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Resilient nations.

ATLAS



OF SOCIO-ECONOMIC AND ENVIRONMENTAL INDICATORS IN THE ARAL SEA REGION OF UZBEKISTAN

(DEVELOPED ON THE BASIS COMPREHENSIVE NEEDS ASSESSMENT OF THE POPULATION
IN EIGHT DISTRICTS OF THE REPUBLIC OF KARAKALPAKSTAN MOST AFFECTED BY THE ARAL SEA CATASTROPHE)



INTRODUCTION

The Atlas has been developed on the basis of the socio-economic survey conducted in 2017 by the Institute for Social Research in 8 districts of the Republic of Karakalpakstan (Kanlikul, Karauzyak, Kegeyli, Muynak, Nukus, Takhtakupir, Chimbay and Shumanay districts). The study was commissioned by UNDP within the UN Joint Programme “Building the resilience of communities affected by the Aral Sea disaster through the Multi-Partner Human Security Fund for the Aral Sea”.

The socio-economic survey was conducted to identify the needs of the population affected by the Aral Sea disaster through application of human security concept and indicators. The survey covered 116 mahallas and 1,600 households, while eight focus group discussions conducted in each district, covering 1,600 respondents representing local authorities and civil society.

The purpose of this Atlas is to provide graphical information on the status of human security indicators in target areas, based on data collected through the assessment.

The designations employed and the presentation of material on the maps used in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP in Uzbekistan concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

CONTENT

This Atlas provides an overview of socio-economic situation in the 8 (eight) districts of the Republic of Karakalpakstan most affected by the Aral Sea disaster, and reflects various aspects of the population well-being, including access to education, health, and municipal services, employment situation and environmental conditions. The data is structured and linked to conventional cartographic basis. Maps and Atlas have been developed using MapInfoPro software.

The Atlas provides information on the following human security indicators in the surveyed areas:

- Environmental security
- Economic security
- Food security
- Health security
- Social security

Official statistics, results of the sociological survey and of focus group discussions among government and non-government institutions in each target area have been used to develop the maps.



Republic of Karakalpakstan (as of December 31, 2017)

Population: 1,817.5 thousand people. (5.7% of the total population of Uzbekistan)

Density: 10.9 people / km² (average for Uzbekistan is 71.5)

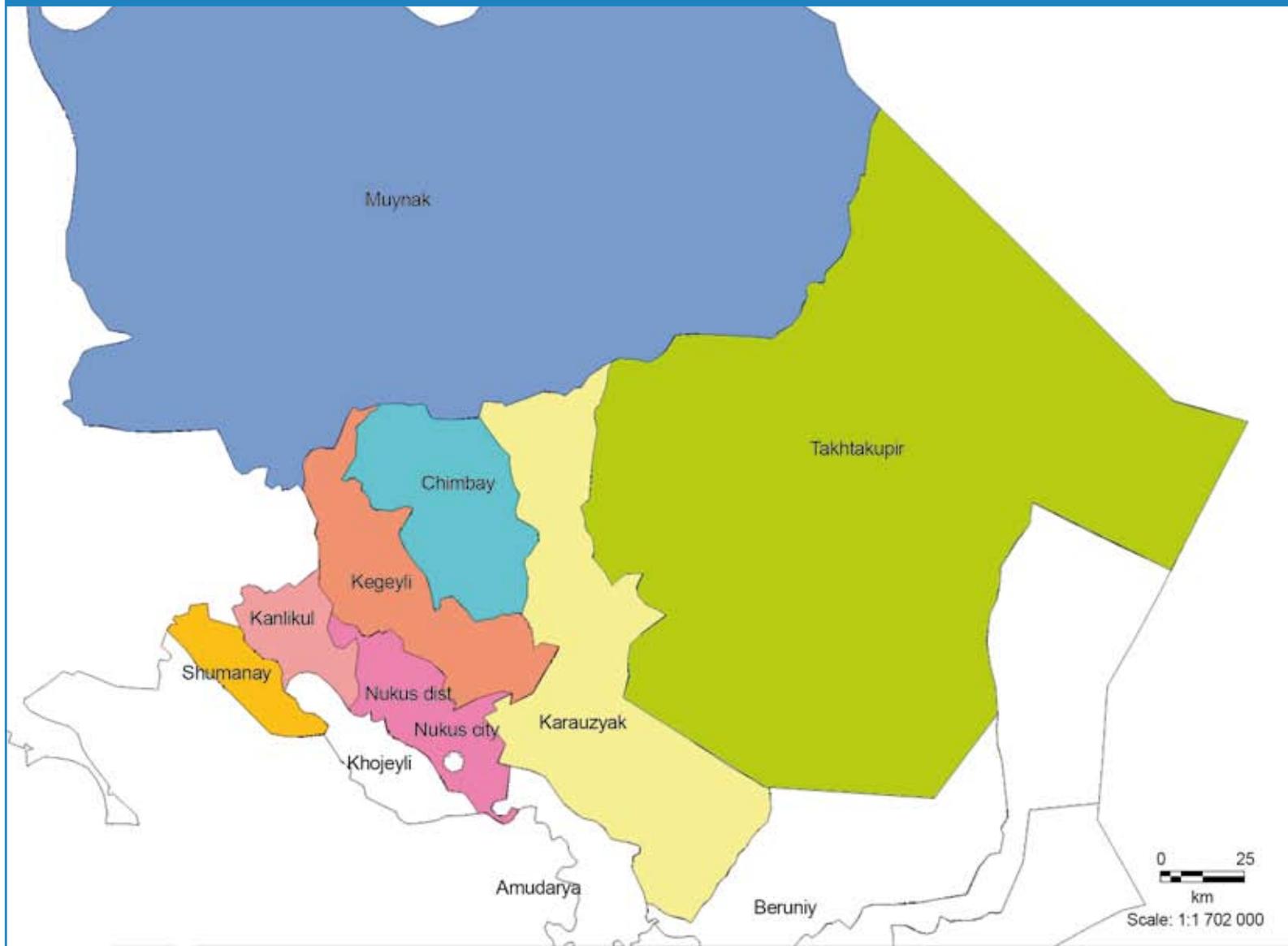
Area: 166,600 km² (37.1% of the territory of Uzbekistan)

Capital: Nukus city

Division: 1 city and 15 districts

Karakalpakstan is located on the Turan lowland. The Kara-Kum desert adjoins it closely from the south-west, the Ustyurt plateau is located in the north-west and the Kyzyl-Kum desert lies in the north-east. The territory of Karakalpakstan also includes the southern half of the Aral Sea and the lower reaches of the Amudarya River. A new salt marsh desert Aral-Kum is now being formed on the dried bed of which.

ADMINISTRATIVE BOUNDARIES OF THE SURVEYED AREAS



NOTATIONS KEYS

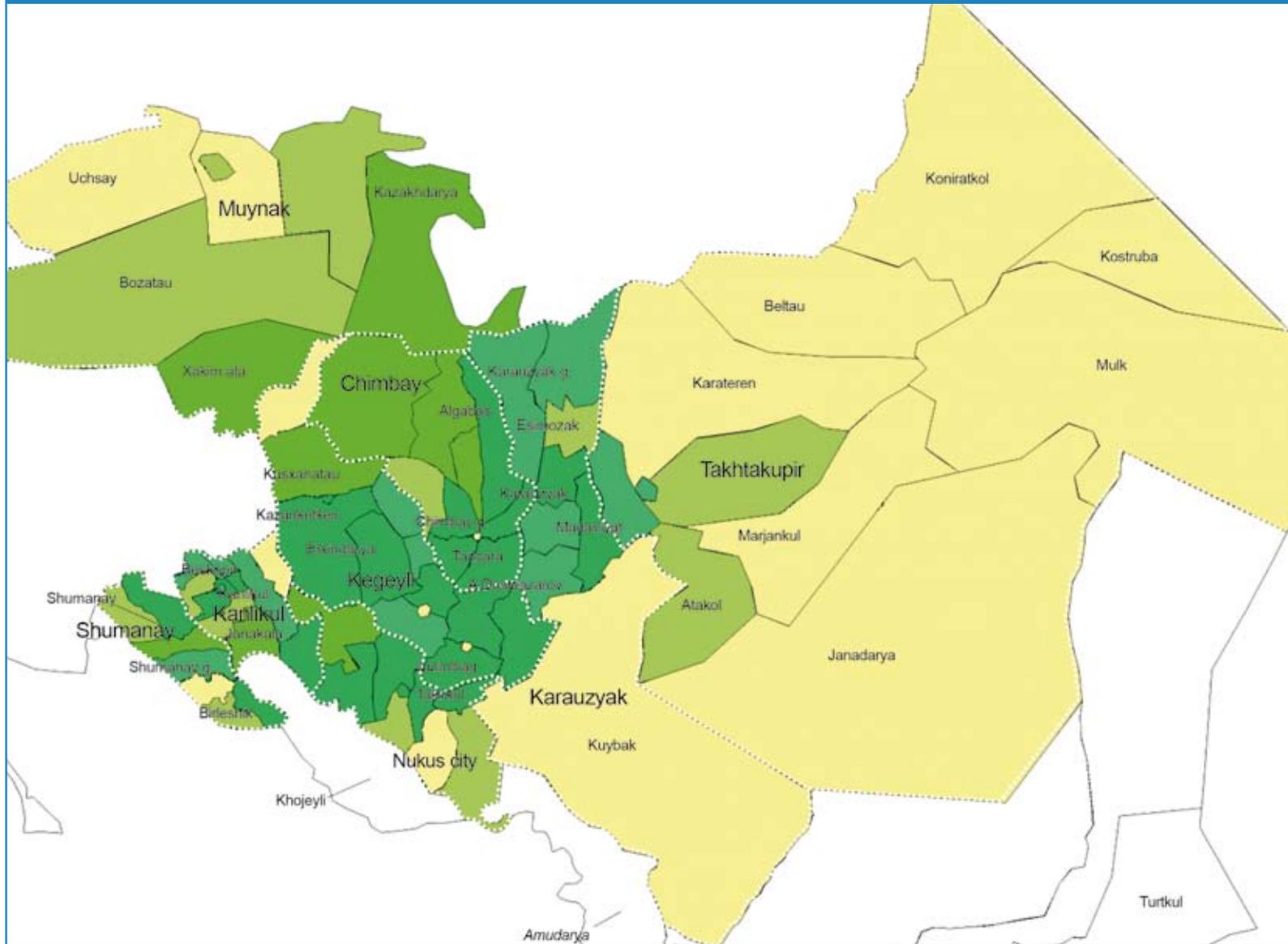
- Kanlikul
- Karauzyak
- Kegeyli
- Muynak
- Nukus dist.
- Takhtakupir
- Shumanay
- Chimbay

Source: Research by the Institute for Social Research, August, 2017

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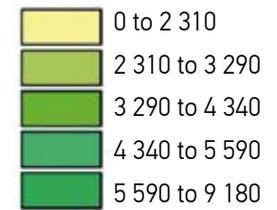
**GENERAL
INFORMATION**

BREAKDOWN OF MAHALLAS IN THE SURVEYED AREAS OF THE REPUBLIC OF KARAKALPAKSTAN BY THE NUMBER OF POPULATION/INHABITANTS



NOTATIONS KEYS

Number of population

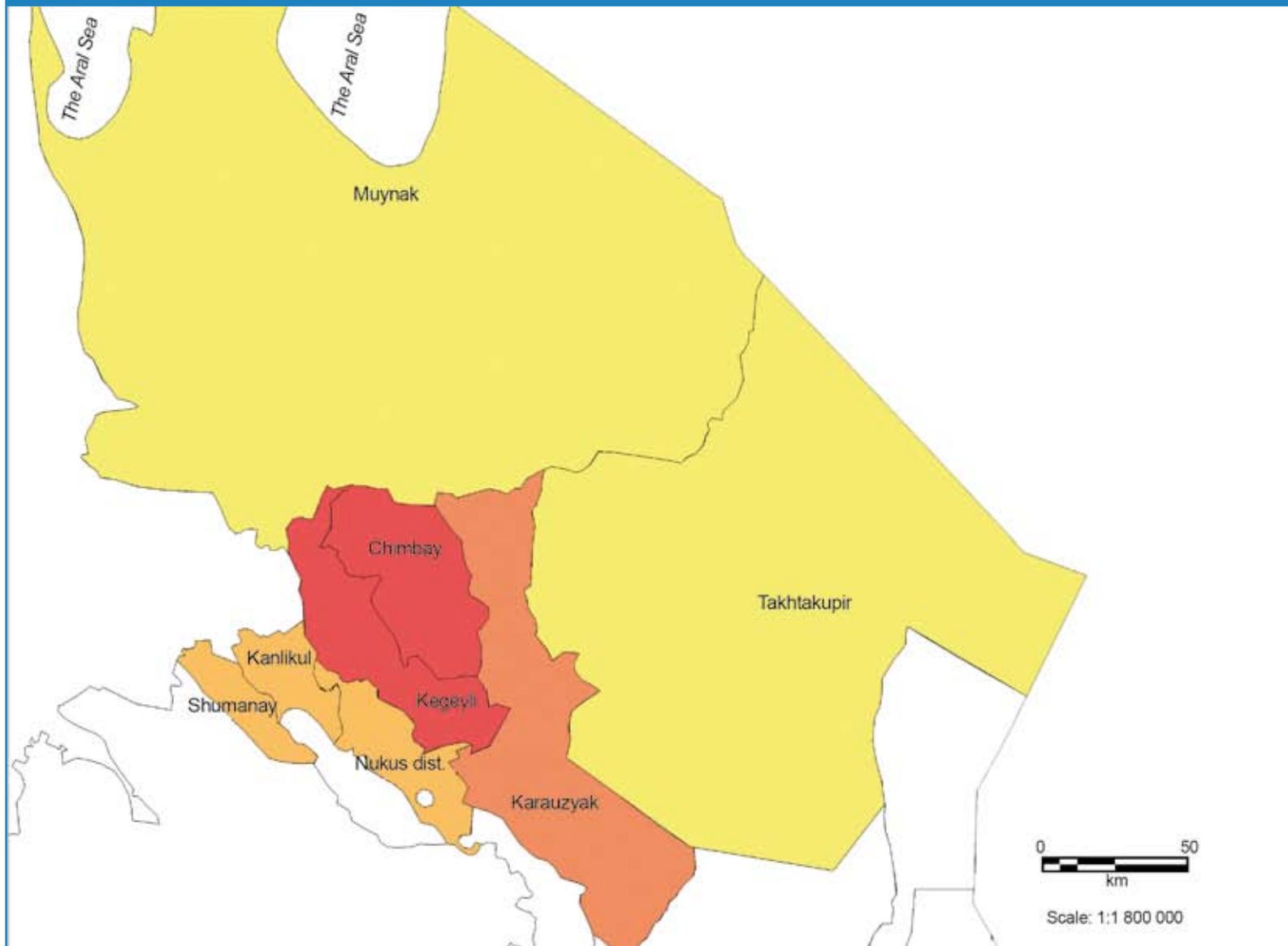


Source: Research by the Institute for Social Research, August, 2017

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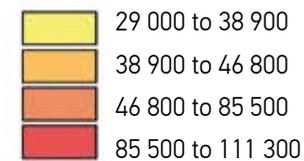
**GENERAL
INFORMATION**

NUMBER OF POPULATION IN THE SURVEYED AREAS



NOTATIONS KEYS

Number of population, people

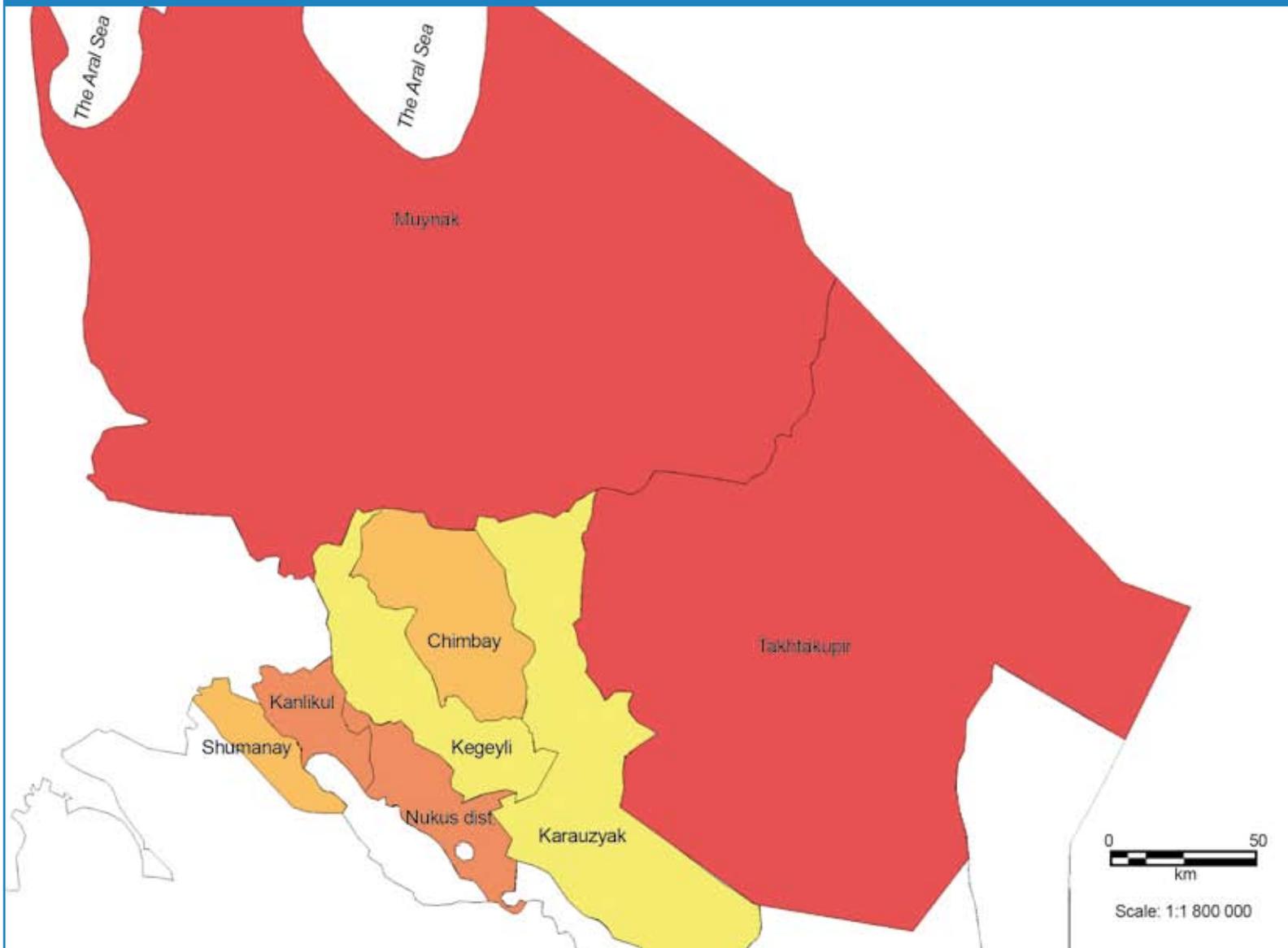


Source: Research by the Institute for Social Research, August, 2017

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**GENERAL
INFORMATION**

THE LEVEL OF POPULATION'S DISSATISFACTION WITH THE ENVIRONMENTAL SITUATION, IN %



NOTATIONS KEYS

The level of dissatisfaction with the environmental situation, in %



46.9% of respondents were not satisfied with the environmental situation.

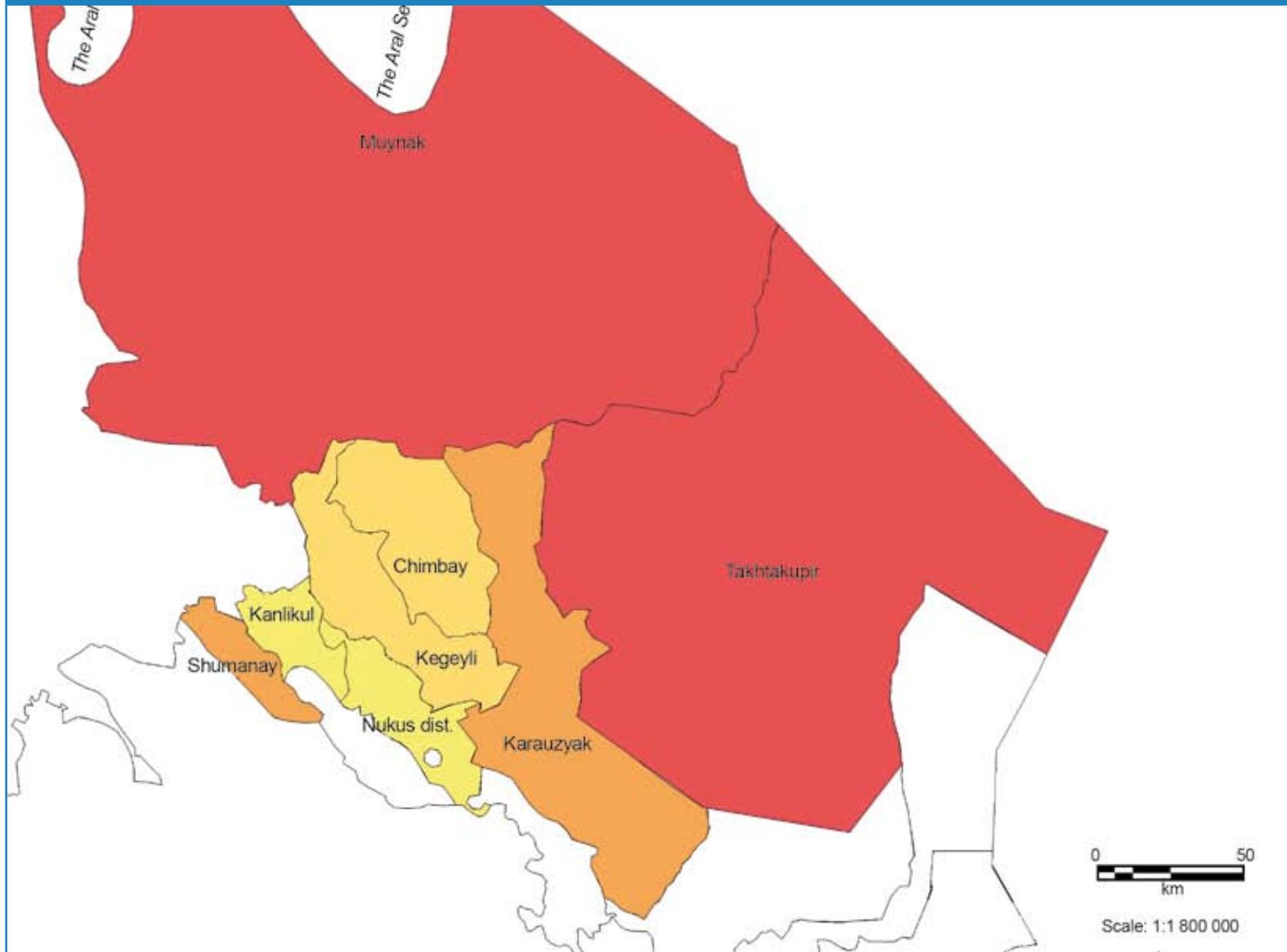
The main reasons: soil salinity (70.6%), air pollution (12.7%), water pollution (9.5%), and drought (6.7%).

