs, total	481 582	665 208	199 993	436 577	649 339	195 660
Consumer costs, of which:	93,5	93,4	93,4	90,3	89,8	89,1
food products	52,1	56,1	54,3	51,1	50,4	48,4
non-food products	26,0	24,3	26,3	24,5	26,1	28,0
paid services	15,4	12,9	12,8	14,7	13,3	12,7
Financial aid to relatives and acquaintances, alimony	2,9	2,1	2,1	4,4	3,7	4,0
Taxes, fees and other payments	0,2	0,1	0,2	0,1	0,1	0,2
Loan and debt repayment	3,5	4,4	4,4	5,3	6,4	6,7

Source: Bureau of National Statistics of the ASPR RoK

If in the country in 2021 consumer spending was 93.0 per cent of total cash expenditures, in Kyzylorda region - 90.4 per cent. At the end of Q3 2022, the share of consumer spending was even lower (88.8 per cent).

In the region as a whole, according to the results of 2021, in the structure of money expenditures of the population more than 50% (51.5%) is occupied by food products, about a quarter (24.1%) - non-food products, 14.8% - paid services, 6.9% - repayment of credit and debt, 2.7% - other expenses.

There is no noticeable difference in the monetary expenditures of the population between urban and rural areas in the region. In consumer expenditures it can be noted that in urban areas the share of expenditures on food products and paid services is higher than in rural areas, while the share of expenditures on non-food products is lower.

For 2018-2021, the structure of expenditures of the region's population on food and non-alcoholic beverages does not differ significantly from the national average (Table 27). The main food expenditure in the region, as in the country, is on meat and meat products (31.9% in 2021), bakery products and cereals (17.8%), fruit and vegetables (16.0%) and dairy products (9.7%).

Table 27. Expenditure of the population on food, average per capita for 2018-2021 and Q3 2022, in %

Types of income	By country			Kyzylorda region		
	2018	2021	2022*	2018	2021	2022*
Food products and soft drinks, total	271 812	398 616	111 374	241 114	329 494	90 427
bakery and cereal products	14,4	15,6	15,7	15,2	17,8	18,5
dairy products	10,7	10,0	10,1	9,6	9,7	10,3
eggs	1,7	2,0	1,9	1,3	1,8	1,6
meat and meat products	33,5	34,3	33,7	33,1	31,9	28,6
fish and seafood	3,8	4,0	3,8	3,7	4,2	4,1
oils and fats	5,5	5,3	5,7	5,4	5,4	5,3
fruits	8,4	8,2	8,7	8,1	8,0	9,5
vegetables	7,9	7,6	7,2	8,3	8,0	8,7
sugar, confectionery and sweets	7,7	6,7	7,4	7,3	6,1	6,9
food products not elsewhere categorised	2,0	2,1	1,5	2,9	2,4	2,0
soft drinks	4,4	4,2	4,3	5,0	4,7	4,7

Source: Bureau of National Statistics of the ASPR RoK

Conclusions:

- ▶ The proportion of the population with incomes below the subsistence minimum between 2018 and 2021 increased from 4.9 per cent to 5.5 per cent;
- ▶ This indicator of the region was slightly higher than the national average (5.2 per cent in 2021);
- ▶ In 2021, the gap between the region's urban and rural population on this indicator was negligible. If in the country in rural areas the share of the population with incomes below the subsistence minimum exceeded the urban indicator almost 2 times, in Kyzylorda region - only by 9.6 per cent;
- ▶ In the country, the incomes of the top 10 per cent of the population are almost 6 times higher than the incomes of the bottom 10 per cent of the population. In Kyzylorda region this gap is noticeably lower and is at the level of 4 times;
- ▶ The bottom 40 per cent of the region's population account for more than 25 per cent (26.0 per cent in 2021) of total household income, compared to a national average of about 23 per cent;
- ▶ In the region in 2021, the average per capita cash income of the population totalled KZT 690.5 thousand, which is 38.6% higher than in 2018;
- ▶ The volume of money income of the population of Kyzylorda region is noticeably lower than the average republican level (KZT 829.3 thousand in 2021) and is one of the lowest in the country. Below only in Turkestan region (KZT 517.4 thousand in 2021), Zhambyl region (KZT 623.1 thousand) and Shymkent city (KZT 626.8 thousand);
- ▶ In recent years, Kyzylorda region is the only region in the country where rural incomes exceed urban incomes;
- ▶ During the period under review, the structure of monetary incomes and expenditures of the region's population did not undergo noticeable changes;
- ▶ In 2021, per capita cash expenditures of the region's population averaged KZT 659.4 thousand, which is 38.0% higher compared to 2018 (KZT 477.6 thousand);
- ▶ The level of expenditures of the region's population is also noticeably lower than the national average;
- ▶ If in the country in 2021 consumer spending was 93.0 per cent of total cash expenditures, in Kyzylorda region - 90.4 per cent;
- ▶ There is no noticeable difference in the monetary expenditures of the population between urban and rural areas in the region;
- ▶ In consumer expenditures it can be noted that in urban areas the share of expenditures on food products and paid services is higher than in rural areas, while the share of expenditures on non-food products is lower

Social Sector

Labour market and wages

According to statistics, in 2021 the number of labour force of Kyzylorda region at the age of 15 years and older was 347.1 thousand people (3.7% of the total labour force in the country). The share of men in the labour force was 53.7% and women 46.3%. The share of the labour force in the population was 64.5%, which is noticeably lower than the national average (69.3%). Among men this indicator was 70.0 per cent, among women - 59.2 per cent. Overall, the labour force as a proportion of the population in the region is one of the lowest in the country. The same trend continued in Q3 2022 (Table 28).

The number of employed population in 2021 was 303.1 thousand people, including salaried workers - 218.4 thousand people (66.2%), other categories of employed population - 111.7 thousand people (33.8%). The share of the self-employed in the region is 10 percentage points higher than the national average (23.8%). Compared to 2017, there is an increase in the share of salaried employees and a corresponding decrease in other categories of the employed population.

In the total employed population, the proportion of men (53.7 per cent in 2021) is slightly higher than women (46.3 per cent). Among other categories of the employed population (self-employed and independent workers), the gender gap was even greater (men - 58.8 per cent, women - 41.2 per cent).

An estimated 17.0 thousand people of working age were unemployed in the region in 2021, slightly more than in 2017 (16.8 thousand). The unemployment rate was 4.9 per cent, which corresponds to the republican level. This indicator was slightly higher in urban areas (5.0%) than in rural areas (4.8%). While in 2017 there was a marked difference in male and female unemployment rates (4.6 and 5.1 per cent respectively), in 2020 and 2021 they were on a par (4.9 per cent each). However, for Q3 2022, the female and male unemployment rates were 4.9 and 5.2 per cent respectively.

Table 28. Key Labour Market Indicators in Kyzylorda region, 2017-2022

Indicator	2017	2018	2019	2020	2021	2022*
Labour force, persons	347 411	349 725	349 125	346 308	347 096	347 034
Share of labour force in the population, %	66,9	67,0	66,2	64,9	64,5	64,0
Employed population, persons	330 562	332 940	332 332	329 431	330 079	329 540
salaried employees, persons	214 175	218 187	218 198	218 862	218 371	218 159
other categories of the employed population, persons	116 387	114 753	114 134	110 569	111 708	111 381
Unemployed population, persons	16 849	16 785	16 793	16 877	17017	17 494
Unemployment rate, %	4,8	4,8	4,8	4,9	4,9	5,0
Youth unemployment rate, % (15-28 years old)	4,3	4,2	4,2	4,3	4,1	4,1
Share of NEET in the total number of young people (15-28 years old), %	9,5	7,0	7,9	7,6	7,2	8,0
Persons not included in the labour force, persons	172 029	172 270	178 479	187 622	190 713	194 906
Share of persons not in the labour force, %	33,1	33,0	33,8	35,1	35,5	36,0

Source: Bureau of National Statistics of the ASPR RoK , *for the QII of 2022

During the period under review, the share of NEET youth (who do not work or study for various reasons) in Kyzylorda region exceeded the national average. For Q4 2021 in the region, their share was 7.2 per cent, in the country - 6.9 per cent (in Q3 2022 in Kyzylorda region - 8.0 per cent, in the country - 6.6 per cent).

The youth unemployment rate in the region also exceeds the national average. In 2021, this indicator in the region was 4.1 per cent, 0.3 percentage points higher than the national average (3.8 per cent). The marked gender disparity in youth unemployment rates (3.4 per cent for males and 5.0 per cent for females in 2021) is also noteworthy.

There has been an increase in the number of persons not in the labour force. In 2021, their share of the region was 35.5 per cent, up 2.4 percentage points from 2017.

According to statistics for 2017-2022, the region's population is mainly employed in education (18.3% in 2021), wholesale and retail trade (17.4%), industry (9.6%), transport and warehousing (9.4%), agriculture, forestry and fisheries (8.9%), construction (8.3%), health and social services (7.7%). There is a decrease in the share of employment in industry and construction and a slight increase in education and trade. In the region, the share of employment in industry and agriculture, forestry and fisheries is noticeably lower than the national average (Table 29).

Within the region, as in the country as a whole, the share of men is noticeably higher in some types of activity (transport and warehousing, construction, agriculture, forestry and fishery, industry, etc.) and,

conversely, there are areas where women significantly outnumber men (health care and social services, education, accommodation and catering services, etc.). There is a higher gender gap in certain areas than the national average. For example, for Q3 2022, male employment in transport and warehousing was 12.4 times higher than female employment, and 3.1 times higher than female employment in agriculture, forestry and fisheries, compared to the national average of 3.4 and 1.4 times respectively. Women outnumber men by about twice as much in real estate operations (2.5% nationally), arts, entertainment and recreation by 56% (10% nationally).

The level of average monthly nominal wages per employee in Kyzylorda region is noticeably lower than the national average. According to data for January-December 2022, the average monthly nominal salary per employee was KZT 262.1 thousand, which is 24.5% higher than the corresponding period of 2021 (Figure 14). The real wage index, taking into account the consumer price index, was 108.8 per cent.

Nationally and in almost all regions of the country, there has been a steady decline in gender pay inequality since 2018. In 2021, the average monthly nominal salary for men in the country was KZT 281.2 thousand, and for women - KZT 220.2 thousand. Accordingly, the gender gap was 21.7 per cent, which means that working women in the country earn on average 78.3 per cent of the wages of men (Figure 15).

Table 29. Share of employed population of Kyzylorda region by types of economic activities, 2017-2022, in %

Types of Activities	2017	2019	2021	2022*		
				total	Male	Female
Employed population - total	330 562	332 332	330 079	329 540	180 911	148 629
Agriculture, forestry and fishing	9,2	8,2	8,9	8,8	12,2	4,7
Industry	11,6	9,8	9,6	9,1	10,9	6,9
Construction	10,3	8,5	8,3	8,3	12,8	2,7
Wholesale and retail trade; cars and motorcycles repair	14,3	17,6	17,4	17,5	15,3	20,2
Transportation and warehousing	9,4	9,3	9,4	9,7	16,4	1,6
Accommodation and catering services	2,3	2,2	1,8	2,0	1,0	3,3
Information and telecommunication	0,8	1,0	0,8	0,9	1,0	0,7
Financial and insurance activities	1,1	1,1	1,1	1,1	1,2	0,9
Real estate transactions	0,6	0,7	0,8	0,7	0,4	1,0
Professional, scientific and technical activities	2,7	2,5	2,5	2,5	2,8	2,1
Activities in the area of administrative and support services	2,0	2,4	2,4	2,3	3,4	1,1
Public administration and defence; compulsory social security	5,7	5,9	5,9	6,0	7,5	4,2
Education	17,8	18,2	18,3	18,2	10,1	28,1
Public health and social services	7,6	7,9	7,6	7,7	3,3	13,0
Arts, entertainment and recreation	1,6	1,5	1,6	1,5	1,1	2,0
Provision of other types of services	3,1	3,4	3,5	3,6	0,5	7,4

