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INNOVATIVE APPROACH IN PROVIDING THE JAPANESE ZONE OF ASTANA

Abstract. In accordance with the Development Strategy of Akmola region until 2020, the main economic frame of the region will be agglomeration zone, adjacent to Astana city. The main transportation and infrastructural axes passing through the territory of the region generally provide its polycentric development. In this regard, perspectives of positioning and development of its corresponding territorial organization and Astana agglomeration population settlement system are related to the development of the centers. Formation of the uniform distribution of the productive forces is an economic necessity, the logical result of all modern development of the production forces. It is not due to the growth "limit" of large cities, but rather a result of their comprehensive development, consciously directed, in accordance with the requirements of market economic laws, in the direction of expansion of agglomeration.

Keywords: institute of development, agro-food complex, suburban area, agglomeration core, technopark, production facilities, food products, production volume, green tourism.

Introduction. For a more intensive development of the metropolitan area, it is planned to strengthen the position of the administrative centers of districts (v.Arshaly, v. Shortandy, v. Akmol), adjacent to agglomeration nucleus villages Kosshy, Koyandy, Talapker, Karaotkel and other with population over 10,000 people.

In these areas creation of an industrial zone, construction of administrative and business center, multi-functioning living complexes and micro districts; development of tourism, construction of large sports facilities is planned.

All the above agglomeration rural regions territorial adjustment projects will lead to an increase in the population of Astana agglomeration with the nucleus, where more than 1.2-1.3 mln. people will live.

Methods of research. Studying and introduction of foreign experience allows to build an effective innovative policy focused on increasing the competitiveness of the national economy. Innovative processes in the republic have not reached the desired pace due to the fact that an effective mechanism for implementing the state's innovation policy has not yet been fully developed.

Results. The population shift is a versatile process in the study of which it is important to take into account its various aspects. Population shift from the village to the city is connected with the development of the cities and towns of Kazakhstan (big and small), increase of specific gravity of urban population of the republic (the so-called process of an urbanization of the population), as well as with the formation of the agglomeration.

According to the statistical data of Akmolinsky oblast and the Department of employment coordination and social programs the rural population of a suburban zone, which includes three regions of Akmolinsky oblast – Arshalynsky, Tselinogradsky and Shortandinsky – as of January 1, 2017 makes 116903 people, the specific gravity of this population in the oblast makes up almost 16%.

The population size of rural areas in the suburban zone of Astana as of January 1, 2017

Indicators	Regions			In 3 regions	All over the Akmolinsky oblast
	Arshalinsky	Tselinogradsky	Shortandinsky		
Population size as of 01.01.2016	27301	59785	29216	116302	731337
Population size as of 01.01.2017	27119	60505	29279	116903	732719
Growth rate, %	99.33	101.20	100.22	100.52	100.19
Specific gravity of population of the regions in the oblast %	3.70	8.26	4.00	15.95	100
It is made by the authors on the basis of statistical data of Akmolinsky oblast.					

The specific gravity of the population in the regions is allocated in the following way:

- Tselinogradsky – 8,3 % or 60505 people;
- Shortandinsky – 4,0 % or 29279 people;
- Arshalinsky – 3,7 % or 27119 people.

The balance of migration in rural territories as of January 1, 2017, has remained negative – 266 people. The positive balance is observed only in the Tselinogradsky region - 184 people. The general process of migration is influenced by migration with the states of the neighboring countries (negative balance -169 people), foreign countries (positive balance - 26 people), interregional (negative balance - 127 people) and regional migration (positive balance - 4 people).

It should be noted that the population of the regions is completely rural as there are no towns there. The age and sexual structure of the population is the basis without which it is impossible to carry out the qualitative analysis of the demographic processes.

The population is a complicated aggregate which is characterized by various structures. One of the major is the age and sexual structure. On the one hand, it has a huge influence on all demographic processes (birth rate, mortality, nuptiality, etc.); on the other hand, it is a derivative of these processes and reflects the previous stages of demographic development.

The structure of migration of the rural population of the capital's suburban zone concerning gender indication is almost identical. For the year 751 women and 1066 men have arrived in the territory of the regions, which makes respectively 13,1% and 13,9% from all number of the arrived people in the Akmola region. The greatest specific gravity of the population shift is the share of migration with the states of foreign countries. It is significant that 24% of women and 21% of men arrived exactly in the explored three regions out of all arrived people in the Akmola region from foreign countries. For the year 853 women and 1227 men have left the regions, which 12.1 and 12.5% respectively from all number of left people. The share of regional population shift is small: 7.1% of women and 6.0% of men that arrived and 6.8% of women and 6.1% of men that left is the share of 3 regions.