Source: Research by the Institute for Social Research, August, 2017

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ENVIRONMENTAL SECURITY

THE LEVEL OF DISSATISFACTION WITH ACCESS TO DRINKING WATER, IN %



NOTATIONS KEYS

The level of dissatisfaction with access to drinking water, in %



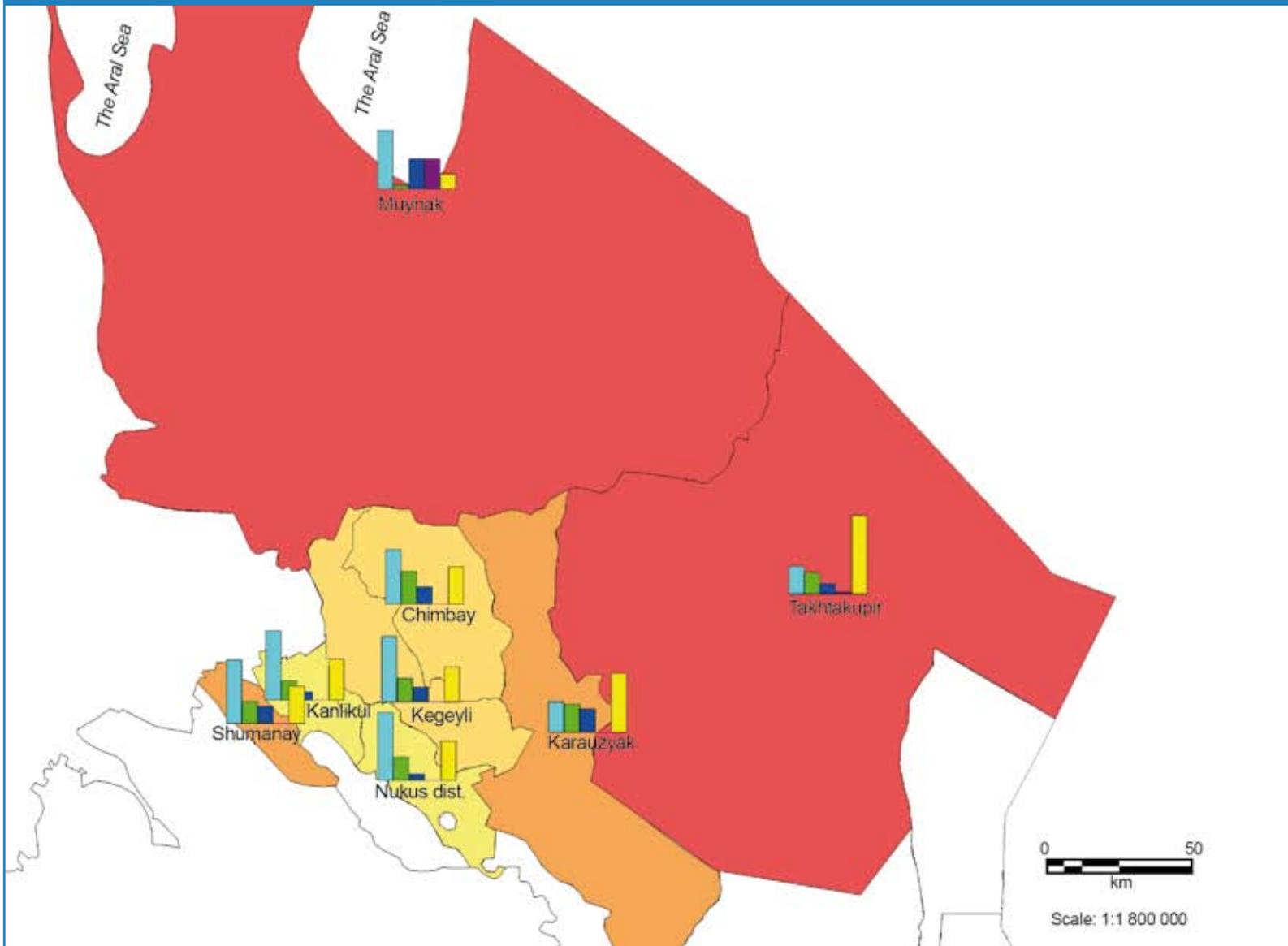
Public dissatisfaction with access to drinking water averages 33.9%. The main reasons: poor-quality water (37.8%), irregular water supply (26.9%) and long distance to water source (19.0%).

Source: Research by the Institute for Social Research, August, 2017

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**ENVIRONMENTAL
SECURITY**

THE MAIN SOURCES OF DRINKING WATER AND THE LEVEL OF DISSATISFACTION OF THE POPULATION WITH WATER SUPPLY, IN %



NOTATIONS KEYS

The level of dissatisfaction with water supply, in %

- 25.6 to 28.6
- 28.6 to 31
- 31 to 42.9
- 42.9 to 43.7

The sources of drinking water

- from domestic running water
- from domestic wells, boreholes
- transported water
- from open reservoirs
- wells, boreholes on the street or of neighbors

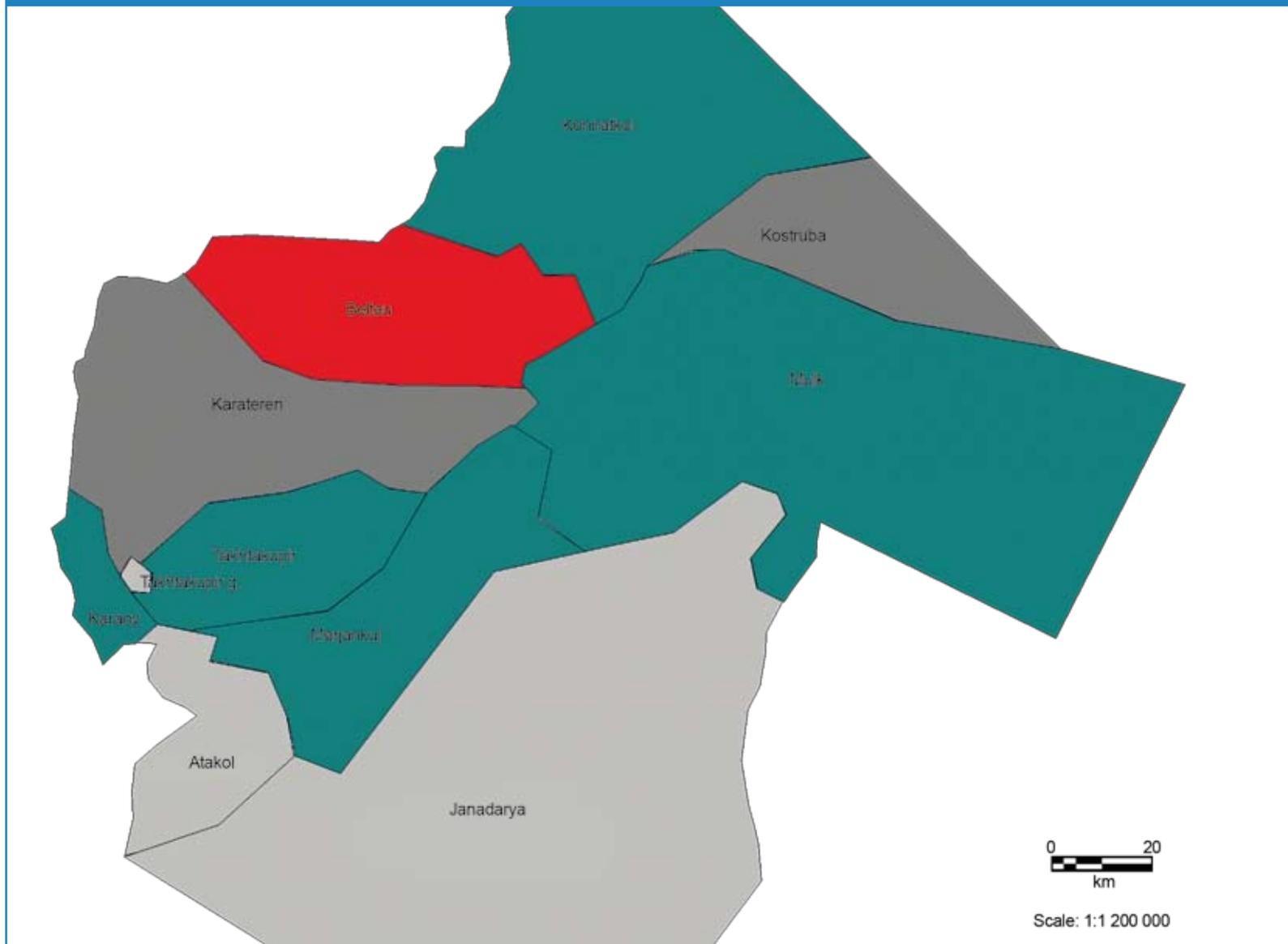


Source: Research by the Institute for Social Research, August, 2017

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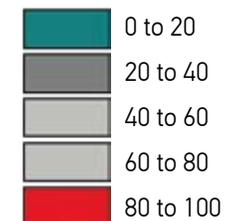
**ENVIRONMENTAL
SECURITY**

THE LEVEL OF DISSATISFACTION WITH THE QUALITY AND SUPPLY OF WATER IN TAKHTAKUPYR DISTRICT, IN%



NOTATIONS KEYS

The level of dissatisfaction in%



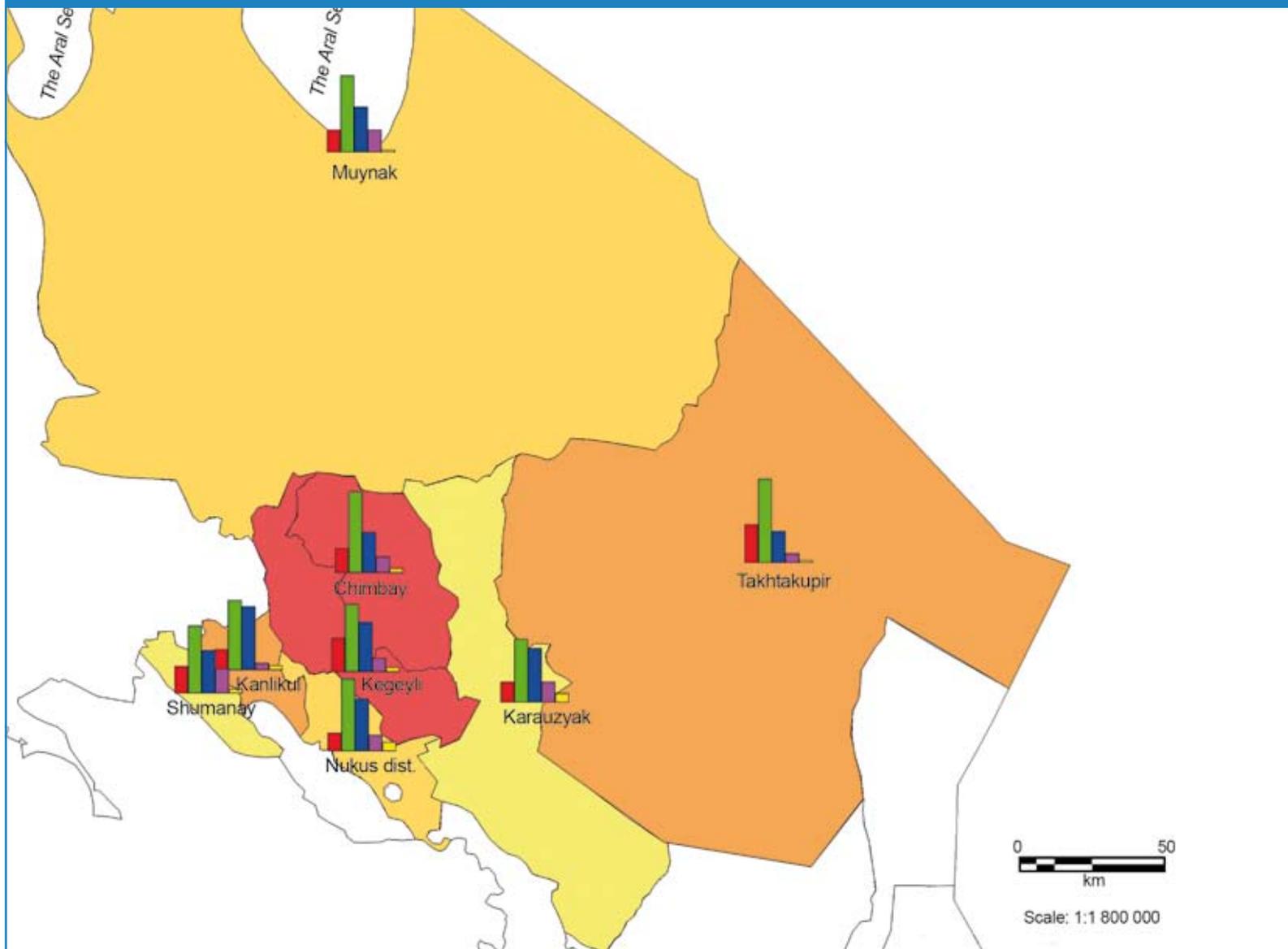
Scale: 1:1 200 000

Source: Research by the Institute for Social Research, August, 2017

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**ENVIRONMENTAL
SECURITY**

BREAKDOWN OF BY AGGREGATE INCOME AND EMPLOYMENT

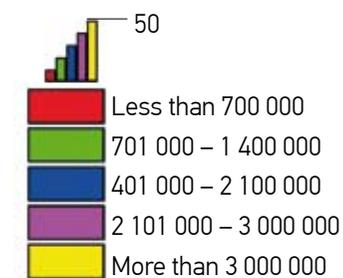


NOTATIONS KEYS

Employment in the formal sector, %



Aggregate household income in UZS

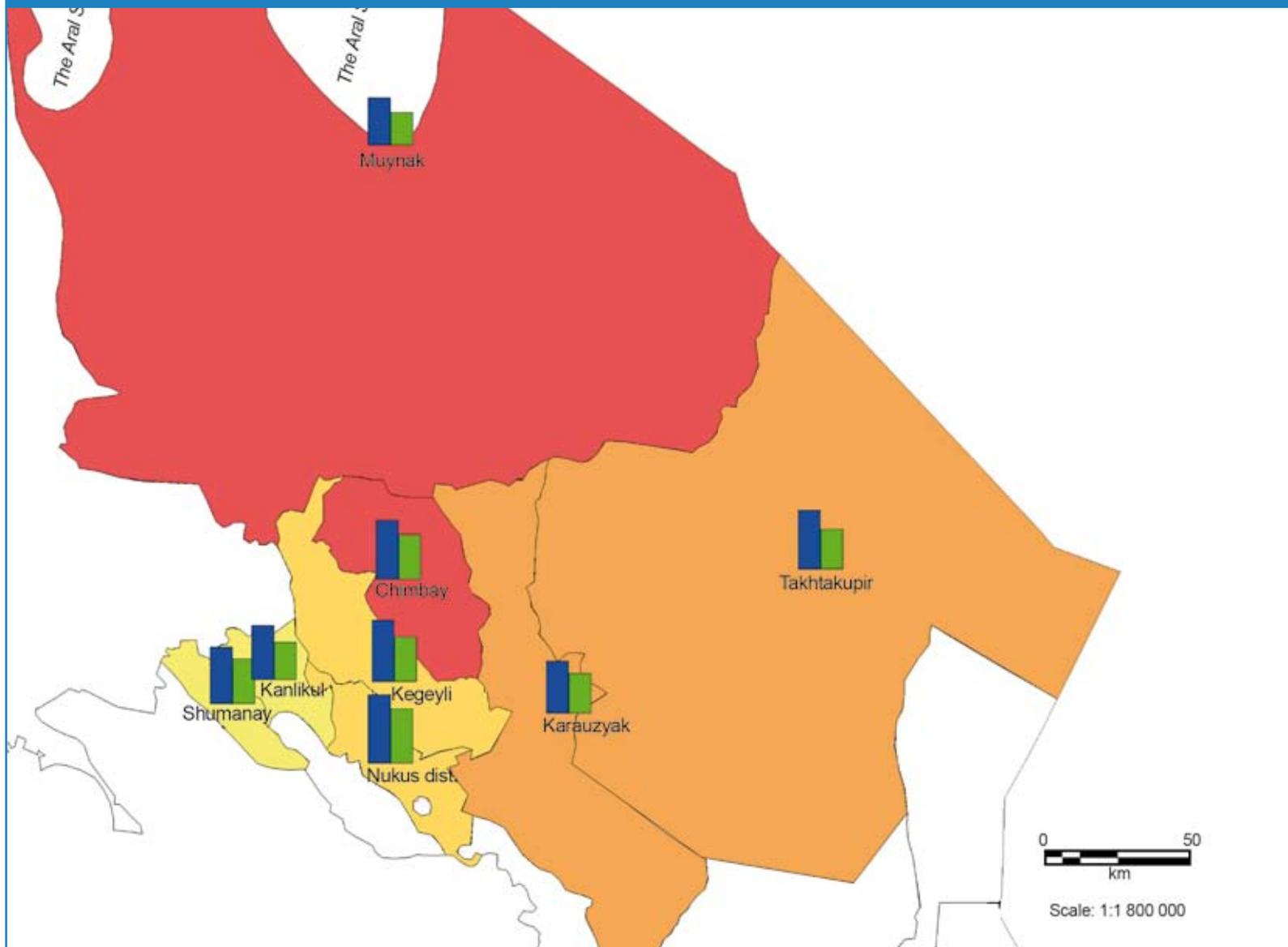


Source: Research by the Institute for Social Research, August, 2017

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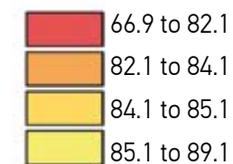
**ECONOMIC
SECURITY**

SHARE OF INCOME FROM HOUSEHOLD PLOT IN TOTAL HOUSEHOLD INCOME, IN%



NOTATIONS KEYS

Households producing agricultural products, %



- Share of income from entrepreneurship
- Including from farming on household plot