Source: Bureau of National Statistics of the ASPR RoK , *for the QII of 2022

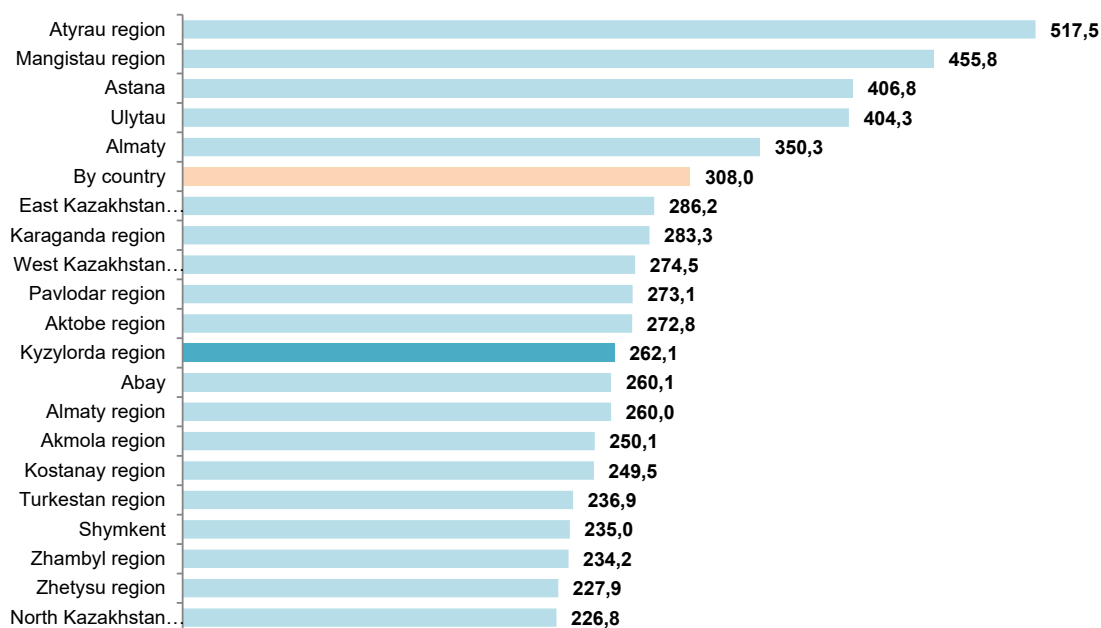


Figure 14. Average monthly nominal salary of one employee for January-December 2022 by regions of the country, in KZT ths.

Source: Bureau of National Statistics of the ASPR RoK

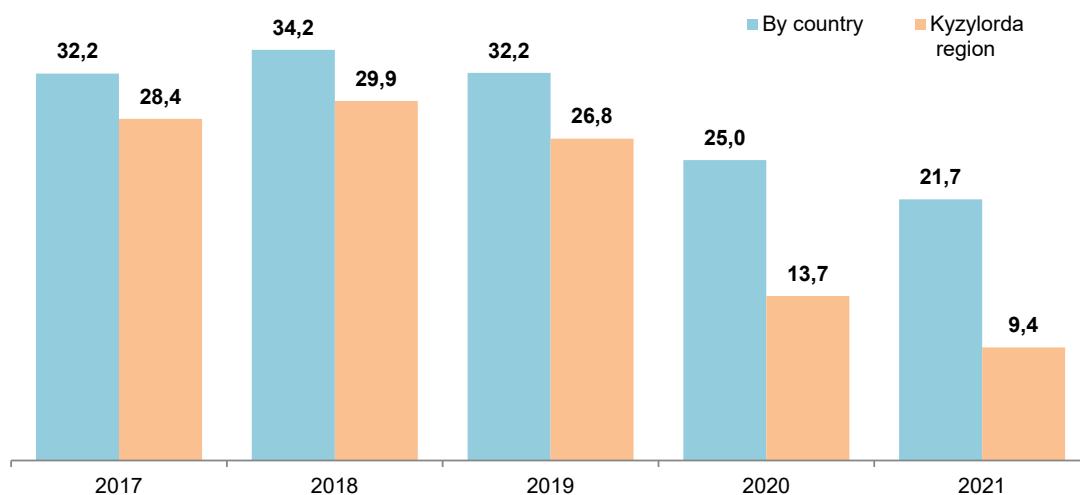


Figure 15. Ratio of wages of women to men, 2017-2021, in %

Source: Bureau of National Statistics of the ASPR RoK

In Kyzylorda region, the difference between men's and women's salaries decreased from 29.9 per cent (men - KZT 154.0 thousand, women - KZT 108.0 thousand) in 2018 to 9.4 per cent (men - KZT 223.7 thousand, women - KZT 202.7 thousand) in 2021. Improvement of this indicator in Kyzylorda region was more significant than the average for the country and according to the results of 2021 is in the group of regions with the lowest indicators.

In the period 2017-2022, there is a significant gap in the level of average monthly nominal wages per employee by sector of the economy (Table 30 and Figure 16). The highest salaries in January-December 2022, which are noticeably higher than the average for all sectors, were recorded in information and communication (KZT 383.2 thousand), transport and warehousing (KZT 368.0 thousand), financial and insurance activities (KZT 364.8 thousand), industry (KZT 345.2 thousand), professional, scientific and technical activities (KZT 333.4 thousand) and public administration and defence (KZT 288.1 thousand). In other industries, the average monthly nominal wage is below the regional average, the lowest level in the sphere of real estate operations (KZT 61.8 thousand).

It should be noted that in the region, compared to the national average, the average monthly nominal wage was lower in all spheres except public administration and defence. The level of wages across the country in some spheres is an order of magnitude higher than in Kyzylorda region. For example, in January-

December 2022, wages in real estate operations in the country were 3.5 times higher than in Kyzylorda region, provision of accommodation and food services and construction - 2 times higher.

The increase in wages in January-December 2022, compared to the same period of 2021, was recorded in all sectors of the economy of the region. The largest increases in nominal wages were observed in real estate operations (by 47.5 per cent), construction (by 35.8 per cent) and transport and warehousing (by 35.6 per cent).

Table 30. Average monthly nominal salary of one employee for 2017-2022 by types of economic activity, KZT

Types of economic activities	Kazakhstan			Kyzylorda region		
	2017	2021	2022*	2017	2021	2022*
Total	150 827	250 311	308 033	124 107	212 777	262 122
Agriculture, forestry and fishing	91 084	150 705	189 132	82 011	112 219	124 872
Industry	214 189	327 090	416 225	210 870	272 519	345 203
Construction	194 227	300 887	413 106	101 991	158 182	210 656
Wholesale and retail trade; cars and motorcycles repair	145 698	217 783	263 553	104 303	155 617	183 675
Transportation and warehousing	193 579	292 124	384 557	179 285	271 975	367 955
Provision of accommodation and food services	140 070	206 349	274 517	73 175	116 324	133 834
Information and telecommunication	221 748	340 545	433 616	134 251	288 189	383 238
Financial and insurance activities	298 725	465 580	551 710	217 805	297 285	364 753
Real estate transactions	147 620	188 520	215 571	188 118	41 864	61 753
Professional, scientific and technical activities	268 664	378 797	449 786	174 572	252 960	333 361
Activities in the area of administrative and support services	151 771	243 518	302 644	79 596	113 833	134 691
Public administration and defence; compulsory social security	125 247	208 859	262 888	138 437	230 276	288 057
Education	96 612	205 183	249 902	93 210	199 712	244 717
Public health and social services	108 714	227 618	248 665	103 197	208 144	231 123
Arts, entertainment and recreation	119 164	160 499	186 548	98 602	142 823	180 022
Provision of other types of services	210 924	248 249	243 692	94 999	148 695	133 482

Source: Bureau of National Statistics of the ASPR RoK

Note: *for January-December 2022

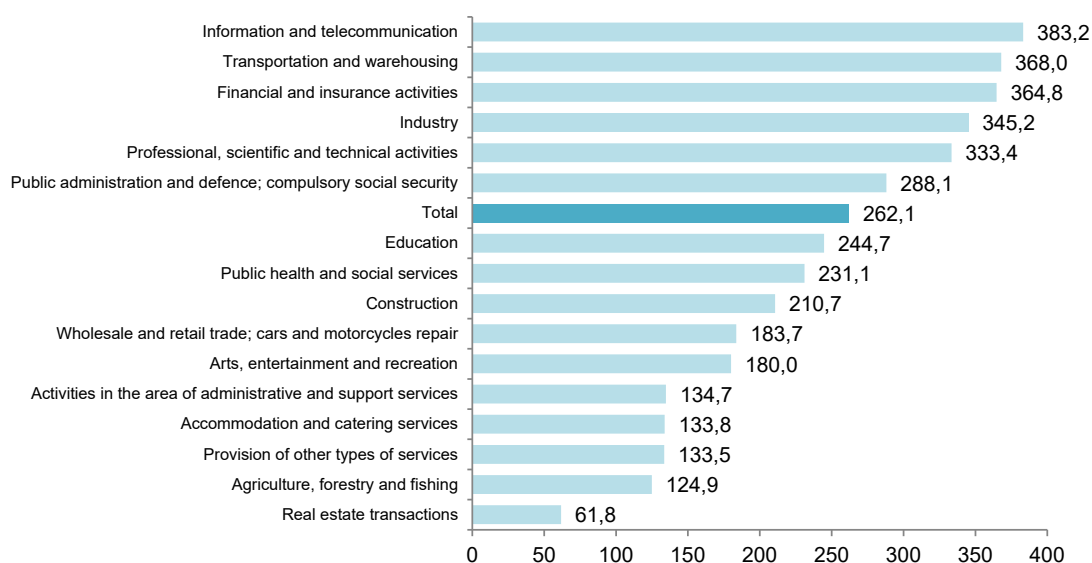


Figure 16. Average monthly nominal salary of one employee for January-December 2022 by types of economic activity, Kyzylorda region, in KZT ths.

Source: Bureau of National Statistics of the ASPR RoK

There is also a significant difference in wage levels by region (Table 31). The highest average monthly nominal wages in recent years have been recorded in Shieli district (KZT 275.8 thousand for January-December 2022) and the cities of Kyzylorda (KZT 271.3 thousand) and Baikonyr (KZT 267.2 thousand). The lowest average monthly wages are for workers in Syrdarya and Karmaksha districts (KZT 214.4 thousand and KZT 219.6 thousand respectively).

Table 31. Average monthly nominal salary of one employee by regions of Kyzylorda region, 2017-2022

Region	2017	2021	Change for 2017-2021, %	2022*	
				for January-December	in % of the corresponding period of the previous year
By region	124 107	212 777	171,4	262 122	124,5
Kyzylorda	135 097	219 955	162,8	271 337	124,9
Baikonyr	120 950	221 835	183,4	267 169	120,9
Aralsk	104 442	192 241	184,1	249 921	133,0
Zhalagash	92 271	207 399	224,8	255 879	124,1
Zhanakorgan	121 536	218 566	179,8	249 403	113,7
Kazalinsk	110 668	204 563	184,8	250 553	123,0
Karmakshinsk	94 702	177 004	186,9	219 573	128,2
Syrdarya	94 339	186 975	198,2	214 420	116,7
Shieli	118 926	212 935	179,0	275 817	130,0

Source: Bureau of National Statistics of the ASPR RoK

Over the period 2017-2021, the most significant growth in nominal wages was observed in Zhalagash and Syrdarya districts. An increase in nominal wages in January-December 2022, compared to the same period of 2021, is noted in all regions of the region. The most notable growth was observed in Aralsk (by 33.0%) and Shieli (by 30.0%) districts.