Counter-magnet cities will receive development, they are planned to be located under the traffic arteries having high-speed railways and highways with relocation of industrial enterprises from Astana city [1].

These measures will form the Astana agglomeration with a highly urban living environment and multifunctional economy orientation, which will have a multiplier effect on the dynamic development of Akmola region and other nearby regions. Formation of an effective Astana agglomeration directly depends on the development of Astana's suburban zone.

The development of the entire Astana agglomeration will be achieved by attracting domestic and foreign capital, as well as the creation of cooperative ties and industrial companies' chain in the development of the relevant clusters in the city and the region.

Agglomeration population's nutritional needs increase due to population growth. According to the forecasts, the population of Astana in 2030 will increase by more than 1.5 times. Thus, in 2030 in comparison with 2016 demand for paste goods will increase by 90%, for potato by 82%, for vegetables by 82%, for milk by 84%, by 85% for all types of meat and by 90% for flour. The requirements for Astana agglomeration population's minimum nutritional needs will increase for the settlement period increases. For basic foodstuffs, such as milk, meat, eggs, population demand nearly doubles.

Due to the fact that nutritional needs of Astana population are not completely satisfied by means of agglomeration's rural production, it is necessary to significantly increase the production and agricultural products processing levels. Thus, the production of rural agglomeration provides the population with 1 sort flour and bread by 100%. Significantly agglomeration population, taking the nucleus into account, is supplied with potatoes (the current supply level is equal to 96%), milk (58%), eggs (88%). However, together with population growth in the future, it is necessary to not only maintain but also increase the rate of production. Many products are not produced in a rural area of agglomeration, such as sunflower oil, fish, sugar, buckwheat. But the cultivation and processing of greens, tomatoes, cucumbers and other vegetables are possible and necessary. Conceptually agglomeration territory must meet their needs for perishable products completely (milk, eggs, vegetables, greens, etc.).

In turn, the growth of agricultural products processing levels can be achieved by:

- ensuring maximum loading of existing production capacities;
- improving the technology on the basis of their modernization;
- improving the quality control system;
- creation of new processing enterprises, with the closest proximity to the sources of raw materials.

To ensure full production load of milk utilization enterprises it is necessary to arrange procurement of milk from the population. Currently, the arrangement of milk procurement from the population is held back due to the lack of mobile laboratories to control the quality of purchased milk. In this regard, it is viable to organize milk purchasing points in the settlements where the number of cows in all categories of cultures is around 1000–1800 heads. Considering that milk processing enterprises are mainly concentrated in Astana, district centers and more than 90% of cows are concentrated in households, actuality of milk purchasing from the population increases.

Growth in product processing can be suppressed such factors as:

- underutilized processing capacity;
- deficiencies in forage production;
- low genetic potential of livestock;
- underdeveloped system of stocking, transportation and storage of raw materials.

According to leading international analysts, the prospect of global food markets requires the creation of a clear framework allowing in any situation to ensure the stability of domestic food market.

Systemic measures include:

- Participation in a positively approved budget programs that allow supporting ongoing activities of agricultural goods producers and processors of agglomeration rural districts;
- Measures to consolidate small agricultural producers through their co-operation and integration with processing enterprises;
- Participation in a lending system of subjects of agroindustrial complex, including through second-tier banks, financial institutions of the National Holding "KazAgro", National Welfare Fund "Samruk-Kazyna".

Thus, the calculation of gross products production in the rural areas of Astana agglomeration considers the future needs of the capital, in close proximity to where they are located - on the one hand, and, on the other hand, - the potential for agricultural production revealed by the method of elimination (factor analysis).

To meet the population demands it is necessary to increase food production volumes by several times by 2030 - especially such as meat, milk, cucumbers, tomatoes, potatoes, greens, etc.

Favorable situation has been formed in rural farms in the grain production, which is characterized by the ability to fully meet the needs of their own. In addition, the production of grain, based on actual data, significantly exceeds the need of the capital in the products of grain processing equal to 27-30% of the gross production. On the prospect of even minor increase in yield productivity and saving area available, production volumes meet the needs of the growing population of the capital.

