The relationship between environmental factors and migration processes in Kyrgyzstan

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Abstract: This article examines the influence of environmental factors on migration processes in Kyrgyzstan, taking into account their socio-economic and political aspects. The article explores the relationship between them, with particular emphasis on internal migration from agricultural areas to urban centers. The causes and consequences of migration, including rural-to-urban emigration and internal population movements, are analyzed in the context of a deteriorating environmental situation and a changing climate. Particular attention is paid to the interaction of environmental factors with socio-economic conditions such as employment, income levels and access to resources. The influence of migration flows on the political situation in the country and possible strategies for managing these processes are also considered. Ultimately, the article highlights key challenges and opportunities for creating sustainable policies that promote environmental sustainability and socio-economic development in Kyrgyzstan.

Key words: Environmental factors; internal migration; environmental pollution; Agriculture; urban environment.

1 Introduction

In recent decades, migration processes have become increasingly significant in the context of global challenges that affect various countries and regions. One of the key factors influencing these processes is environmental changes, which have a significant impact on people's lives and social structures. Kyrgyzstan, as a country with a unique natural environment and a vulnerable environmental situation, is no exception.

The scientific article is devoted to the analysis of the relationship between environmental factors and migration processes in Kyrgyzstan, taking into account socio-economic and political aspects. In light of the increasing impact of climate change, natural disasters, environmental

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degradation and the availability of natural resources, special attention is paid to their impact on social dynamics and population behavior.

The purpose of this study is to analyze various aspects of the relationship between environmental factors and migration processes in Kyrgyzstan. In particular, the impact of environmental changes on the socio-economic situation in the country, the dynamics of population migration, as well as political regulation and the state's response to these challenges will be considered.

2 Materials and methods

A review of existing research on internal migration in Kyrgyzstan and the role of environmental factors in this context is carried out. Theoretical approaches to the analysis of the influence of environmental conditions on migration processes have been studied. The main environmental factors influencing living conditions in urban regions of Kyrgyzstan have been identified, including climatic features, availability of natural resources and environmental sustainability. An assessment is made of the influence of environmental factors on internal migration processes in order to identify the main trends in the migration behavior of the population. Based on the results obtained, final conclusions are formulated and recommendations are developed for the development of policies for managing migration processes taking into account environmental aspects in Kyrgyzstan.

3 Results

In Kyrgyzstan, one of the problems is the high level of poverty among the population. This level of poverty can be explained both by the radical economic reforms that began in the 1990s and by the insufficient effectiveness of social and economic policies. These reforms led to the consolidation of society, dividing it into rich and poor. The economic crisis continues, and people from various socio-professional groups may be using insufficient means of subsistence.

In Kyrgyzstan, there is a trend between the incomes of the population in the context of global and climate change, as well as between different regions. A decrease in livestock production and a limitation in the level of agricultural processing in rural areas leads to a reduction in the working population in cities or abroad in search of work. Special youth actively intervene in this process, which may lead to a reduction in the working-age population in the future [2].

There is no doubt that the transition to a market economy in Kyrgyzstan occurred suddenly and became the root cause of a series of financial, economic and social crises. These shocks have led to an unbalanced migration flow, since the different levels of development of regions make them different attractiveness for migrants. This leads to internal migration from the regions to more developed regions such as the city of Bishkek, Chui region and the city of Osh, which plays a major role in the south of the country. Unorganized migration processes are accompanied by such serious socio-economic problems as unemployment, housing shortages and criminal situations, which can ultimately lead to socio-political and socio-economic conflicts [8].

It is worth noting that internal migration is mainly caused by economic factors and results in high unemployment rates. However, the scale and direction of internal migration flows are also economic changes in natural and climatic conditions. For example, the valley areas of Kyrgyzstan, due to their climate and current conditions, are more attractive for living than the high mountain regions.
Taking into account all the circumstances formed around population migration and environmental factors, the Government of the Kyrgyz Republic included “climate-induced migrants” in the Concept of Migration Policy of the Kyrgyz Republic for 2021-2030 in section 6: Migration and security and calls on stakeholders to deepen their understanding of the complex interactions between environmental environment, climate change and migration dynamics, which in turn makes it possible to develop and implement effective policies aimed at mitigating the negative consequences of forced environmentally-related migration. From the Concept of Migration Policy. 6: Migration and security. Environmental degradation and the effects of climate change are forcing environmental migration. Among the most common factors that provoke migration processes are the lack of clean water and land, crop failures and natural disasters. This leads to a reduction in the number of livestock keepers and farmers and the devastation of areas in remote and border areas. There is a lack of awareness among government agencies and the public about climate change and its relationship with migration, climate disasters and possible adaptation measures. Therefore, it is necessary to take a number of measures to take into account and integrate climate and other risks, as well as raise public awareness of how to deal with them [4].

