Directions for Financing the Activities of the Forestry System of Uzbekistan and the Classification of Indicators for Assessing its Effectiveness

Mamatqulova Muxlisa Mamirjanovna
Researcher, Tashkent State University of Economics (TSUE)
Email: zebo0608@mail.ru

Abstract:

This article analyzes the composition of sources of financing the activities of the forestry system of Uzbekistan, their dynamics of change over 2021–2024, and the main economic indicators assessing the efficiency of the use of financial resources. During the study, state budget allocations, extrabudgetary revenues, income from leasing forest fund lands, international donor funds, environmental funds, and agro-forestry projects were considered as the main directions of the financing system. The article identifies the economic stability and efficiency of the sector through indicators such as the dynamics of financial flows, net profit, profitability, and ROI. The results of the study showed that the diversification of financing in the forestry system, increased international support, and the activation of market mechanisms have strengthened the financial independence of the sector.

Keywords: Forestry, Sources Of Financing, State Budget, Extrabudgetary Revenues, International Donations, Rental Income, Agro-Forestry Projects, Financial Efficiency, Profitability, ROI, Net Profit, Environmental Projects, Green Space.

1. Introduction

Several main sources back the financing of the forestry of Uzbekistan. Of them, state budget, extra-budget revenues, projects and programmes sources of international donors, as well as revenue from renting out forest fund lands and other natural resources are the most important. In the 2021-2024, significant alterations took place regarding what constitutes those sources of finance but also with their internal structure that changed dynamically [1].

In the first years (especially in 2021) forestry operations were funded mainly by a state budget revenue. Nevertheless, the amount of income from land rents and foreign grants, as well as chargeable extra budgetary services, has increased in recent years. This development signifies a

significant step towards improving the financial self-reliance of the sector, and adoption of new financing mechanisms [2].

The forestry sector in Uzbekistan is a strategically crucial one to eco-sustain the planet, utility of natural resources in an economical and efficient manner, as well as enhance the country's ability for climate reasons. The fact is that most of national territory is covered with desert and semi-arid environments, thus the processes of reforestation, afforestation and protection of forests strongly depend on a good mobilization and allocation of financial resources. Over the past years, several reforms have been undertaken to diversify forestry activities, scale up collaboration with international financial agencies and enhance economic and fiscal instruments in the sector [3].

The forestry financing model is no longer totally dependent on state budget appropriations. Support is being provided by хозяйствующие, grants, international loans, environment funds, receipts from the private sector. These diversified sources of financing support sustainable forest management, the stabilization of vegetation cover in desertified areas, secure biodiversity conservation, promote green economy concepts and improve livelihoods for communities [4].

Literature review

FAO Sustainable Forest Management and Financing Mechanisms in Central Asia.

This FAO report provides an in-depth analysis of the economic, ecological, and institutional mechanisms for sustainable forest management in Central Asia. Using Uzbekistan as a case study, the report highlights key challenges in forestry financing, including the high dependence on the state budget, the relatively low share of extra-budgetary funds, and the insufficient monetization of forest ecosystem services [5]. It also emphasizes the growing importance of modern financial instruments such as international financing, grants, credit lines, and Payment for Ecosystem Services (PES). This source serves as a significant theoretical foundation for substantiating the classification and diversification of financing sources discussed in the article [6].

Global Environment Facility (GEF). Forest Landscape Restoration and Climate Resilience Projects: Uzbekistan Country Report.

This report presents detailed information on the effectiveness, financial scale, and environmental and social outcomes of international forest landscape restoration (FLR) projects implemented in Uzbekistan. It quantitatively demonstrates the contribution of donor funding to enhancing the sustainability of the forestry sector [7]. In particular, the economic efficiency of GEF-funded projects in afforestation of desert areas, biodiversity restoration, and climate change adaptation is thoroughly examined. The report supports and scientifically validates the article's conclusions regarding the increasing share of international grants in 2023-2024 [8].