The perspective need of the capital in such vegetables as carrots, beets, cabbage can be satisfied with a few large agricultural enterprises, having organized their production based on modern technologies of production and storage of vegetables. To supply the city it is enough to dedicate 35 th. Ha of vegetable crops, provided yields not less than 200 centners per hectare. Rural agglomerations have good natural conditions both for the production of vegetables and the development of the canning industry. Potatoes

production may become an important sector of the agrarian economy of the rural areas agglomeration, here it has the best natural and economic conditions. Good yields and high quality of the most valuable crops can be obtained at low cost. The process of diversification in the potato farming is seen in the ways of development of seed, the introduction of modern technologies of cultivation, storage and processing of these products. Farming areas have the capacity to produce many potato products that are in high demand from industry and population - mashed potato and chips. A major basis of production diversification in agroindustrial complex of rural areas of Astana agglomeration is the presence of favorable conditions, significant capacity for sugar beet processing. This is the basis for the development of sugar production, candy and confectionery production.

Dairy cattle breeding is characterized by high water-intensity, labor-intensity, capital-intensity, so it is viable to develop it in the areas with the most favorable terms and conditions, as well as close proximity to industrial centers. In areas where appropriate natural and economic conditions are not available, it is feasible to reduce the production of these products. Where there is no labor, difficult transport situation, weak food base households with no cows are more acceptable. In this case, the cows can be passed to farms, private households farmers on the compensation terms of the cows cost by means of products supply, including for diversified farms.

In agglomeration areas' agriculture there are objective prerequisites for activation of diversification processes, as it is promoted by climatic, technological and socio-economic conditions. In the agricultural sector of Astana agglomeration rural areas there has always existed the possibility of production of various types of agricultural production and its processing. This, in turn, provides an objective basis for related and unrelated types of diversification. For more sustainable rural development and improving the competitiveness of agricultural enterprises, it is necessary to develop new types of activities.

A common form of development of the largest settlements of agglomeration rural areas is the creation counter-magnet cities, that is specialized and at the same time to a certain extent self-sufficient functional units in the agglomeration system. Counter-magnet cities are usually considered as a means of restricting the growth of large cities, not as a means of rationalizing the process what they really are. The idea of their specialization, a clear division of the territory of the industrial and transport and residential areas also did not receive sufficient development. In place of the city as a point of concentration of production and population comes agglomeration - a vast area of intensive development, which combines traditional urban functions with agricultural production and recreation. The role of the peripheral part of the agglomeration is growing steadily, as opposed to the role of the central city, as more and more parts of the industry and transportation, trade and housing are outside the traditional city limits. Practice has shown that the nucleus, especially large one, cannot function normally without counter-magnet cities [2].

Agglomeration development changes correlation between the area of intensive development and peripheral agrarian and raw material zone inside economic territory as a whole. Attracting intensive agriculture, mining ubiquitous raw materials and the organization of public resort, counter-magnet cities rapidly expand in all directions from the central nucleus of the agglomeration.

The whole process of the formation of extensive areas of intensive development is related to the earth as a function of the spatial basis of social production. Growth of the general scale of the production process at a relatively faster progress of transport and communication is accompanied by an even more rapid increase in its spatial scale. The structure of the economic activity of the society is changing in favor of the industry, which requires a relatively large area. This includes a social recreation and other fields. All existing economic assets at the present level of development of the productive forces are allocated with a high capability for territorial expansion of the zones of their concentration. The whole systems of the agglomeration, the entire system of productive forces need constant development, in coverage of more and more areas.

The concept of agglomeration development as an adequate form of distribution of social productive forces has two fundamental advantages to confront her concept of development of "optimum" size cities. Firstly, only by means of agglomeration it is possible to territorially compound the industry and agriculture, which is always a necessary condition for the elimination of significant differences between cities and villages. Secondly, only the creation of agglomeration solves the problem of rational use of inter-urban lands that can only count on extensive agricultural development in case of the ban on the spatial expansion of cities. By itself, the agglomeration consists of the same elements as the modern city: from

the industrial, transportation, residential and commercial areas with the addition of areas of intensive agriculture and recreation. The quantity here is transformed into quality. Growth of the city leads at a certain point to a qualitative leap, to the emergence of a new spatial form of social life.

The development of green tourism could contribute to the emergence of rural areas from the crisis by increasing material wealth and contribute to the partial solution of the issues of rural employment. Thus, since the village needs fundamental changes, green tourism can facilitate the employment of the rural population.