Conclusions:

- ▶ In 2021, the labour force of Kyzylorda region was 347.1 thousand people (3.7% of the total labour force in the country);
- ▶ The share of men in the labour force was 53.7% and women 46.3%;
- ▶ The share of the labour force in the population was 64.5%, which is noticeably lower than the national average (69.3%);
- ▶ In 2021, the number of self-employed (other categories of the employed population) was 111,700 (33.8 per cent of the total employed population). The share of the self-employed in the region is 10 percentage points higher than the national average (23.8%);
- ▶ In the total employed population, the proportion of men (53.7 per cent in 2021) is slightly higher than women (46.3 per cent). Among other categories of the employed population (self-employed and independent workers), the gender gap was even greater (men - 58.8 per cent, women - 41.2 per cent);
- ▶ An estimated 17.0 thousand people of working age were unemployed in the region in 2021, slightly more than in 2017 (16.8 thousand);
- ▶ The unemployment rate was 4.9 per cent, which corresponds to the republican level. This indicator was slightly higher in urban areas (5.0%) than in rural areas (4.8%);
- ▶ While in 2017 there was a marked difference in male and female unemployment rates (4.6 and 5.1 per cent respectively), in 2020 and 2021 they were on a par (4.9 per cent each);
- ▶ During the period under review, the share of NEET youth (who do not work or study for various reasons) in Kyzylorda region exceeded the national average. In Q3 2022, they were 8.0 per cent in the region and 6.6 per cent nationally;
- ▶ The youth unemployment rate in the region also exceeds the national average. The marked gender disparity in youth unemployment rates (3.4 per cent for males and 5.0 per cent for females in 2021) is also noteworthy;
- ▶ The region's population is mainly employed in education (18.3% in 2021), wholesale and retail trade (17.4%), industry (9.6%), transport and warehousing (9.4%), agriculture, forestry and fisheries (8.9%), construction (8.3%), health care and social services (7.7%);
- ▶ There is a decrease in the share of employment in industry and construction and a slight increase in education and trade;

- ▶ In the region, as well as in the country as a whole, the share of men is noticeably higher in some types of activity, and vice versa, there are spheres where women significantly outnumber men. For example, for Q3 2022, male employment was 12.4 times higher than female employment in the transport and warehousing industry. In the field of real estate operations, women outnumber men by about 2 times;
- ▶ The level of average monthly nominal wages per employee in Kyzylorda region is noticeably lower than the national average;
- ▶ In January-December 2022, the average monthly nominal salary of one employee was KZT 262.1 thousand, which is 24.5% higher than the corresponding period of 2021;
- ▶ In recent years, the gender wage gap has significantly decreased and by the end of 2021 (9.4 per cent) the region is among the lowest performing regions;
- ▶ In the period 2017-2022, there is a significant gap in the level of average monthly nominal wages by sector of the economy;
- ▶ The highest salaries in January-December 2022, which are noticeably higher than the average for all industries, are recorded in information and communication (KZT 383.2 thousand), transport and warehousing (KZT 368.0 thousand), financial and insurance activities (KZT 364.8 thousand) and others;
- ▶ The lowest level of wages is observed in the sphere of real estate operations (KZT 61.8 thousand);
- ▶ It should be noted that in the region, compared to the national average, the average monthly nominal wage was lower in all spheres except public administration and defence. The level of wages across the country in some spheres is an order of magnitude higher than in Kyzylorda region. For example, in January-December 2022, wages in real estate operations in the country were 3.5 times higher than in Kyzylorda region, provision of accommodation and food services and construction - 2 times higher;
- ▶ The largest increases in nominal wages in January-December 2022 are observed in real estate operations (by 47.5%), construction (by 35.8%) and transport and warehousing (by 35.6%);
- ▶ In the context of the regional areas, the highest average monthly nominal wages in recent years have been recorded in Shieli district (KZT 275.8 thousand for January-December 2022) and the cities of Kyzylorda (KZT 271.3 thousand) and Baikonyr (KZT 267.2 thousand). The lowest average monthly wages are for workers in Syrdarya and Karmaksha districts (KZT 214.4 thousand and KZT 219.6 thousand respectively).

Education and Health. Social security

According to statistical information on the education system of the Republic of Kazakhstan, in 2021 there were 668 pre-school education and training organisations in Kyzylorda region, with a total enrolment of 45,700 children (table 32). Most preschool organisations (63.6 per cent) are located in rural areas, attended by 53.9 per cent (24,600 persons) of all children enrolled in preschool education and training. In 2017, there were 659 preschool organisations in the region, covering 46,400 children.

Table 32. Early childhood care and education indicators for 2017-2022

Indicators	2017	2018	2019	2020	2021	2022
Number of pre-school organisations	659	662	666	665	668	680
city	252	242	245	240	243	***
village	407	420	421	425	425	***
Number of children in preschool organisations, people.	46 414	45 344	45 237	44 231	45 662	***
Share of children from 1 to 3 years of age covered by preschool education and training, %	11,7	18,6	36,3	44,4	49,8	***
Share of children from 1 to 6 years of age covered by preschool education and training, %	62,5	77,7	79,1	84,8	85,1	85,4
Share of children from 3 to 6 years of age covered by preschool education and training, %	100,0	100,0	100,0	100,0	99,0	100,0
Technical condition of buildings of preschool organisations, units						
standard	248	251	296	292	289	***
adapted	359	361	370	373	379	***
emergency	10	10	10	10	9	***

Source: National collections «Statistics of the Education System of the Republic of Kazakhstan, data of the akimat of Kyzylorda region»

Preschool enrolment in the region increased significantly between 2017 and 2021. Preschool enrolment of children aged 1 to 6 years increased from 62.5 per cent in 2017 to 85.1 per cent in 2021, and enrolment of children aged 1 to 3 years increased from 11.7 per cent to 49.8 per cent. During the period under review, the coverage of children aged 3-6 years was almost 100 per cent.

In 2021, the number of children on the kindergarten waiting list was 11.1 thousand, which is noticeably lower than in 2017 (16.7 thousand children).

According to the regional akimat, 142 State kindergartens are 88 per cent provided with special speech therapists and speech therapy. In 2021, two kindergartens (in Karmaksha district and Kyzylorda city) opened autism rooms for children with autism, with a staff of 18 specialist tutors [11].

In the region, the majority of buildings of pre-school organisations are not standard but adapted (349 buildings in 2021). Also according to statistics, in 2017, 12 buildings of pre-school organisations in the country were in a state of emergency, of which 9 emergency buildings fall on Kyzylorda region. In 2021, the situation has not changed much, out of 11 emergency buildings in the country 9 were located in Kyzylorda region. For example, in 2022 in the city of Aralsk, three kindergartens were recognised as emergency and transferred to rented buildings.

There are 295 full-time general education schools in the region, of which 19 are small schools (11 in Aralsk District, 5 in Shiliya District, and 3 in Kazaly District). The share of small-complete schools (SCS) in Kyzylorda region (6.8%) is the lowest in the country. For the 2021-2022 school year, the share of SCSs in the total number of general education schools in the country was 36.7 per cent. In the context of regions, 75.2% of schools in the North-Kazakhstan Province were SCSs, in the Kostanay Province - 64.0%, in the Akmola Province - 63.6% (the highest indicators among regions) [10].

During the period under review, there has been an annual increase in the number of schoolchildren, and at the beginning of the 2022-2023 school year, 171,500 schoolchildren were enrolled in schools in the region, including 1,400 in small schools (Table 33).

According to the statistical information on the RK education system, the share of schools that have created favourable conditions for inclusive education has significantly increased in the region. According to the results of 2021 in Kyzylorda region in 94.9 % of daytime public schools (in 55 schools out of 294) conditions for inclusive education were created. Inclusive education covered 53.0 per cent (2,900 children) of the total number of children with disabilities, which is noticeably higher than the national average (43.6 per cent).

In 2021, 1,740 teachers took professional development courses under the inclusive education programme in the region.

In general, according to statistics, Kyzylorda region is one of the leaders among the regions of the country in providing inclusive education in secondary education (the second indicator after Astana city in 2021).

The number of schools with three-shift education is growing. While in 2017 and 2018 there were no three-shift schools in the region, in 2021 there are 9 units. The number of emergency schools was 3 units.

Taking into account the dynamics of the growing number of children in the region, 34 public schools and 18 public schools will be built by 2025 in order to reduce and avoid emergency and three-shift schools.

In 2021, the number of teachers in full-time public general education schools totalled 19,900, of which 95.2 per cent (18,900) were with higher or postgraduate education. The proportion of teachers with tertiary education is one of the highest in the country and slightly above the national average (92.1 per cent in 2021).

During the period under review, the need for teachers was small compared to many regions. and in 2021, it was the lowest among the regions and totalled only 5 people, 3 Russian language teachers and 2 primary school teachers. In the country as a whole in 2021, the need for teachers was 3.4 thousand people.

Educational programmes of additional education in the region, as well as in the country as a whole, are implemented in extracurricular organisations and general education schools, and are provided by local executive bodies at the expense of the local budget.

According to the Akimat of the region, in 2022, the number of children attending additional education was 156.8 thousand people, which is 81.0% more than in 2018. The proportion of children enrolled in additional education and clubs has increased accordingly, from 65 per cent in 2018 to 90 per cent in 2022, one of the highest rates in the country (Table 34).

As of today, the network of supplementary education organisations in the region consists of 61 units (9 pupils' homes, 13 art schools, 21 sports schools, 6 school centres, 5 private centres and 7 State camps), which cover 34 per cent of pupils (56,500 people). The share of boys in supplementary education organisations was 58.0 per cent, girls 42.0 per cent.

According to the results of 2021 in the country the coverage of schoolchildren by organisations of additional education was 29.7% (in Kyzylorda region - 31%). The highest rates among regions were in West Kazakhstan (68.0%), Pavlodar (63.2%) and North Kazakhstan (58.5%) regions, and the lowest rates were in the cities of Almaty (11.9%) and Shymkent (16.3%) [10].

Table 33. Key indicators of secondary education (primary, basic secondary, general secondary) for 2017-2022

Indicators	2017	2018	2019	2020	2021	2022
Number of schools, units	293	293	293	293	294	295
The number of students, people.	147 585	153 502	161 469	168 042	169 539	171 545
Percentage of schools that created conditions for inclusive education, %	40,3	46,4	65,8	86,7	94,9	85,0
Percentage of students enrolled in inclusive education, %	15,3	42,5	40,9	45,0	53,0	52,0
Number of emergency schools, units	1	2	3	2	3	
Number of three-shift schools units	0	0	2	7	9	
Number of small-complete schools, units.	23	20	20	21	20	19
Number of students in small comprehensive schools, people.	2 801	937	928	1 746	1 696	1 431
Number of teachers, people	17 340	17 981	18 360	19 143	19 893	
Share of teachers with higher and post-graduate education, %	93,8	93,6	93,9	94,6	95,2	
Need for teachers, people	45	98	139	48	5	

Source: National collections «Statistics of the Education System of the Republic of Kazakhstan, data of the akimat of Kyzylorda region

Table 34. Supplementary education indicators for 2018-2022

Indicators	2018	2019	2020	2021	2022
Number of children enrolled in additional education, people	86 590	89 740	115 780	139 590	156 764
Share of children enrolled in additional education, %	65	68	70	85	90
Number of children enrolled in supplementary education in supplementary education organisations, people	52 581	56 668	52 112	53 775	56 545
Share of children enrolled in supplementary education in supplementary education organisations, %	29	30	30	31	34
Number of additional education organisations	57	59	59	60	61

Source: Kyzylorda Region Akimat data

In 2021, of the 60 buildings of the organisation of additional education, 38 were typical and 22 were adapted, of which 17 buildings required major repairs.

The region has 30 technical, vocational and post-secondary education organisations (17 public, 13 private) with more than 20,000 students (20,900 at the beginning of the 2022-2023 academic year). In 2021-2022 academic year, 3108 places are allocated from the local budget and 1600 places from the republican budget (a total of 4708 places) for training of personnel with technical and professional, post-secondary education necessary for the needs of the labour market of the region, implemented industrial-innovative projects and representatives of small and medium-sized businesses [11].

In 3 higher education institutions of the region the number of students at the beginning of the 2022-2023 academic year was 14.3 thousand.

The region's health system had 47 hospitals in 2017, which decreased to 34 in 2021 (Table 35). At the same time, the number of hospital beds increased from 4.6 thousand to 5.4 thousand units, and the number of hospital beds per 10,000 people increased from 58.7 to 65.8 units (65.4 units per 10,000 people in the country). In addition, there are 145 medical institutions providing outpatient and polyclinic care to the population.

During the period under review, there has been an annual increase in the number of medical personnel. In 2021, 2.9 thousand doctors of all specialities and 10.7 thousand average medical workers (nurses, paramedics, etc.) provided medical care to the population of the region. There are 34.5 doctors and 129.5 nursing staff per 10,000 people in the region (the national average in 2021 is 40.9 doctors and 98.7 nursing staff per 10,000 people [12]).

Table 35. Some health indicators for 2017-2021

Indicators	2017	2018	2019	2020	2021
Number of doctors of all specialties	2 644	2 697	2 740	2 842	2 860
per 10,000 population	33,8	34,0	34,1	35,1	34,5
Number of nursing staff	9 590	9 808	10 402	10 601	10 721
per 10,000 population	122,5	123,5	129,5	130,1	129,5
Number of hospitals	47	47	36	33	34
Number of hospital beds	4 593	4 532	4 361	6 399	5 448
per 10,000 population	58,7	57,1	54,3	78,6	65,8
Number of hospital beds for children	810	839	852	851	943
Number of medical organisations providing outpatient and polyclinic care to the population	134	134	149	139	145

Source: National collections «Statistics of the Education System of the Republic of Kazakhstan, data of the akimat of Kyzylorda region»

More than 400,000 diseases with first-time diagnoses are registered annually in the oblast (Table 36). Respiratory diseases account for the major share. In 2021, the disease accounted for 31.9 per cent of the total, compared to 41.5 per cent nationally. The shares of diseases of digestive organs (9.4%), genitourinary system (8.2%), eye and its apparatus (6.0%), blood and hematopoietic organs (5.9%) and circulatory system (5.8%) are also significant.