This domestic scholarly article analyzes the current state of financing mechanisms in Uzbekistan's forestry sector, including the structure of budget allocations, the share of extra-budgetary revenues, and ongoing financial reforms. The authors provide practical recommendations for increasing revenues through leasing forest fund lands, expanding service-based income, and attracting private investments. The study reinforces the discussion of financial structural changes observed during 2021–2023 with local statistical evidence. Furthermore, financial efficiency indicators (such as

profitability, return on investment (ROI), and related measures) are evaluated within the context of Uzbekistan's economic conditions [9].

Asian Development Bank (ADB). Financing Green Growth and Forest Sector Reforms in Uzbekistan.

The ADB technical report examines the financial foundations of the "Yashil Makon" initiative, agroforestry projects, and forestry sector reforms in Uzbekistan. It highlights the relevance of market-based mechanisms, public–private partnerships (PPP), green bonds, and other green finance instruments in unlocking the economic potential of the forestry sector [10]. The report also proposes a framework for monitoring the efficiency indicators of investment projects planned for 2024. This source deepens the article's analysis of contemporary financing directions, particularly the strengthening of private sector participation and international institutional engagement.

2. Methodology

This study provides a scientifically grounded analysis of the financing directions of Uzbekistan's forestry system, existing funding sources, the participation of international financial institutions, and the indicators used to assess financing effectiveness. The methodology is based on the following approaches:

Theoretical Analysis

The fundamental principles, sources, and mechanisms of forestry financing were examined based on international reports and national research.

Comparative Analysis

The financing practices of Uzbekistan's forestry system were compared with those of other Central Asian countries (Kazakhstan and Kyrgyzstan). This approach made it possible to identify the strengths and weaknesses of national financing mechanisms within a regional context.

Empirical Analysis

Statistical data from the Forestry Agency of Uzbekistan, as well as projects financed by ADB and GEF, were analyzed to assess: the share of state budget allocations, the volume of international grants and loans, the level of private sector participation, and the formation of revenues derived from industrialized forest resources.

This empirical assessment provided quantitative support for evaluating the effectiveness and diversification of financing sources within the forestry sector.

3. Result

Table 1 below presents the composition of the main financing sources of Uzbekistan's forestry system for the period 2021–2024, including their growth rates and proportional shares within the overall funding structure.

Table 1. Analysis of the Financing Sources of Uzbekistan's Forestry Sector and Their Structural Changes.

Financing Source	2021 (bln UZS)	2022 (bln UZS)	2023 (bln UZS)	2024 (bln UZS)	from 2021 until 2024 (%)	Share (2024) %
State budget allocations	98,4	113,2	128,7	140,5	+42,8%	61,3%
Extra-budgetary revenues	13,5	15,4	18,6	22,0	+62,9%	9,6%
Income from leasing forest fund lands	3,2	4,8	7,3	9,1	+184,3 %	4,0%
International donor funds (grants, projects)	-	-	18,7 (mln $)	25,0 (mln $)	-	~10,5%
Special environmental funds and services	6,4	8,1	9,9	11,3	+76,6%	5,0%
Agroforestry and "Yashil Makon" project resources	8,3	10,9	13,4	15,9	+91,6%	6,9%
Total	**129,8**	**152,4**	**196,6**	**224,8**	**+73,2 %**	**100%**

As can be observed from the above table, the total volume of financing is expected to increase from 129.8 billion UZS in 2021 to 224.8 billion UZS in 2024. In particular, extra-budgetary sources especially revenues derived from land leasing and environmental services demonstrate the highest growth rates among all financing categories. Notably, beginning in 2023, the mobilization of international donor funds signifies the commencement of a qualitatively new stage in the financing of the forestry sector [11].

The upward trend of investments in agroforestry and "Yashil Makon" CCIs, suggests that they a re gain ing in importance not only as an environmental tool but also economically and socially. The ratio of state budget support to the total financial sources is decreasing, but overall increase of all types of financial flows signifies improvements in the sector's financial standing and its tendency towards more diversified and sustainable financing mechanisms [12].

