

ECONOMIC FACTORS AFFECTING THE MANAGEMENT OF HILL AREA ECOSYSTEMS

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Abstract

One of the main problems of the national economy is to determine how to use the potential of the existing ecosystem structure and how much is intact to create additional services in this ecosystem in the future. Before society can decide how to answer this question, it needs to have a good understanding of the nature of the unique natural resources available in this ecosystem, along with prioritizing higher goals. Food production relies on biodiversity for a variety of food plants, pollination, pest control, nutrient supply, genetic diversity, and disease prevention and control.

Keywords: Ecosystem management, delicate ecosystem, Hills, biological diversity, concept of sustainability, regional specialization, structure of economy, structure of ecological system.

Introduction

The critical role that managed and unmanaged ecosystems play in supporting economic activity and human well-being is of increasing concern as evidence of increasing human pressures on such systems.

We usually talk a lot about how economic growth affects the environment. This is certainly appropriate - it is necessary to be so.

... Implementation of ill-conceived or unscientifically approached projects in the use of precious natural resources poses a significant threat to the delicate ecosystem of these hilly areas. The obvious effects of such exploitation and development have caused massive erosion in both the hills and the plains [1].

Hills are a natural biosphere reserve of any region or country of special importance from the environmental and economic point of view. If these areas are used correctly in all aspects (ecologically and economically), they can play a decisive role in the growth and development of the country's national economy. Although hilly areas have their own natural resources, in some cases - As a result of increasing pressure of human activity, it is becoming impoverished and causing the failure of the existing ecosystem.

First as already mentioned, the hilly regions - despite being ecologically unique - remain economically poor. Critically, these contradictions are the result of the irrational, unplanned and unscientific approach used in the development of such areas with special relief features. Proper, efficient use of hilly areas with delicate ecosystems requires highly sensitive scientific approaches.

One of the most widespread effects of the current global changes is the biological impoverishment of species, the rapid decrease in the diversity of their habitats, in connection



with climate changes. Man's encroachment into wildlife and "dominion" over it is compounding the scale of negative impacts.[2]. Biodiversity is the basis of human life support systems, and its decline has serious consequences for all of humanity.

... We all know - today humanity is going through a very difficult time. Climate change, water and other natural resource depletion problems are becoming major threats on Earth[3]. In ecologically fragile areas, large-scale development projects cannot be implemented, taking into account various life-supporting services. For approved projects, positive interventions aimed at reducing the current degradation and restoring the original ecosystem in the area are now urgently needed. In order to meet the needs of the ecosystem and preserve it in its natural state, the local government should rely on models that bring both ecological and economic benefits when promoting large-scale regional development projects [4].

The intense sur of city life However, pollution and noise often encourage people to find solace in nature. Mountains and hills attract people with their unique green landscapes, clean air and peaceful environment.

The rate of economic growth of any country largely depends on the desire of people to develop. If a country has a low level of consciousness and the general population accepts "poverty" as their fate, then there is little hope for development. The point is that economic development is not a mechanical process. To achieve this, they should consciously use the available opportunities and increase their knowledge and skills[5]. Of course, in order not to fall behind economically, large-scale and well-thought-out projects should be implemented in the use of existing natural resource potential.

The current process of globalization requires the management of beautiful natural landscapes as well.

The concept of stability was first put forward in 1980 by a group of scientists led by J. Tinbergen in the report "Revision of the International Order" presented to the Club of Rome [6]. In this report, scientists concluded that an economic system cannot develop sustainably without taking into account the interests of social and ecological systems. The use of traditional economic mechanisms will reduce economic efficiency in the future.