In the region, the main problematic issues in the health care sector are:

- ▶ unfavourable environmental situation in the region, which affects the health of the population;
- ▶ high incidence of socially significant diseases, especially tuberculosis;
- ▶ low health index of pregnant women;
- ▶ insufficient level of material and technical equipment of health care organisations;
- ▶ insufficient number of special centres, qualified medical personnel, equipment and inventory in cases of epidemics (pandemic) of infectious nature.

In order to improve the quality of medical care, a «regional perspective plan for the development of health care facilities for 2019-2025» has been approved, and the region's health care system network has been brought in line with state standards. In order to improve the accessibility and quality of medical care, medical organisations in the region are being equipped with the necessary equipment.

Table 36. Morbidity of population by groups of diseases, Kyzylorda region, 2017-2021, in per cent

Disease group	2017	2018	2019	2020	2021
Number of registered diseases with first-time diagnoses - total	424 299	452 019	454 434	428 262	410 644
respiratory diseases	28,2%	28,5%	29,6%	33,1%	31,9%
digestive diseases	10,5%	10,5%	10,6%	9,8%	9,4%
diseases of the genitourinary system	7,9%	9,1%	9,2%	8,4%	8,2%
diseases of the eye and its appendages	7,0%	7,0%	6,8%	5,8%	6,0%
diseases of blood and hematopoietic organs and certain disorders involving the immune mechanism	7,1%	6,6%	6,5%	6,0%	5,9%
circulatory diseases	5,4%	5,3%	5,0%	5,7%	5,8%
nervous system diseases	5,0%	4,6%	4,7%	4,9%	4,9%
skin and subcutaneous tissue diseases	5,0%	4,9%	5,2%	4,6%	4,7%
injuries and poisonings	5,0%	4,6%	4,5%	4,2%	3,9%
ear and mastoid diseases	3,7%	3,7%	3,7%	3,3%	3,8%
diseases of the musculoskeletal system and connective tissue	3,4%	3,9%	3,8%	3,7%	3,8%
endocrine diseases, eating and metabolic disorders	3,1%	2,7%	2,9%	2,7%	3,1%
other diseases	8,6%	8,6%	7,5%	7,7%	8,7%

Source: Bureau of National Statistics of the ASPR RoK

The region is implementing comprehensive measures to provide social security for the population. To date, 3,900 people receive targeted State social assistance (table 37).

Comprehensive solution of housing provision for certain categories of citizens is an urgent issue. Over the period considered, there was a significant increase in the number of families assigned state housing assistance. While the number of such families was only 137 in 2017, it will be 31,500 in 2019 and 12,300 in 2022.

In 2022, 32,000 persons with disabilities are registered in the region, 2,300 more than in 2017. The number of children with disabilities increased from 4,900 to 6,000.

Table 37. Some social protection indicators for 2017-2022

	2017	2018	2019	2020	2021	2022
Number of recipients of targeted social assistance, persons	8 979	7 735	6 817	4 744	4 634	3 945
Number of families assigned state housing assistance	137	7 706	31 481	13 056	13 747	12 336
Number of registered persons with disabilities, persons	29 736	30 100	30 599	30 810	30 961	32 001
Number of children with disabilities, persons	4 938	5 004	5 217	5 296	5 509	5 961

Source: Bureau of National Statistics Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, Kyzylorda region Akimat data

Conclusions:

- ▶ In 2021, the number of children on the kindergarten waiting list was 11.1 thousand, which is noticeably lower than in 2017 (16.7 thousand children);
- ▶ 142 State kindergartens are 88 per cent provided with special speech therapists and speech therapy;
- ▶ In the region, the majority of buildings of pre-school organisations are not standard but adapted (349 buildings in 2021);
- ▶ The majority of pre-school buildings in the country recognised as emergency buildings are in Kyzylorda region (9 out of 11 in 2021). For example, in 2022 in the city of Aralsk, three kindergartens were recognised as emergency and transferred to rented buildings;
- ▶ There are 295 full-time general education schools in the region, of which only 19 are small schools. The share of small-complete schools (SCS) in Kyzylorda region (6.8%) is the lowest in the country;
- ▶ The share of schools that have created favourable conditions for inclusive education has increased significantly in the region. According to the results of 2021 in Kyzylorda region in 94.9 % of daytime public schools (in 55 schools out of 294) conditions for inclusive education were created.
- ▶ According to statistical data, Kyzylorda region is one of the leaders among the regions of the country in providing inclusive education in secondary education;
- ▶ The number of schools with three-shift education is growing. While in 2017 and 2018 there were no three-shift schools in the region, in 2021 there are 9 units;
- ▶ The share of teachers with higher education in the region (95.2 % in 2021) is one of the highest in the country and slightly above the national average (92.1 %);
- ▶ In 2021, the need for teachers in the region was the lowest among the regions at only 5;
- ▶ Kyzylorda region has one of the highest indicators in the country in terms of coverage of children with additional education. This figure has increased from 65 % in 2018 to 90 % in 2022;
- ▶ In 2021, the coverage of schoolchildren by supplementary education organisations in the region was 31% (29.7% in the country);
- ▶ In 2021, of the 60 buildings of the organisation of additional education, 38 were typical and 22 were adapted, of which 17 buildings required major repairs;
- ▶ There are 30 technical, vocational and post-secondary education organisations in the region, with more than 20,000 students (20,900 at the beginning of the 2022-2023 school year). In 3 higher education institutions of the region the number of students is 14.3 thousand;
- ▶ There are 47 hospitals and 145 medical institutions providing outpatient and polyclinic care to the population;
- ▶ The number of hospital beds per 10,000 population (65.8 units) is at the national level (65.4);
- ▶ During the period under review, there has been an annual increase in the number of medical personnel. There are 34.5 doctors and 129.5 nursing staff per 10,000 people in the region (the national average in 2021 is 40.9 doctors and 98.7 nursing staff per 10,000 people).
- ▶ More than 400 thousand diseases with first-time diagnoses are registered in the region every year;

- ▶ Respiratory diseases account for the major share (31.9 per cent in 2021);
- ▶ State targeted social assistance is provided to 3.9 thousand people;
- ▶ The issue of a comprehensive solution to the provision of housing for certain categories of citizens remains relevant;
- ▶ During the period under review, there was a significant increase in the number of families receiving State housing assistance. While the number of such families was only 137 in 2017, it will be 31,500 in 2019 and 12,300 in 2022;
- ▶ In 2022, 32,000 persons with disabilities are registered in the region, 2,300 more than in 2017.

According to the results of the analysis of demographic factors of development of Kyzylorda region and social sphere, it is possible to highlight topical issues for the region and potential for development.

Strengths:

- ▶ annual population growth in the region;
- ▶ relatively young age structure of the region's population. At the beginning of 2022, the median age of the population was 28.9 years, while the national average was 31.8 years;
- ▶ high birth rate and low mortality rate;
- ▶ relatively high natural increase;
- ▶ income gap between the richest 10 % of the region's population and the poorest 10 % is noticeably lower than the national average (4 times vs. 6 times, respectively);
- ▶ small difference in income between urban and rural areas. In 2021, in rural areas, the share of the population with incomes below the subsistence minimum was only 9.6 per cent higher than in urban areas (almost twice as high as in the country);
- ▶ stable unemployment rate (4.9 %), which corresponds to the republican level;
- ▶ significantly reduce the gender wage gap. According to the results of 2021 (9.4 %), the region is in the group of areas with the lowest indicators;
- ▶ significant increase in the enrolment of children in preschool education. Pre-school enrolment of children aged 1-6 years increased from 62.5 % in 2017 to 85.1 % in 2021, and enrolment of children aged 1-3 years increased from 11.7 % to 49.8 %;
- ▶ The share of small-complete schools (SCS) in Kyzylorda region (6.8%) is the lowest in the country;
- ▶ the share of schools that have created favourable conditions for inclusive education has increased significantly in the region. According to the results of 2021 in Kyzylorda region in 94.9 per cent of daytime public schools (in 55 schools out of 294) conditions for inclusive education were created;
- ▶ the share of teachers with higher education in the region (95.2 % in 2021) is one of the highest in the country and slightly above the national average (92.1 %);
- ▶ one of the highest indicators in the country in terms of children's enrolment in supplementary education. This figure has increased from 65 per cent in 2018 to 90 per cent in 2022.

Weaknesses:

- ▶ migration loss of the region's population, which mainly concerns the population of working age;
- ▶ migration loss of population is observed in all regions of the region, which has led to a reduction in population in some districts of the region;
- ▶ growing demographic burden on the able-bodied population (largely due to a relatively high birth rate);
- ▶ the infant mortality rate in the region remains high and slightly exceeds the national average;
- ▶ significant difference in infant mortality rates between urban and rural areas. In 2021, urban areas had an infant mortality rate more than three times higher than rural areas;
- ▶ mortality from transport accidents is slightly higher than the republican level;
- ▶ the share of the population with incomes below the subsistence minimum is slightly higher than the republican level;
- ▶ the level of incomes and expenditures of the region's population is noticeably lower than the national average;
- ▶ the share of the labour force in the population (64.5% in 2021) is noticeably lower than the national average (69.3%);
- ▶ imbalance in the labour market of the workforce, shortage of skilled workers;
- ▶ high share of the self-employed (other categories of the employed population). In 2021, the share of the self-employed in the region was 33.8 % (of the total employed population), which is 10 percentage points higher than the national average (23.8 %);
- ▶ the share of NEET youth in Kyzylorda region exceeds the national average;
- ▶ technical condition of buildings of pre-school organisations. In the region, most of the buildings of preschool organisations are not standard, but adapted. The vast majority of emergency buildings of preschool organisations in the country are in Kyzylorda region (9 out of 11 in 2021);

- ▶ increase in the number of schools with three-shift education. While in 2017 and 2018 there were no three-shift schools in the region, in 2021 there are 9 units;
- ▶ Insufficiently developed network of children's and youth clubs, sports grounds and facilities at the place of residence and in places of mass recreation;
- ▶ insufficient provision of material and technical base of educational institutions, including in VET;
- ▶ insufficient qualification level of VET staff;
- ▶ shortage of hostels in the VET system;
- ▶ unfavourable environmental situation in the region, which affects the health of the population;
- ▶ shortage of qualified medical personnel;
- ▶ high morbidity rate of the population with socially significant diseases;
- ▶ insufficient level of material and technical equipment of health care organisations.

Opportunities:

- ▶ high proportion of children and young people in the population structure. Relatively young age structure of the population;
- ▶ development of transport infrastructure, construction and repair of the region's motorways in order to reduce the level of accidents on the roads;
- ▶ digitalisation of the social sector. Increasing the level of digitalisation in the social sphere;
- ▶ increase in the volume of construction of social facilities. Introduction of a new simplified model of budget planning in the construction of social facilities;
- ▶ eliminating the shortage of pupil places, three-shift education and accidents in secondary education organisations by creating new pupil places. Implementation of the pilot national education project «Comfortable School»;
- ▶ professional development and retraining of teaching staff;
- ▶ modernisation of the VET organisation within the framework of the Jas Maman project;
- ▶ annual increase in funding for education and health care;
- ▶ creation of new jobs in education, healthcare and other sectors;
- ▶ Improving health literacy and reducing behavioural risk factors;
- ▶ Improving the quality of health care services by attracting highly qualified specialists, particularly in rural communities; Implementation of the pilot national project «Modernisation of Rural Health Care»
- ▶ improvement of the environmental situation, contributing to the reduction of morbidity rates;
- ▶ introduction of «digital family card» and «social wallet» personalised by state social guarantees.

Barriers:

- ▶ annual growth in the share of the elderly population;
- ▶ maintaining a relatively high level of negative migration balance, as a result of which there is a decrease in the population in some districts of the region;
- ▶ intraregional migration, which is characterised by outflow of residents to large settlements, in particular Kyzylorda city and its surroundings, creates additional pressure on the infrastructure of these settlements;
- ▶ dependence of new jobs creation on attracting investments to the region;
- ▶ the likelihood of an increase in the proportion of NEET youth;
- ▶ further deterioration of the technical condition of buildings of pre-school organisations;
- ▶ shortage of school places and increase in the number of three-shift schools due to high birth rate, urbanisation as well as deterioration of buildings;
- ▶ reduction in the quality of medical services to the population due to the shortage of medical personnel and insufficient equipment of health care organisations;
- ▶ deterioration of the environmental situation, which may lead to an increase in the incidence of socially significant diseases.