Discussion

In evaluating the efficiency of financial resource utilization within the forestry system of the Republic of Uzbekistan, several key economic indicators are of critical importance. These include the volume of revenues, net profit, return on investment (ROI), and the overall profitability level. Through these indicators, the effectiveness of financing can be assessed not only from a quantitative perspective but also in qualitative terms [13].

First, it is necessary to analyze the gross revenue indicators. This measure is determined on the basis of annual income flows. In recent years, revenues generated by the Forestry Agency through project implementation, service provision, leasing activities, and grant funding have increased significantly.

For example, in 2023 the total gross revenue amounted to 320 billion UZS, whereas the projected figure for 2024 has been set at 365 billion UZS. This represents a growth rate of 14.1 percent, reflecting the expansion of activities within the forestry sector and the diversification of financing sources [14].

To determine the net profit indicator, the following formula is applied:

Net Profit = Gross Revenue − Total Expenses

It was determined that in 2023 the total amount of expenditures reached 295.9 billion UZS. Accordingly, based on this figure, the corresponding financial indicators can be calculated:

Net Profit(2023) = 320 billion UZS − 295.9 billion UZS = 24.1 billion UZS

Thus, in 2023 the net profit of the Forestry Agency amounted to 24.1 billion UZS. This indicator signifies the strengthening of the commercial orientation of the sector's activities.

The next important indicator is Return on Investment (ROI). This metric is calculated on the basis of the following formula:

ROI = (Net Profit / Total Investment Volume) × 100

In 2023, the funds allocated from the state budget, amounting to 128.7 billion UZS, are considered as the total volume of investment. Accordingly, the ROI indicator can be calculated on this basis:

$$\text{ROI}_{2023} = \left(\frac{24{,}1}{128{,}7}\right) \times 100 \approx 18{,}7\%$$

Based on the 2024 forecast, this indicator is expected to exceed 20 percent. This suggests that the investments implemented in the forestry sector are yielding positive returns and demonstrating tangible effectiveness.

In addition, the overall profitability level of forestry activities is of considerable importance. The profitability ratio is calculated as follows:

Profitability=($\frac{Net\ Profit}{Total\ costs}$)*100 ≈ 18,7

This indicator for 2023:

$$\text{Rentabellik}_{2023} = \left(\frac{24,1}{295,9}\right) \times 100 \approx 8,1\%$$

Here's the English translation of your text:

This level is considered an above-average indicator for an organization operating in the public sector. In particular, taking into account the large share of expenses related to ecological, social, and regional sustainability, this level of profitability is deemed acceptable.

Based on the analyses above, it can be said that during 2021–2024, positive dynamics are observed in the financial performance indicators of the forestry sector. The increase in net profit, along with the year-on-year growth of ROI and profitability levels, indicates that the sector is developing in a financially sustainable manner. At the same time, this situation confirms the strategic correctness of diversifying funding sources, reducing the burden on the state budget, and attracting the private sector [15].

The structural composition of funding sources in Uzbekistan's forestry sector has significantly changed in recent years. These trends are the result of new strategic approaches aimed at increasing financial independence, reducing the budgetary load, and attracting alternative sources, which are directly reflected in the dynamics of financial resources.

In 2021, the forestry financing system largely relied on centralized sources namely, allocations from the state budget which accounted for approximately 75–80% of total funding. For example, in 2021, the total funding amounted to 129.8 billion UZS, of which 98.4 billion UZS came from the state budget. The remaining 31.4 billion UZS was sourced from extrabudgetary funds, including revenue from leasing forest land (3.2 billion UZS), income from services, environmental fees, and small projects.

This structural ratio gradually balanced over the years. By 2022, extrabudgetary revenues reached 15.4 billion UZS, and income from leases reached 4.8 billion UZS. These changes indicate, on one hand, the efficient use of the forest fund, and on the other, the expansion of the range of services within the system. In particular, the increase in leased land plots led to the emergence of numerous public-private partnership projects.