At the moment, the problem of internal migration has significant geopolitical significance for Kyrgyzstan. Rural residents, especially in remote border areas, are leaving their homes en masse, which creates the problem of populating these territories with citizens from neighboring countries. These overpopulated states are using the freed up land for agriculture. Previously, the inhabitants of remote highland and desert areas were considered natural frontiersmen due to their pastoral and agricultural activities. Now villages are appearing in Kyrgyzstan, reminiscent of those in central Russia, where pensioners, children and other disabled people predominate.

Thus, the transition of the population from rural areas to cities has an impact on national security, which requires adjustments in the migration policy of rural-urban exchange and the development of a set of measures aimed at stabilizing the rural population and attracting labor resources to support peripheral villages. Despite the fact that migration dynamics from rural areas to cities in Kyrgyzstan corresponds to global trends in the movement of people from agricultural areas to urban industrial centers, internal migration is still accompanied by significant negative consequences [6]. First, internal migration contributes to the formation of a social stratum in cities that is deprived of livelihoods, housing and work. These people often denied access to legal rights to work, housing and income, are forced to occupy land and build on illegal sites. Over the years, mass squatting of agricultural land around Bishkek and in the city of Osh was observed. Increasing competition for limited jobs in large cities, as well as the widespread perception that migrants have an easier time obtaining land than locals, creates fertile ground for conflicts between locals and newcomers. It is not surprising that the cities of Bishkek and Osh became places of mass protests and “color revolutions” in 2005 and 2010 [8].

As a result of the marginalization of migrants and the urban population, the intellectual, educational and cultural level of the urban environment is degraded. Population growth in large cities places additional strain on limited resources. The infrastructure of cities is not designed for such a massive influx of migrants from rural areas. Population growth in cities and suburban areas increases the burden on already underdeveloped urban transport systems. For example, the suburban areas of Bishkek, where most migrants live, often lack access to city utilities such as heating, water supply and sewerage. These areas also become high-risk areas for crime, social tension and the spread of infectious diseases [3].

It must be taken into account that people occupying land and building on it without permission mainly belong to the poor. Most often, they violate safety regulations and ignore
engineering, technical and sanitary standards of urban planning. This is especially dangerous in the mountainous regions of Kyrgyzstan, where mountain-building processes continue and there is high seismic activity.

Such self-development in suburban areas, carried out by low-income migrants, can lead to the creation of residential areas with unsafe social and industrial infrastructure. Due to the fact that construction occurs quickly and often outside the legal framework, without taking into account seismic risks, this can lead to serious dangers to the life and health of the inhabitants of such areas [5].

It is important to note that many migrants face difficulties in obtaining government support and social protection due to lack of registration, which prevents them from receiving benefits for medical services, utility bills, and child benefits. The government has difficulty allocating sufficient funds to address the problems faced by internal migrants.

The lack of adaptation programs for migrants in urban environments is a significant problem. Without accurate data on the number of internal migrants due to their non-registration, authorities are only beginning to understand the seriousness of this problem. For example, the Government of the Kyrgyz Republic adopted the Strategy for the Development of Social Protection of the Population for 2012-2014, which sets itself the task of creating a comprehensive social protection system. It includes the opening of social service centers, an increase in social payments and the implementation of state social orders [5]. However, the regions from which internal migration originates also face challenges. Population decline leads to a decrease in the labor force and a decrease in economic activity. Because of regional degradation, the active and able-bodied part of the population is increasingly moving to other regions, which aggravates the situation.

Thus, internal migration is one of the factors threatening the socio-economic stability of the country. Poverty of the population and the strong distribution of wealth in society negatively affect its socio-economic condition, causing social upheaval among the population, which ultimately can lead to socio-political conflicts.

4 Discussion

Without denying the economic reasons for the deterioration of social indicators, we nevertheless note the significant influence of environmental factors on these indicators. For example, in Kyrgyzstan, about 40% of the population is forced to consume water whose quality does not meet sanitary standards. Against the backdrop of regional mountain extreme natural and climatic conditions, among the factors of deteriorating health and reducing the body's resistance to disease, environmental causes take priority. The most dangerous threat to human health comes from air pollution. Contaminated water sources and soil cover follow this. The specificity of environmental factors is such that they act almost imperceptibly and manifest themselves only in various forms of diseases and deterioration of health, the causes of which people do not clearly understand [1]. Taking into account the aggravation of the local environmental and economic situation and the unresolved problem of poverty among the general population, an increase in the negative impact of the entire set of environmentally unfavorable factors on the morbidity level of the population is predictable.

From the point of view of ensuring the social and environmental safety of the population, trends in air, water and soil pollution in cities that attract the main flows of internal migrants present an extremely unfavorable situation. For example, in recent years in Kyrgyzstan, the formation of the state of the atmospheric basin occurred with a decrease in emissions of pollutants from stationary sources. The main sources of air pollution are energy companies,
manufacturers of building materials, utilities, mining and processing enterprises, as well as private households and vehicles. In recent years, the number of cars, mostly old ones, imported from abroad has increased several times, which has led to a significant increase in emissions of pollutants into the atmosphere [2].

