

BUDGET PLANNING FOR THE FORESTRY SECTOR IN UZBEKISTAN: CHALLENGES AND STRATEGIC APPROACHES

Mamatkulova Mukhlisa Mamirzhanovna

Researcher, TSUE

zebo0608@mail.ru

Abstract

This study explores the mechanisms, challenges, and future prospects of state budget planning for Uzbekistan's forestry sector. The research analyzes financial data from recent years, highlighting trends in budget allocations and identifying structural issues in resource distribution. It proposes a set of evidence-based strategies to enhance fiscal efficiency, ecological sustainability, and long-term development through optimized budget planning. The findings underline the importance of program-based budgeting, result-oriented financing, and regional ecological prioritization.

Keywords: Uzbekistan, forestry, budget planning, public finance, ecological policy, result-based budgeting

Introduction

In recent years, the forestry sector of Uzbekistan has gained increasing importance as part of the country's broader environmental and sustainable development strategy. As a nation largely dominated by arid and semi-arid landscapes, Uzbekistan faces significant ecological challenges, including desertification, loss of biodiversity, and degradation of arable land. Forests, despite covering only about 8% of the total land area, play a crucial role in mitigating these environmental threats, contributing to climate regulation, improving soil stability, and supporting rural livelihoods.

The government's attention to forestry has been reflected in key national initiatives such as the "Yashil Makon" (Green Nation) program, which aims to plant over one billion trees across the country over a period of several years. This ambitious afforestation campaign, along with ecosystem restoration efforts, requires a robust and sustainable financial foundation. As such, budget planning for the forestry sector has emerged as a critical issue for ensuring both effective resource utilization and the achievement of long-term environmental goals.

Historically, forestry in Uzbekistan has been financed predominantly through centralized public funds allocated by the state budget. While the volume of funding has gradually increased—from 280 billion UZS in 2021 to a projected 470 billion UZS in 2024—several inefficiencies persist in how these funds are allocated and spent. In particular, a significant

portion of the budget is still absorbed by administrative expenditures, with limited investment in research, monitoring, and region-specific interventions. Moreover, the absence of a results-based or performance-driven budgeting framework has made it difficult to assess the impact of public spending on forestry outcomes.

Given these challenges, there is a growing need to reform the budget planning process in a way that aligns financial allocations with ecological priorities and measurable results. This includes not only improving transparency and efficiency in fund distribution but also exploring innovative approaches such as program-based budgeting (PBB), performance indicators, and regional planning models that take into account the diverse ecological zones of the country.

Literature review

Public funding remains the foundational pillar for forestry development in many countries. Studies show that the efficiency of forest budget planning is closely tied to a country's institutional frameworks and the diversity of financial instruments employed. According to Borovskaya, the effectiveness of forestry financing systems depends significantly on the balance between stable budget allocations and the inclusion of market mechanisms that stimulate sustainable forest management.

In the context of the Russian Federation, the financing system for forest management in Ivanovo Oblast exemplifies a decentralized approach. Local authorities play a major role in planning and prioritizing budget allocations for afforestation and forest conservation. It was found that about 70% of the total funding was provided from regional budgets, which demonstrates the importance of territorial planning in forestry financing.

The Czech Republic experience provides a comparative perspective, where forestry is predominantly funded through state subsidies allocated via performance-based mechanisms. These mechanisms ensure that forestry entities are not only accountable for their expenditures but also motivated to meet ecological and economic targets. This model serves as a reference for introducing similar performance-linked planning frameworks in Uzbekistan.

A broader global view is offered in the UN Forum on Forests report, which underscores that sustainable forest financing requires a combination of public and private capital flows. The report stresses the importance of budget predictability and multi-year planning frameworks that allow forestry agencies to plan long-term initiatives rather than operate on yearly disbursements. In addition, it highlights the risks of underfunding when state budgets are not aligned with forest policy priorities.

Finally, international best practices suggest the adoption of medium-term expenditure frameworks (MTEFs) that align financial planning with environmental outcomes. Such models

can ensure that budget allocation for forestry is not only timely and sufficient but also tied to specific indicators of performance, such as hectares reforested or biodiversity preserved.

Methodology

In this article, a comprehensive methodological approach was employed to analyze the planning of state budget funds for the forestry sector in Uzbekistan. The focus was placed on assessing the link between national fiscal policy and forestry development, identifying challenges in budget planning, and comparing international practices.