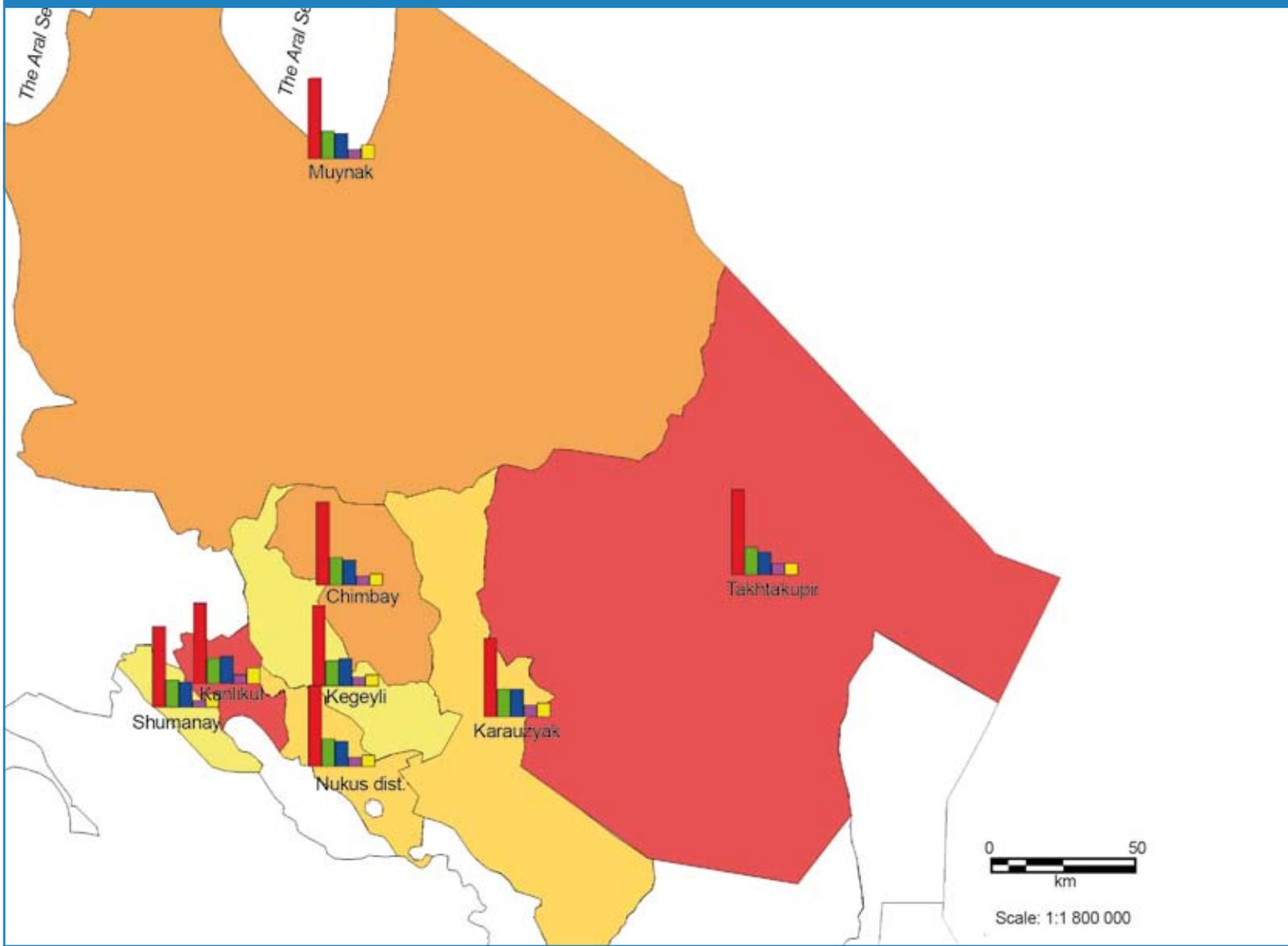
Scale: 1:1 800 000

Source: Research by the Institute for Social Research, August, 2017

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**ECONOMIC
SECURITY**

STRUCTURE OF HOUSEHOLD EXPENDITURES AND THE LEVEL OF THE MIDDLE CLASS (MIDDLE-INCOME), IN %



NOTATIONS KEYS

The share of middle-income population, according to surveys of the mahalla leaders, in %

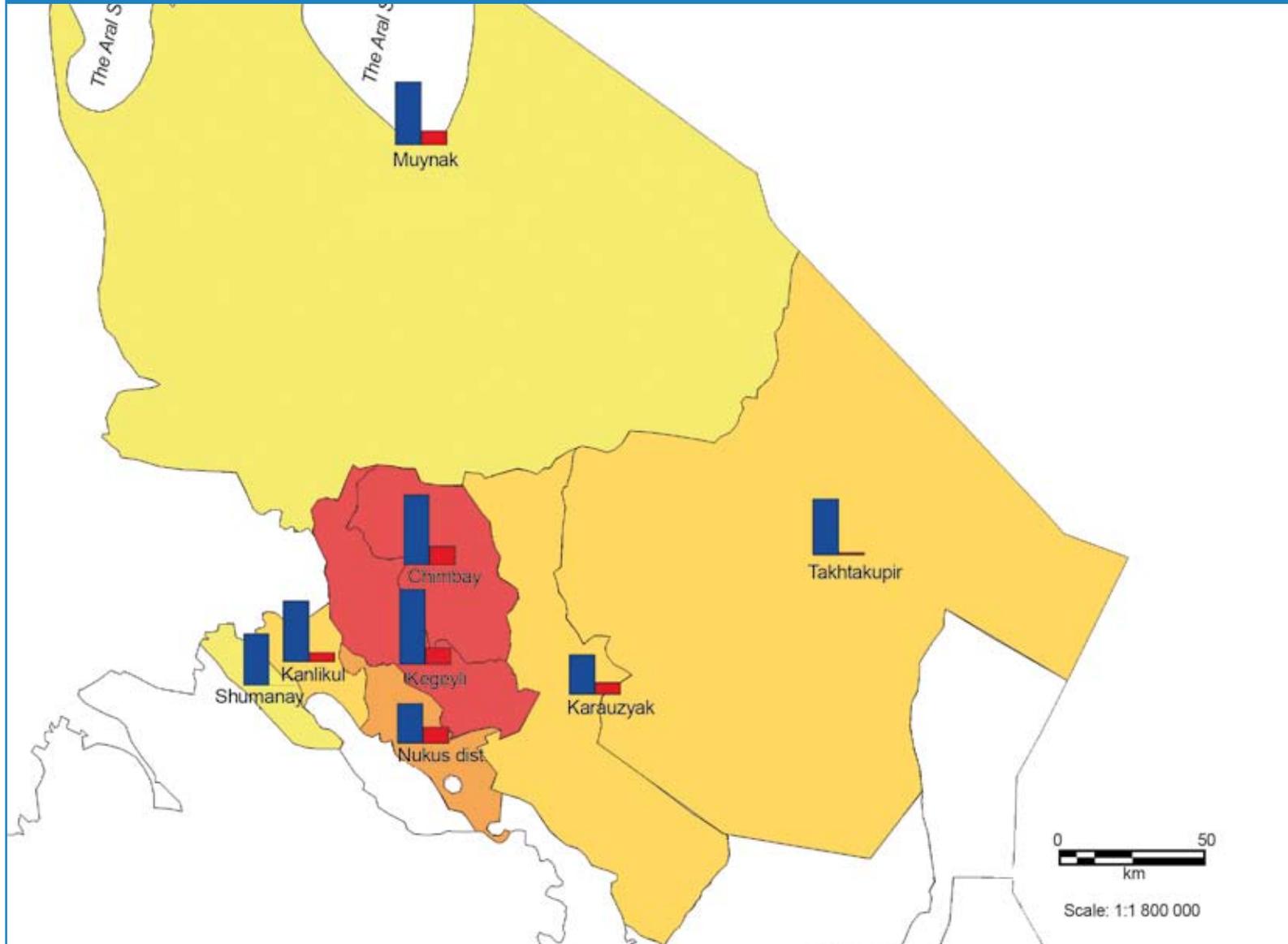
- 63.5 to 67.1
- 67.1 to 68.3
- 68.3 to 71.4
- 71.4 to 74.3

The structure of household expenditures

- 50
- Food
 - Non food products
 - Services
 - Obligatory payments
 - Savings

Source: Research by the Institute for Social Research, August, 2017

EMPLOYMENT IN INFORMAL SECTOR AND LABOR MIGRATION

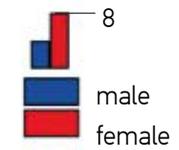


NOTATIONS KEYS

Employment in the informal sector, %



Household members in labor migration, %

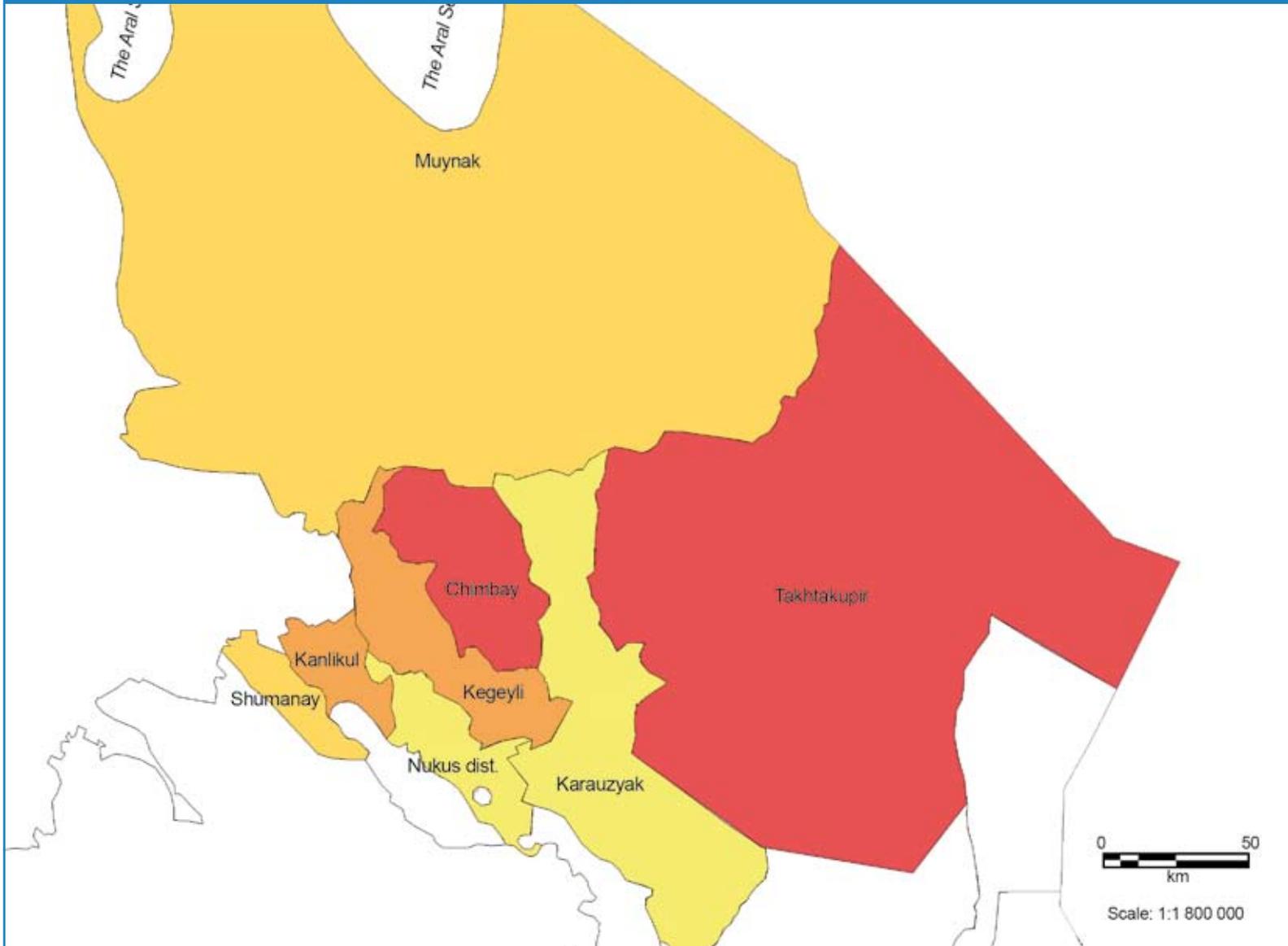


Source: Research by the Institute for Social Research, August, 2017

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**ECONOMIC
SECURITY**

EMPLOYMENT, IN%



NOTATIONS KEYS

The level of dissatisfaction with employment situation, %



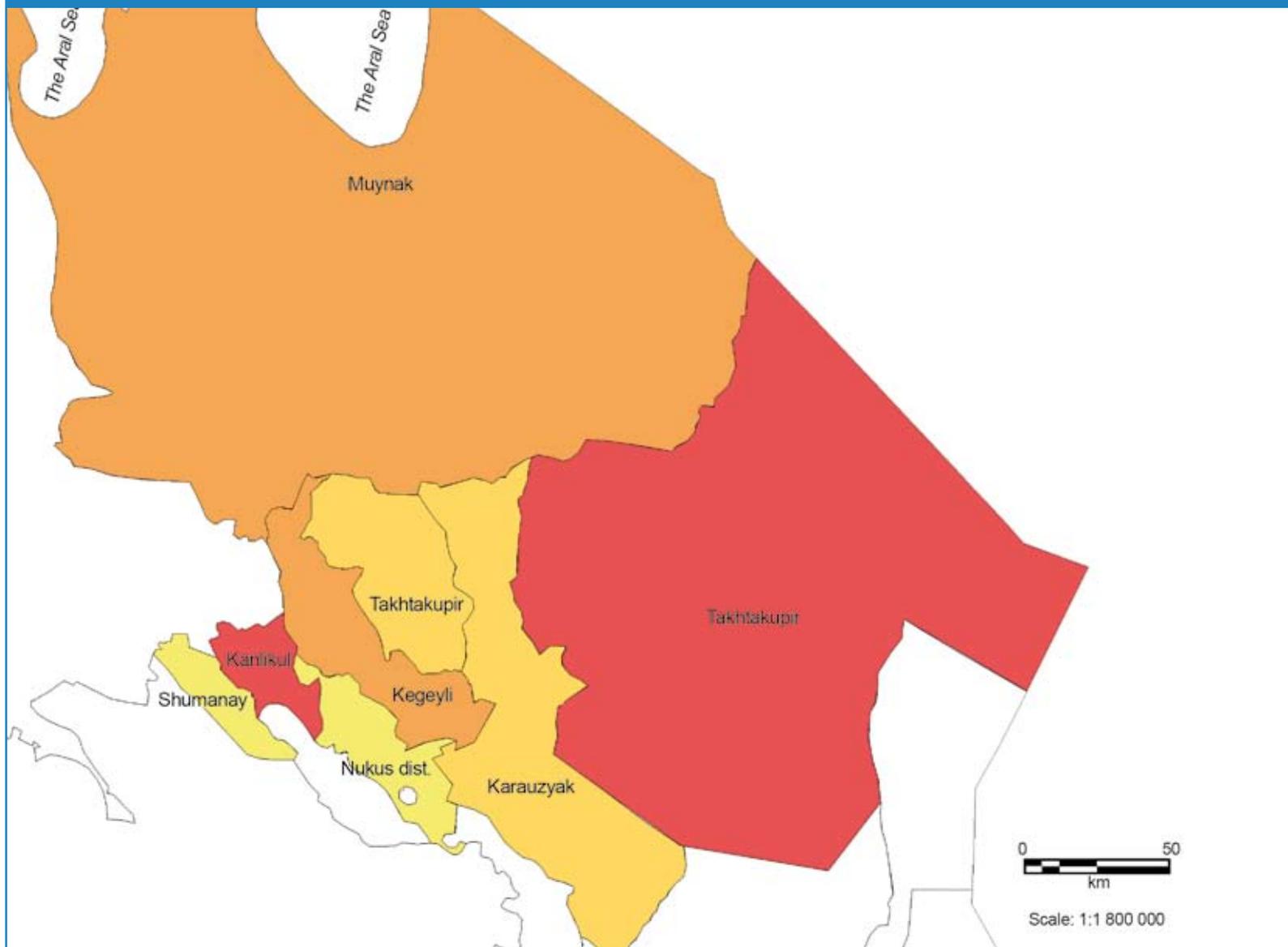
According to the survey results, 49.8% of respondents are not satisfied with the employment situation due to the lack of permanent jobs (76.2%) and low wages (21.6%).

Source: Research by the Institute for Social Research, August, 2017

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**ECONOMIC
SECURITY**

POTENTIAL FOR ENTREPRENEURSHIP DEVELOPMENT



NOTATIONS KEYS

Willingness and inclination to run a business, in %



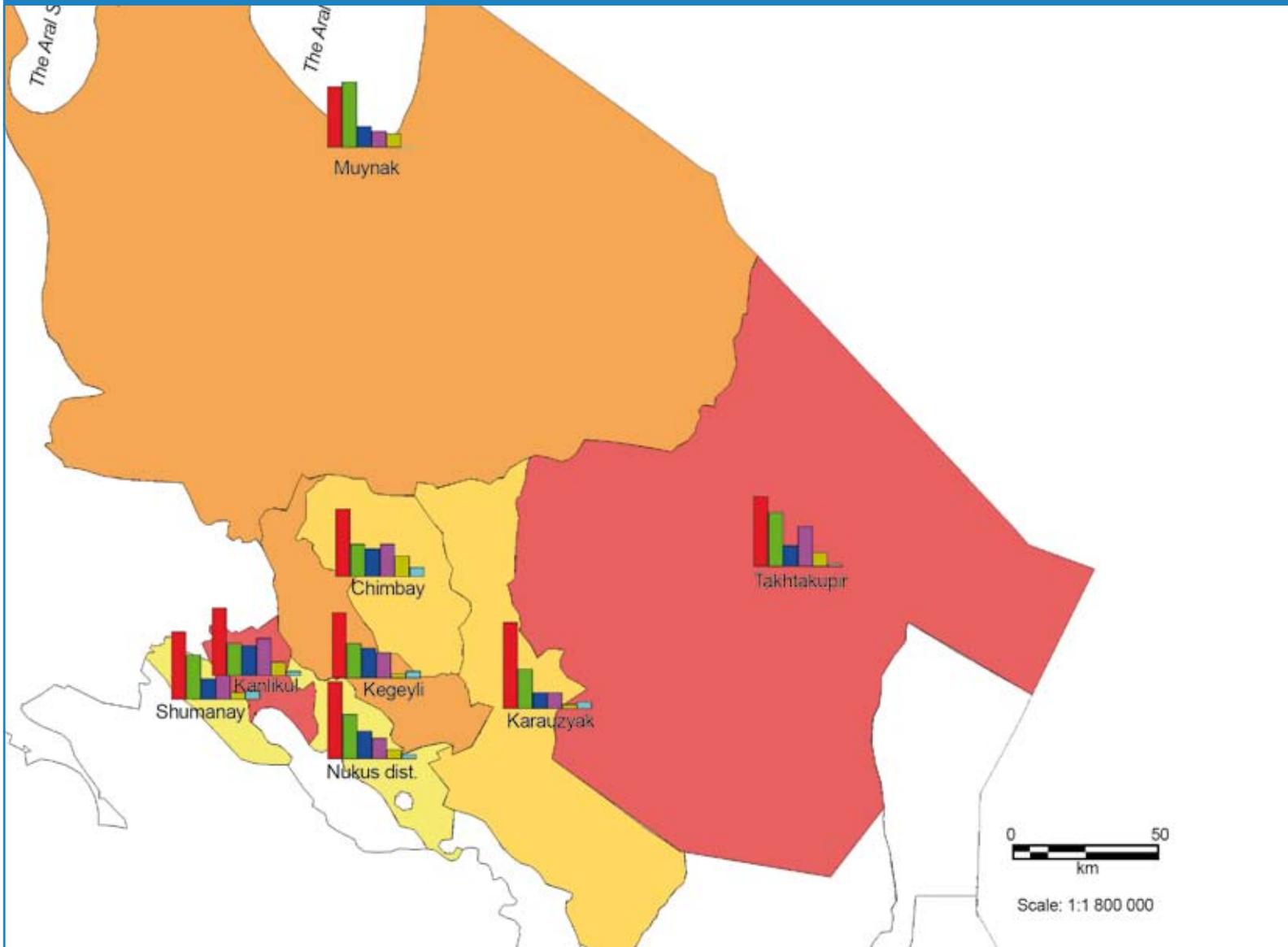
According to the survey results on average 25.9% of the population prefers to do business.