These tendencies were then exacerbated in 2023. Altogether, the total amount of money received for the year made up 196.6 billion soums, 128.7 bln.of which are from the state budget funds, 18.6-extrabudgetary revenues and ru.leasing income Ï3.'1.lj5" "l'.Ç.lgf..j¶I:J¾þÎï.I Notably, international donor participation emerged. To whit, in 2023, a regular sum of USD 18.7 million was mobilized from GEF (Global Environmental Facility), FAO (Food and Agriculture Organization of the UN) and ADB (Asian Development Bank). This represents the creation of a previously unknown funding vector.
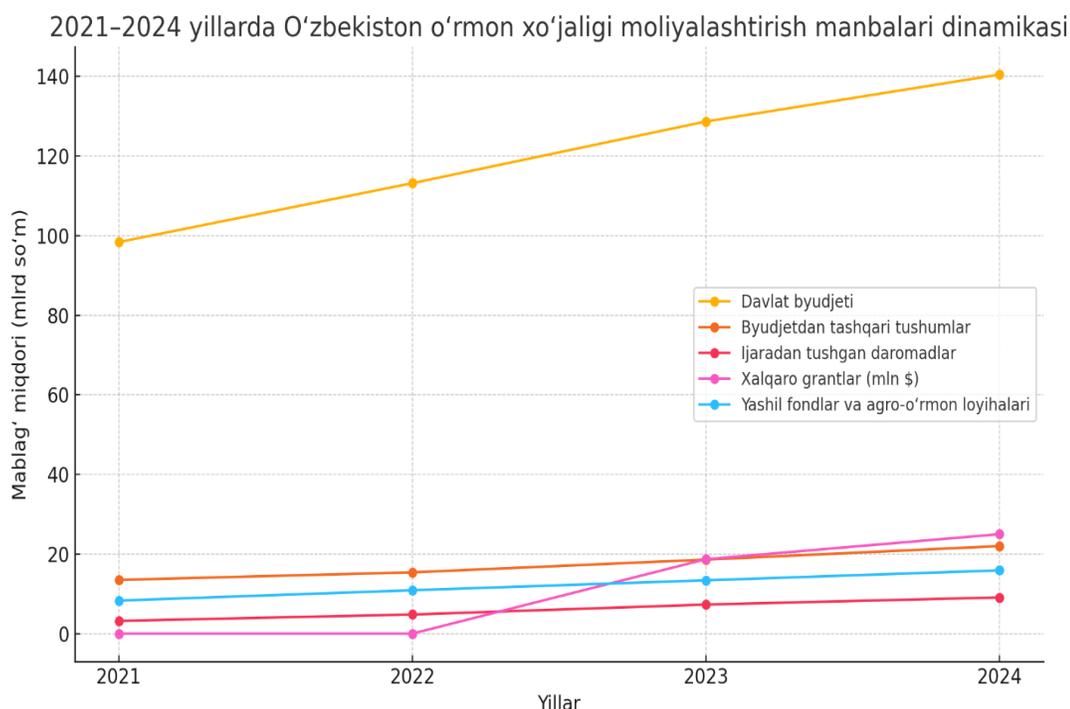
Figure 1. Dynamics of funding sources in Uzbekistan's forestry sector, 2021-2024.

The above graph 1 illustrates the dynamics of funding sources for Uzbekistan's forestry sector from 2021 to 2024. It shows that: the state budget remains the primary funding source; extrabudgetary revenues and income from leases have been steadily increasing year by year; international grants (starting from 2023) have been incorporated into the financial structure; and agro-forestry and green fund projects have maintained a stable growth rate.