In the economic development of the country, the role of economic factors is crucial. The economic factors affecting the management of the ecosystems of the Adir region are as follows:

- 1. Hspecialization of udud;**
- 2. Structure and potential of the economy;**
- 3. Level of development of production infrastructure;**
- 4. Investment environment.**

1. Area specialization. Agriculture is a field rich in additional opportunities. The prosperity of our markets and the well-being of our lives largely depend on it. After all, the land of our country is generous. Therefore, in the coming years, great attention will be paid to the radical reform of the agrarian sector and its adjustment to market requirements being directed. For example, the nearly 3-fold increase in state procurement prices made cotton and grain growing a profitable industry. In addition, the transition to a completely new system of work in cotton farming, that is, to the cluster system, has fundamentally changed the attitude to work. It became possible to effectively organize and manage work [7]. Each area engaged in the



production of agricultural products has different problems related to its natural environment (relief, soil and water resources), which certainly affects the specialization of this area. The total area of hilly areas of Andijan region is 44,034.6 hectares, of which 21,550.4 hectares are irrigated areas. Figure 1 below shows the share of hilly areas in the districts of our region with respect to the total land area. we can see it coming.

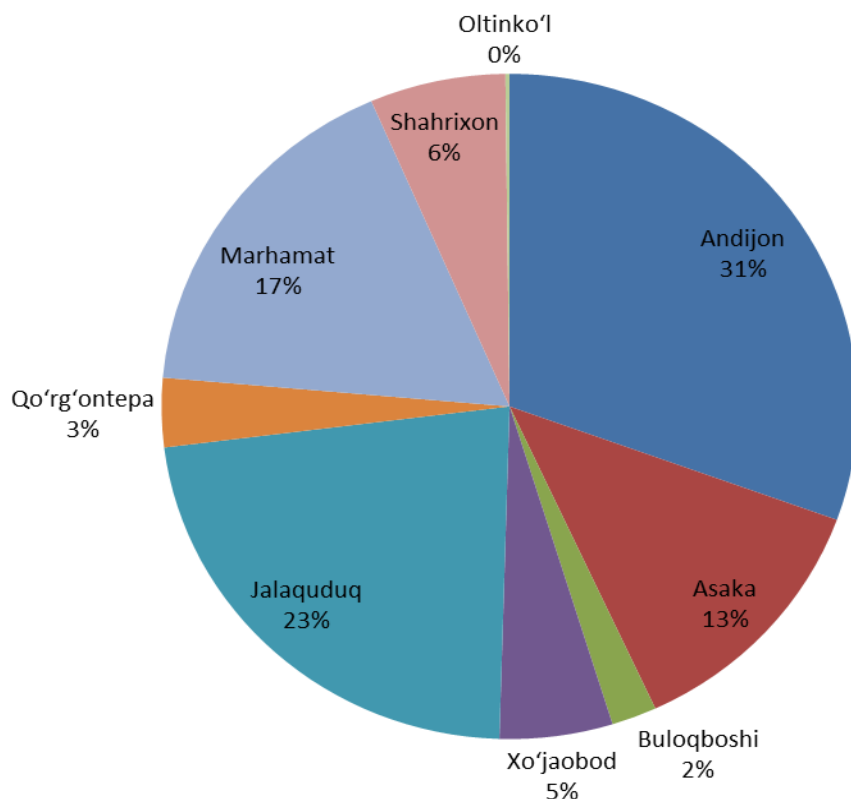


Figure 1. The share of existing districts of the hilly areas of Andijan region (in % of the total land area)

In terms of the irrigated land area (21550.4 ha) (Fig. 2), the districts indicated above (Andijan - 7496.3 ha, Jalakuduq - 4631.1 ha and Markhamat - 4823.2 ha) is leading. Therefore, there are conditions for irrigated agriculture in these areas. In the irrigated parts of the hilly areas, horticulture, viticulture and vegetable growing are specialized. Other non-irrigated areas are used as pasture.

Decree of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev dated 28.01.2022 on approving the "New development strategy of Uzbekistan for 2022-2026" [8] - a very important role in the socio-economic development of our country plays and encourages the representatives of each field to work conscientiously, assigning huge responsibilities. In this "Strategy for Development"[9], Section VII and 100 objectives specific to them are specified. According to the 30th goal of Section III aimed at "rapid development of the national economy and ensuring high growth rates" - "Increasing the income of peasants and farmers by at least 2 times through the intensive development of agriculture on a scientific basis, a number of tasks have been defined to bring the annual growth of agriculture to at least 5%. They consist of:



