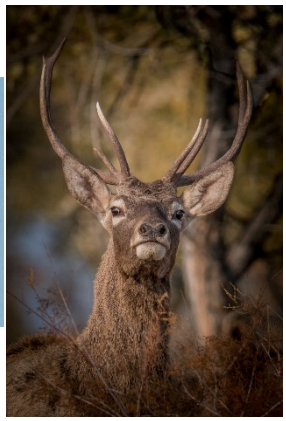
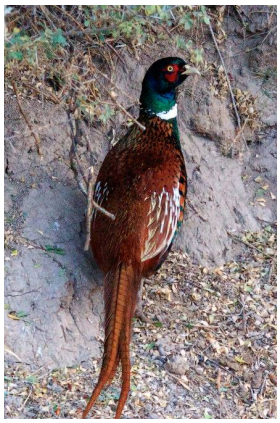
BIOFIN
The Biodiversity Finance Initiative

UZBEKISTAN

BIODIVERSITY EXPENDITURE REVIEW

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Biodiversity Finance Initiative (BIOFIN) is a global partnership addressing the biodiversity finance challenge in a comprehensive manner. The Initiative provides an innovative methodology enabling countries to measure their current biodiversity expenditures, assess their financial needs in the medium term and identify the most suitable finance solutions to bridge their national biodiversity finance gaps.

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Acronyms and Abbreviations

BER	National Biodiversity Expenditures Review
BIOFIN	UNDP Biodiversity Finance Initiative
CBD	UN Convention on Biological Diversity
ESG	Environmental, Social and Governance
FA	Forestry Agency
FAO	Food and Agricultural Organization
Fund	Fund for Ecology, Environmental Protection and Waste Management under the Ministry of Ecology, Environmental Protection and Climate Change
GBF	Global Biodiversity Framework
GEF	Global Environment Facility
GIZ	German International Cooperation Agency (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH)
JICA	Japan International Cooperation Agency
KOICA	Korea International Cooperation Agency
MEF	Ministry of Economy and Finance
Ministry of Ecology	Ministry of Ecology, Environmental Protection and Climate Change (former Ministry of Natural Resources - former State Committee for Ecology and Environmental Protection)
MoA	Ministry of Agriculture
MoW	Minister of Water Resources
NBSAP	National Biodiversity Strategy and Action Plan
ODA	Official Development Assistance
PIR	National Biodiversity Finance Policy and Institutional Review
PPP	Public-Private Partnerships
UNDP	United Nations Development Program
USAID	The United States Agency for International Development
Uzhydromet	National Hydrometeorological Agency

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Executive Summary

This report provides a comprehensive analysis of public biodiversity expenditure in Uzbekistan over the period from 2020 to 2022 and presents future expenditure scenarios for the years 2024 to 2028. This analysis covers an atypically short timeframe, primarily due to the unavailability of data from earlier years. Introducing a budget tagging system in the future would not only rectify this data scarcity but also streamline and simplify subsequent analyses, ensuring more comprehensive assessments over extended periods.

Review results revealed that environmental expenditures account for less than 1.62%, and direct biodiversity expenditure constitute only 0.5% of total public expenditure in Uzbekistan. Accordingly, a significant amount of direct biodiversity expenditures was allocated through the Forestry Agency under the Ministry of Ecology, Environmental Protection and Climate Change (Ministry of Ecology) for afforestation and forest upkeep in the country.

As for the Extra-budgetary Fund of the Ministry of Environment, it is noted that revenues from fines, fees and compensation for the use of natural resources have decreased by almost half from USD 5.96 million in 2020 to USD 3.08 million by 2022. The revenue distribution across regions underscored the dominance of regions like Karakalpakstan and Tashkent city in generating revenues, while regions in the Fergana valley lagged.

A significant portion of the biodiversity conservation efforts in Uzbekistan over this period was bolstered by international entities, including but not limited to the United Nations Development Program (UNDP), The German International Cooperation Agency (GIZ), The Global Environment Facility (GEF), and The United States Agency for International Development (USAID). Between 2020 and 2022, projects and initiatives funded by these organizations, such as the Sustainable Development of Mountain Ecosystems, played a crucial role in conservation endeavors.

