

Nutrition as an indicator of quality of life of the population in the conditions of trans-border territories (Amur region)

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Abstract. Quality of life is one of the global goals of sustainable development. At the same time, the tasks of economic growth become secondary and are considered as the basis for ensuring sustainable development. At present, there is no single universal system of the quality of life indicators as one of the criteria for sustainable development. The article defines the significance of the nutrition quality as one of the basic indicators of the concept “quality of life.” Also, an analysis of the actual nutrition in the Amur region in 2017 is presented. It is compared with the recommended norms of good nutrition.

Keywords: nutrition, nutrition quality, sustainable development, quality of life, consumption

1. Introduction

Most of the leading countries of the world today choose to line their activities in accordance with the principles of the “Concept of Sustainable Development” (the Concept) as the vector of their development. One of the fundamental principles of this Concept is the assessment of the level of development of a country not only by the gross domestic product, which gives an estimate only of the newly created value, but also taking into account certain changes in the natural capital and quality of life of the population. In particular, Principle 25 of the Concept states that “peace, development, and environmental protection are interdependent and inseparable” [1].

The long-run objective of a country’s economic development ceases to be only economic growth, measured as the real GDP growth. Increasingly, the result is estimated as an increase in the quality of life in general, one of the components of which is the growth of GDP. For example, Principle 8 of the Concept combines “sustainable development” and “quality of life” in one bundle [1]. The Russian Federation is also taking certain steps towards sustainable development. The first such step is the Decree of the President of the Russian Federation No. 440 of April 1, 1996 “On the concept of the transition of the Russian Federation to sustainable development” [2], in which considerable importance is given to the problems of ensuring the certain level of quality of life in the country.

The concept “quality of life” is quite voluminous and can be considered from different positions with different degrees of detail. In a broad sense, the concept will be understood as a generalizing socio-economic category representing a generalization of the concept “standard of living,” which includes not only the level of consumption of material goods and services, but also the satisfaction of spiritual needs, health, life expectancy, environmental conditions human, moral and psychological climate, spiritual comfort [3]. Thus, the quality of life is a complex category being assessed by a large number of indicators, since the individual ones allow to evaluate only certain components of the

quality of life, but not the category as a whole. Close attention is paid to achieving a certain quality of life in transboundary regions, since the factors affecting the quality of life are influenced by the mutual influence of neighboring countries in these territories. As an example of such border areas is the Amur region.

In the “Concept of Transition of the Russian Federation to Sustainable Development”, a special place is given to regional aspects of sustainable development: “Transition to sustainable development of the Russian Federation as a whole is possible only if sustainable development of all its regions is ensured.” [2] This is due to the fact that the sustainable development of a country is possible only if the sustainable development of its individual parts. The problem of ensuring regional sustainable development is rather complicated, because it is hardly possible to use universal mechanisms for the whole country due to regional differentiation. Of particular concern is the sustainable development of the Far East in general and the Amur region in particular. Traditionally, the Far Eastern frontier territories of the Russian Federation are less developed than the central regions of Russia. This is primarily due to the fact that the border areas perform more political functions than economic ones. At the same time, there are also objective reasons causing a lag in the development of the Far Eastern transboundary territories. These include the following: difficult climatic conditions, low population density (which often makes it unprofitable to create and maintain economic infrastructure), high transport costs for the delivery of food from the central regions of Russia, risky agriculture (which reduces the population's ability to self-provide food). In such a situation, the problem of ensuring sustainable development in transboundary territories takes on particular importance.

The purpose of this research is to identify the role of nutrition quality as an indicator of quality of life. *The object* is the analysis of the quality of nutrition as an indicator of quality of life in the Amur region.

2. Materials and Methods

The theoretical basis of the research was the works of Russian scholars and regulatory documents. The information base includes human development reports and reports of the Federal State Statistics Service and the Territorial Department of the Federal State Statistics Service for the Amur Region. Research methods: analytical, statistical.

3. Results

In our opinion, the contemporary development should go in line with the principles of the concept of sustainable development. One of the objectives of the implementation of this concept is to achieve a certain level of quality of life. Now there is no universally accepted list of quality of life indicators. For example, the “Concept of the Transition of the Russian Federation to Sustainable Development” contains the following: a person's life expectancy (expected at birth and actual), his state of health, deviation of the environment from standards, level of knowledge or educational skills, income (measured by per capita GDP), the level of employment, and the degree of realization of human rights [2].

Researchers Prokushev, E. V. and Likhonin, E. P. propose to include in the system of indicators of quality of life the following: population income (with analysis of their distribution, differentiation, reality, etc.); nutrition quality (consumption structure, caloric content, food composition); housing comfort (total area of housing occupied per inhabitant); health quality; quality of social services; quality of education; quality of culture, quality of the service sector; quality of the environment; the leisure structure; demographic trends (indicators of life expectancy, fertility, mortality, nuptiality, divorce rate); safety indicators (number of recorded crimes) [4].

The human development index, which is an integral indicator of the quality of life, measures the country's achievements in terms of health status, education, and the actual income of its citizens in three main areas for which their indices are assessed: life expectancy; education; gross national income [5].