- Specialization of regions in the cultivation of a certain type of product;
- Expanding the scope of state support in agriculture and implementing new insurance mechanisms;
- Development of 464,000 hectares of new and disused land and allocation to clusters based on open selection. Reduction of 200,000 hectares of cotton and grain areas and long-term lease of these lands to the population based on open selection;
- Growing of exportable products and development of fruit and vegetable growing, increasing the area of intensive gardens by 3 times and greenhouses by 2 times, increasing the export potential by another 1 billion US dollars;
- Increase and protection of soil fertility;
- Improving the system of agroservices based on science and innovation. Supplying raw materials to agro-industrial enterprises and increasing the production volume by 1.5 times;
- Development of agrologistics centers and increasing the number of modern laboratories. Implementation of the national program on seed and seedling production;
- Establishment of the International Agricultural University together with prestigious international scientific centers and higher education institutions. Deepening the integration of science and practice in the agricultural sector; and
- To create wide conditions for effective use of farms by the population.

The "Strategy of Development" defined by the President determines the socio-economic position of our country in the current globalization conditions.

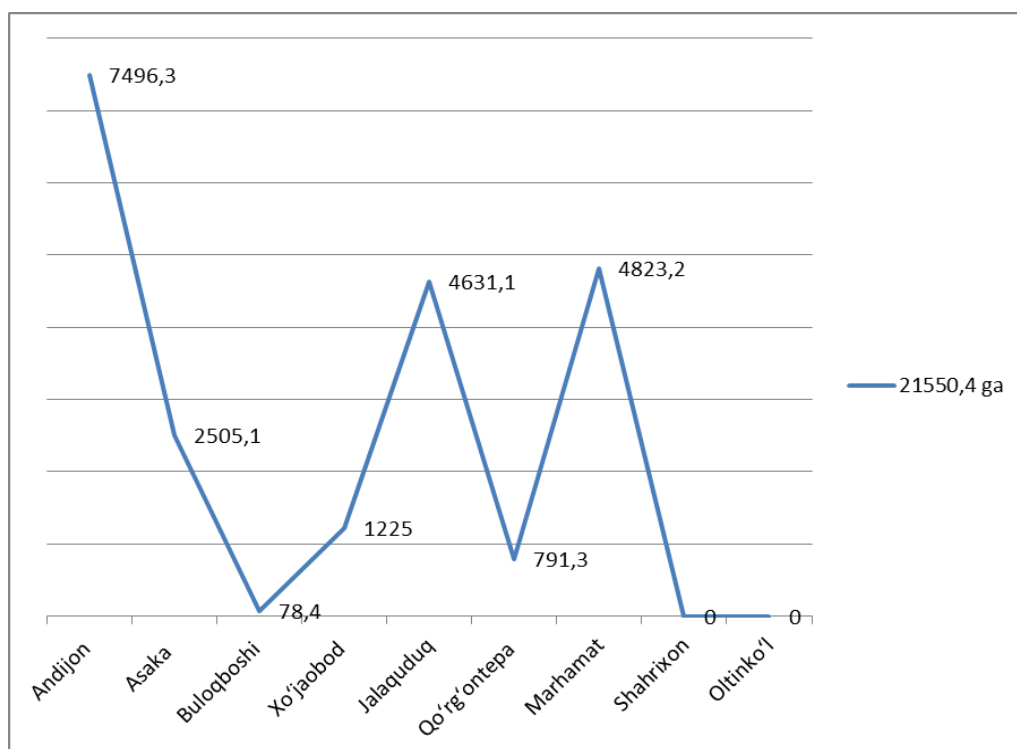


Figure 2. Irrigated land areas of existing districts of hilly regions of Andijan region (in hectares).



Since the main goal of our scientific research work is to increase the ecological and economic efficiency of the emirates located in the territory of our province, we focus more on the agricultural sector. It is known that the irrigated parts of these areas are used as widely as possible, as mentioned earlier. But the use of non-irrigated areas (Figure 3) only as pasture is not enough for the current globalization conditions.