Based on the analysis of the data of socio-economic development of Kyzylorda region, the following some problems, trends and promising areas of development of the region can be identified:

Issues

- ▶ There is a negative migration balance, which has led to a decrease in the population in some districts of the region;
- ▶ Intraregional migration, which is characterised by outflow of residents to large settlements, in particular Kyzylorda and its surroundings, creates additional pressure on the infrastructure of these settlements;

- ▶ In the last two years, the infant mortality rate in the city was significantly higher than the rural rate;
- ▶ In recent years, the region's death rate from transport accidents has been slightly higher than the national level;
- ▶ The indicator of housing provision per one resident in the region remains one of the lowest among the regions of the country;
- ▶ There is high wear and tear of electricity supply networks;
- ▶ There is a low share of regional and district motorways in good and satisfactory condition;
- ▶ There is a depletion of the raw material base and a low rate of development of the manufacturing sector of industry;
- ▶ There is a weak fodder base, lack of complete fodder and, as a consequence, low productivity of livestock and poultry, etc.;
- ▶ The majority of emergency buildings of preschool organisations in the country (9 buildings out of 11 emergency buildings in 2021) are in Kyzylorda region;
- ▶ The number of three-shift schools is increasing every year;
- ▶ There is an insufficient level of material and technical equipment of health care organisations and a shortage of qualified medical personnel.

Tendencies

- ▶ High natural population growth in the region (relatively high birth rate and low mortality rate);
- ▶ By the end of 2021, life expectancy at birth slightly exceeded the national level;
- ▶ For all major causes of death, the mortality rate in Kyzylorda region was noticeably lower than in the country;
- ▶ The volume of GRP of the region in 2021 compared to the corresponding period of the previous year increased by 17.1%;
- ▶ There was an annual growth of gross output of agricultural products (services);
- ▶ In 2021, the number of operating SMEs increased by 31.5 per cent compared to 2020, while the output of products (goods and services) by SMEs increased by 23.3 per cent;
- ▶ In 2021, the average per capita cash income will be 38.6 per cent higher than in 2018;
- ▶ The gender wage gap has significantly decreased, and by the end of 2021 the region is in the group of areas with the lowest indicators;
- ▶ In the region, the coverage of children with preschool education has increased significantly;
- ▶ According to statistics, the region is one of the leaders among the regions of the country in creating favourable conditions for inclusive education;
- ▶ There has been a significant increase in the coverage of schoolchildren with additional education.

Perspective sectors

- ▶ Industry (hydrocarbon reserves, non-ferrous metals, rich undeveloped deposits of metal ores, presence of industrial zones);
- ▶ Transport and logistics complex (favourable geographical location, availability of the motorway «Western Europe - Western China», railway «Moscow - Almaty - Astana»);
- ▶ Domestic tourism (presence of Baikonur Cosmodrome, historical cultural heritage and recreational potential);
- ▶ Agriculture (favourable soil and climatic conditions for the development of crop and livestock farming);
- ▶ Creating conditions for the development of small and medium-sized businesses.

1.2 Experience of cooperation of Kyzylorda region with international organisations. Assessment of the region's readiness to launch cooperation with the United Nations Development Programme

The section considers the experience of cooperation of Kyzylorda region with international organisations, analyses the implemented projects, and assesses the readiness of the region for the possibility of cooperation with UNDP.

Experience of cooperation with international organisations and their results

Kyzylorda region has a rich experience of working with international organisations. The projects implemented in the region have an ecological orientation and are related to the Aral Sea restoration.

In order to overcome the ecological crisis and improve the socio-economic situation in the Aral Sea basin, recognised by the world community as one of the biggest disasters of the XX century, the Heads of Central Asian states established the International Fund for Saving the Aral Sea (IFAS) in 1993. IFAS

successfully implements projects together with the Government of Kazakhstan, international and regional organisations, financial institutions and the donor community.

Currently, in order to systematically address the problems of the Aral Sea region in Kyzylorda region, relevant work is being carried out with international organisations such as the World Bank, German Society for International Cooperation (GIZ), Agency for International Development (USAID) with the involvement of the International Consulting Company «Yekom Consulting Engineers».

The following projects are being implemented in the region with the financial support of the World Bank:

«Regional development and rehabilitation of the northern part of the Aral Sea» (hereinafter referred to as the Project) and additional components aimed at improving the socio-economic situation in the Aral Sea region. The project is aimed at implementation of 2 out of 6 components included in the first stage of the project «Regulation of the Syrdarya river channel and preservation of the northern part of the Aral Sea» (SARATS-2), 4 components are implemented at the expense of the republican budget. The approximate cost of the Project is US\$190 million. To date, the World Bank has provided a grant of US\$1.5 million To develop a feasibility study for the Project.

The project has 3 components and aims to achieve the following key results:

1. improvement of volume and quality of water accumulation in the Northern Aral Sea up to 40 km³;
2. development of the fisheries sector by supporting the production and processing of fish products;
3. improvement of environmental monitoring and water resources management in the Northern Aral Sea;
4. reducing the release of salt deposits from the Aral Sea bed by installing protective forest strips;
5. development of ecological tourism.

«Improvement of irrigation and drainage systems on irrigated fields» Project IDSD-2 (Irrigation and Drainage Systems Development Project)/IID-2 (Irrigation and Drainage Systems Improvement) worth KZT 9.3 billion.

The IDSD-2 project includes 15.1 thousand ha of irrigated land in rural districts of Akkum, Bukarbai Batyr, Tan and Madeniyet of Zhalagash district. World Bank participation - 30% of the project cost.

The German Society for International Cooperation (GIZ) has installed fish protection structures worth KZT 163 million in June 2020 at the Kokaral Dam to prevent fish kills due to the lack of fish lifts. The principle of operation of the installation is based on scaring away fish approaching a water body using hydroacoustic devices. The experimental fish protection device is expected to save up to 4,000 tonnes of fish that pass through the Kokaral Dam from being killed.

There is also experience of cooperation with several international organisations on project implementation. For example, the project «On Rehabilitation of Landscapes of Kazakhstan», implemented with non-refundable funds from the World Bank in 2022-2025, provides:

- ▶ establishment of a sustainable forest nursery on 33.5 hectares for the harvesting of saxaul seedlings;
- ▶ purchase of necessary equipment;
- ▶ mapping of 500 thousand ha of the dried part of the Aral Sea;
- ▶ design surveys for 100 thousand hectares;
- ▶ greening of 3 thousand hectares near Kyzylorda city.

In case of successful completion of works on creation of such zone, the Agency for International Development (USAID) through IFAS will implement the project of saksaul sowing on the area of 500 ha with placement of water installation on the dried part of the Aral Sea in the RK.

In addition, through the German Society for International Cooperation (GIZ), soil research, survey and design work was carried out on an area of 50,000 hectares.

To date, the result of jointly implemented projects to improve the environmental situation in the region is [13]:

- ▶ increase of water level in the Small Aral from 39 to 42.2 metres and the sea approaching the town of Aralsk at a distance of 17 km;
- ▶ increasing the capacity of the Syrdarya river channel;
- ▶ preservation of the northern part of the Aral Sea as a geographical and climate-forming object: the dried seabed was covered with a water mirror over an area of 870 km² (from 2,414 to 3,288 km²);
- ▶ an increase in the volume of water in the sea by 11.5 km³ (from 15.6 to 27.1 km³);
- ▶ reduction of water mineralisation from 23 to 12 g/l;
- ▶ biodiversity restoration, 14 out of 38 previously extinct fish species have reappeared;
- ▶ of the 70 lakes that had dried up, 30 were filled with water again;
- ▶ more than five thousand people previously resettled from these places have returned to the region;
- ▶ the environmental, sanitary and hydrometeorological situation in the region has improved;
- ▶ water availability of irrigated lands increased;

- ▶ more than 300 thousand ha of saxaul were planted in the Kazakh part of the dried Aral Sea bed.

Priority sectors (according to the analysis)

Social Sector

In the social sphere, health care and education are considered priorities for co-operation with UNDP.

In the sphere of health care in Kyzylorda region, a negative factor is the unfavourable environmental situation in the region, which affects the health of the population and the high level of morbidity of the population with socially significant diseases. In particular, the incidence of tuberculosis and the low health index of pregnant women should be noted. Also affects the insufficient level of material and technical equipment of health care organisations, insufficient number of special centres and qualified medical personnel, equipment and inventory, in cases of epidemics (pandemics) of infectious nature.

In the sphere of education, schools are insufficiently equipped with computer equipment and low coverage of high-speed Internet, so that schoolchildren's access to information technologies is limited.

Economic sector

Kyzylorda region is an industrial-agrarian region, the main vector of the region's economy is directed to the extractive industry, while the manufacturing sector is developing insufficiently. The agro-industrial complex of the sector is characterised by small-scale agricultural production, weak fodder base and, as a consequence, low productivity of livestock and poultry, low share of domestic products and deep processing in the domestic market of food products. At the same time, the region's specialisation creates conditions for the development of these industries due to growing domestic and foreign markets for their products.

The problematic issue is high wear and tear of 35 kV power supply networks, reconstruction is required. Preliminary work has been done in the region to develop a design and construction programme, positive conclusions of the state expertise have been obtained and budget requests have been submitted. However, due to the fact that the region is subsidised, the implementation of projects on modernisation and construction of power facilities with a capacity of even 35 kV is beyond the capacity of the Kyzylorda region budget.

The region has the potential for innovative development through the construction of alternative energy, wind and solar power facilities due to climatic conditions.

Available resources allow to develop tourism in the region, Kyzylorda region combines spiritual-cognitive, agro- and space tourism: Korkyt Ata-symbol of eternal search of truth and Baikonur cosmodrome-symbol of achievements of technical thought of mankind.

The presence in the region of a city classified as a «small town» (Aralsk) creates the need to create a model of state support for SMEs in small towns to improve the socio-economic situation in these and other cities.

Environmental sphere

The problem to be solved in Kyzylorda region is the lack of landfills in the district centres that meet sanitary and environmental requirements (Zhalagash, Terenozek, Shieli and Zhanakorgan settlements). There are 145 landfills in the region, of which 7 landfills (or approximately 5%) meet environmental requirements. This fact is detrimental to the ecology of the region and requires taking necessary measures to ensure that MSW is collected, utilised and accumulated in landfills in accordance with environmental standards. At the same time, focusing only on the creation of landfills is not a solution in the long term, because MSW is constantly growing, there are not enough places officially allocated for landfills, and the number of unauthorised landfills is growing. They cause serious damage to the environment and public health.

At the same time, the region has experience in implementing projects on construction of a waste sorting complex, laying of external engineering networks and construction of a landfill under PPP in Kyzylorda. International experience shows that MSW recycling is profitable and provides jobs.

There are 15 business entities operating in the sphere of waste transportation, collection, processing and utilisation in the region. The share of MSW recycling is approximately 20 per cent. Smart Rubber LLP produces hoses for drip irrigation from worn out unusable car tyres, Kyzylorda Kagazy LLP produces toilet paper for household needs, DaZhaEr LLP, IE August, Aymyrzaev, Ayan LLP sort and collect waste paper, cardboard, plastics and plastic

Proposal of the region for co-operation

The region is positioned as a centre of attraction for industrial business and entrepreneurship with high transit potential, the strategic vision of the region is aimed at increasing the population's income by creating quality jobs and improving the quality of life of the population.

The region has submitted a project on training and retraining of young family members for co-operation with UNDP for consideration:

Project on training and retraining of members of young families who belong to vulnerable groups, development of small entrepreneurship among young people. Financial support is needed to train young

people in the basics of business, different skills, and requalification in currently in-demand specialities. The project requires a set of activities that will most effectively explore existing problems with access to services, taking into account the different needs of men and women.

The project is proposed to be implemented along the following lines:

1. analysis and monitoring of young families belonging to vulnerable groups of the population, creation of a database with detailed information that includes speciality, work experience, skills of each person;
2. identification of in-demand specialities and vacancies for a given period of time;
3. training and retraining of young people;
4. meeting with employers;
5. identifying a permanent place of employment for young people.

The project implementation will contribute to the reduction of the number of unemployed youth and NEET youth; will provide additional mandatory tax and social revenues to the regional budget.

The estimated cost of the project is KZT 26 million. Implementation of the project - 2024-2025.