One of the central aspects highlighted in the report is the alignment of Uzbekistan's biodiversity expenditure with the Aichi strategic goals. The current system, however, lacks a biodiversity tagging mechanism in public finance, which poses challenges in directly associating expenses with specific international or national commitments.

Looking into the future, the report develops three potential expenditure scenarios for biodiversity conservation:

1. In the “business as usual” scenario, biodiversity expenditure remains largely static, adjusting only for inflation.
2. The “optimistic” scenario envisions an uptick in expenditure, propelled by the intensification of national strategies and bolstered international cooperation.
3. The “reduction of public spending” scenario forecasts a potential decline in public biodiversity expenditure, stemming primarily from structural changes in the natural resources management system.

Based on these findings, several recommendations are posited. Firstly, the integration of a biodiversity tagging system in public finance can significantly enhance transparency and alignment with international and national commitments. Secondly, the country stands to benefit from bolstered international collaborations, both in terms of financial and technical support. Thirdly, exploring models like Public-Private Partnerships (PPP) can pave the way for sustainable and efficient biodiversity conservation strategies in Uzbekistan. Lastly, investing in capacity building,

updating policies, and embarking on public awareness campaigns are paramount for a holistic approach to conservation efforts.

While Uzbekistan showcases a commitment to conserving biodiversity, there's a distinct need for a more calculated approach to resource allocation, international collaboration, and structural reforms to ensure sustainable conservation practices in the coming years.

1. Background information

1.1. Introduction

Biodiversity encompasses the diversity among living organisms across ecosystems and species. It serves as the backbone of functional ecosystems which in turn offer valuable ecosystem services. Uzbekistan's biodiversity plays an indispensable role in sustaining ecosystems. As a result, it drives the provision of ecosystem services such as food, fiber, fodder, regulatory services like carbon sequestration, pollination and watershed protection, cultural values including recreation and heritage, and preservation of habitats and genetic diversity as delineated by IPBES. However, human-induced activities threaten the current global biodiversity state.

The Convention on Biological Diversity (CBD), signed in 1992 in Rio de Janeiro, is an umbrella framework for 195 nations to act on biodiversity. The convention is anchored in three objectives: conservation of biological diversity, sustainable utilization of its components, and the just and equal distribution of benefits derived from genetic resources[1]. During its 10th conference, the CBD introduced the Aichi Biodiversity Targets, a set of 20 global goals to counteract biodiversity loss and emphasize its conservation and sustainable use. Uzbekistan aligned itself with this global commitment, focusing on multifaceted biodiversity issues including ecosystem conservation, restoration of degraded habitats, sustainable natural resource use and bolstering biodiversity education and awareness.

One notable concern raised in the CBD is the financial shortfall for biodiversity. Adequate funding[2] for biodiversity is pivotal both for conserving biological variety and ensuring the sustainable utilization of natural resources.

In response, the United Nations Development Programme launched the Biodiversity Finance Initiative (BIOFIN) to scrutinize biodiversity financial policies and institutions, evaluate biodiversity spending, assess financial requirements for biodiversity and identify financial priorities. The initiative's goal is to enhance biodiversity management in alignment with the CBD framework.

The adoption of Kunming-Montreal Global Biodiversity Framework (GBF), signed by 196 nations on 19 December 2022 and aimed at "taking urgent action to halt and reverse biodiversity loss" and to protect 30% of land and sea area by 2030, has become an important milestone in ensuring the proper focus of the most important part of any development action - financing. The governments, including Uzbekistan, that signed the agreement have committed themselves to make progress towards meeting targets and updating their National Biodiversity Strategy and Action Plans (NBSAPs), which will be accompanied with biodiversity financing plans (BFPs). Among other aspects, BFPs will have to offer a clear set of actions and mechanisms to help close the biodiversity finance gap that is estimated to be more than USD 700 billion a year globally. Thus, with a new international framework combined with a global trend to make Environmental, Social and