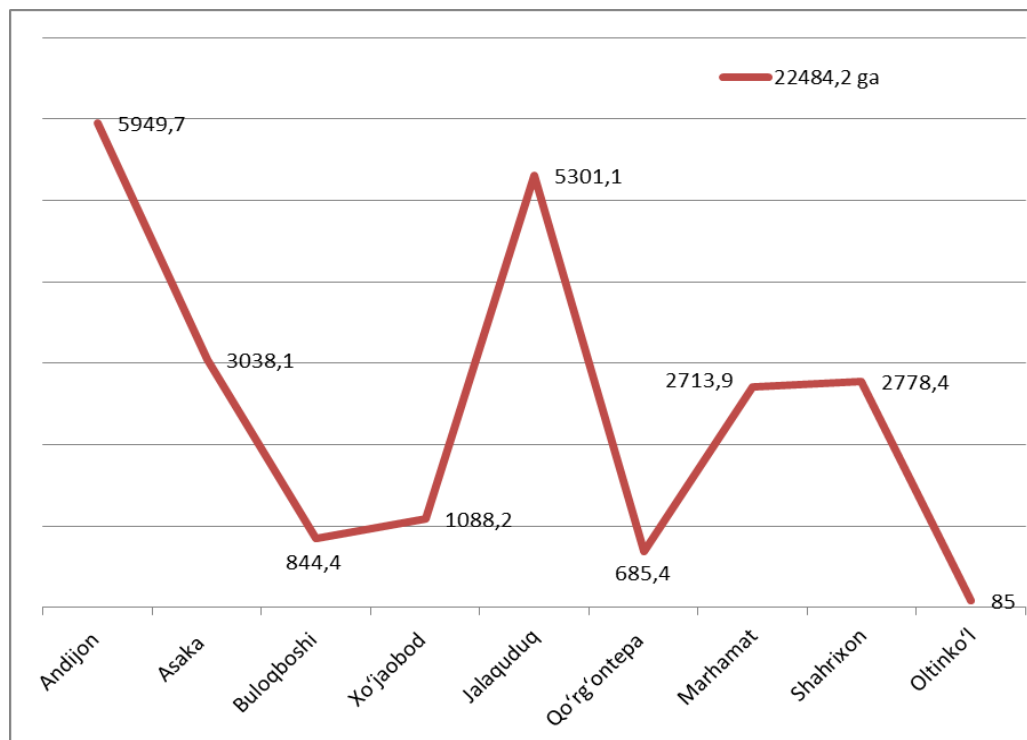


Figure 3. Non-irrigated land areas of existing districts of hilly regions of Andijan region (in hectares).

2. Structure and potential of the economy. In the years of independence in the Republic of Uzbekistan, a lot of work is being done to reform agriculture based on the requirements of the market economy. Land, the main means of production, was given to its owners: peasants and farmers, the forms of ownership were changed, peasants' and farmers' associations were formed, and production and export of products were launched in a completely new way. Improvement of land reclamation and increase of productivity of hill regions is the most important and decisive factor of intensive development of agriculture and increase of its efficiency. The most important thing is that it serves as a necessary condition and guarantee for raising the material well-being of the villagers.

In these areas, it will not be possible to grow vegetables and grain products, to develop industries other than horticulture, the amount of precipitation in the summer season is slightly less, and in animal husbandry - beekeeping. Considering that the demand for food products is increasing day by day due to the growing population, we may face serious problems in the future. Professor I.Yu. Umarov noted that in 2007, the level of consumption of bread and bakery products in the total consumption of Andijan region population was 71.9% compared to 1999. The reason for this is, on the one hand, the relatively low solvency of the population,



and on the other hand, the low consumption of bread substitutes due to the low cost of bread products. In such conditions, it is necessary to increase the number of business entities focused on the production of meat and dairy products, by encouraging them and giving them incentives, to bring the population's natural needs for these products closer to the level of medical standards [10].

Ecosystem structure - when some products are produced in this system and the resulting wastes are returned to the ecosystem, often in new forms that the ecosystem cannot adapt to, it affects ecosystem services. That is, production inevitably affects the provision of ecosystem services.

One of the main problems of the national economy is to determine how to use the potential of the existing ecosystem structure and how much is intact to create additional services in this ecosystem in the future. Before society can decide how to answer this question, it needs to have a sufficient understanding of the nature of the unique natural resources available in this ecosystem, along with prioritizing higher goals. Food production relies on biodiversity for a variety of food plants, pollination, pest control, nutrient supply, genetic diversity, and disease prevention and control. Cultivation of medicinal plants for the pharmaceutical industry also relies on biodiversity.