Assessment of the region's readiness to launch cooperation with UNDP (project management capacity, human resources, expertise)

Kyzylorda region has human and expert resources. In 2018, the Jas Project was successfully implemented in the region. Then, within the framework of the joint project of the Ministry of Education and Science of Kazakhstan and the World Bank on the development of youth corps in the region, the largest number of projects was implemented - 244, 836 people took part in them. The total amount of grant funding for projects of Kyzylorda region was about KZT 247 million [14].

Most of the region's projects were aimed at food production (22 %), educational projects - 17 %, cultural and leisure projects - 16 %, sports projects - 9 %. A popular trend was the opening of sewing and knitting workshops - 16, 7 centres for training in folk arts and crafts (production of furniture, kitchen utensils, national clothing, footwear and household items) were also opened. Thanks to the project, five carpentry workshops, a machine shop and robotics courses were launched. 21 projects aimed at installing sports grounds, opening gyms and fitness centres. Participants in 36 projects were given the opportunity to eventually open their own livestock farms and poultry farms, two greenhouses, three apiaries, 17 bakeries, pastry shops and cheese-making workshops.

Young people also gained business skills and their first work experience, which undoubtedly had a positive impact on youth development and improved human capital. Young people felt responsible, not only for the grant they received, but also for achieving results.

Thus, the project on training and requalification of young people proposed by the region has all the prerequisites for successful implementation and achieving a multiplier effect through the development of human capital. The successful implementation of the Jas Project shows that there is experience in implementing such projects, awareness and interest of young people

Conclusions:

The analysis of cooperation of Kyzylorda region with international organisations has shown that the region has extensive experience of working with various international organisations. The region has a vision on possible areas of cooperation with international organisations.

At the same time, there are a number of areas of concern that need to be addressed for support (Table 38).

Table 38. Main problem areas of Kyzylorda region

Main areas of concern	
Social	Wear and tear of health care facilities, insufficient level of health care organisations' ITE
	Insufficient number of dedicated health centres
	Insufficient number of qualified medical personnel
	Depreciation of educational facilities
Economic	Insufficient provision of schools with computer equipment and low coverage of high-speed Internet access
	High wear and tear of 35 kV power supply networks
	Low share of domestic products and deep processing in the domestic food market
Environmental	Small-scale agricultural production
	Existence of an environmental disaster zone
	Lack of landfills meeting sanitary and environmental requirements

Considering the problem of recycling and the lack of landfills complying with environmental standards, it is proposed to direct co-operation towards waste collection and recycling. In this direction, it is also proposed to consider the possibility of providing training to introduce separate waste collection and recycling in the region. The implementation of this initiative will require the allocation of grant funding for the application of innovative methods for organizing landfills for the collection of solid waste. The main objective of the proposed project may be to prevent the harmful impact of MSW on the environment and turn it into secondary resources by educating young people and introducing skills to the population on separate collection and recycling of waste.

Possible areas for retraining and acquisition of business skills by young people include agrarian, production, tourism. Taking into account the significant lack of qualified personnel in the tourism sector and the availability of tourist facilities, it is necessary to note the high potential for investment in this area.

It is also suggested to consider improving the environment by adopting water conservation technologies and circular utilisation of resources and waste in agriculture. Opportunities should be explored to reorient the region's agriculture towards less moisture-loving agricultural products.

Consequently, the project proposed by the region will ensure re-skilling of young people for further employment in the core sectors of the region.

It is also important for the region to implement projects for the development of alternative energy, wind and solar energy.

Strengths:

- ▶ the region has a positive experience in implementing joint projects with international organisations, especially in the field of ecology and environmental conservation;
- ▶ in 2018, the Jas Project was successfully implemented in the region, so there is experience and positive results from a similar project offered by the region to train young people in business skills;
- ▶ the region has experience in implementing projects on construction of a waste sorting complex, laying of external engineering networks and construction of a landfill under PPP in Kyzylorda;
- ▶ there are 15 business entities operating in the area of waste transportation, collection, recycling and utilisation in the region, so there is also experience in MSW recycling in the region;
- ▶ there are tourist sites in the region (Korkyt Ata, Baikonur Cosmodrome).

Weaknesses:

- ▶ only 7 out of 145 landfills meet environmental requirements;
- ▶ high degree of wear and tear of 35 kW power supply networks;
- ▶ insufficient provision of schools with computer equipment and low coverage of high-speed Internet;
- ▶ insufficient level of material and technical equipment of health care organisations;
- ▶ insufficient number of special medical centres and qualified medical personnel, equipment and supplies.

Opportunities:

- ▶ to train young people in business skills for the profile sectors of the region (production, agrarian, tourism);
- ▶ provide training and grant funding to introduce separate waste collection and recycling in the region;
- ▶ apply innovative methods of organising landfills for MSW collection;
- ▶ to develop spiritual-cognitive, agro- and space tourism;

Barriers:

- ▶ due to the drying up of the Aral Sea, the region is classified as an ecological disaster zone;
- ▶ due to the drying up of the Aral Sea, there is degradation of water and land resources, reduction of water quality, desertification, reduction of biodiversity and increased negative impact on the climate;
- ▶ high morbidity rate of the population with socially significant diseases.

2. ANALYSIS OF THE SUSTAINABILITY OF THE DEVELOPMENT OF THE REGION IN CONSIDERATION OF THE PRINCIPLES OF «GREEN ECONOMY» AND LOW CARBON DEVELOPMENT, IDENTIFICATION OF DIRECTIONS WITH THE POTENTIAL FOR DEVELOPMENT

2.1. Identification of key issues in the region in terms of environmental conditions, greenhouse gas emissions by selected sectors and negative impacts of climate change based on assessment of available and/or provided data by local executive bodies

In the period 2017-2021 in Kyzylorda region, a total of 135.8 thousand tonnes of pollutants were emitted into the atmospheric air by stationary sources of pollution, where 64.9% were emitted in Kyzylorda, 9.0 per cent to Zhanakorgan district, 6.4 per cent to Shieli district, 5.3 per cent each to Syrdarya and Aral districts respectively, 4.4 per cent to Kazaly district, 2.5 per cent to Karmaksha district, 1.4 per cent to Zhalagash district and 0.9 per cent to Baikonur.

Emissions trends are uneven, with a decrease of 11.2 per cent between 2017 and 2019 and a subsequent increase of 19.5 per cent until 2021. In general, the growth of pollutant emissions for the period under review was 6.0%. The highest growth dynamics is observed in Baikonur city (23 times), Shieli district (1.6 times), Kazaly district (97.5 per cent) and Aralsk district (26.7 per cent) (Table 39).

Таблица 39. Объем загрязняющих веществ, отходящих от всех стационарных источников загрязнения, тонн

Region	2017	2021	Dinamics 2021/2017	Schedule 2017-2021	Share change	Share 2021
Kyzylorda region	27 583,1	29 251,0	6,0%		0,0%	100%
Kyzylorda	18 991,0	17 229,2	-9,3%		-9,9%	59%
Baikonyr	21,4	532,7	2389,3%		1,7%	2%
Aralsk	1 357,7	1 719,9	26,7%		1,0%	6%
Zhalagash	446,4	350,4	-21,5%		-0,4%	1%
Zhanakorgan	2 504,3	2 464,5	-1,6%		-0,7%	8%
Kazalinsk	874,0	1 725,8	97,5%		2,7%	6%
Karmakshinsk	786,0	670,2	-14,7%		-0,6%	2%
Syrdarya	1 491,3	1 648,9	10,6%		0,2%	6%
Shieli	1 110,90	2 909,30	161,9%		5,9%	10%

Note: According to the Bureau of National Statistics of the Agency for Strategic Planning and Development

The irregular growth of emissions of air pollutants from stationary sources per capita should also be noted. Thus, if in the region as a whole the situation has not changed (on average 35.4 tonnes per person per year), then in Baikonur city this indicator for the period under review increased 26.8 times, in Shieli district - 2.5 times, in Zhalagash and Kazalinsk districts - 2 times.

The main share of pollutants are liquid and gaseous pollutants (86.0%), which increased for 2017-2021 by 12.9% (or by 2.9 thousand tonnes) and reached the value of 25.9 thousand tonnes. 71.1% of liquid and gaseous emissions fall on Kyzylorda city.

The remaining part (14.0%) is occupied by solid pollutants, the volume of which decreased by 29.5% (or by 1.3 thousand tonnes) over the same period, reaching a value of 18.9 thousand tonnes per year. 26.1 per cent of solid pollutant emissions accounted for the city of Kyzylorda, 17.7 per cent of solid pollutant

emissions accounted for the city of Kyzylorda, 17.7% - Zhanakorgan district, 13.7% - Shieli district, 13.0% - Aralsk district.

During the period under review, a total of 401.5 tonnes of pollutants were captured and neutralised. The growth of capture and neutralisation volumes was 31.8%. At the same time, only 17.6 tonnes of pollutants were disposed of.

According to the results of eco-monitoring conducted in 2022, the level of atmospheric air pollution in Kyzylorda city is elevated.

Another issue is outdated or non-existent sewage treatment facilities. In Kyzylorda and Baikonur cities there are treatment facilities with incomplete treatment, in such district centres as Aral city, Aiteki bi, Zhanakorgan, Zhosaly, Shieli there are no treatment facilities at all.

There is a 21.6% decrease in municipal waste generation (from 148 to 116 thousand tonnes) with a simultaneous 3.4-fold increase in recycling and disposal (from 5.2 thousand tonnes to 22.8 thousand tonnes), Thus, the share of recycled municipal waste increased from 3.5% in 2017 to 19.6% in 2021.

At the same time, there is an increase in industrial waste by 9.8% from 112,000 tonnes to 123,000 tonnes.

Total waste received for 2017-2021 was 183.4 thousand tonnes (49.5% growth for 2017-2021), with 21.4% sorted (3.3 times growth in sorting) and 10.4% recycled by third party organisations (8.5 times growth in recycling) (Figure 17).

There are 145 landfills in the region, of which 7 landfills comply with environmental requirements (percentage share - 4.82 %). There are 17 business entities operating in the sphere of waste transportation, collection, processing and utilisation in the region. The region is being cleaned up - according to the Akimat of the region, 99 unauthorised dumps were eliminated in 2022.

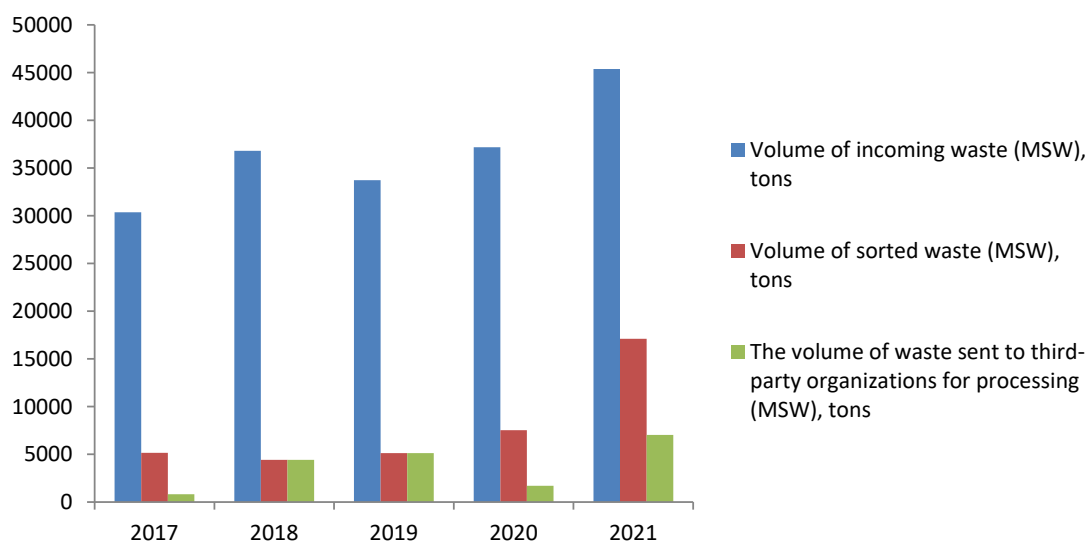


Figure 17. Dynamics of received, sorted and recycled MSW, tonnes

Note: according to the data provided

Total expenditures on environmental protection in the region for the period under review had a stable growth trend of 37.4% (or KZT 899 million). The highest growth of expenditures was observed in Aralsk district (by 49.8 times), Zhanakorgan district (by 50.7 per cent), Syrdarya district (by 44.0 per cent), Kyzylorda city (by 33.8 per cent) (Table 40).