As can be seen from the above lists of indicators of living standards, a special place is occupied by the indicators characterizing the quality of nutrition. In our opinion, this is due to the fact that the quality of nutrition affects the standard of living in several ways. First, the quality of nutrition (structure of consumption, balance, caloric content, food composition) allows to assess the degree of satisfaction of human needs for food, which is directly one of the indicators of quality of life. Second, the quality of nutrition largely determines the level of people's health, life expectancy at birth and the reproduction of healthy offspring, which is also one of the indicators of quality of life, both independent and included in the Human Development Index [6]. Third, the quality of food additionally determines the level of human performance, which indirectly affects labor productivity and, as a result, the amount of output in the country, which is also an independent indicator of quality of life and part of the integral index.

The importance of nutrition for the quality of life is emphasized in a number of regulatory legal documents adopted in our country. For example, in the National Security Strategy in the Russian Federation [7], Concept of the Long-Term Socio-Economic Development of the Russian Federation until 2020 [8], Doctrine of Food Security of the Russian Federation [9], and others. Recommendations for rational consumption of food products that meet modern requirements for healthy nutrition are set out in the Order of the Ministry of Health of the Russian Federation No. 614 [10].

As part of our research, we compared the recommended rational norms of healthy nutrition and the actual consumption of basic foodstuffs in the Amur Region. The results are presented in Table 1 [10-11].

Table 1. Consumption of basic foods in the Amur region in 2017.

Basic food	Recommended standards consumption, kg per year per person	Actual consumption, kg per year per person	Actual consumption from recommended, %
Meat and meat products in terms of meat (including by-product / category II and raw fat)	73	61	83.56
Milk and dairy products in terms of milk	325	173	53.23
Eggs and egg products, pieces	260	325	125
Sugar	24	37	154.17
Vegetable oil	12	15	125
Potatoes	90	135	150
Vegetables and melons	140	137	97.86
Fruits and berries	100	62	62
Grain products (flour, flour, cereals and beans)	96	137	142.71

As the analysis of the data in Table 1 shows, the Amur residents do not meet the rational consumption norms. The exception is the consumption of vegetables and melons, because it almost corresponds to the norm (97.86%). For the remaining positions there are significant deviations. Thus, the consumption of meat and meat products is 83.56% of the recommended standard. It is 53.23% for milk and dairy products; 125% for eggs and egg products and vegetable oil; 62% for fruits and berries. The "overconsumption" of sugar, potatoes and bread products should be emphasized: 154.17%, 150.00% and 142.71%, respectively.

Residents of the Amur region receive less animal protein (meat and milk consumption is significantly reduced), vitamins, microelement, cellulose (reduced consumption of berries and fruits and, to a lesser degree vegetables). At the same time, the consumption of sugar, potatoes and bread products was exceeded by 1.5 times, and eggs and vegetable oil – by a quarter.

This imbalance of nutrition leads to an imbalance in the diet of the population. Substitution of meat, milk, and fruit with carbohydrate-containing products – bread, potatoes and sugar – leads to the emergence of nutritional and nosological diseases of both the adult population and children. The structure of nutrition of Amur residents clearly reduces the quality of life in the region. A direct correlation is seen between the quality of nutrition and such indicators as the incidence rate and life expectancy in the region. If in Russia as a whole, life expectancy (expected) is 72.70 years in 2017, 67.51 years for men and 77.64 for women, then for the Amur region these figures are much lower – 69.6, 63, 66 and 74.61 years, respectively [12].

A similar pattern is observed with the incidence rate: for the Russian Federation as a whole, this indicator in 2017 was 146691.9 people per 100 thousand of the population, in the Amur Region – 151509.7 people [13]. The human development index as a whole in the Amur region in 2015 was 0.831, which corresponds to the 68-69th place in the regional ranking of Russia [14].

Of particular concern is the unbalanced nutrition among teenagers and young people. It is precisely this age when food habits, nutritional motivation, and nutritional behavior are formed, establishing the future health, life expectancy, and productivity of a nation. Earlier studies indicate the problem of poor-quality and unbalanced nutrition of adolescents in the region [15], as a result of which the problem of an insufficiently high level of quality of life in the Amur Region becomes chronic.

4. Discussion

One of the basic objectives of the implementation of the Concept of Sustainable Development is to improve the quality of life. The task of improving the quality of life becomes a priority rather than a simple task of economic growth. At the same time, today there is no single, universally recognized, universal system of indicators of the quality of life, by which it is possible to track the level of sustainable development of a country, or its part. In most of the methods examined in the framework of the study, the quality of nutrition is one of the significant, basic indicators of the standard of living. Moreover, in our opinion, it is designated explicitly in the form of consumption of basic foodstuffs, which directly reflects the level of satisfaction of people's food needs, and indirectly through the indicators of morbidity, longevity, and efficiency.

5. Conclusion

Our research leads us to the following conclusions. The concept of sustainable development replaces the concept of economic growth, changing the main criteria for development: instead of estimating GDP, an assessment of the quality of life begins to be used. The quality of life is a complex integral concept that is still in the stage of theoretical development. In this regard, today there is no unified system of the indicators measuring the quality of life.

This study is based on the available scientific and regulatory data, the role of nutrition quality was identified as one of the most important indicators of the quality of life. An analysis was made on the actual consumption of basic foodstuffs in the Amur region in accordance with the recommended values. The analysis revealed significant deviations in these indicators. The actual consumption of potatoes, sugar, bread products significantly exceeds the recommended standards. Taking into account the interrelation of the quality of nutrition and the level of morbidity [6], as well as a result of life expectancy, it can be concluded that the quality of life in the Amur region is not sufficiently high due to insufficient nutrition.

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