Source: Research by the Institute for Social Research, August, 2017

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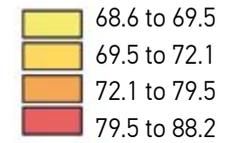
**ECONOMIC
SECURITY**

MAIN REASONS FOR UNWILLINGNESS TO DO BUSINESS

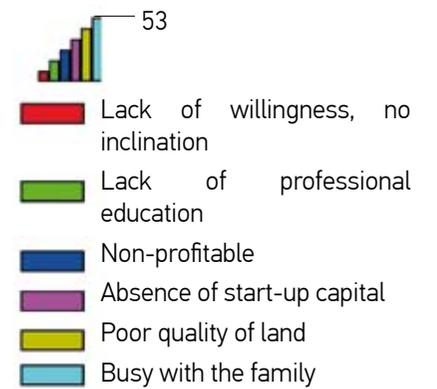


NOTATIONS KEYS

Unwillingness to do business, in %



Main reasons:

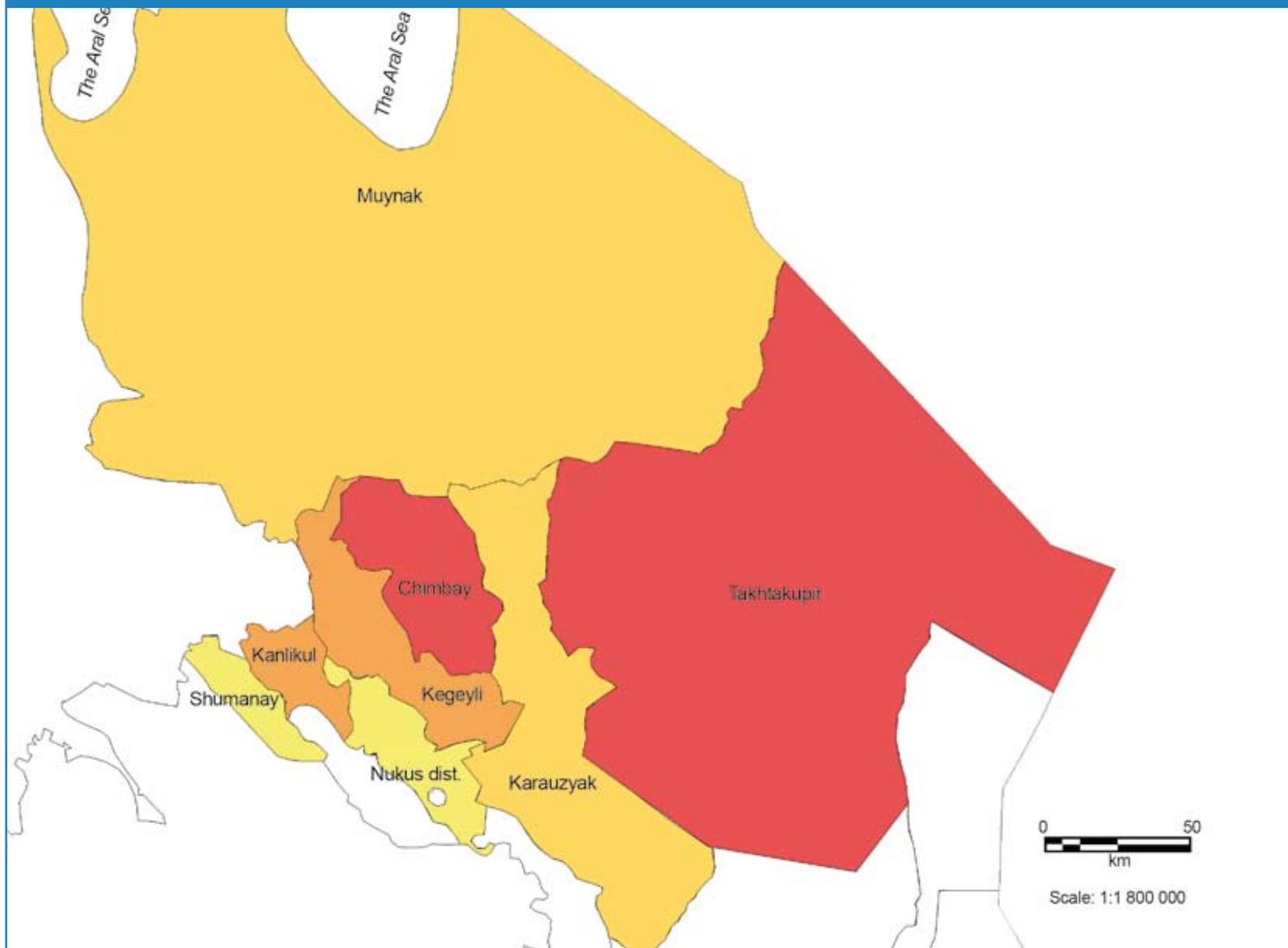


Source: Research by the Institute for Social Research, August, 2017

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**ECONOMIC
SECURITY**

THE LEVEL OF DISSATISFACTION WITH TRANSPORT INFRASTRUCTURE, IN %



NOTATIONS KEYS

The level of dissatisfaction with transport infrastructure, in %



On average, 43.2% of the population is not satisfied and 24.3% is partially satisfied with the operation of transport infrastructure facilities.

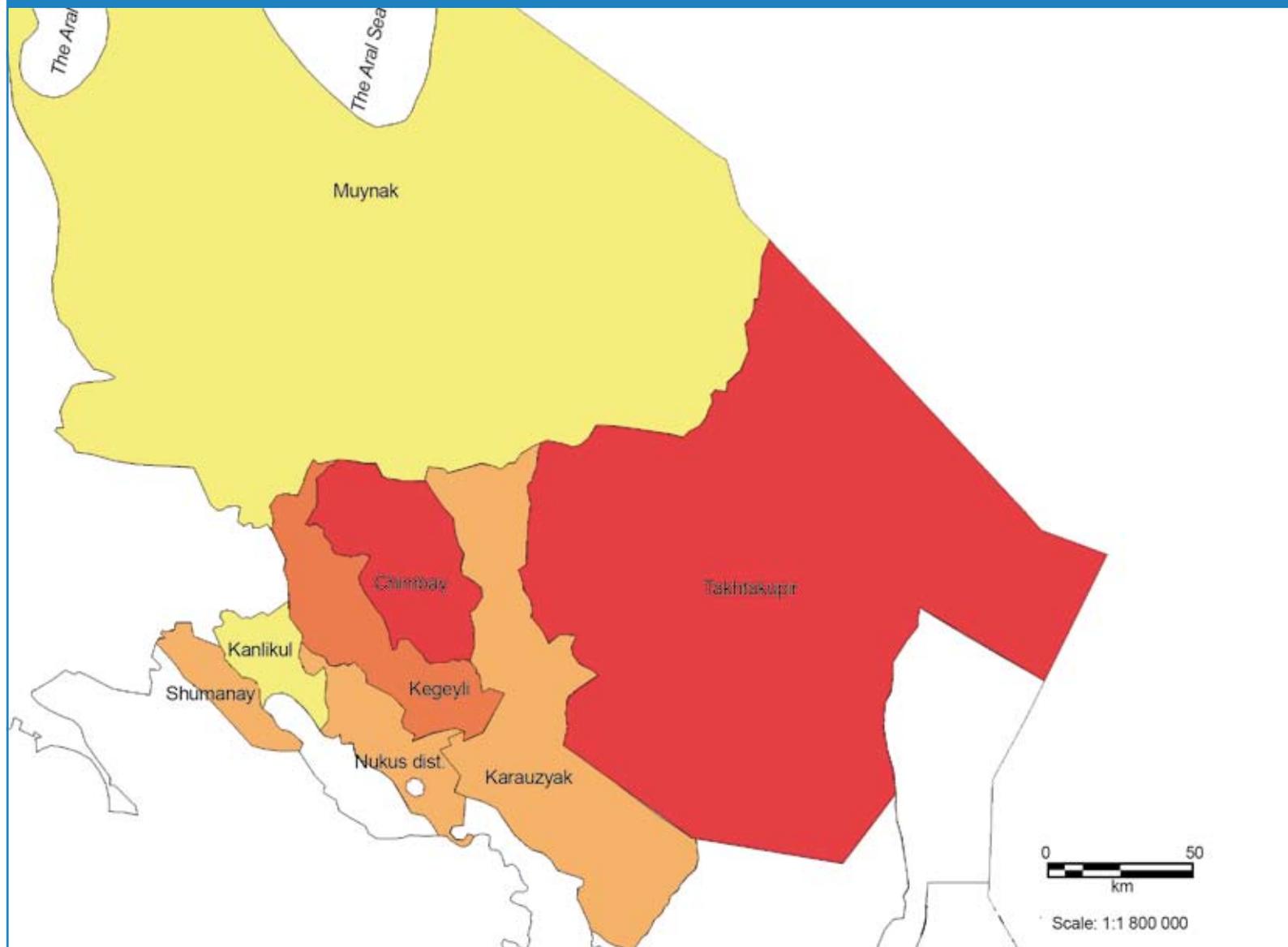
The main reasons: low quality of local roads which require repair and reconstruction (79.4%), as well as the lack of transport routes (16.3%).

Source: Research by the Institute for Social Research, August, 2017

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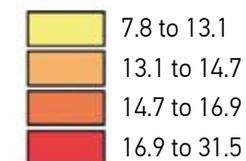
**ECONOMIC
SECURITY**

THE LEVEL OF DISSATISFACTION WITH TRADE SERVICES, IN %



NOTATIONS KEYS

Dissatisfaction with trade services, in %



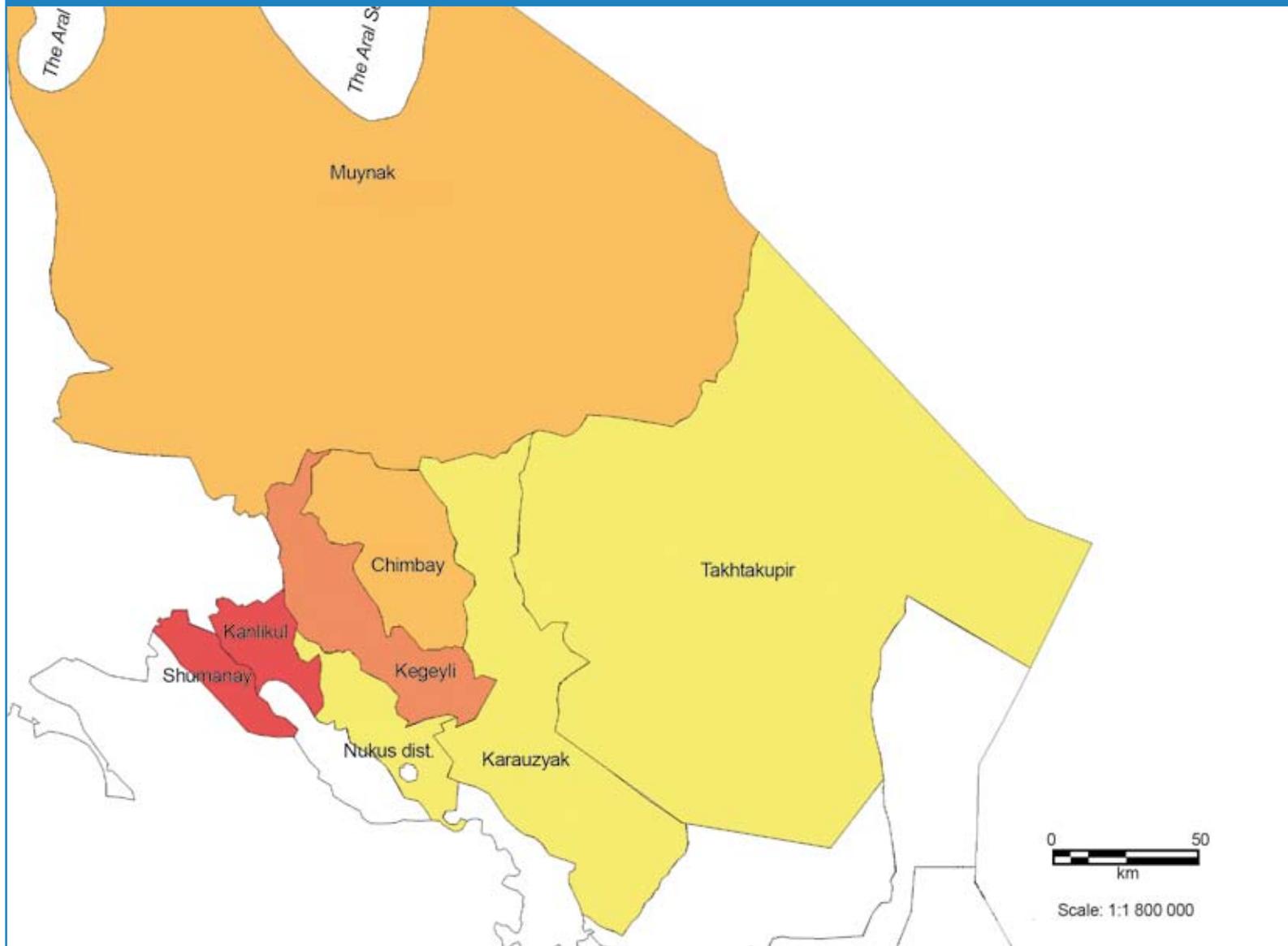
On average, 16.3% of respondents expressed dissatisfaction with trade services. The main reasons: remoteness of trade objects (31%), high prices (22.7%), limited range of products (8.1%).

Source: Research by the Institute for Social Research, August, 2017

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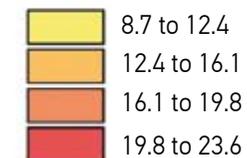
**ECONOMIC
SECURITY**

THE LEVEL OF DISSATISFACTION WITH THE QUALITY OF BANKING AND FINANCIAL SERVICES, IN %



NOTATIONS KEYS

The level of dissatisfaction with the quality of banking and financial services, in %



On average, 14.8% of respondents noted dissatisfaction with the quality of financial services.

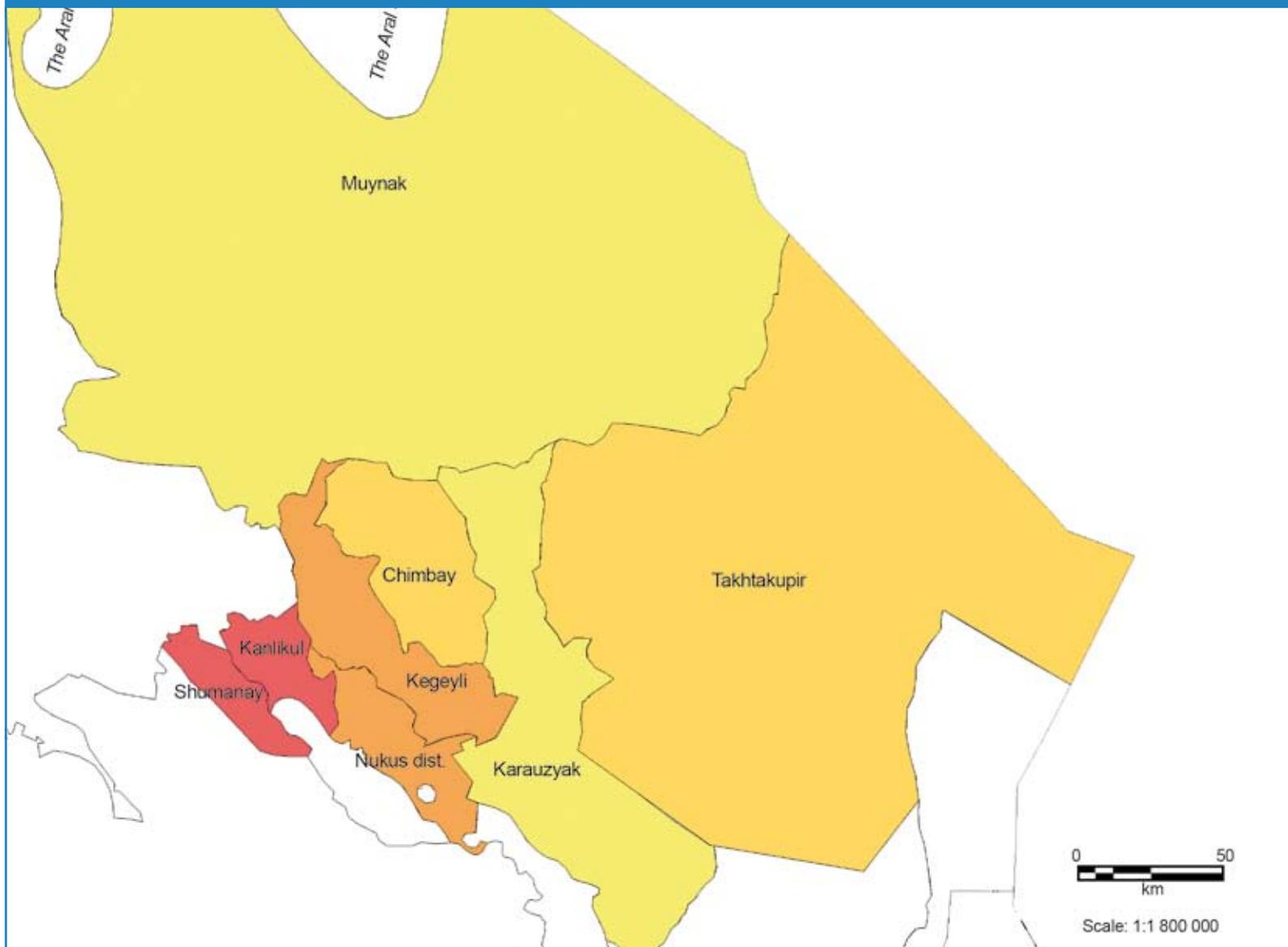
The main reasons: high interest rate on loans, problems with cash, bureaucratic barriers, excessive claims on collateral for a loan.

Source: Research by the Institute for Social Research, August, 2017

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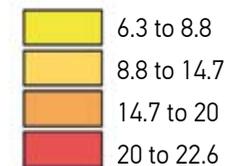
**ECONOMIC
SECURITY**

THE LEVEL OF DISSATISFACTION WITH THE SECONDARY SPECIAL AND VOCATIONAL EDUCATION, IN %



NOTATIONS KEYS

The level of dissatisfaction with the secondary special and vocational education, in %



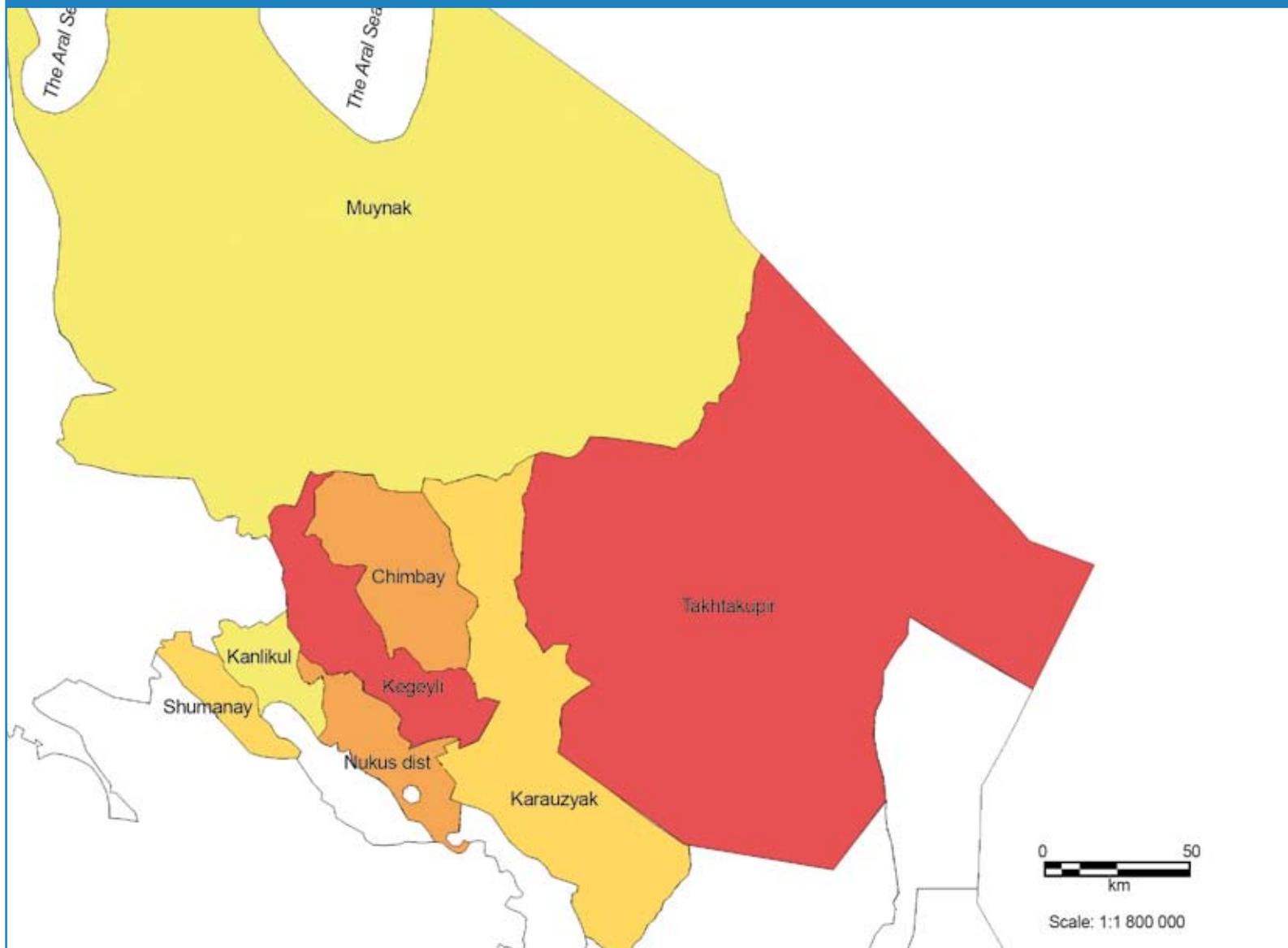
The dissatisfaction with the secondary specialized and vocational education averaged 12.7 %.