Green tourism is a specific form of recreation in private farms in rural areas with the use of property and labor resources of personal, subsidiary or farming, natural and recreational features of the locality and cultural, historical and ethnographic heritage of the region [3, p. 138-143]. This type of tourism involves the stay of tourists in their own dwelling house of a farmer, in a separate (guest house) or on the territory of a personal farm.

Green tourism as an object of research is considered, first of all, in the context of solving the problems of rural development, rural communities, rural employment. This is due to the need to develop additional types of entrepreneurial activities in rural areas, creating a full-fledged environment for health and recreation residents of cities and megacities.

Interest in rural green tourism is high and stable in all countries of the world. However, each country seeks to create its own national development model, inherent only in it. Green tourism can actively develop only in environmentally friendly regions. Foreign statistics show that 35% of urban residents of EU countries prefer annual leave in the village [1, p.84]. In Kazakhstan, this percentage is much lower, but has a stable positive dynamics.

Conclusions. Against the backdrop of the rapid development of green tourism, the question naturally arises of the role of the Akmola region in the market of these tourist services. It should be noted that the region has all the prerequisites for the intensive development of internal and external green tourism, namely:

- Features of geographical position and relief, water resources. So, on the territory of the Akmola region, there are large rivers - Chaglinka and Ishim, and there are healing lakes Balpashor and Maybalyk;
- favorable climate, low population;
- active development of agriculture in the region. So, Akmola region is one of the main agrarian and industrial regions, producing more than 23% of grain, 7% of milk and 6% of meat produced in the country [4]. The average annual grain production in the region over the last 3 years was 4.7 million tons, and the average annual grain export for this period was 1.6 million tons [4];
- wealth of natural, historical and cultural and recreational potentials - 15 specially protected natural areas are located on the territory of the region, the total area of which is more than 828 thousand hectares [3]. In the region there are many mountain pine forests that make up the real wealth of the Akmola region.

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АСТАНА ЖАПОНИЯ АЙМАҒЫНДАҒЫ ИННОВАЦИЯЛЫҚ БАҒАЛАУ

Аннотация. Ақмола облысының 2020 жылға дейінгі даму стратегиясына сәйкес облыстың негізгі экономикалық құрылымы Астанаға жақын агломерация аймағы болады. Облыс аумағынан өтетін негізгі көлік және инфрақұрылымдық осьтер, тұтастай алғанда, оның полисантильді дамуын қамтамасыз етеді. Осыған байланысты, Астана қаласының тұрғындарын тиісті аумақтық ұйымдастыру мен агломерациялау жүйесін дамыту және дамыту перспективалары орталықтардың дамуымен байланысты. Өндіруші күштердің біркелкі бөлінуі – бұл экономикалық қажеттілік, өндіруші күштердің қазіргі заманғы дамуының логикалық нәтижесі. Бұл үлкен қалалардың «лимитінің» өсуіне байланысты емес, бірақ олардың жан-жақты дамуы нәтижесінде агломерацияны кеңейту бағытында саналы экономикалық заңдардың талаптарына саналы бағытталған.

Түйін сөздер: агроөнеркәсіп кешені, қала маңы аймағы, агломерация негізі, технопарк, өндірістік нысандар, азық-түлік өнімдері, өндіріс көлемі, жасыл туризм.

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ИННОВАЦИОННЫЙ ПОДХОД В ПРЕДОСТАВЛЕНИИ ЯПОНСКОЙ ЗОНЫ АСТАНЫ

Аннотация. В соответствии с Стратегией развития Акмолинской области до 2020 года основной экономической структурой региона будет зона агломерации, прилегающая к Астане. Основные транспортные и инфраструктурные оси, проходящие через территорию региона, в целом обеспечивают его полицентрическое развитие. В этой связи перспективы развития и развития соответствующей территориальной организации и системы агломерации населения Астаны связаны с развитием центров. Формирование равномерного распределения производительных сил является экономической необходимостью, логическим результатом всего современного развития производственных сил. Это происходит не из-за роста «предела» крупных городов, а в результате их всестороннего развития, сознательно направленного в соответствии с требованиями рыночных экономических законов в направлении расширения агломерации.

Ключевые слова: институт развития, агропродовольственный комплекс, пригородная зона, ядро агломерации, технопарк, производственные объекты, продукты питания, объем производства, зеленый туризм.

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