[1] Convention on Biological Diversity (CBD); Global Biodiversity Outlook 1; INTRODUCTION - https://www.cbd.int/gbo1/chap-02.shtml

[2] Secretariat of the Convention on Biological Diversity. (n.d.-b). Global Biodiversity Outlook 3. Retrieved from https://www.cbd.int/gbo3/?pub=6667§ion=6673

Governance (ESG) standards mandatory for businesses the global investments in biodiversity are expected to grow rapidly, especially in the private sector.[3]

The biodiversity expenditure analysis, conducted in line with the Biodiversity Finance Initiative (BIOFIN) methodology, necessitates the identification of the primary financial stakeholders. It evaluates the foundational financial allocations for biodiversity classifying them by the CBD standards. Furthermore, the review forecasts future biodiversity expenses based on different scenarios and time periods, juxtaposes expected financing against the actual financial needs to implement the Uzbekistan National NBSAP[4], and computes the financial gap required for biodiversity investment. An integral part of this assessment is engagement and enlightenment of both public and private sectors concerning biodiversity financing.

The primary objectives of this report include:

1. A comprehensive assessment of institutions and financial structures supporting biodiversity management and conservation activities.
2. Analysis of macroeconomic indicators pertinent to biodiversity.
3. Estimation of the foundational funding allocated for biodiversity in Uzbekistan.
4. Formulation of prospective scenarios aligned with current biodiversity expenditure trends.

1.2. Main concepts of biodiversity finance in Uzbekistan

The main concepts used to illustrate biodiversity finance in Uzbekistan are as follows:

State budget: Governed by the Budget Code[5] per the Law on state budget of December 26, 2013, and related Cabinet of Ministers Order on budget standards of December 27, 2016[6] and other normative documents, Uzbekistan budget consists of the republican budget, 12 provincial (viloyat) budgets, the Tashkent city budget, and the budget of the Karakalpakstan autonomous republic.

Budget revenues: The largest share of the state budget's revenues originates from direct and indirect taxes, which collectively account for 70% of total revenues. Resource fees contribute an estimated 15% with the remaining revenue sourced from elements such as property tax, and other sources (source: www.stat.uz).

Budget expenditures: These are the funds allocated to various governmental organizations for predetermined objectives. The current Biodiversity Expenditure Review (BER) report examines budget expenditure, given that the discrepancy between budget allocations and actual spending is minimal. This suggests that spending capacity isn't a significant concern, especially since the allocations themselves were relatively modest.

Biodiversity-related expenditure: This refers to the portion of the budget expenditure earmarked for initiatives that either directly or indirectly support biodiversity.

Actual attributed biodiversity expenditure: As per the BIOFIN methodology, this represents the share of biodiversity-related expenditures that are directly attributed to biodiversity. This approach

[3] Biodiversity Credit – an effective trade-off mechanism. (n.d.). Retrieved from https://www.undp.org/uzbekistan/blog/biodiversity-credit-effective-trade-mechanism
[4] To be revised in 2023 and published in a new revision
[5] https://lex.uz/acts/2304140
[6] https://lex.uz/acts/3083835

differentiates between expenditures directly linked to biodiversity and those that indirectly support it.

1.3. Organization of the report

This report is organized into six chapters.

The first chapter provides background information, introducing the CBD and emphasizing the importance of Biodiversity Finance.

The second chapter focuses on the methodology adopted for the biodiversity expenditure review in Uzbekistan. It defines the scope of the review, presents the conceptual framework, discusses attributed biodiversity expenditure, and highlights any limitations.

Chapter three offers an institutional overview in alignment with the National Biodiversity Finance Policy and Institutional Review (PIR) for Uzbekistan. It examines the financing scheme and discusses macroeconomic indicators related to biodiversity.

Chapter four presents the results from the analysis of the biodiversity budget expenditure.