Source: Research by the Institute for Social Research, August, 2017

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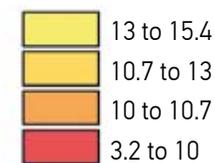
**ECONOMIC
SECURITY**

PRODUCTION OF FOOD AND NON-FOOD PRODUCTS BY HOUSEHOLDS, IN %



NOTATIONS KEYS

Production of food and non-food products by households for last 12 months, in %



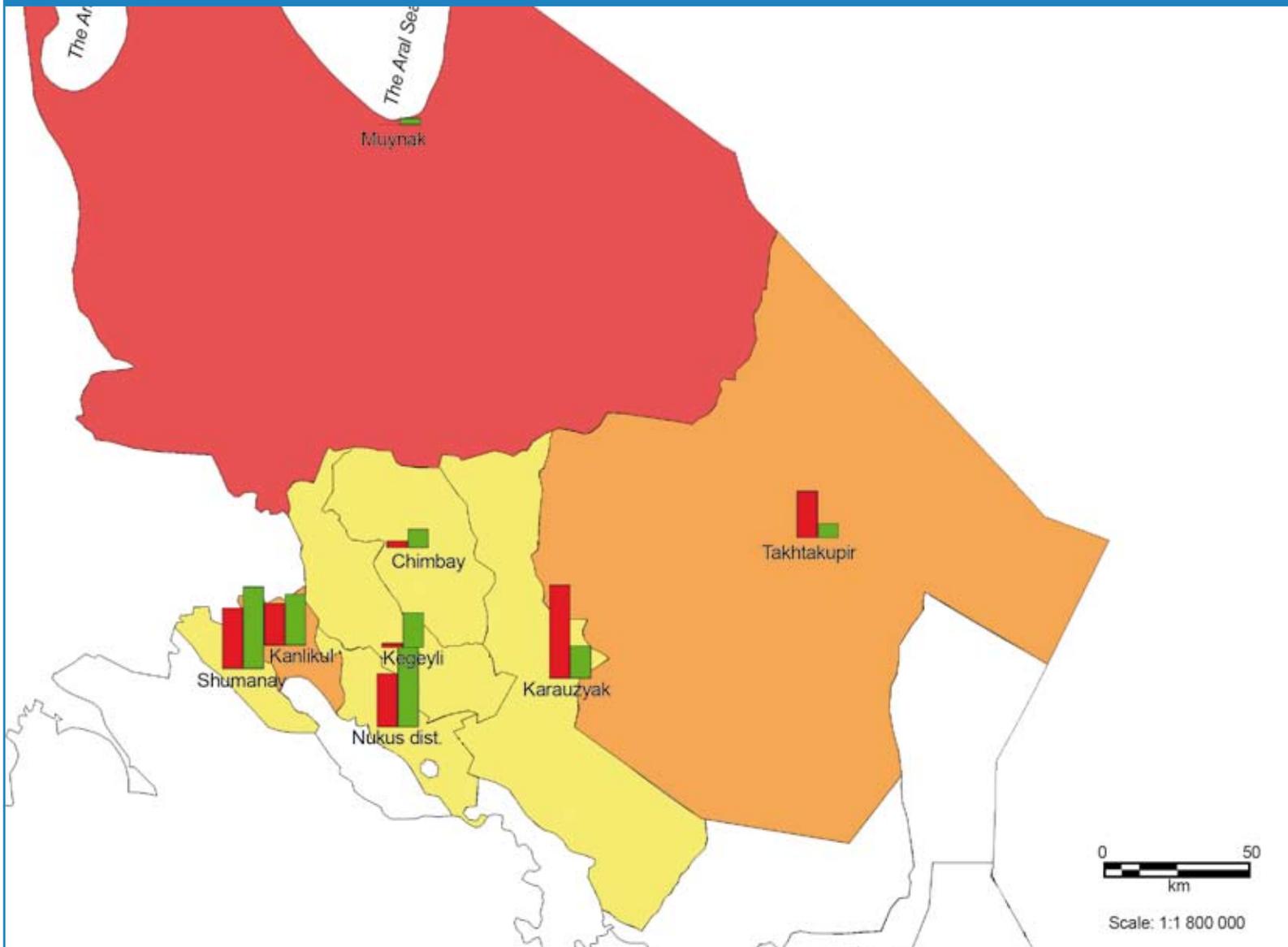
On average, 9.9% of households were engaged in the production of food and non-food items over the last 12 months. Of the total amount of goods produced by the households surveyed, 88% are food products.

Source: Research by the Institute for Social Research, August, 2017

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FOOD SECURITY

PRODUCTION OF BEANS AND RICE BY HOUSEHOLDS, IN KG



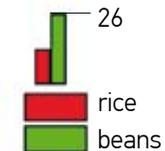
NOTATIONS KEYS

Sown area of agricultural crops, thousand hectares



The survey revealed that the production of rice and beans per household for last 12 months was on average 10 kgs.

Production of beans and rice per 1 household/kg/for last 12 months

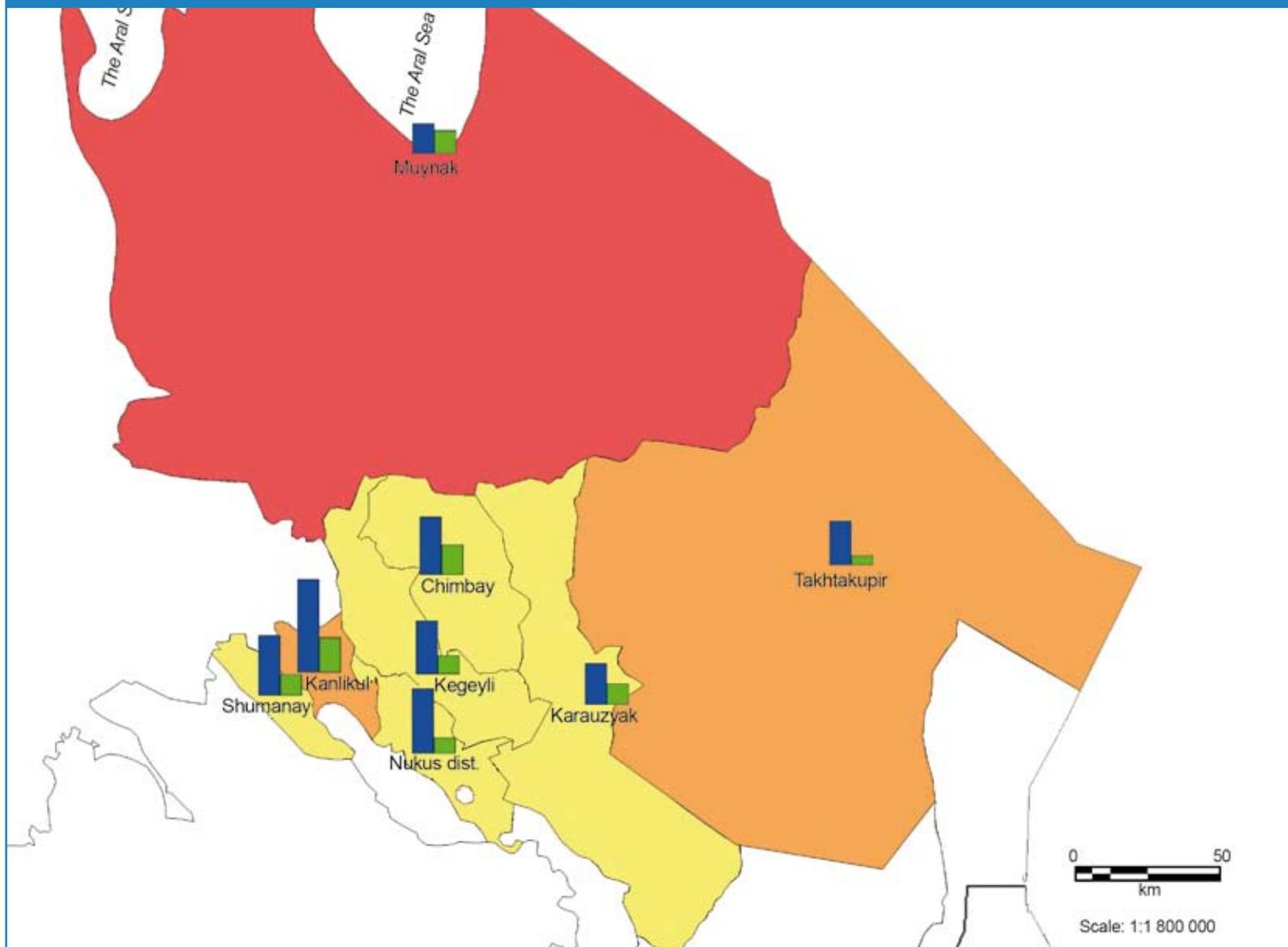


Source: Research by the Institute for Social Research, August, 2017

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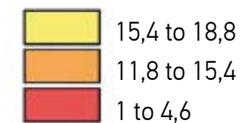
FOOD SECURITY

PRODUCTION OF FRUITS AND GRAPES BY HOUSEHOLDS, IN KG



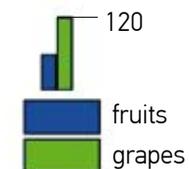
NOTATIONS KEYS

Sown area of agricultural crops, thousand hectares



According to the survey, the production of fruits and grapes per 1 household for last 12 months averaged 67 and 26 kg, respectively.

Production of fruits and grapes per 1 household/kg/for last 12 months

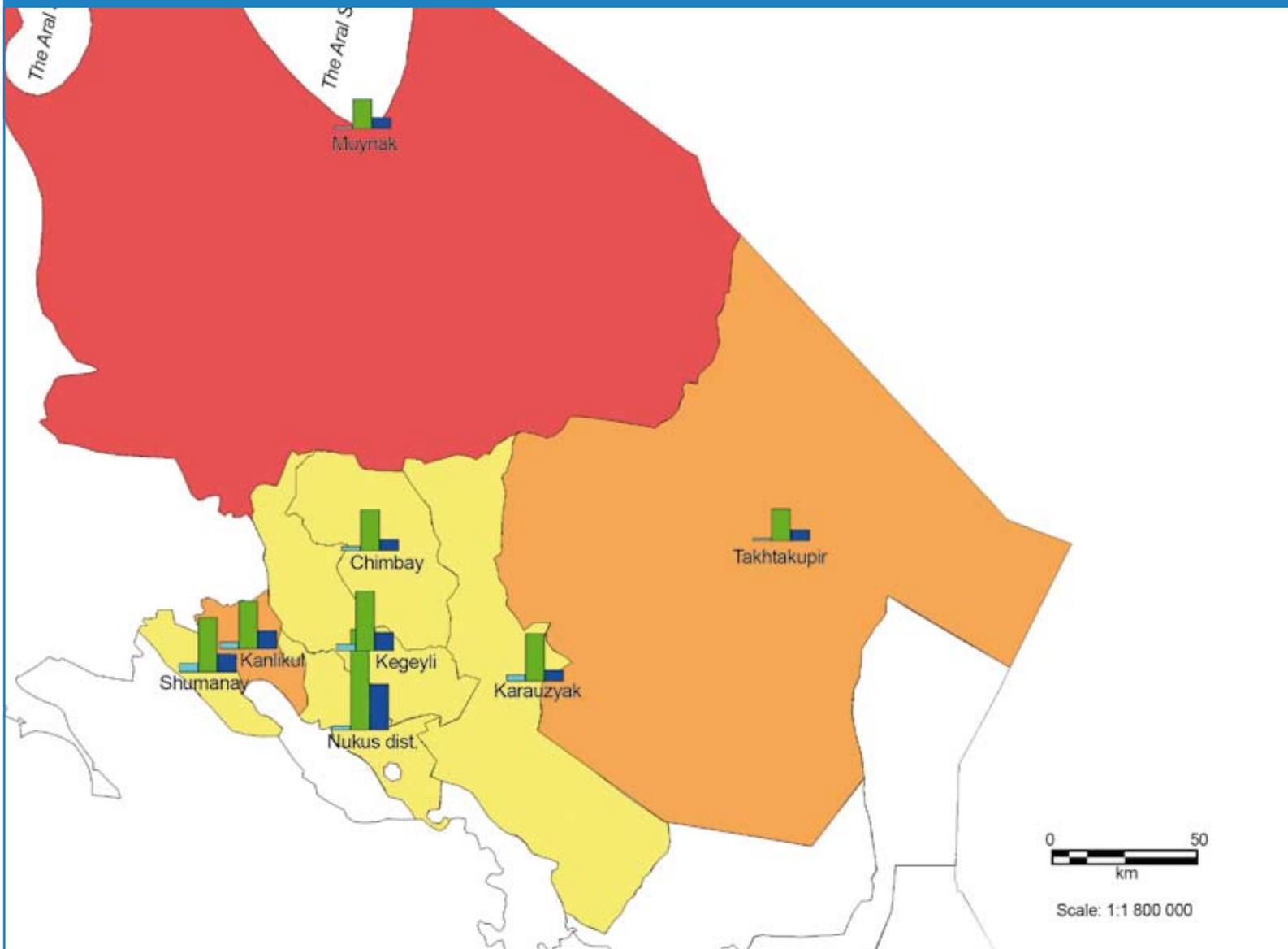


Source: Research by the Institute for Social Research, August, 2017

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FOOD SECURITY

PRODUCTION OF POTATOES, VEGETABLES AND MELONS BY HOUSEHOLDS, IN KG



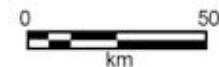
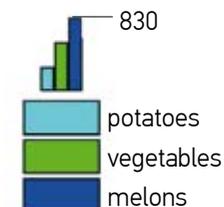
NOTATIONS KEYS

Sown area of agricultural crops, thousand hectares



According to the survey, the production of potatoes, vegetables and melons for last 12 months per 1 household averaged 44, 410 and 139 kg, respectively.

Production of potatoes, vegetables and melons per 1 household/kg/ for last 12 months



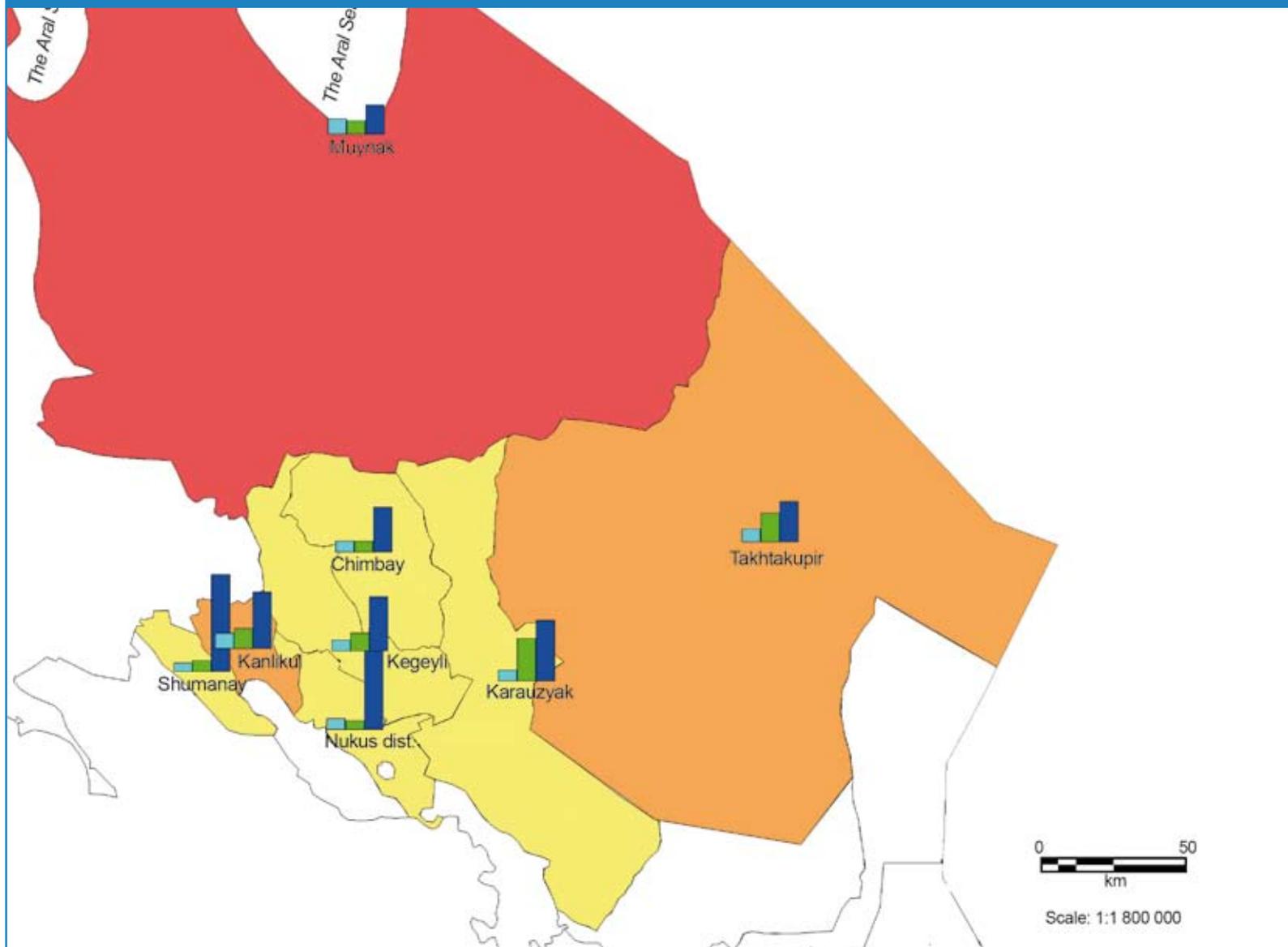
Scale: 1:1 800 000

Source: Research by the Institute for Social Research, August, 2017

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FOOD SECURITY

LIVESTOCK AND POULTRY PER 100 HOUSEHOLDS



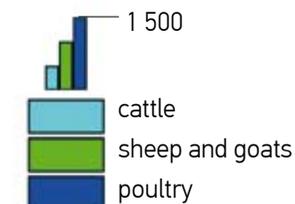
NOTATIONS KEYS

Sown area of agricultural crops, thousand hectares



According to the survey, 100 households have on average: cattle – 185 heads, sheep and goats – 292 heads, poultry – 848 heads.

Livestock and poultry per 100 households

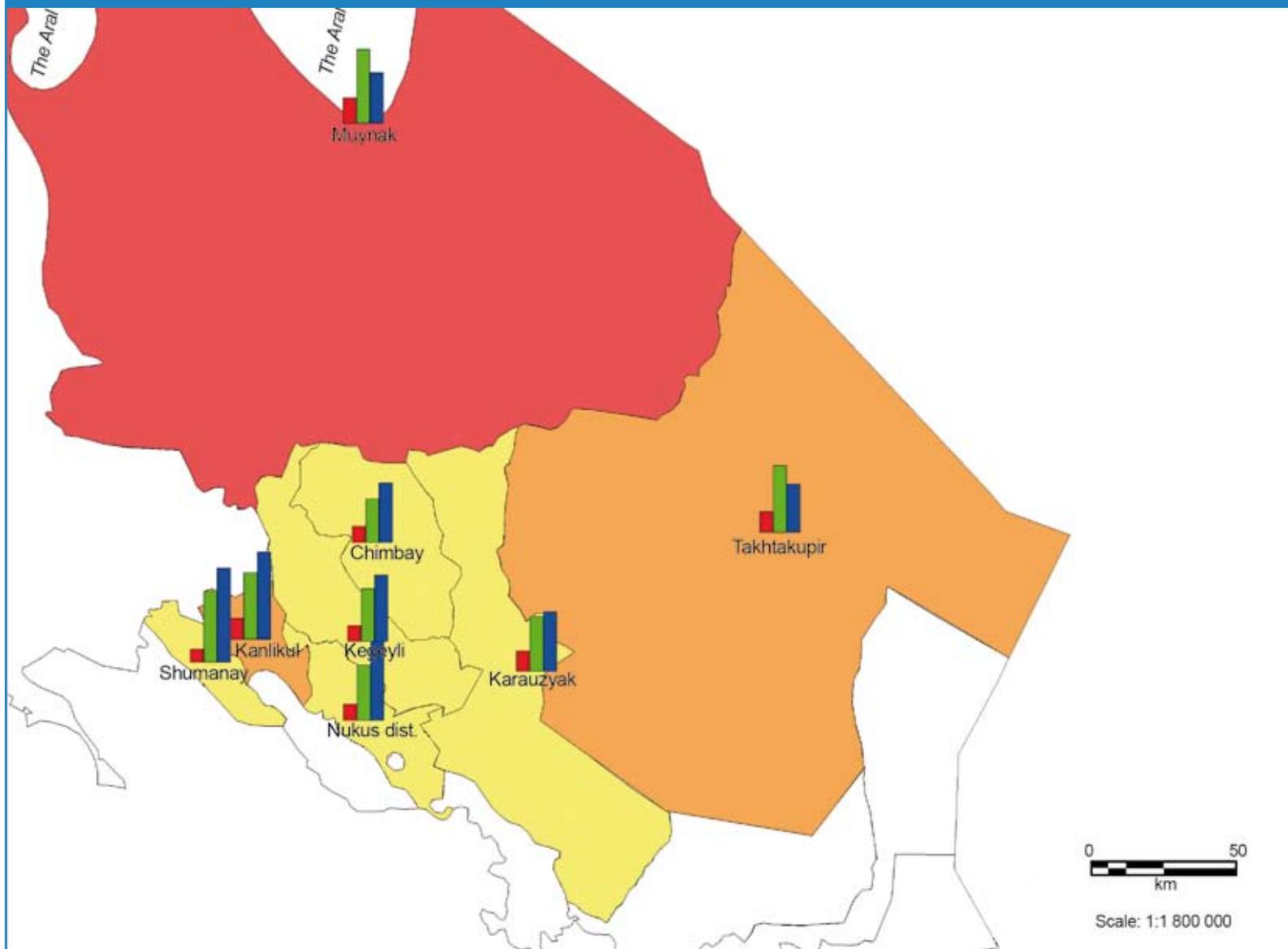


Source: Research by the Institute for Social Research, August, 2017

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FOOD SECURITY

LIVESTOCK PRODUCTION BY HOUSEHOLDS



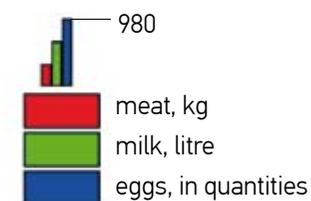
NOTATIONS KEYS

Sown area for the agricultural crop, thousand hectares



In average 1 household produced 193 kg of meat (for last 12 months), 614 litre of milk (for last month), 694 eggs (for last month).