5. Conclusion

Expanding funding sources, directing them efficiently, and evaluating their effectiveness in Uzbekistan's forestry sector is of critical importance today. The study indicates that, alongside state budget allocations, grants and loans provided by international financial institutions such as FAO, GEF, and ADB play a significant role in increasing forest areas, restoring landscapes, and ensuring ecological sustainability. At the same time, the insufficient development of domestic financing mechanisms and the low participation of the private sector highlight the need for additional reforms in the sector. It has been identified that a unified indicator system including financial, ecological, social, and institutional metrics is necessary to determine funding efficiency. Analysis of international experience shows that developing modern financing mechanisms in Uzbekistan such as green bonds, carbon credits, and public-private partnership projects can enhance the sustainability of the forestry system. Overall, an effective financing system is a key factor in expanding forests, strengthening ecological security, and improving public well-being.

References

[1] Food and Agriculture Organization of the United Nations (FAO), Sustainable Forest Management and Financing Mechanisms in Central Asia. Rome, Italy: FAO, 2022.

[2]   Global Environment Facility (GEF), Forest Landscape Restoration and Climate Resilience Projects: Uzbekistan Country Report. Washington, DC, USA: GEF, 2023.

[3]   Sh. Ergashev and S. Mamatqulov, "Ways to improve financing mechanisms in the forestry system of Uzbekistan," Journal of Innovative Development of the Republic of Uzbekistan, no. 4, pp. 55–64, 2021.

[4]   Asian Development Bank (ADB), Financing Green Growth and Forest Sector Reforms in Uzbekistan, ADB Technical Report. Manila, Philippines: ADB, 2023.

[5]   R. S. Madatovich, "Aesthetic features of the formation of a healthy environment in the upbringing of children in the family," JournalNX, vol. 6, no. 4, pp. 88–90, 2020.

[6]   R. Madatovich, "The role of civic responsibility in educating youth in a healthy spiritual environment in an information society," Pubmedia Social Sciences and Humanities, vol. 3, no. 1, p. 6, 2025.

[7]   R. S. Madatovich, "The role of preschool education and family education in the raising of a healthy balanced generation," For Teachers, vol. 57, no. 4, pp. 520–523, 2024.

[8]   S. M. Ruzimurodov, "Ethnomadanian and ethnoesthetic aspects of the formation of a healthy lifestyle in society," The American Journal of Social Science and Education Innovations, vol. 3, no. 5, pp. 188–194, 2021.

[9]   A. A. Azizkulov and S. M. Ruzimurodov, "Gazali on the significance of intellect in human activity," Paradigmata Poznani, no. 2, pp. 43–46, 2014.

[10] S. Ruzimurodov and M. Yusupov, "On the origins of philosophical thought in Uzbekistan," in Problems and Prospects of the Development of Science at the Beginning of the Third Millennium in the CIS Countries, p. 253.

[11] H. N. Qahramonovich, "Worthy descendants of the Samarkandians: enlighteners jadids," World Bulletin of Social Sciences, vol. 13, pp. 37–40, 2022.

[12] R. T. Usanov and N. K. Khakkulov, "Iz istorii izucheniya problemy 'Nenasilie'," Ekonomika i Sotsium, no. 6-2 (121), pp. 1406–1413, 2024.

[13] T. Shaymardonov, "Siddiqiy-Ajziy hayoti va ijodining o'rganilishi," Uzbekistan: Yazyk i Kultura, vol. 1, no. 1, pp. 27–39, 2022.

[14] T. A. Shaymardonov, "Sayidahmadxo'ja Siddiqiy-Ajziyning qofiya qo'llash mahorati," Yosh Olimlar Axborotnomasi – Vestnik Molodykh Uchenykh, vol. 1, no. 1, pp. 147–152, 2024.

[15] T. A. Shaymardonov, "The role of Siddiqi-Ajzi in Uzbek jadid literature," American Journal of Social and Humanitarian Research, vol. 1, no. 4, pp. 91–100, 2020.

Internet websites:
1. www.forestdeclaration.org/

2. www.gov.uz/en/eco/news/view/43988

3. www.gov.uz/oz/urmon