It should be noted that according to open data, the region is implementing the «Roadmap for comprehensive solution of environmental problems of Kyzylorda region for 2020-2025» in such areas as reduction of emissions into the atmospheric air, water resources, waste management, landscaping. However, the results of the programme implementation are not publicly available.

Table 40. Volume of current expenditures on environmental protection, KZT ths.

Region	2017	2021	Dinamics 2021/2017	Schedule 2017-2021	Share change	Share 2021
Kyzylorda region	2 401 904	3 300 927	37,4%		0%	100,0%
Kyzylorda	1 938 049	2 593 527	33,8%		-2,1%	78,6%
Baikonyr	-	-	-		-	-
Aralsk	3 495	177 604	4981,7%		5,2%	5,4%
Zhalagash	8 214	7 833	-4,6%		-0,1%	0,2%
Zhanakorgan	149 033	224 599	50,7%		0,6%	6,8%
Kazalinsk	6 069	3 559	-41,4%		-0,1%	0,1%
Karmakshinsk	2 646	1 014	-61,7%		-0,1%	0,0%
Syrdarya	4 931	7 102	44,0%		0,0%	0,2%
Shieli	289 467	285 689	-1,3%		-3,4%	8,7%

Note: According to the Bureau of National Statistics of the Agency for Strategic Planning and Development

According to the inspection of the Akimat of the region in the direction of «environmental permits» for 11 months of 2022, such problems as incorrect application of the methodology for determining the standards of emissions into the environment, lack of permission for burning raw gas, lack of accounting of the actual load of equipment for the last 2-3 years within the indicators established by the project in determining the standards of emissions, non-compliance with environmental requirements were identified.

Basically, the region belongs to the zone of ecological disaster, mainly due to the problems with the Aral Sea: desertification processes, soil salinisation in significant areas, contamination with pesticides and herbicides, salts of heavy metals, as well as due to the aggravation of pollution from the operation of the Baikonur Cosmodrome. Also, critical issues in maintaining a positive environment in the region include combating landfills, upgrading/constructing sewage treatment plants, and improving air quality levels.

2.2 Assessment of the region's strategic planning documents for the vision of green, low-carbon development by sector, risks to achieving the identified target indicators

In the Development Plan of Kyzylorda region for 2021-2025 in the analysis of the current situation in the sphere of problems in the direction of «ecology» is indicated only the lack of landfills in the villages of Zhalagash, Terenozek, Shieli and Saksaulsk, which meet environmental and sanitary requirements. As part of the «health care» direction, the unfavourable environmental situation affecting the health of the population and the high incidence of socially significant diseases, especially tuberculosis, are highlighted. The following activities can be attributed within the framework of the impact on the improvement of the environmental situation in the development plan:

- ▶ Increasing the coverage of students with the course «Ecology» in the secondary school programme;
- ▶ Increasing student access to best green practices and technologies (supplementary education);
- ▶ increase of land area with application of water-saving technologies (drip irrigation, sprinkling);
- ▶ increasing the level of public satisfaction with the environmental quality of life;
- ▶ increasing the level of wastewater treatment in cities;
- ▶ increase in the volume of commissioning of RES electric capacities;
- ▶ increasing the coverage of separate collection in cities (capital, cities of republican, regional and district significance): by fractions; separate hazardous types of waste (medical and mercury-containing waste, electronic and household appliances);
- ▶ increasing the share of recycling and utilisation of solid waste, agro-industrial waste and hazardous medical waste;
- ▶ increase in the volume of the Northern Aral Sea by 35%;

- ▶ increase in the number of citizens covered by the environmental information campaign;
- ▶ Reduction of water losses under irrigation: increasing the length of reconstructed canals;
- ▶ reduction of fresh water abstraction in industry;
- ▶ reduction of energy consumption in the public sector and housing and utilities;
- ▶ increase of natural population of fish resources by 1 per cent until 2024;
- ▶ coverage of youth environmental projects;
- ▶ Increase/expand the area covered by forests, including through planting 2 billion trees, ensuring normative rooting rate by species and planting regions.

In summary, despite the fact that the current regional development plan for 2021-2025 contains measures and indicators to improve environmental conditions, no systematic approach to uncovering and addressing current environmental problems has been identified.

2.3 Identification of sectors/subsectors with high decarbonisation potential not covered by strategic planning

In total, the region under consideration contains facilities with the maximum amount of greenhouse gas emissions, which, as a consequence, are included in the National Carbon Plan Total carbon credits for regulated areas of activity (Table 41).

Table 41. List of installations with allocated carbon credits for them for the electricity sector

Name of organization	Name of unit	Quota for 2022	Quota for 2023	Quota for 2024	Quota for 2025
Unitary Enterprise based on the Right of Economic Management KyzylordaTeploElectrocentre of the Department of Energy and Housing and Communal Services of Kyzylorda region	Thermal power centre station, boiler unit No. 6, 9	125 332	123 448	121 603	119 771
	Cogeneration gas turbine power plant, gas turbine unit No. 1, 2, 3	143 020	140 871	138 765	136 674
	Station Yuzhnaya boiler house, steam boilers No. 1, 2, 3, 4, 5, 6, 7	46 280	45 585	44 904	44 227
Intergas Central Asia JSC	Kyzylorda Main Gas Pipelines Department	89 149	87 809	86 497	85 194

Analysis to identify sectors/subsectors with high decarbonisation potential has shown that sectors with high potential are already covered by carbon regulation. While these sectors or facilities already have activities that contribute to some extent to GHG emission reductions, in the unregulated sectors, no such potential has been identified. However, in order to identify such potential, it is necessary to carry out work on GHG emissions estimation, but preliminary for this purpose it is necessary to create a regional fuel and energy balance of the region for fuel combustion sectors and collect data according to the methodology for GHG calculation for sectors other than fuel combustion sectors according to the Intergovernmental Panel on Climate Change (IPCC) sectoral breakdown of GHG reporting.

Conclusions:

Analysing the sustainability of regional development based on the principles of green economy and low-carbon development of the region and identifying areas with potential for development has shown that there is a need to work on establishing a systematic work to implement the directions and principles in the existing strategic documents on the development of the region.

It is necessary to allocate a separate target for improvement of the environmental situation with relevant indicators and activities aimed at addressing the improvement of the environmental situation.

The development and implementation of green economy and low-carbon development principles in strategic development documents requires attention in connection with the adoption of the Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060. It is necessary to link all strategic objectives to these principles to increase the sustainability of the region's development.

Development of a regional strategy to reduce greenhouse gas emissions is of great importance. In order to do this, it is necessary to determine the GHG reduction potential through detailed development of the region's regional fuel and energy balance for fuel combustion sectors and other non-fuel combustion sector data according to the sectoral breakdown of IPCC GHG reporting. This work will determine the region's contribution to the country's greenhouse gas reduction target.

In the direction of «green economy» it is necessary to take systemic measures to improve the state of atmospheric air, rational use of water resources, preservation of biodiversity and development of clean energy sources. These measures can be included in the regional low carbon development strategy.

CONCLUSION

By analysing the socio-economic development of Kyzylorda region for the period 2017-2022, both problem areas, competitive advantages and potential for further growth were identified.

Kyzylorda region demographic situation is characterised by high natural increase (relatively high birth rate and low mortality) and negative migration balance. The region has a relatively young age structure of the population. At the beginning of 2022, the median age of the population was 28.9 years, while the national average was 31.8 years.

In the sphere of demographic development, one of the most important problems in the region, as in many regions of the country, is the negative migration balance. Migration loss of the region's population is mostly due to the departure to other regions of the country, which mainly concerns the population of working age.

Nevertheless, due to the high natural increase, the population of the region shows positive dynamics. It has grown by 7.8 per cent since the start of 2017, and the average annual population growth rate over 6 years (adjusted for the results of the 2021 National Census) is 1.3 per cent.

Population growth in the region for the period 2017-2022 was mainly provided by the city of Kyzylorda. In some areas of the region in certain years natural increase did not cover migration loss. Accordingly, these regions experienced a decline in population.

Significant natural population growth in the region is due to the high birth rate and low mortality rates compared to the national data. By the results of 2021, Kyzylorda region was second only to Turkestan and Mangistau regions in terms of birth rate, and the overall mortality rate is one of the lowest in the country.

During the reporting period for all main causes of death, the death rate in Kyzylorda region was much lower than in the country. It should be noted that more than one third of deaths from external causes are due to transport accidents. The death rate from transport accidents in the region is slightly higher than the republican level.

According to the results of 2021, the indicator of life expectancy at birth of the region slightly exceeded the republican level. The gender difference on this indicator in the region was also comparatively better than the national average.

The level of infant mortality in the region remains high and slightly exceeds the national average. There has been a significant difference in infant death rates between urban and rural areas in the region in recent years. In 2021, urban areas had an infant mortality rate more than three times higher than rural areas.

The volume of produced Gross Regional Product (GRP) of Kyzylorda region in 2021 amounted to KZT 1,926.0 billion and increased by 17.1% compared to the corresponding period of the previous year.

The share of GRP of the region for the republic for 2021 was 2.3 per cent, and for the first 9 months of 2022 - 2.5 per cent. According to this indicator Kyzylorda region is on the 16th position among 20 regions of the country.

The share of GRP per capita in the region is also one of the lowest in the country (KZT 2,345.1 thousand in 2021 and KZT 2001.6 thousand in 9 months of 2022). The region also ranks 16th among the country's regions by this indicator.

The oil and gas sector is the defining industry of the regional economy.

Mining accounts for 69.4 per cent of industrial production through 2021, dominated by crude oil and natural gas production (81.9 per cent). The share of manufacturing industry in the structure of industrial production is insignificant, only 23.8 per cent.

It should also be noted that in the context of areas of the region the main volume of industrial production falls on Kyzylorda city (73.2%). Kyzylorda city (73.2%). The next most industrialised region is Zhanakorgan district (12.2% of the total industrial output of the region), where 29 industrial enterprises operate.

The most pressing problems in the industrial sector are the depletion of the raw material base and the low rate of development of the manufacturing sector.

Between 2017 and 2022, the region's transport industry has seen a significant increase in freight traffic and freight turnover and a significant decrease in passenger traffic and passenger turnover.

In Kyzylorda region, the total length of public roads is 3.0 thousand kilometres, of which 2.0 thousand kilometres are local roads (of regional and district significance). Despite annual growth, there is a relatively low proportion of local roads in good and fair condition (75 per cent in 2021). This situation remains one of the region's major problems in the transport sector. Among the areas of the region, the lowest level of local roads in good and satisfactory condition is observed in Aralsk district (in 2019 - 48.2%, in 2022 - 64.0%). %, in 2022 - 64.0%).

In 2021, the share of local roads in good and satisfactory condition in half of the country's regions exceeded 85%, of which in Zhambyl and Mangistau regions it reached 95%.

The housing sector has seen an increase in the total area of housing commissioned over the last three years from 608.9 thousand square metres in 2020 to 683.2 thousand square metres in 2022. At that, the greatest specific weight falls on Kyzylorda city (about 60%).

According to the information for 2022, the indicator of housing provision per one resident in the region (20.8 sq.m.) remains one of the lowest among the regions and is noticeably behind the national average (23.4 sq.m.).

Intraregional migration, which is characterised by outflow of residents to large settlements, in particular Kyzylorda and its surroundings, creates additional pressure on the infrastructure of these settlements. Number of people on waiting lists for land plots for construction of individual residential houses, social and rental housing, etc. is increasing.

In the housing and utilities sector, there is a high deterioration of electricity supply networks (68% in 2021).

In the agricultural sector there was an annual growth in gross output of products (services) and for 2022 reached KZT 180.1 billion. The region's share in the gross output of agricultural products (services) in the country is one of the lowest among the regions (1.9%).

Plant growing accounts for the main share of agricultural production (more than 60%). In 2022, the specified sown area of agricultural crops in the region totalled 188.6 thousand hectares. In the region various agricultural crops are grown, such as cereals and legumes (mainly rice), sunflower, potatoes, open field vegetables, cucurbits, sugar beet.

Positive dynamics has developed in the livestock sector, the number of livestock is growing steadily, and the volume of products produced is increasing.

The key challenges of the agro-industrial complex in the region are small-scale agricultural production, weak fodder base, lack of complete fodder and, as a consequence, low productivity of livestock and poultry, etc. The main problems of the agro-industrial complex in the region are small-scale agricultural production, weak fodder base, lack of complete fodder and, consequently, low productivity of livestock and poultry.