Livestock production per 1 households

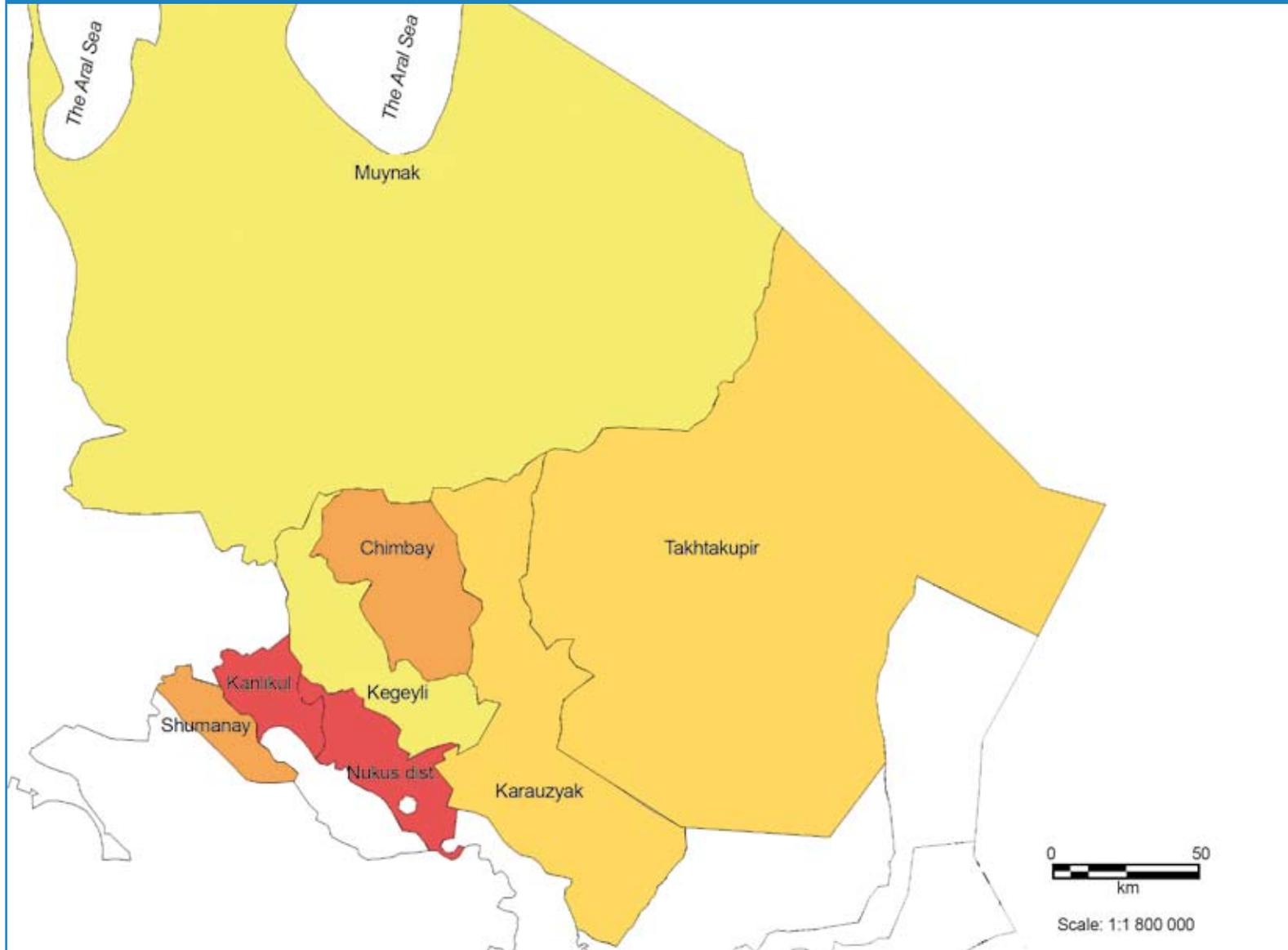


Source: Research by the Institute for Social Research, August, 2017

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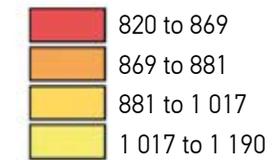
FOOD SECURITY

COST OF CONSUMER BASKET, THOUSAND UZS/ PER FAMILY/PER MONTH



NOTATIONS KEYS

Cost of consumer basket, thousand UZS/ per family/per month



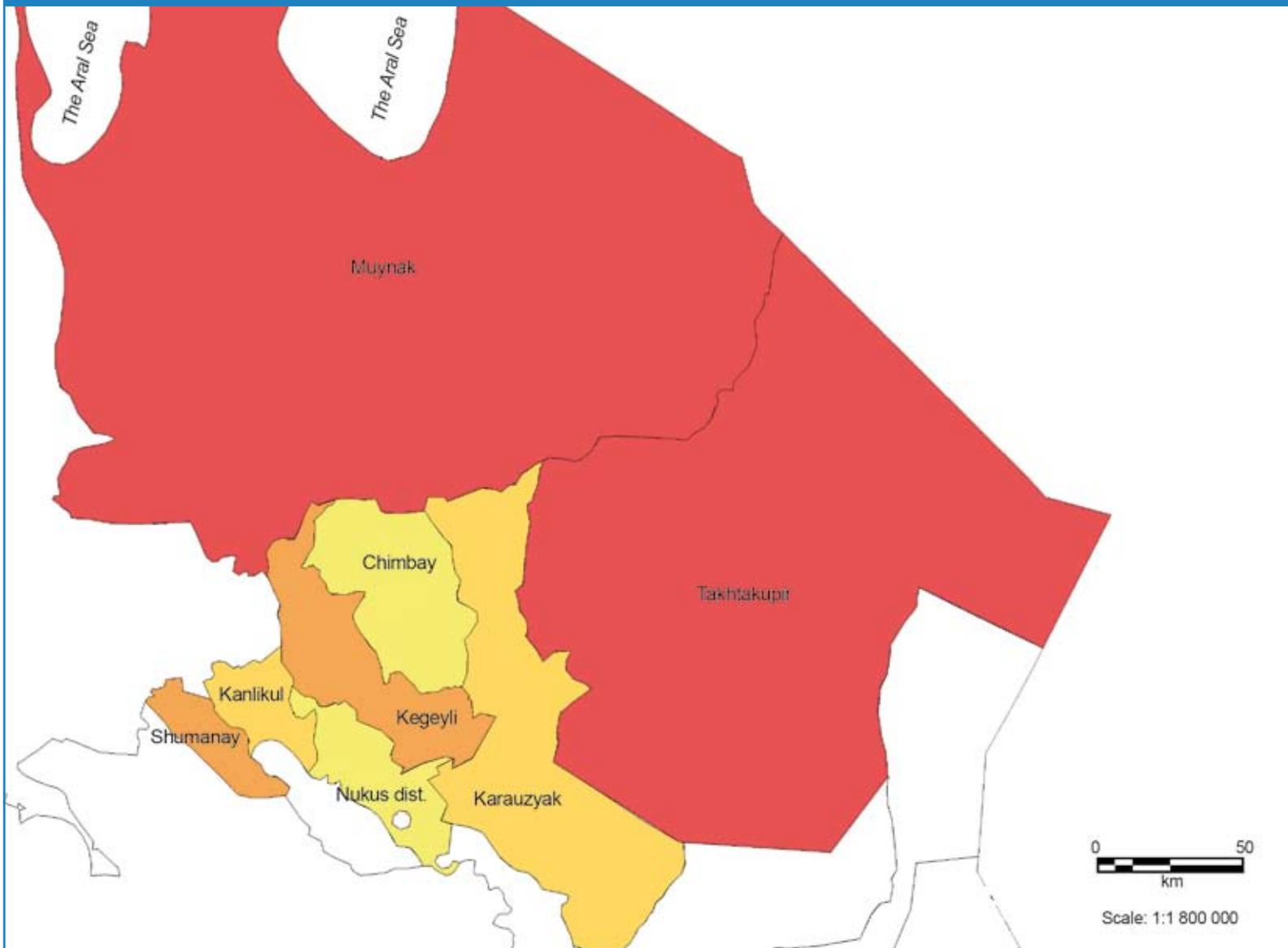
In general, for 60% of the households, the affordability of food products is low, i.e., the aggregate income of families do not cover the cost of consumer basket.

Source: Research by the Institute for Social Research, August, 2017

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FOOD SECURITY

AVAILABILITY OF DOCTORS PER 10 THOUSAND PEOPLE



NOTATIONS KEYS

Availability of doctors per 10 thousand people



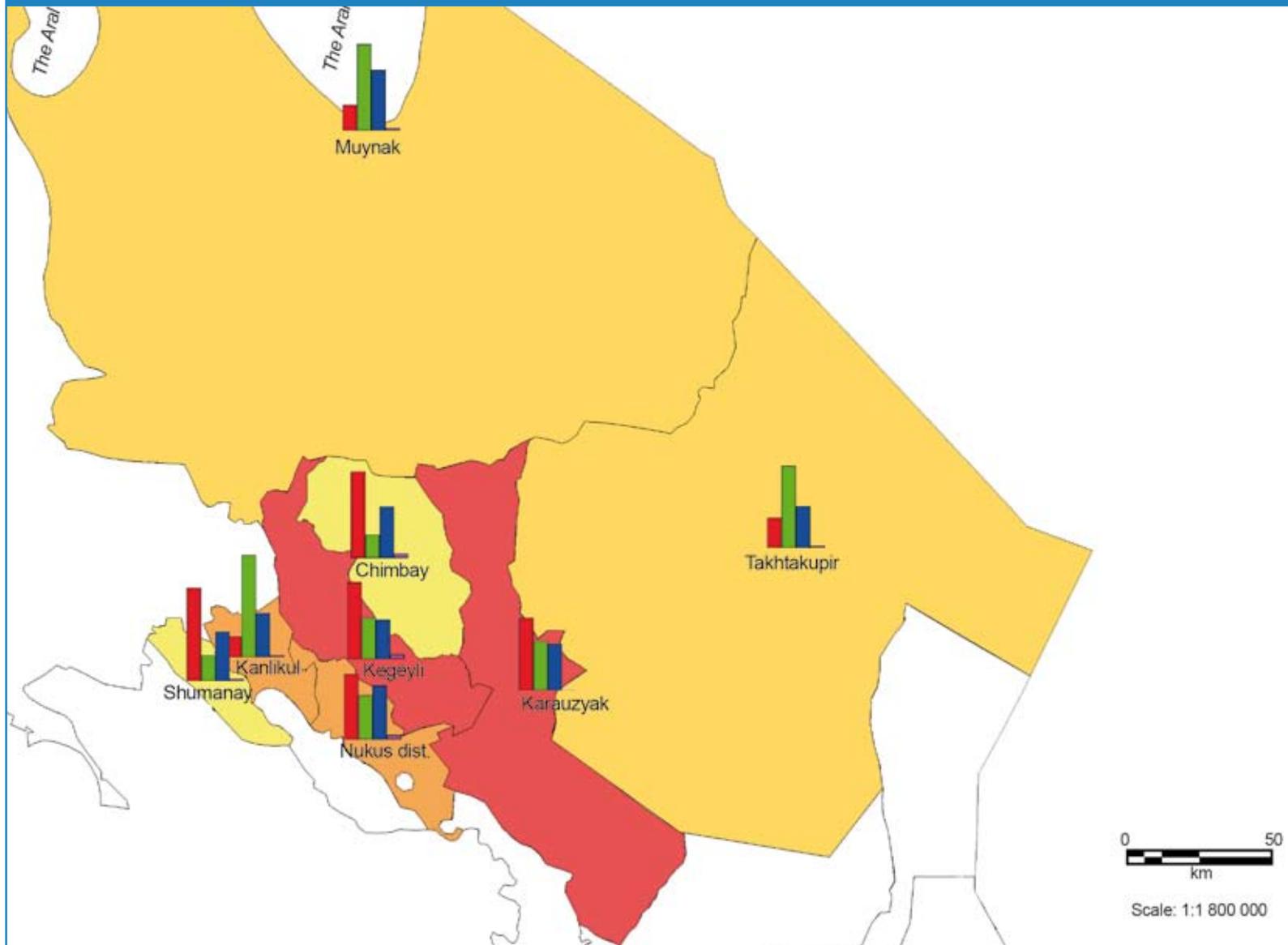
The availability of medical staff across the RK is 21 doctors and 92.1 nurses per 10 thousand people including health workers at republican medical institutions. The proportion of doctors with qualification categories is 50.6% and nurses – 36.2%.

Source: Ministry of Health of the Republic of Karakalpakstan, 2016

HEALTH SECURITY

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HEALTHCARE INSTITUTION ATTENDANCE OF POPULATION, IN %

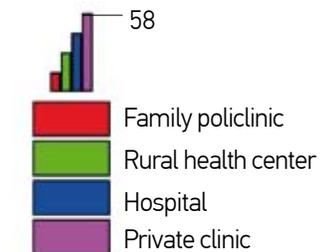


NOTATIONS KEYS

Attended Healthcare institutions within the year, in %



Attendance in breakdown by Healthcare institutions, in %

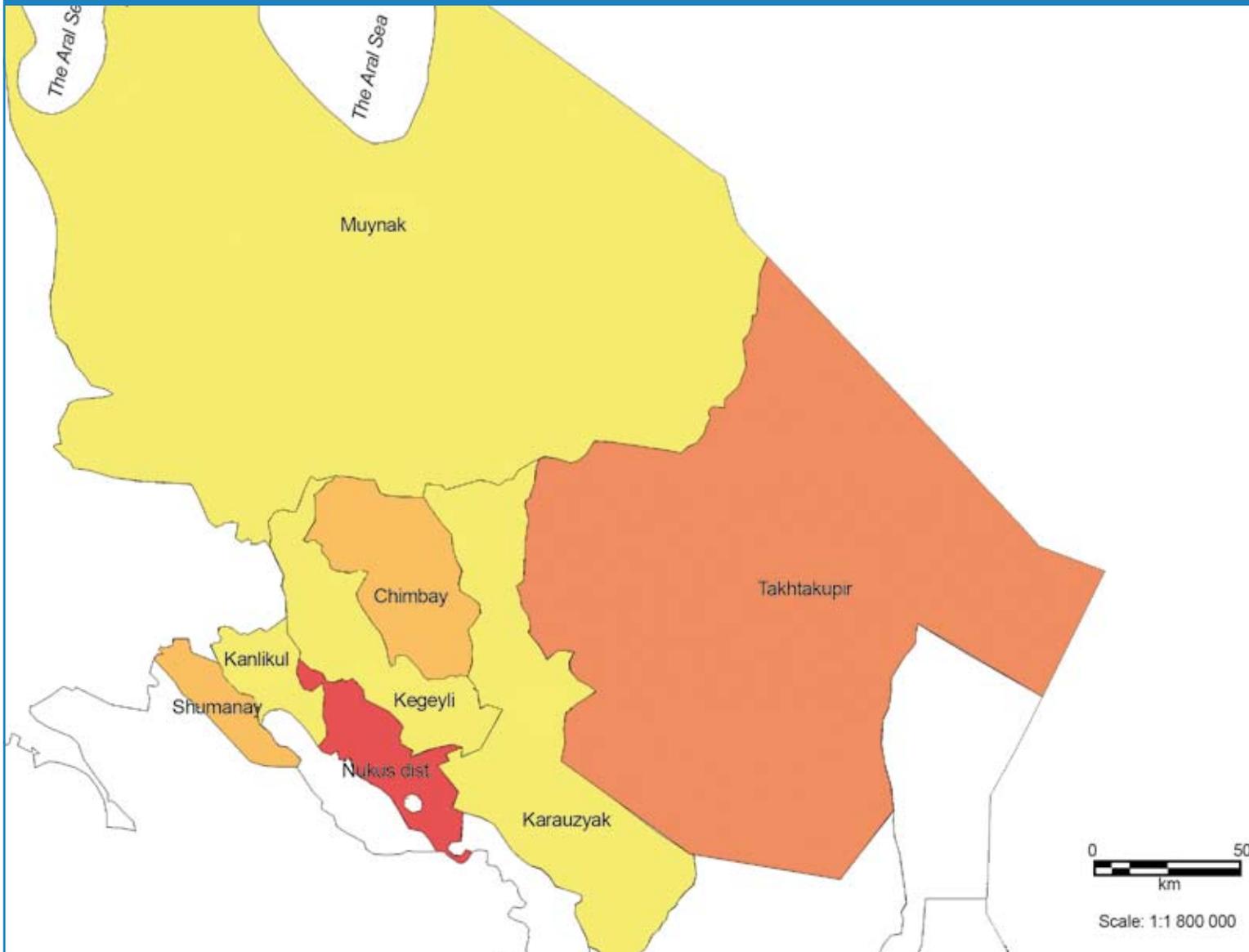


Source: Ministry of Health of the Republic of Karakalpakstan, 2016

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HEALTH SECURITY

THE LEVEL OF DISSATISFACTION WITH MEDICAL SERVICES, IN %



NOTATIONS KEYS

The level of dissatisfaction with medical services, in %



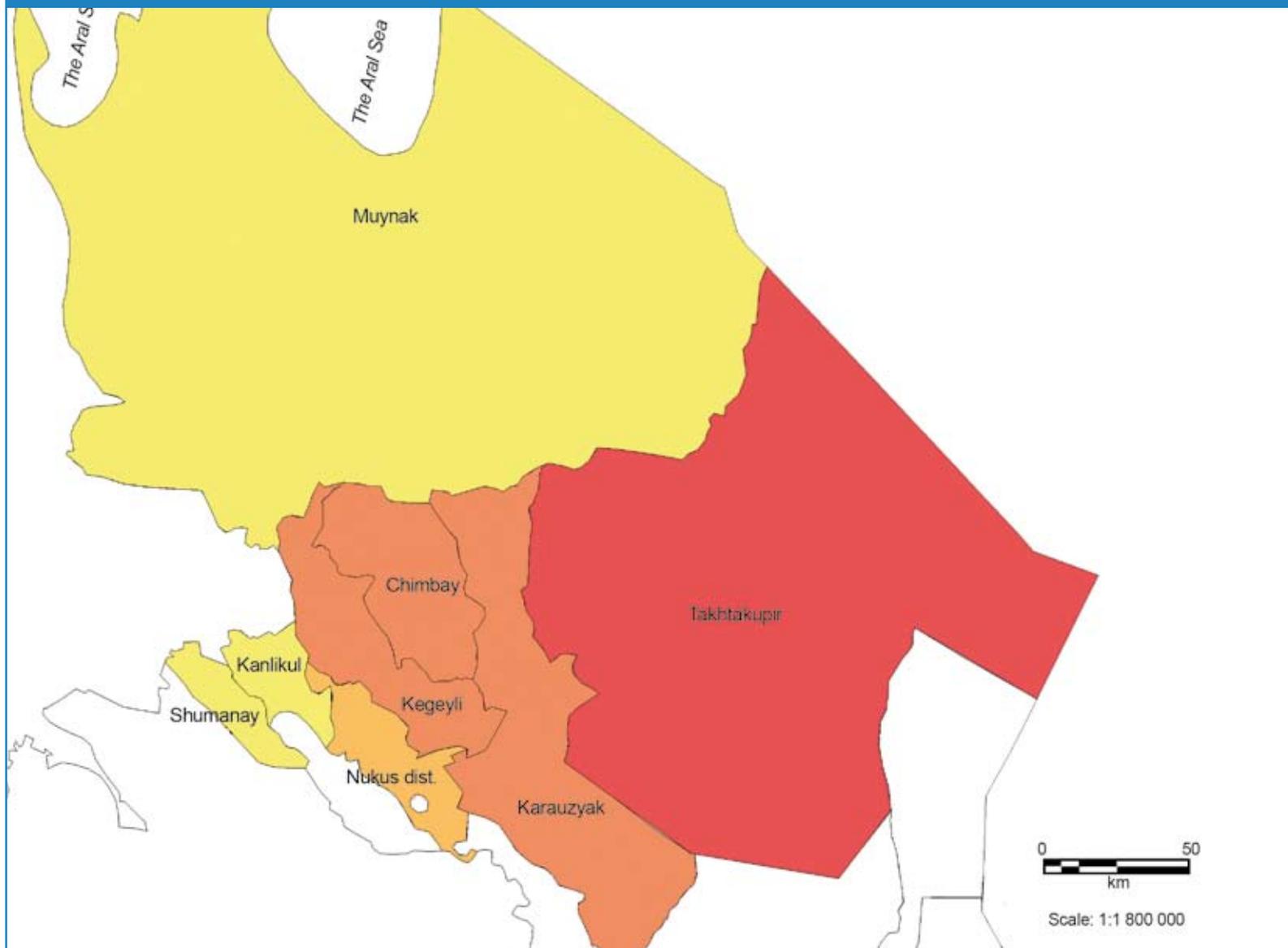
On average, 18% of respondents are not satisfied with the quality of medical services provided. The main reasons: inexperience of doctors (31.9%), remoteness of medical institutions (22.5%), poor quality of emergency medical care (14.0%), insufficient provision of medical equipment (13.0%), lack of specialized specialists (10, 9%).