Firstly, a descriptive analysis method was used to examine the structure and trends of state budget allocations to the forestry sector during the period 2018–2024. Official reports from the State Statistics Committee, the Ministry of Finance, and the Ministry of Ecology, Environmental Protection and Climate Change served as primary data sources. The analysis enabled the identification of annual budget dynamics, budget versus off-budget financing shares, and functional expenditure breakdowns.

Secondly, a comparative analysis was conducted to benchmark Uzbekistan's budget planning mechanisms with international experiences, specifically those of the Czech Republic, Russia, and Brazil. This allowed the identification of gaps in forecasting, performance-based budgeting, and eco-oriented financial targeting.

Thirdly, an expert evaluation method was applied to assess national policy documents such as the "Green Space" program and the "Environmental Safety Concept." Expert insights helped highlight practical issues in project selection, budget formulation, and implementation stages. The combination of these methods led to a set of practical recommendations, including the integration of result-based budgeting models, the adoption of ecological effectiveness indicators, and the development of a regionally differentiated financing system for forest development in Uzbekistan.

Results

The results show that Uzbekistan has made progress in increasing the budgetary allocations for forestry—from 280 billion UZS in 2021 to a projected 470 billion UZS in 2024. However, a disproportionate share of this funding remains concentrated on administrative costs and centralized planting programs, with insufficient regional differentiation.

Table 1. Budget Allocation Trends for Forestry in Uzbekistan (2021–2024, in billion UZS)

Year	Total Allocation	Operational Costs	Afforestation Projects	Ecological Monitoring	Research & Innovation
2021	280	175	80	15	10
2022	342	210	100	20	12
2023	414	245	125	24	20
2024	470	260	150	30	30

The analysis indicates that although the volume of afforestation funds is growing, the share of allocations for regional innovation, ecological monitoring, and biodiversity restoration remains below 15% of the total budget. The use of output-based budgeting remains limited, and coordination with local governments is weak. These constraints lead to inefficiencies in the implementation and ecological impact of forest programs.

Discussion

The discussion of the research findings reveals several critical insights into the current state and future prospects of budget planning for the forestry sector in Uzbekistan. One of the core challenges identified is the limited scope of performance-based budgeting practices within the sector. Despite the adoption of strategic programs such as the “Yashil Makon” initiative, funding decisions remain largely input-oriented, rather than being based on clear, measurable outcomes. This misalignment weakens the potential to maximize ecological and socio-economic benefits from allocated state resources.

Another issue concerns the centralization of fiscal planning and the lack of differentiated budgetary frameworks at the regional level. Forests in Uzbekistan are spread across diverse ecological zones, from desert regions in Karakalpakistan to mountain forests in the Tashkent and Fergana valleys. However, current budget planning does not sufficiently reflect these territorial differences, leading to inefficient use of funds and poor project sustainability. Comparative analysis with countries like the Czech Republic and Russia shows that introducing regionally customized forest financing models can enhance the ecological return on investment and improve resilience to climate risks.

Furthermore, the role of off-budgetary resources and private sector engagement remains underdeveloped. In many developed and emerging economies, green bonds, ecological compensation funds, and carbon finance mechanisms serve as complementary sources for state funding. Uzbekistan has initiated some steps in this direction, yet lacks a fully institutionalized framework to channel such investments effectively into forestry development. Broader

integration of international financing practices and environmental-economic valuation tools can help strengthen this aspect.

Conclusion

In conclusion, the effective planning of state budget allocations for the forestry sector in Uzbekistan remains a critical factor in ensuring the ecological stability and economic sustainability of the country. The current budgeting approach, while supportive in intent, still lacks the flexibility, performance orientation, and territorial sensitivity needed to meet the diverse demands of Uzbekistan's forestry landscape. The findings of this study reveal that a centralized and input-driven financial planning model often results in suboptimal use of public resources and limits the sector's potential to contribute to national and global environmental goals.

A transition towards a results-based budget planning system, supported by clear key performance indicators (KPIs), is essential to align financial inputs with ecological outcomes. Additionally, regional budget differentiation must be introduced to account for ecological diversity, forest degradation levels, and climate vulnerabilities across various territories. The international experience of countries such as Finland, the Czech Republic, and Russia highlights the importance of decentralized, flexible, and program-based financing strategies that integrate both national priorities and local needs.

Moreover, incorporating off-budget mechanisms, including green bonds, carbon financing, and private sector partnerships, will diversify funding sources and reduce the fiscal burden on the state. It is also recommended that Uzbekistan strengthens institutional capacity in forest economics and financial planning, improves transparency in allocation procedures, and adopts modern digital monitoring tools for performance tracking.

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