In chapter five the correlation between biodiversity expenditure and the Aichi targets is investigated. Importantly, the Aichi goals have been superseded by the GBF goals set out in the Kunming-Montreal Agreement adopted in December 2022. However, given that the newly developed and agreed framework targets have not yet been nationalized by most countries, including Uzbekistan, this BER analysis was based primarily on the current version of the NBSAP and its nexus to the Aichi targets. It should also be noted that Uzbekistan joined the GEF GBF Early Action Support Program in April 2023 and is expected to review its NBSAP and related policies during the coming year.

The following chapter introduces potential scenarios for biodiversity finance.

The concluding chapter encapsulates the key findings of the report and puts forth recommendations.

2. Methodology

2.1. Scope of biodiversity expenditure review in Uzbekistan

The review of biodiversity expenditure in Uzbekistan focuses on three primary sources: the government's budget, investments from the private sector, and contributions from international donors. This is illustrated in Figure 1.

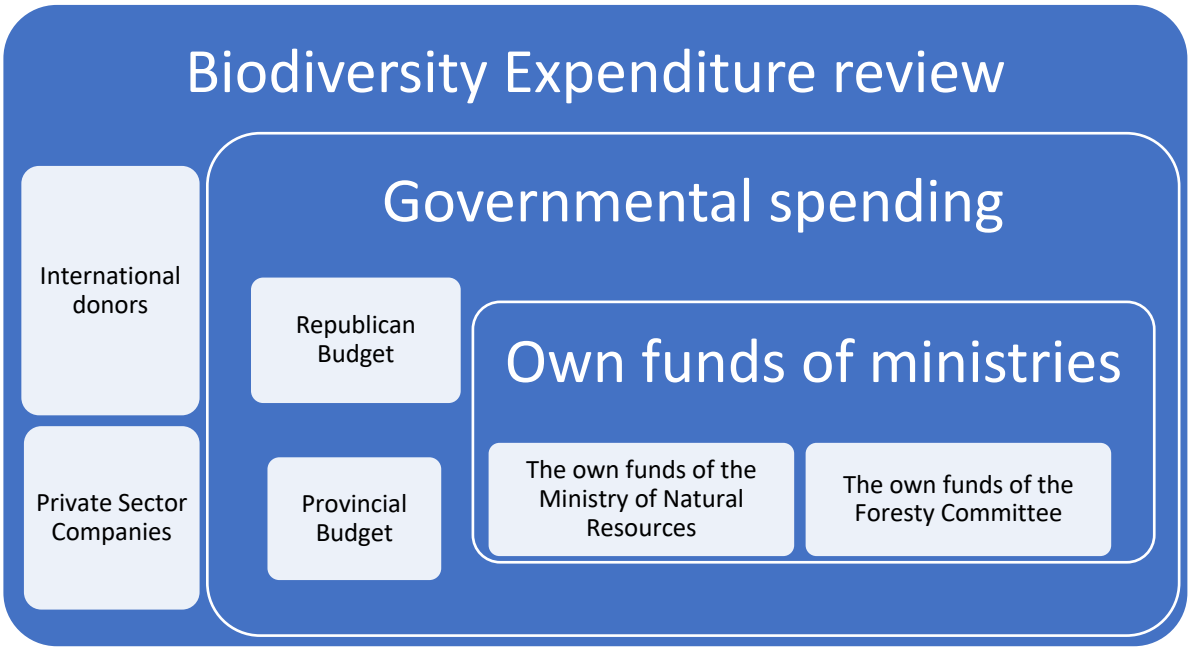


Figure 1.The scope of BER Uzbekistan

2.2. Principles in selecting datasets to be analyzed

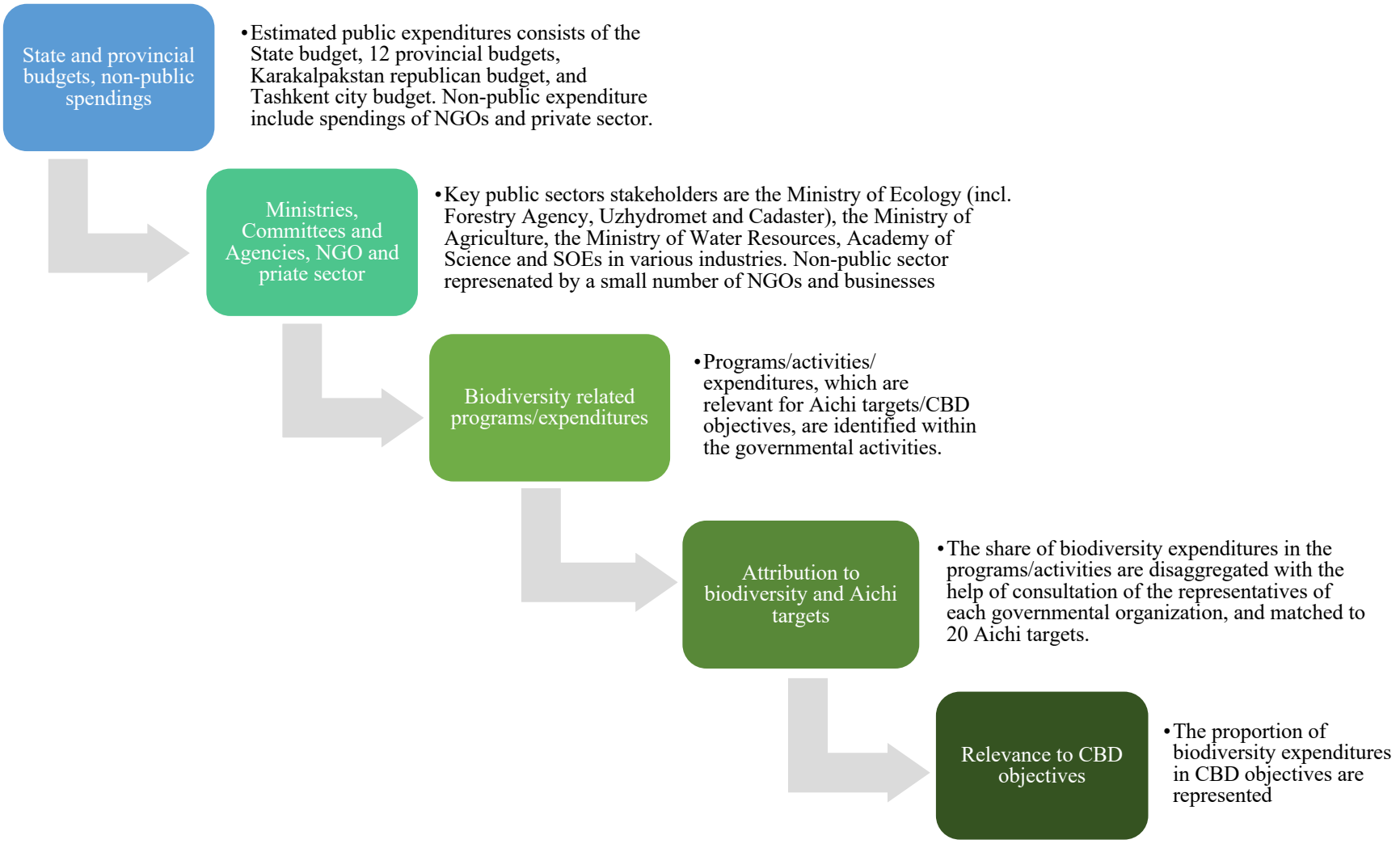
To effectively capture the government's biodiversity-related expenditures, the following guiding principles have been established:

- **Inter-agency data availability:** The data should be readily accessible from the various government agencies engaged in biodiversity-related activities. This approach ensures comprehensive coverage and a holistic understanding of state spending in this area.
- **Temporal data availability:** The data must pertain to the specified review period. This ensures that the analysis accurately reflects the financial outlays linked to biodiversity within the stipulated timeframe.