Taking into account all state support measures, the number of operating SMEs in the region is growing annually. There is a 31.5 % increase in 2021 compared to 2020. The output of products (goods and services) by SMEs of the region in 2021 totalled KZT 456,056 million, which is 23.3% more than in 2020.

Significant increase in output was observed in Aral'sk (by 88.7 per cent) and Syrdarya districts (by 34.3 per cent). At the same time, the share of SMEs in the region's GRP (16.3%) remains one of the lowest among the country's regions and is significantly lower than the national average (33.3%).

By types of economic activity in Kyzylorda region, the construction sector produces 32.4 per cent of SME output in the region. The second in terms of output is industry - 24.1 per cent. The share of wholesale and retail trade is 17.7 per cent.

In the context of areas of the region, the largest share of output of the region falls on Kyzylorda city (67.6%), Zhanakorgan (9.5%) and Shieliysky (7%) districts.

Women's entrepreneurship is actively developing in the region, with 48.5 per cent of SMEs headed by women. 76.1 per cent are women individual entrepreneurs. In order to support women's entrepreneurship in the region, a Centre for the Development of Women's Entrepreneurship was established in 2022 to accumulate non-financial support measures.

Level and quality of life of the population. According to the sample survey in Kyzylorda region, the share of the population with incomes below the subsistence minimum in the period 2018-2021 increased from 4.9 per cent to 5.5 per cent. In 2021, this indicator of the region was slightly higher than the national average (5.2%). The gap between the urban and rural population of the region by this indicator was insignificant. If in the country in rural areas the share of the population with incomes below the subsistence minimum exceeded the urban indicator almost 2 times, in Kyzylorda region - only by 9.6 per cent. Also, in the region, the bottom 40 per cent of the population have slightly more income (25 per cent) than the national average (about 23 per cent).

In the region in 2021, the average per capita cash income of the population totalled KZT 690.5 thousand, which is 38.6% higher than in 2018. The volume of money income of the population of the region is noticeably lower than the average national level (KZT 829.3 thousand in 2021) and is one of the lowest in the country. It can also be noted that in recent years Kyzylorda region is the only region in the country where rural incomes exceed urban incomes.

In 2021, per capita cash expenditures of the region's population averaged 659.4 thousand tenge, which is 38.0% higher than in 2018. The level of expenditures of the region's population is also noticeably lower than the national average.

In urban areas, the share of expenditures on food products and paid services is higher than in rural areas, while the share of expenditures on non-food products is lower.

In 2021, the labour force of Kyzylorda region was 3471 thousand people (3.7% of the total labour force in the country). The share of the labour force in the population was 64.5%, which is noticeably lower than the national average (69.3%).

In the total employed population, the proportion of men (53.7 per cent in 2021) is slightly higher than women (46.3 per cent). Among the self-employed (other categories of the employed population), the gender gap was even greater (men - 58.8 per cent, women - 41.2 per cent).

The share of the self-employed in the region (33.8 per cent) is 10 percentage points higher than the average value for the country (23.8 per cent).

The unemployment rate was 4.9 per cent, which corresponds to the republican level. This indicator was slightly higher in urban areas (5.0%) than in rural areas (4.8%). While in 2017 there was a marked difference in male and female unemployment rates (4.6 and 5.1 per cent respectively), in 2020 and 2021 they were on a par (4.9 per cent each).

During the period under review, the share of NEET youth in Kyzylorda region exceeded the national average. In Q3 2022, they were 8.0 per cent in the region and 6.6 per cent nationally; Youth unemployment in the region also exceeds the national average.

The region's population is mainly employed in education (18.3% in 2021), wholesale and retail trade (17.4%), industry (9.6%), transport and warehousing (9.4%), agriculture, forestry and fisheries (8.9%), construction (8.3%), health care and social services (7.7%).

The level of average monthly nominal wages per employee in Kyzylorda region is noticeably lower than the national average. In recent years, the gender wage gap has significantly decreased and by the end of 2021 (9.4 per cent) the region is among the lowest performing regions.

The highest salaries in January-December 2022, which are noticeably higher than the average for all sectors, are recorded in information and telecommunication (KZT 383.2 thousand), transport and warehousing (KZT 368.0 thousand), financial and insurance activities (KZT 364.8 thousand). The lowest level of wages is observed in the sphere of real estate operations (KZT 61.8 thousand);

In the context of the regional areas, the highest average monthly nominal wages in recent years have been recorded in Shieli district (KZT 275.8 thousand for January-December 2022) and the cities of Kyzylorda (KZT 271.3 thousand) and Baikonyr (KZT 267.2 thousand). The lowest average monthly wages are for workers in Syrdarya and Karmaksha districts (KZT 214.4 thousand and KZT 219.6 thousand respectively).

Preschool enrolment in the region increased significantly between 2017 and 2021. Preschool enrolment of children aged 1 to 6 years increased from 62.5 per cent in 2017 to 85.1 per cent in 2021, and enrolment of children aged 1 to 3 years increased from 11.7 per cent to 49.8 per cent. During the period under review, the coverage of children aged 3-6 years was almost 100 per cent.

The number of children on the kindergarten waiting list was 11.1 thousand, which is noticeably lower than in 2017 (16.7 thousand children).

One of the important problems in the sphere of preschool education is the technical condition of buildings of preschool organisations. In the region, most of the buildings of preschool organisations are not standard, but adapted. The vast majority of emergency buildings of preschool organisations in the country are in Kyzylorda region (9 out of 11 in 2021).

There are 295 full-time general education schools in the region, of which only 19 are small schools. The share of small staffing schools in Kyzylorda region (6.8 per cent) is the lowest in the country.

According to statistical data, Kyzylorda region is one of the leaders among the regions of the country in creating favourable conditions for inclusive education. According to the results of 2021 in Kyzylorda region the conditions for inclusive education were created in 94.9 per cent of public day schools.

There has been an annual increase in the number of students and at the beginning of the 2022-2023 school year, 171,500 students were enrolled in schools in the region, an increase of 16.2 per cent compared to the 2017-2018 school year. This trend influenced the growth of the number of schools with three-shift education. While in 2017 and 2018 there were no three-shift schools in the region, in 2021 there are 9 units.

The proportion of teachers with tertiary education in the region (95.2 per cent in 2021) is one of the highest in the country and slightly above the national average (92.1 per cent). Also, in 2021, the need for teachers in the region was the lowest among the regions at only 5 people.

Kyzylorda region has one of the highest indicators in the country in terms of coverage of children with additional education. This figure has increased from 65 per cent in 2018 to 90 per cent in 2022. In 2021, of the 60 buildings of the organisation of additional education, 38 were typical and 22 were adapted, of which 17 buildings required major repairs.

The region has 30 technical, vocational and post-secondary education organisations with more than 20,000 students. In 3 higher education institutions of the region the number of students at the beginning of the 2022-2023 academic year was 14.3 thousand.

The region's health care system operated 47 hospitals in 2017, a number that decreased to 34 in 2021. At the same time, the number of hospital beds per 10,000 people increased from 58.7 to 65.8 units, which corresponds to the national indicator (65.4 units per 10,000 people).

There are about 35 doctors for every 10,000 people in the region, which is noticeably lower than the national average (41 doctors per 10,000 people). The number of nurses per 10,000 people in the region is noticeably higher than the national average (130 and 99 nurses respectively).

More than 400 thousand diseases with first-time diagnoses are registered in the region every year. Respiratory diseases account for the major share. In 2021, the disease accounted for 31.9 per cent of the total, compared to 41.5 per cent nationally. The shares of diseases of digestive organs (9.4%), genitourinary system (8.2%), eye and its apparatus (6.0%), blood and hematopoietic organs (5.9%) and circulatory system (5.8%) are also significant.

In the region, the main problematic issues in the health care sector are:

- ▶ unfavourable environmental situation in the region, which affects the health of the population;
- ▶ high incidence of socially significant diseases, especially tuberculosis;
- ▶ low health index of pregnant women;
- ▶ insufficient level of material and technical equipment of health care organisations;
- ▶ insufficient number of special centres and qualified medical personnel.

The region is implementing comprehensive measures to provide social security for the population. As of today, 3.9 thousand people receive state targeted social assistance.

Comprehensive solution of housing provision for certain categories of citizens is an urgent issue. Over the period considered, there was a significant increase in the number of families assigned state housing assistance. While the number of such families was only 137 in 2017, it will be 31,500 in 2019 and 12,300 in 2022.

Analysis of cooperation with international organisations shows that Kyzylorda region has a rich experience of working with international organisations. The projects implemented in the region have an ecological orientation and are related to the Aral Sea restoration. In order to systematically address the problems of the Aral Sea region, work is being carried out with the World Bank, the German Society for International Cooperation (GIZ), and the Agency for International Development (USAID).

There is experience of cooperation with international organisations on implementation of projects in the region: on restoration of landscapes of Kazakhstan, implemented at the expense of non-refundable funds of the World Bank in 2022-2025; the Agency for International Development (USAID) will implement the project of sowing saxaul on the area of 500 hectares.

Taking into account the successful experience of cooperation of Kyzylorda region with international organisations, the region has a vision on possible areas of cooperation with international organisations. Cooperation is proposed to be channelled into the area of waste collection and recycling. Provide training and grant funding to introduce separate waste collection and recycling in the region, as well as innovative methods for organising landfills.

Implementation of projects for the development of alternative energy, wind and solar power is also relevant for the region. Consideration of environmental improvements and tourism development in the region is also suggested.

Regional sustainability analysis of development taking into account the principles of «green economy» and low-carbon development has shown that there is a need to work on the establishment of systematic work on the introduction of directions and principles in the existing strategic documents on the development of the region. In the analysis of the current situation in the sphere of problems in the direction of «ecology» only the absence of landfills in the settlements of Zhalagash, Terenozek, Shieli and Saksaulsk that meet environmental and sanitary requirements is indicated. As part of the «health care» direction, the unfavourable environmental situation affecting the health of the population and the high incidence of socially significant diseases, especially tuberculosis, are highlighted.

It is required to allocate a separate target on improvement of the environmental situation with relevant indicators and activities aimed at addressing the improvement of the environmental situation.

It requires attention to the development and implementation of the principles of green economy and low-carbon development in strategic development documents in connection with the adoption of the Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060. Development of a regional strategy to reduce greenhouse gas emissions is of great importance.

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Table. Measures aimed at stimulating SME development in Kyzylorda region

Name	Unit of measurement	2020		2021	
		plan	actual	plan	actual
Provision of grants for the development of new production facilities	mln KZT/MB	110,5	110,5	94,585	94,585
Subsidising the interest rate on loans	mln KZT/MB	1339,41	1339,41	-	-
	mln KZT/RB	-	-	1422,256	1422,256
	mln KZT/Sv	-	-	856,034	856,034
Partial guarantee of bank loans for project implementation	mln KZT/RB	295,264	295,264	690,0	690,0
	mln KZT/MB	240,0	240,0	756,093	756,093
	mln KZT/Sv	-	-	104,156	104,156
Provision of budget loans to promote entrepreneurship under the programme for the development of productive employment and mass entrepreneurship	mln KZT/RB	3103,4	3103,4	-	-
Lending to promote entrepreneurship in regional centres and single-industry towns	mln KZT/RB	278,5	278,5	-	-
Provision of microcredits in Kyzylorda (205)	mln KZT/RB	-	-	1 028,5	1 028,5
Attracting funds from “Damu” Entrepreneurship Development Fund” JSC to increase the volume of credit resources for SME development	mln KZT/MB	488,0	488,0	-	-
Increase in the authorised capital of the Microfinance Organisation Limited Liability Partnership «Regional Investment Centre» of Kyzylorda	KZT mln.	700,0	1200,0	-	-
Provision of state grants to young entrepreneurs to implement new business ideas within the framework of the State Programme for Business Support and Development Business Roadmap-2025	mln KZT/RB	71,0	71,0	250,0	248,7
Provision of state grants for small business entities	mln KZT/Sv	11,025	-	-	-
Establishment of a service centre for entrepreneurs in the city of Kyzylorda	mln KZT/MB	73,5	73,5	-	-
Continued availability of funding in rural areas under the regional Microbusiness-Kyzylorda programme	Within the limits of the funds foreseen	-	-	-	-
Partial guarantee of microcredits under the Programme for Productive Employment and Mass Entrepreneurship Development	mln KZT/MB	18,9	18,9	-	-
Partial guarantee of microcredits	mln KZT/MB	3,969	-	-	-
	mln KZT/Sv	35,721	-	-	-

Note: prepared on the basis of the organisation's development programme for the region