Source: Ministry of Health of the Republic of Karakalpakstan, 2016

HEALTH SECURITY

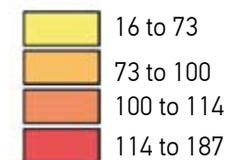
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VIRAL HEPATITIS A INCIDENCE PER 100,000 PEOPLE



NOTATIONS KEYS

Viral hepatitis A incidence per 100,000 people



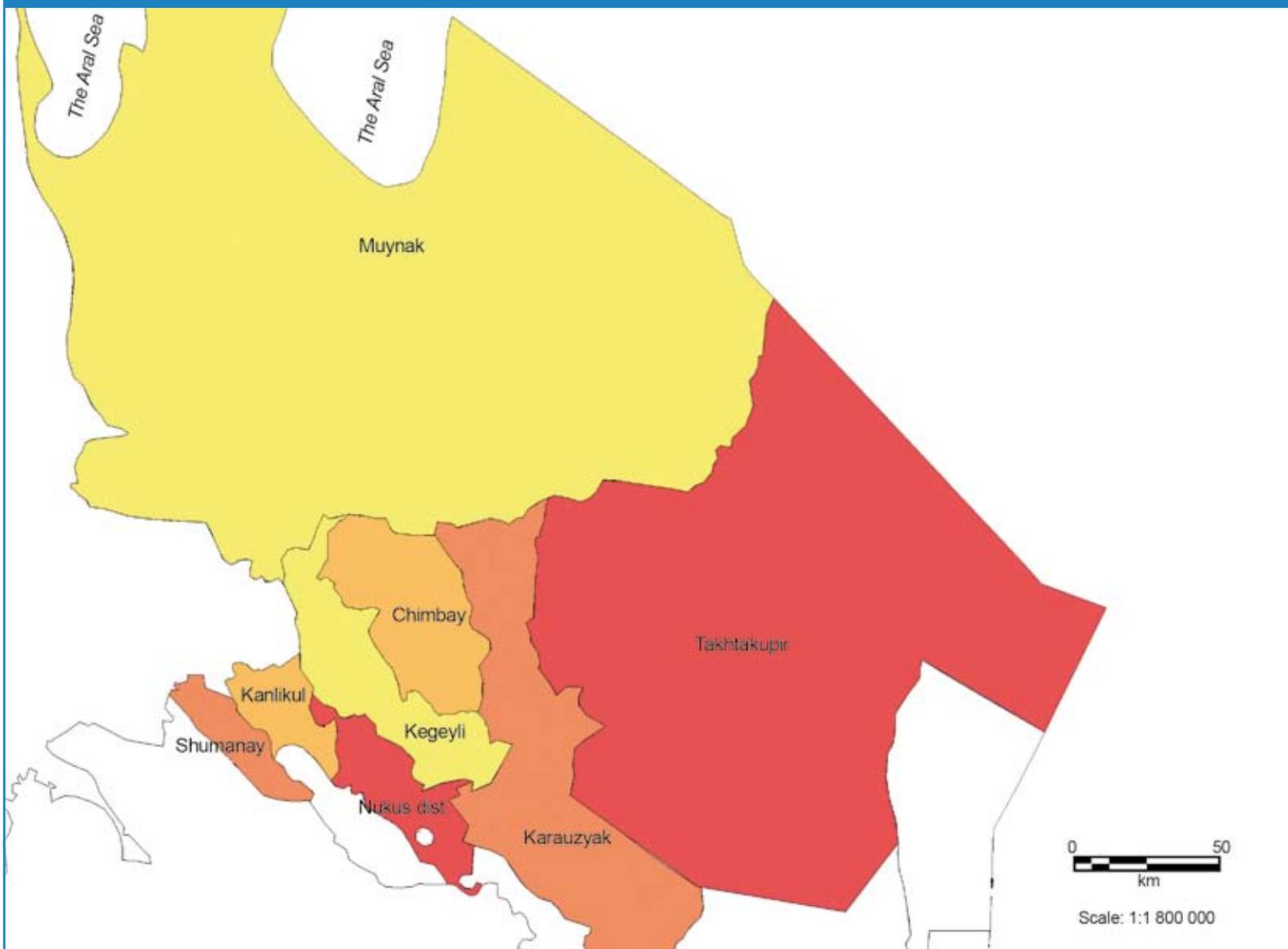
An incidence rate of Viral hepatitis A in the Republic of Karakalpakstan in 2016 was 92.7 per 100 thousand population.

Source: Ministry of Health of the Republic of Karakalpakstan, 2016

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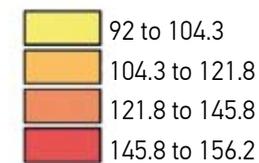
HEALTH SECURITY

INCIDENCE RATE OF TUBERCULOSIS PER 100,000 PEOPLE



NOTATIONS KEYS

Incidence rate of tuberculosis per 100,000 people



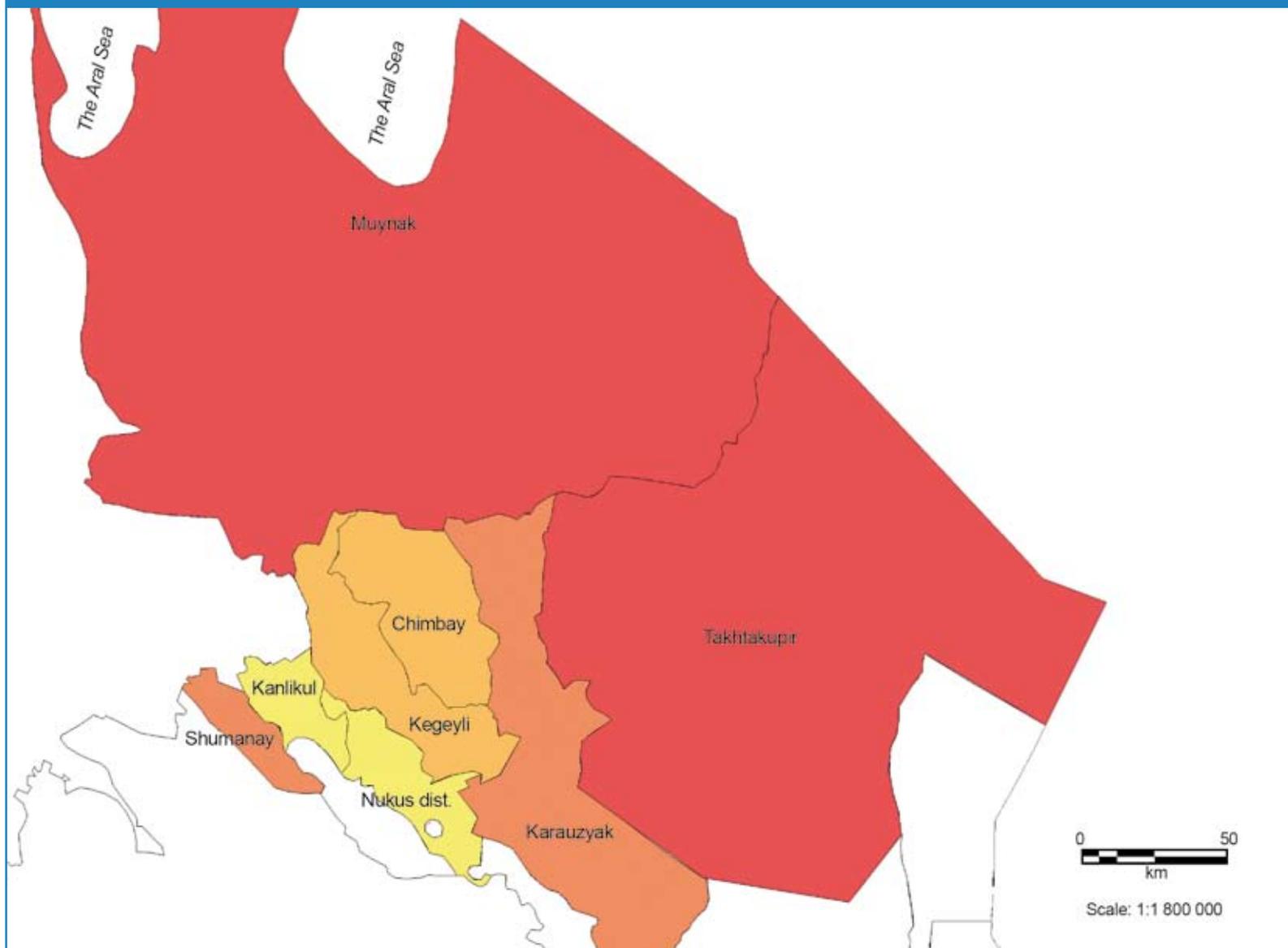
An incidence rate of Tuberculosis in the Republic of Karakalpakstan in 2016 was 84.1 per 100 thousand population.

Source: Ministry of Health of the Republic of Karakalpakstan, 2016

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HEALTH SECURITY

THE LEVEL OF DISSATISFACTION WITH THE PROVISION OF MEDICATIONS, IN %



NOTATIONS KEYS

The level of dissatisfaction with the provision of medications, in %



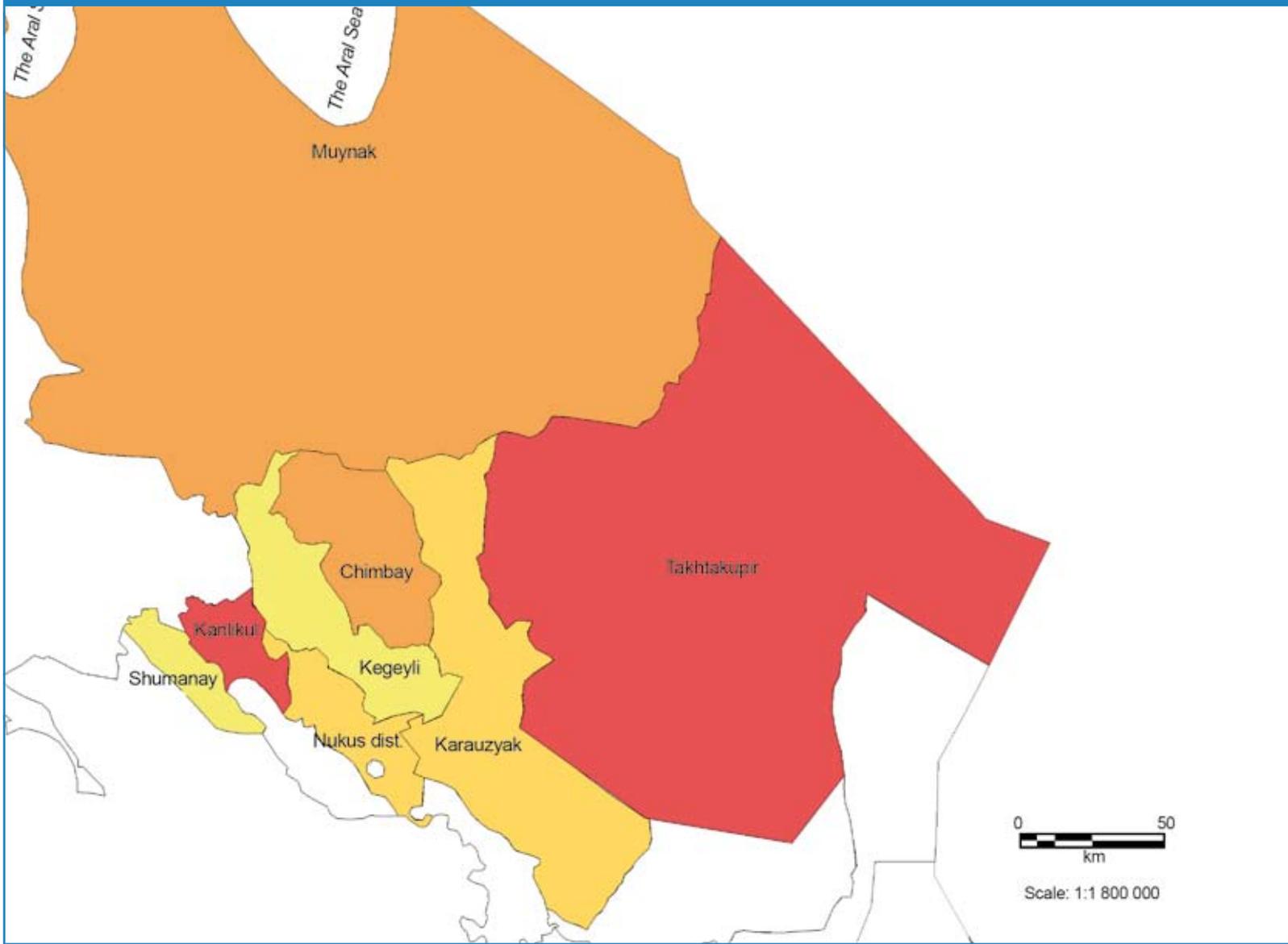
On average, 41.3% of respondents are not satisfied with the provision of medications. The main reasons: the remoteness of pharmacies (57.3%), high prices for the medicines (37.5%).

Source: Ministry of Health of the Republic of Karakalpakstan, 2016

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HEALTH SECURITY

POVERTY LEVEL, IN %



NOTATIONS KEYS

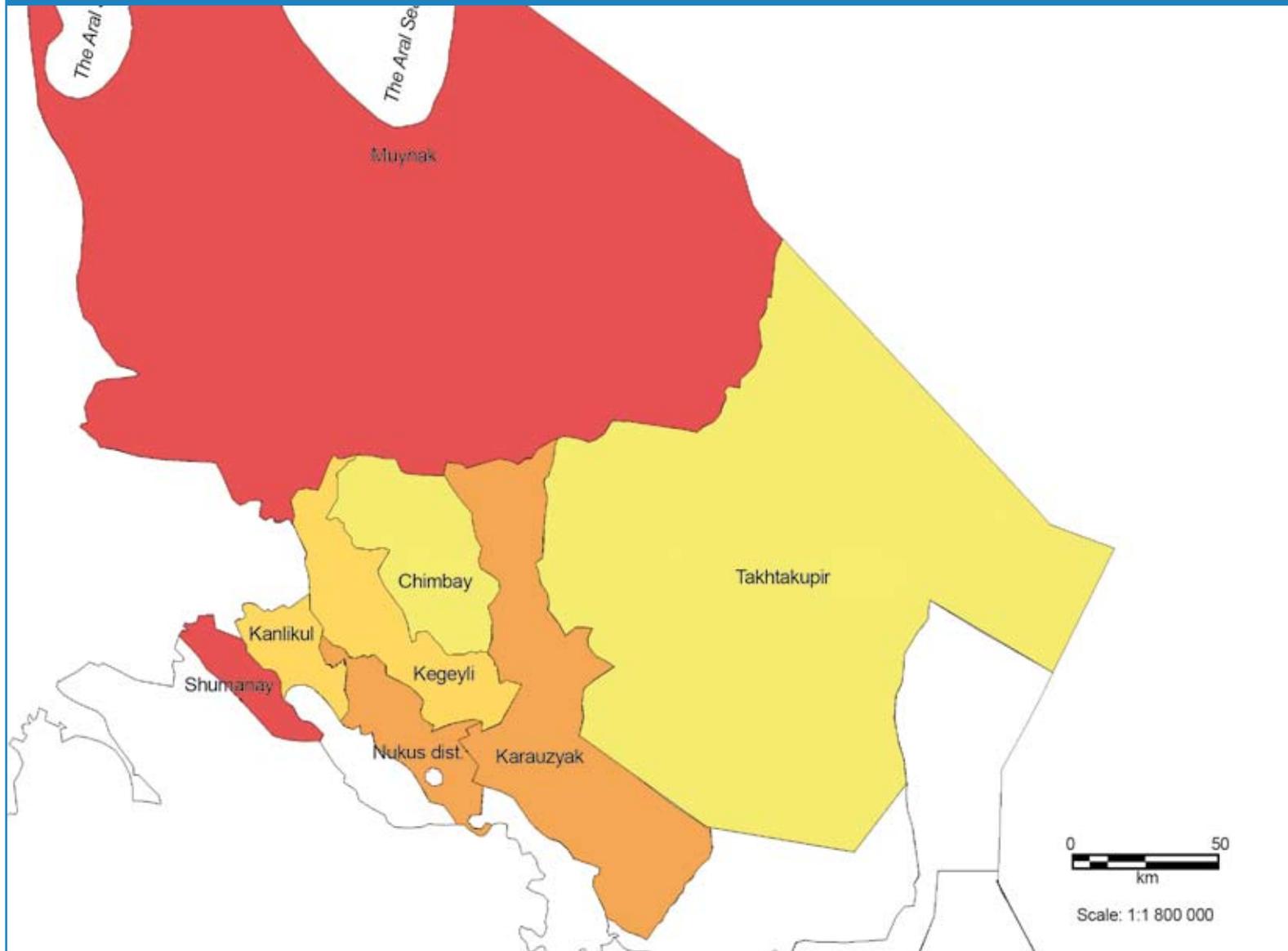
Poverty level, in %

- 13.4 to 16.9
- 16.9 to 22.1
- 22.1 to 23
- 23 to 26.2

According to the survey of community leaders, the level of poverty in the surveyed areas averaged 20.3%.

Source: Research by the Institute for Social Research, August, 2017

PRESCHOOL ATTENDANCE, IN %



NOTATIONS KEYS

Preschool attendance, in %



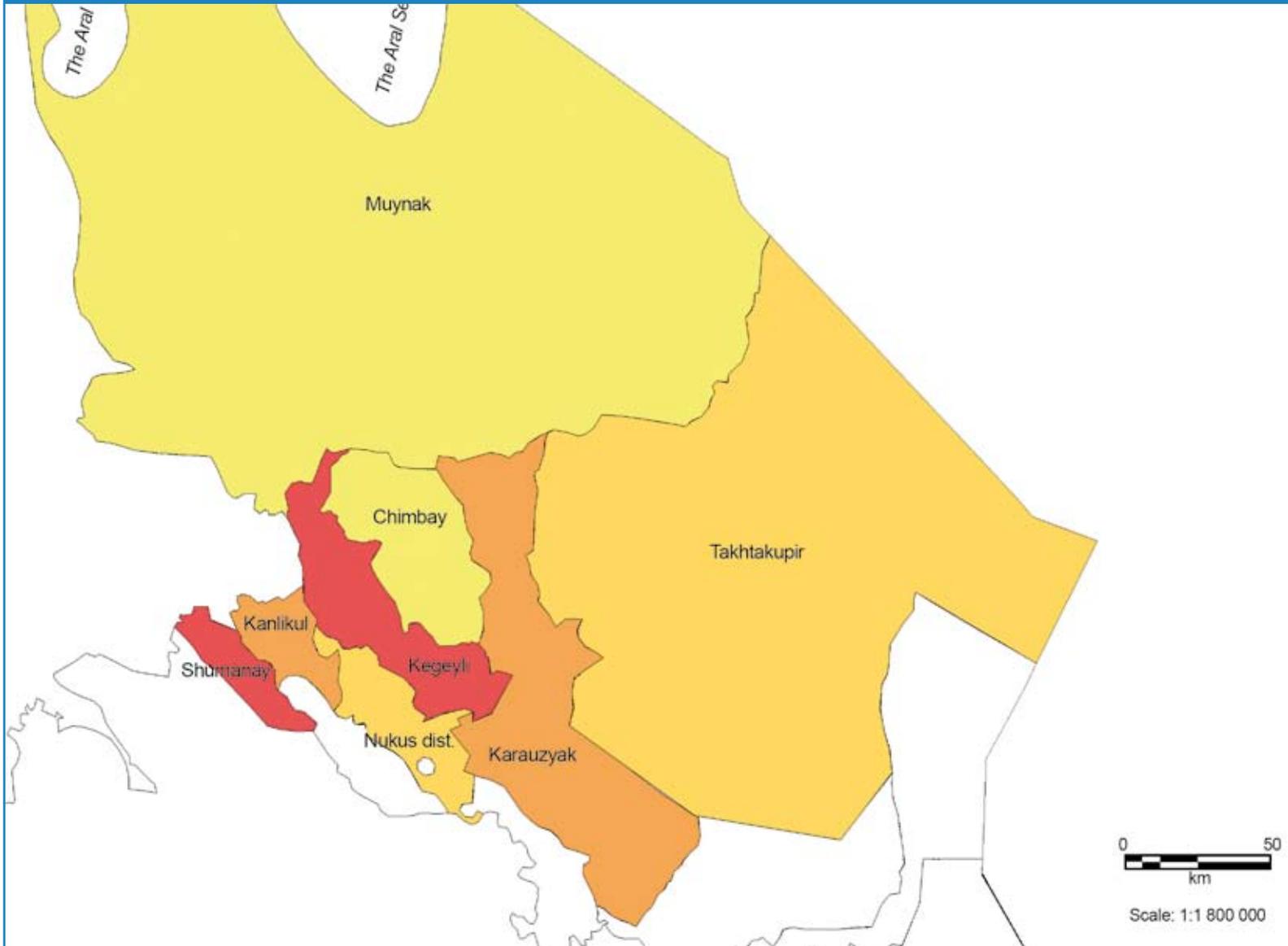
On average, preschool attendance was 32.7%. The main reasons for low attendance: the absence of pre-schools, the remoteness from settlements, the lack of appropriate conditions (physical infrastructure, etc.), high tariffs.