By adhering to these principles, we aim to provide a thorough and accurate representation of the government's financial commitments to biodiversity.

Note: Currency exchange values used in this report were averaged from the weekly exchange rates published by the Central Bank of Uzbekistan: USD 1 is estimated at 10,064.73 UZS in 2020; 10,623.44 in 2021; and 11,045.70 in 2022.

2.3. Conceptual framework



2.4. Attribution of biodiversity expenditures

Governmental organizations in the Biodiversity Expenditure Review

The present BER includes governmental organizations involved in biodiversity conservation either directly or indirectly. A list of these organizations, all funded by the state budget, is detailed in the conceptual framework. By focusing on these entities, the review aims to provide a holistic financial overview of biodiversity conservation in Uzbekistan.

Identification of biodiversity-related expenditures

In line with the report's conceptual framework, the BER analysis started by gathering data on the annual finances earmarked for each governmental organization. The allocated budget supports various activities of the governmental organizations. During the evaluation phase, each organization's initiatives were scrutinized. Only activities with direct or indirect bearing on biodiversity conservation were incorporated into the BER, ensuring a more pointed assessment.

Attribution to biodiversity expenditures

It is important to acknowledge that in Uzbekistan, notwithstanding the advancement of the NBSAP[7] and other national commitments to meet international goals, there is no distinct system for recognizing biodiversity finance within the public finance and budgeting process. This gap makes it challenging to correlate specific expenditures to national biodiversity objectives.

Therefore, within the BER, expenditures linked to biodiversity were identified in tandem with feedback from representatives of each organization. The process involves classifying biodiversity-related activities as either direct or indirect biodiversity expenditures. The former is evaluated at 100%, while the latter are ascribed percentages ranging from 10% to 90%, depending on their intended biodiversity impact. By adopting this classification, the BER aims to estimate the expenditures portion dedicated conservation, even without a definitive public finance recognition for biodiversity in Uzbekistan (see Annex A – Biodiversity related activities, explanations, and their attribution to biodiversity).

Towards Aichi targets

Uzbekistan's biodiversity expenses are aligned with the Aichi targets, a metric for measuring progress on international biodiversity conservation commitments. For analytical clarity, they have been categorized under the five strategic Aichi goals[8]. This categorization streamlines understanding and offers a snapshot of Uzbekistan's biodiversity-related activities in line with international pledges.

The subsequent section delves into Uzbekistan's biodiversity conservation financing structure and explores associated macroeconomic markers, giving insights into the economic context of biodiversity investments.

Furthermore, the report provides a biodiversity finance profile for Uzbekistan, showcasing financial allocation for conservation and the various sources of funding involved.

[7] To be revised in 2023 and published in a new revision

[8] Secretariat of the Convention on Biological Diversity. (n.d.). Aichi Biodiversity targets. Retrieved from https://www.cbd.int/sp/targets

3. Financing system, macroeconomic indicators and biodiversity finance profile

3.1. Public Spending

Figure 2 illustrates the annual budget cycle in Uzbekistan, which can be broken down into four primary steps: budget preparation, budget review and approval, budget allocation, expenditure.

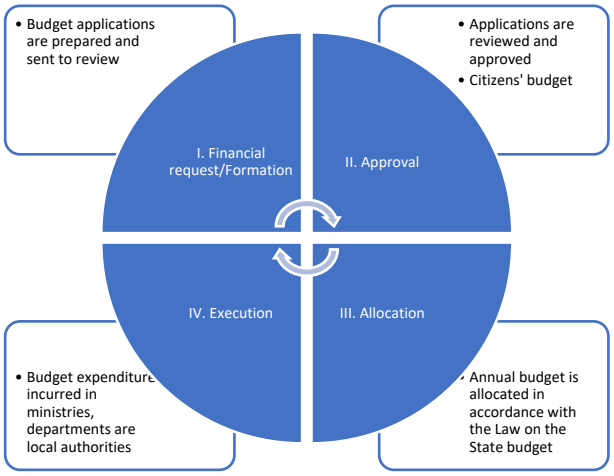


Figure 2. Annual budget planning

1. Budget preparation. Ministries, departments, and local authorities prepare budget applications based on their defined responsibilities as outlined in laws, norms, decrees of the President and of the Cabinet of Ministers. These applications consider short, medium, and long-term periods.