Due to the low incomes of the population in Kyrgyzstan, old and physically worn-out cars are mainly purchased, which are used until they are completely worn out. Thus, the country has become a unique place for the removal and disposal of old and worn-out vehicles. Statistics show that after ten years of vehicle operation, the amount of harmful substance emissions doubles. Meanwhile, the city of Bishkek, which is the largest city in the country with a population of more than a million people, including its suburbs, concentrates about 20% of the population of the entire country. This leads to increased socio-ecological problems in this zone, since it is one of the most polluted [3].

The country's second largest city, Osh, also suffers from air pollution. In the regions of the south, due to the relative poverty of the population, the oldest cars are most often purchased, which worsens the socio-ecological situation. In general, motorization in Kyrgyzstan leads to a deterioration in the quality of life of the population due to air pollution. In developed countries, measures are being actively implemented to reduce automobile exhaust emissions by introducing quality standards, such as Euro-3, 4, 5 standards. However, in Kyrgyzstan, the state lags behind in the application of such standards, mainly due to the fear of provoking social protests among the population.

The situation in public utilities has a negative impact on the condition of the air basin. In particular, due to the lack of its own reserves of natural gas in Kyrgyzstan, most private houses are forced to use local coal, which has a low calorific value and high ash content. In addition, the practice of densifying the building of houses leads to deterioration of ventilation in urban and suburban areas. In recent years, due to the “motorization” of the country, the number of vehicle refueling points has sharply increased. However, the spontaneous development of a network of gas stations leads to a serious deterioration of the environmental situation in the regions, since they are often located in green areas, close to residential buildings, water protection zones of rivers and reservoirs without proper protection of groundwater. The problem of recycling household waste is also becoming increasingly urgent [8]. Due to the shortage of containers and specialized vehicles, the number of uncontrolled landfills in cities and their suburban areas has sharply increased. In addition, the separate waste collection system, including food waste, waste paper, scrap metal and plastic, has been destroyed.

To the Government of the Kyrgyz Republic, the problem of household waste disposal is most acutely felt in the city of Bishkek. The landfill is a serious source of both environmental and sanitary-epidemiological hazards. Situated in an area with high groundwater levels, it helps filter contaminated wastewater into underground water aquifers. Wind currents carry debris throughout the surrounding area, polluting the soil and surface water sources. In addition, the processes of smoldering, combustion and decomposition of waste cause pollution and intoxication of atmospheric air [8].

Currently, there is active construction of new residential areas in close proximity to the city landfill, which raises serious concerns. This could lead to pollution of the transboundary Chu River and the penetration of liquid waste into underground water horizons, which could cause outbreaks of infectious diseases among the population in both Kyrgyzstan and neighboring Kazakhstan [8].

It is obvious that a radical renovation of landfills and their transformation into modern landfills is required. Moreover, it is necessary to build a waste processing plant. Modern urban waste contains more than 100 toxic compounds, so this task is extremely important.
Among the most critical environmental problems in Kyrgyzstan are the following. Firstly, air pollution with chemicals in industrial areas and cities, both from stationary sources and from vehicles, as well as dust in certain areas. Secondly, water pollution from solid and liquid waste in cities, local settlements and industrial centers, as well as excessive use of water resources in agriculture. Thirdly, the deterioration of the radiation situation in certain areas of the country due to the condition of tailings ponds and dumps located in the zone of seismic activity and in landslide areas. Fourthly, an increase in desertification and soil degradation throughout the country in the context of global climate change and the negative impact of dehydration of the Aral Sea on the climate. All these environmental and economic problems become more acute in conditions of a systemic economic crisis, social upheaval and high levels of poverty [8].

5 Conclusion

Currently, in Kyrgyzstan there is a close connection between the problems of ensuring environmental safety and the existing socio-economic crisis. Poverty and poverty in rural areas, economic difficulties in cities contribute to the thoughtless use of natural resources by the local population, which only worsens the environmental situation. One of the main socio-demographic consequences of poverty is the migration of the agricultural population to the country's large cities. Although this may lead to a reduction in the shadow economy associated with the inefficient use of natural resources, it also increases the socio-ecological risks associated with the concentration of population in cities with poor environmental conditions [9]. Internal migration also gives rise to other critical trends that threaten the integral security of the state and society.

Environmental factors play a significant role in migration processes in Kyrgyzstan, especially in the context of internal migration from rural areas to urban centers. Climate change, environmental degradation, unavailability of water resources and other environmental problems have a direct or indirect impact on people's migration decisions. Socio-economic factors, such as access to education, healthcare, labor resources and infrastructure, also play an important role in migration processes [6]. Future research in this area could include more in-depth analysis of specific environmental issues and their impact on migration, as well as assessing the effectiveness of policies and programs to mitigate the negative impacts of migration processes. Based on the above, we can conclude that it is important to include environmental aspects in the development and implementation of migration policy, which represents a significant step in creating a stable and satisfactory environment for all members of society.

References