Source: Research by the Institute for Social Research, August, 2017

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SOCIAL SECURITY

THE LEVEL OF DISSATISFACTION WITH THE SERVICES OF PRESCHOOL INSTITUTIONS, IN%



NOTATIONS KEYS

The level of dissatisfaction with the services of preschool institutions, in %



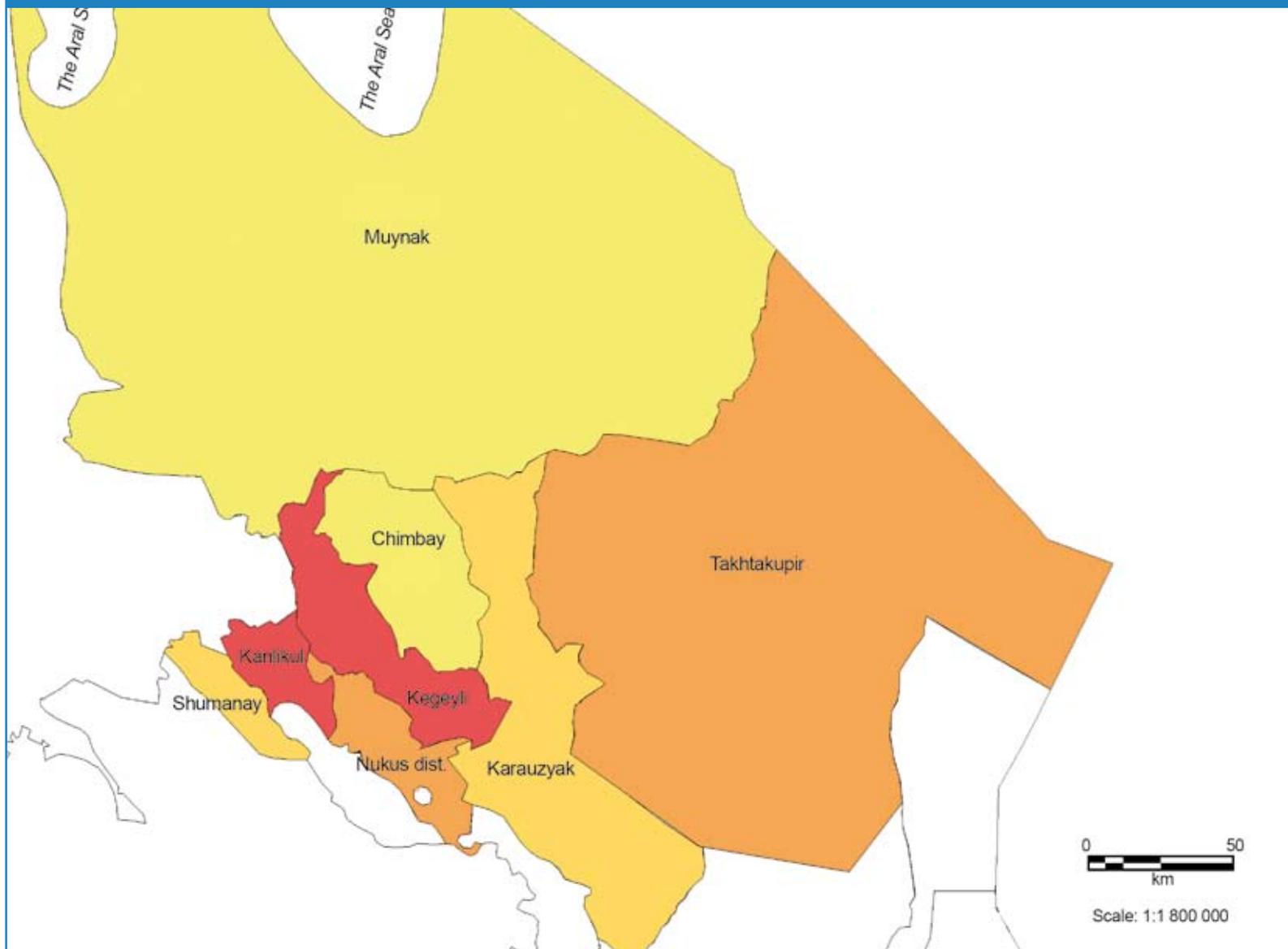
On average 40.3% of respondents are not satisfied with the services of pre-school institutions. The main reasons: the absence of pre-schools (53.3%), the remoteness from the settlements (16.5%), lack of appropriate conditions (physical infrastructure, etc.), high tariffs (6.7%).

Source: Research by the Institute for Social Research, August, 2017

SOCIAL SECURITY

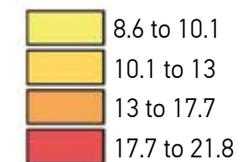
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THE LEVEL OF DISSATISFACTION WITH SCHOOL EDUCATION, IN %



NOTATIONS KEYS

The level of dissatisfaction with school education, in %



The level of dissatisfaction with school education was 13.1%.

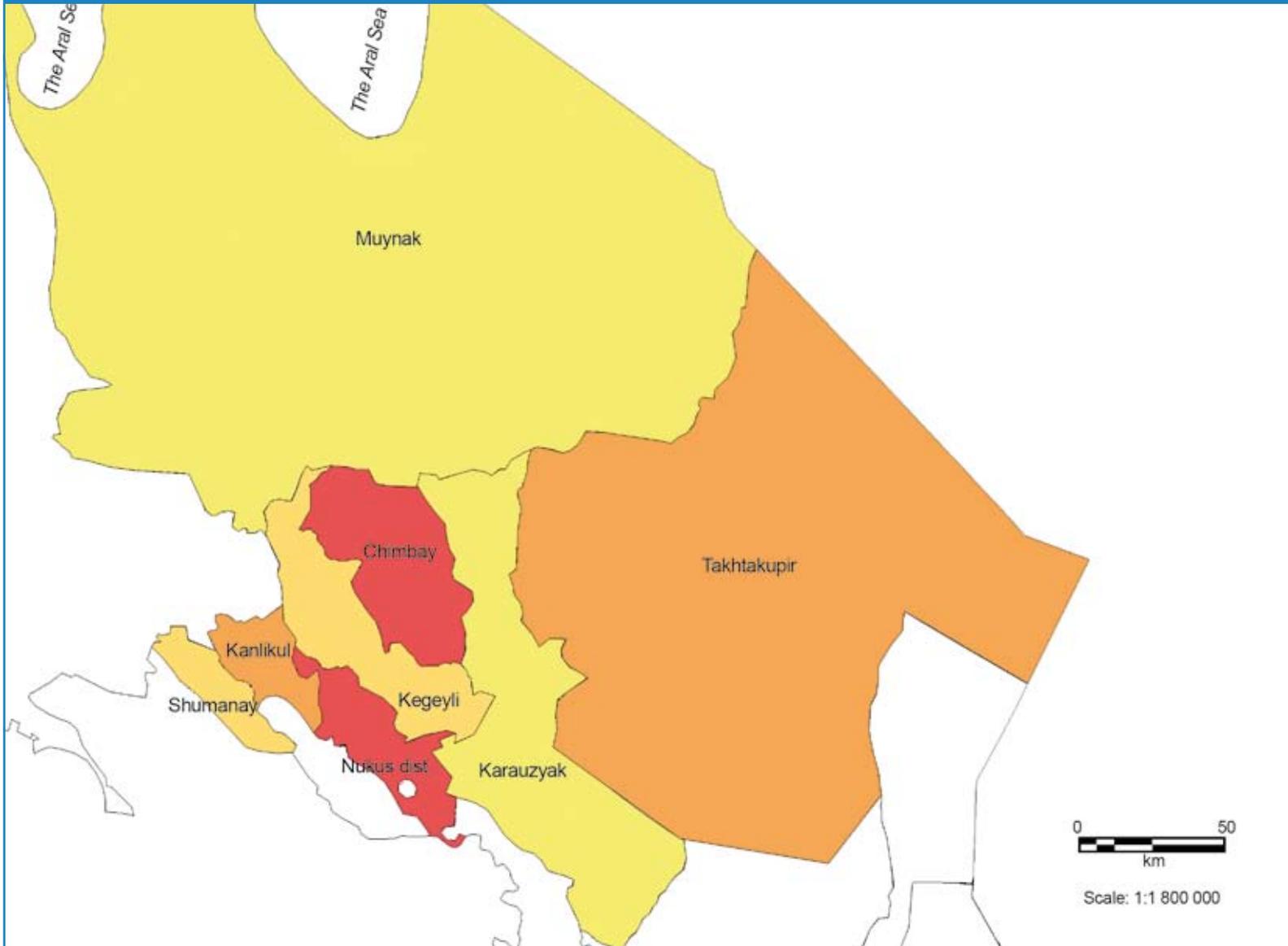
The main reasons: poor quality of education (41.5%), insufficient provision of teaching materials (13.8%), remoteness (8.1%), lack of personnel (4.1%).

Source: Research by the Institute for Social Research, August, 2017

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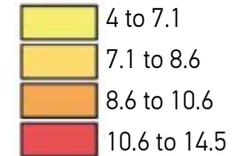
SOCIAL SECURITY

THE LEVEL OF POPULATION'S DISSATISFACTION WITH HOUSING CONDITIONS, IN%



NOTATIONS KEYS

The level of population's dissatisfaction with housing conditions, in %



On average, 34.8% of surveyed households are not satisfied (including partial dissatisfaction) with the provision of land and housing.

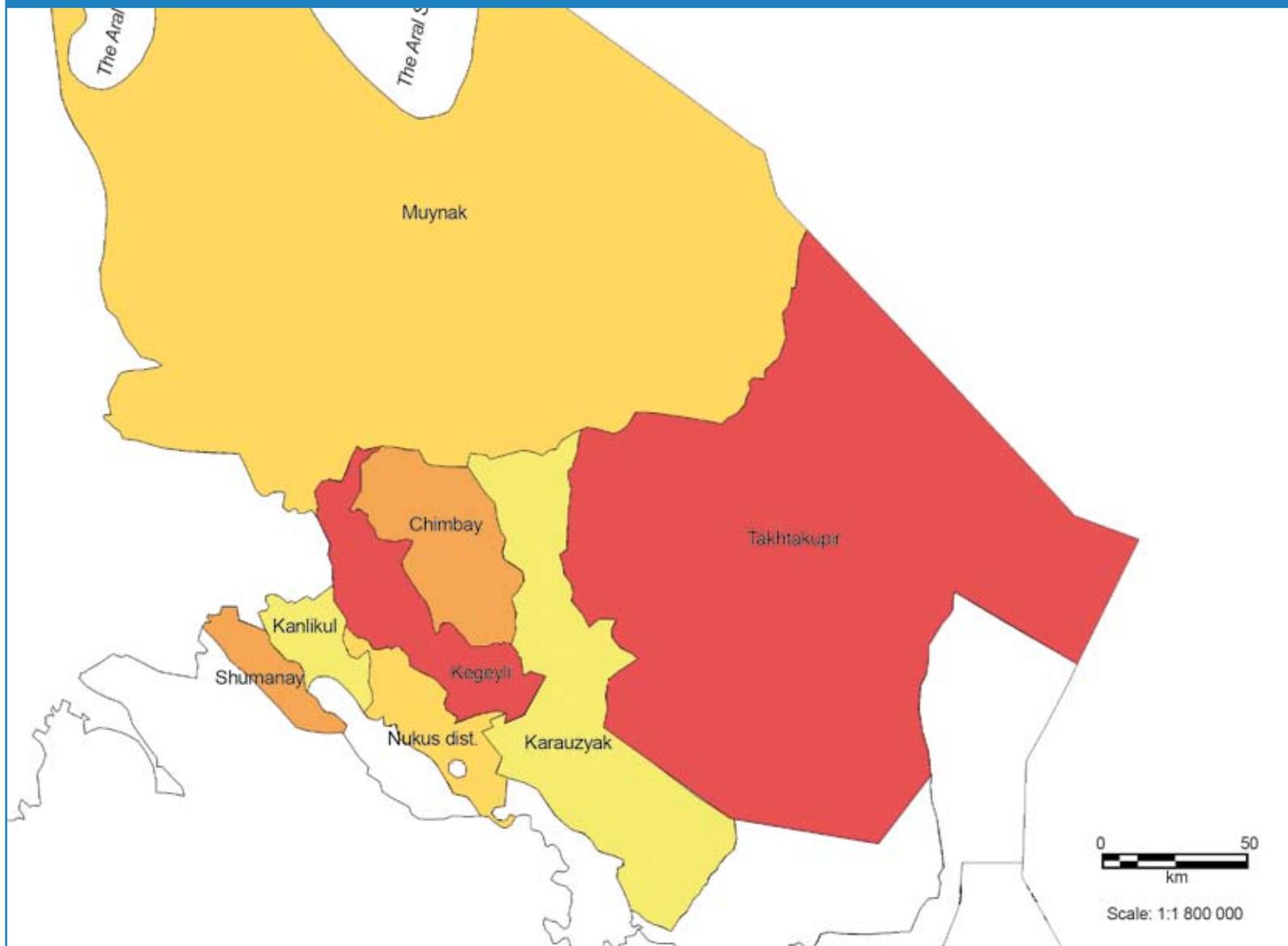
The main reasons: lack of land for housing (46.7%), high cost of building materials (40%), associated with additional transportation costs due to the remoteness of rural settlements.

Source: Research by the Institute for Social Research, August, 2017

SOCIAL SECURITY

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THE LEVEL OF DISSATISFACTION OF THE POPULATION WITH NATURAL AND LIQUEFIED GAS SUPPLY, IN %



NOTATIONS KEYS

The level of dissatisfaction of the population with natural and liquefied gas supply, in %



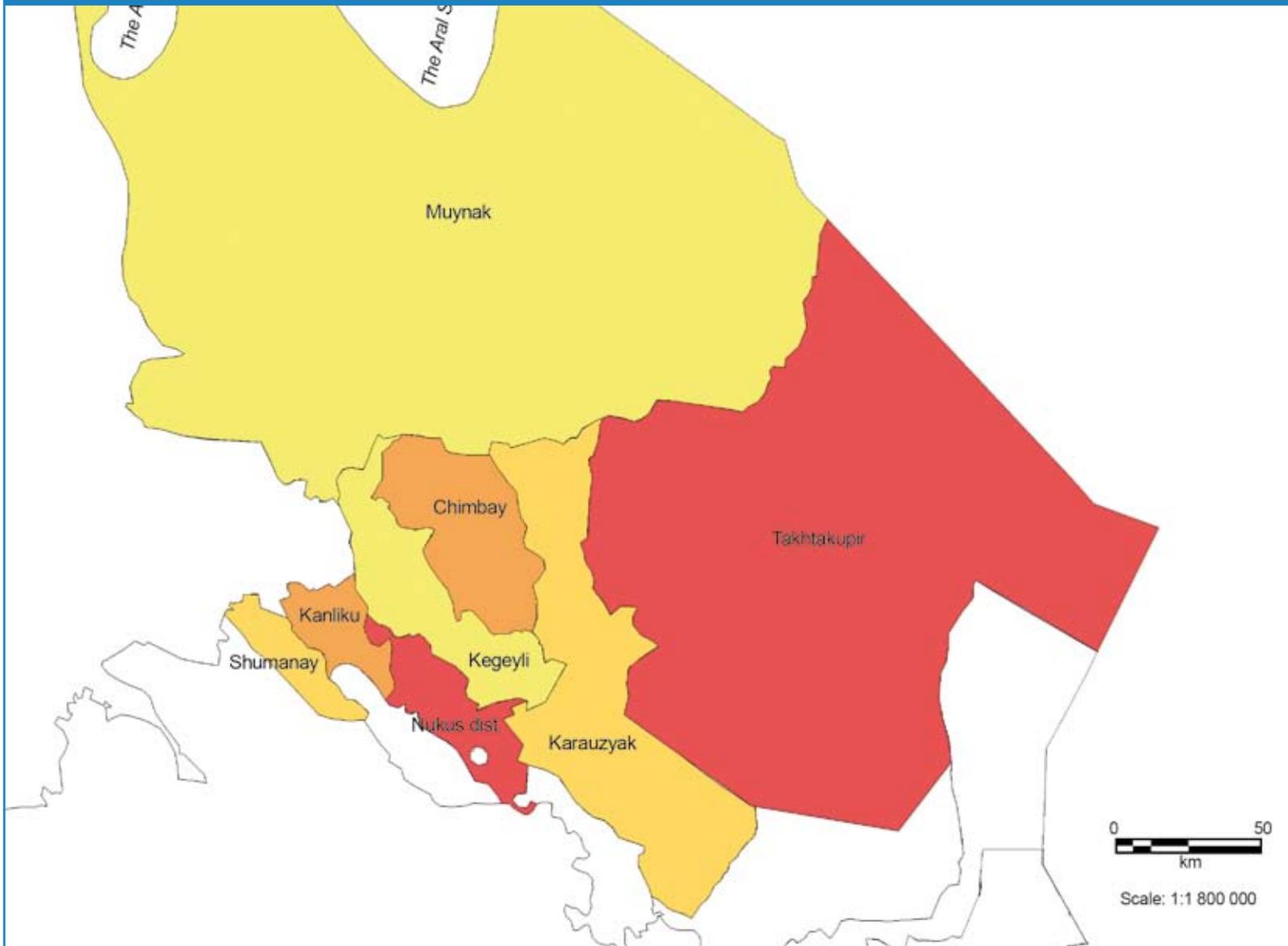
On average, 21.1% of respondents are not satisfied with access to natural gas supply. The main reasons: irregular supply of natural gas (20.5%) and late delivery of liquefied gas cylinders (41.2%).

Source: Research by the Institute for Social Research, August, 2017

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SOCIAL SECURITY

THE LEVEL OF DISSATISFACTION OF THE POPULATION WITH FUEL SUPPLY, IN %



NOTATIONS KEYS

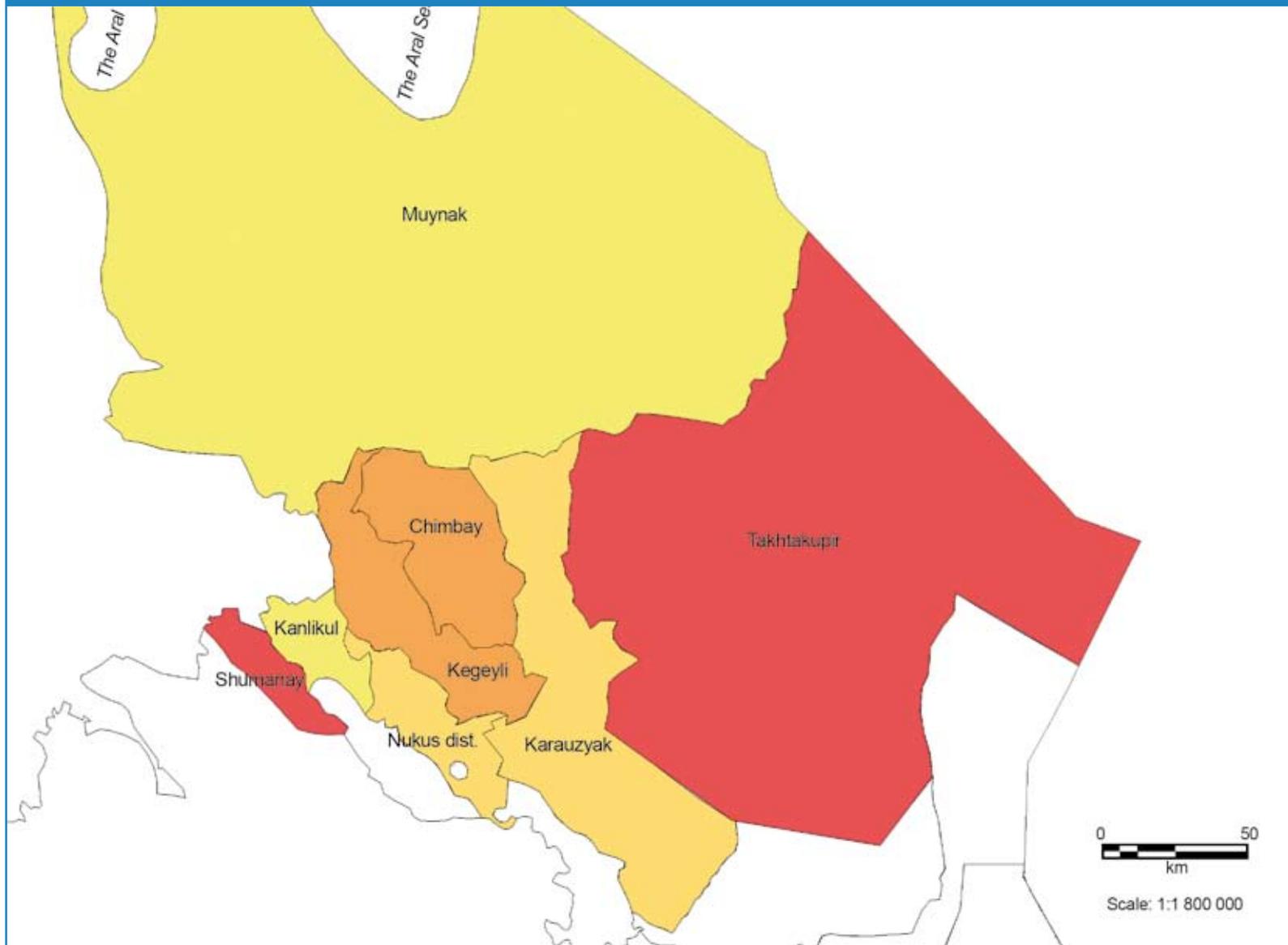
The level dissatisfaction of the population with fuel, in %

- 9.2 to 20.6
- 20.6 to 24.6
- 24.6 to 31.9
- 31.9 to 37.7

On average, 25.6% of respondents are not satisfied with the state of access to fuel (coal). The main reasons: high cost (56.3%) and irregular supply (23.4%).

Source: Research by the Institute for Social Research, August, 2017

THE LEVEL OF DISSATISFACTION WITH CONSUMER SERVICES, IN %



NOTATIONS KEYS

The level of dissatisfaction with consumer services, in %



On average, 30.9% of respondents are not satisfied with consumer services. The main reason is a long distance to the object.

Source: Research by the Institute for Social Research, August, 2017

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SOCIAL SECURITY

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