3. Development level of production and service infrastructure in Hill regions.

Infrastructure —production and a set of various auxiliary service sectors (organizations, enterprises and institutions) that serve to ensure the regulatory conditions necessary for the circulation of goods, as well as human life activities; intangible production sector. Infrastructure services are intangible goods that satisfy vital needs. Since infrastructure is a necessary condition, a part of economic resources is involved in ensuring its operation.

If we look at the entire history of the development of hill ecosystems, we can see that the available opportunities for promoting rational development and protecting hill areas, ecology, environment and resources are very limited. The options available are limited. Planning of Adir regions based on the sustainability defined by the "World Environment and Development Commission" is one of the most important tasks in the current globalization conditions. The state should develop, implement and create a strong national mechanism for the implementation of the planning system for all individual settlements at the state level, in the regional context, and at the local level in order to ensure the sustainable development of the economy. This is very important for the people to live a prosperous life.

The infrastructure of hill regions is more complicated than other regions (plains). For example, various problems are encountered in the construction of regional roads and connecting roads with other regions. The topography of these regions, the fragility of the soil (susceptibility to landslides) require the development and implementation of projects related to road construction in a scientifically sound manner. Roads passing through hilly areas are prime locations for building shops, eateries, cottages, hotels, restaurants, car repair shops, industries and even houses. Of course, for this, safety measures should be taken to prevent various unfortunate events that may arise from the features of the relief in these areas. Unfortunately, the roads passed through the provinces in our region do not meet the established standards. For example, the fact that the road connecting Andijan and Bulagboshi districts is built on the



basis of an almost straight line, and in some places the slope (elevation degree) is high, it is very difficult to drive cars during the rainy season (freezing period). This road makes the small brick manufacturing enterprises located in the area light-weight, far-near, but it is very dangerous to walk with loads on the steep road [11].

The insufficient width of the road in these areas and the expansion of the structures under construction will make it impossible to expand the roads in the future. This puts a lot of pressure on the road network and puts a high level of stress on the smooth flow of traffic.

The mountainous and hilly regions, including various natural, cultural and religious features, provide favorable advantages to the country's economy. But various conflicts have stalled the country's development and other huge tourism potential and are a major hindrance to foreign exchange earnings. ... At the same time, the proper use of these abundant natural resources is limited by several factors, namely, weak local development management capacity, poor transport networks and infrastructure, and lack of private sector investment. - imposes institutional restrictions on joining the global economy[12].

It is necessary to create more jobs for the population of our rapidly growing region to live well. For this, taking into account the population density of the region, it is necessary to develop the infrastructure in the hilly areas as well. The construction of residential areas, wind power plants, roads, schools, hospitals, etc., will contribute to the general development of the population of the region. This prevents migration to cities by creating jobs in the area itself.

There are cultural monuments of historical importance in the hilly regions of our region (for example, Pozilmon ota in Korgontepa, Suppa in Asaka (Chontak), Bogi Babur in Bogishamol, Kilichmozor in Jalaguduk). attracted tourists from different parts of the country and the world.

In the development of tourist infrastructure, attention should be paid to ensuring perfect harmony with the environment. Activities related to tourism should be developed by involving local authorities and lead to their economic development. It should clearly define the conflicts between tourism and the use of resources for the livelihood of the local population, and attempts to minimize them. The type and extent of tourism development allowed in any area should be compatible with the environment and socio-cultural characteristics of the local authority. Tourism should be planned on the basis of a comprehensive land use plan as an integral part of the regional development strategy.

4. Investment Environment

Failure to effectively address environmental and social risks can cause serious financial and operational problems. Given that social impact efforts have significant mitigating consequences, increased costs or lost benefits are avoided and valued.

Also, on the other hand, divestment of ecosystem services and investments in them can prevent ecosystems from failing. That is, there is no political, socio-economic pressure on the ecosystem.

An investment in ecosystem management may not be economically viable today, but it is an important factor in future ecosystem enrichment and expansion of services.



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