2. Budget review and approval. The Ministry of Economy and Finance (MEF) and the Cabinet of Ministers review the submitted budget applications. Following their assessment, these applications are forwarded to the Accounting Chamber to draft State Budget Law for the forthcoming year. Once drafted, this proposed budget undergoes public discussion under the aegis of the Cabinet of the Ministries, after which it is presented to the Legislative Chamber of the Parliament for approval. The “Citizens' Budget”, a simplified version of the budget document that makes it easier for citizens to understand the budget, is also published.

3. Budget allocation. Upon approval, the state budget is allocated to the ministries, departments, and local authorities to finance specific activities.

4. Expenditure. In the final step, the allocated funds are expended for their intended purposes. In terms of monitoring of budget expenditures, the process is largely centralized and overseen by state bodies, particularly the Ministry of Finance and the Accounting Chamber. The parliament or its relevant committees also play a role in oversight by scrutinizing budget execution.

3.2. Macroeconomic indicators

Analysis on the macroeconomic indicators showed that economy of Uzbekistan has been growing steadily. As an illustrative example, GDP of Uzbekistan was recorded at UZS 605.5 trillion (or USD 60.22 billion per World Bank data) in 2020 and reached UZS 888.3 trillion (or USD 80.39 billion per World Bank data) in 2022 (Figure 3). At the same time inflation has risen from 10.8% in 2021 to 11.4% in 2022. In 2022, Uzbekistan experienced a GDP growth of 5.7%, fuelled by robust remittances, consumer spending, and export activities. Exports, excluding gold, saw a surge

of 21% (in US dollar terms), with textiles, non-ferrous metals, fertilizers, and food products taking the lead, primarily due to a significant export boost to Russia, which rose by 52%[9].

There was a noteworthy rise of 53% in service exports, predominantly in transportation and tourism sectors. This growth is attributed to a three-fold influx of tourists or migrants from Russia and a rejuvenated interest in tourism from neighbouring countries such as Kazakhstan, Kyrgyzstan, and Tajikistan[10].

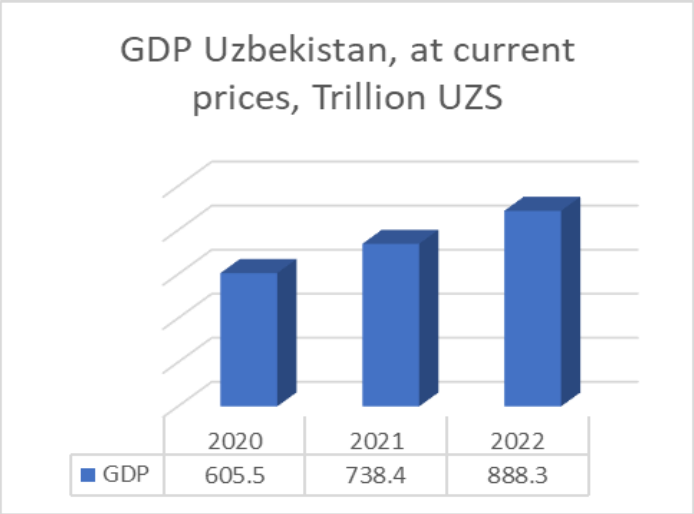


Figure 3. GDP Uzbekistan in 2020-2022, source: the World Bank

The main production sectors contributing to the country's economy are agriculture, forestry, fishing, industry, and the service sector. The service sector holds the highest share, accounting for almost 40% of the gross production. The industrial sector follows, representing approximately 30% of the production. Additionally, the agriculture, forestry and fishing sector make up around one-fourth of the production in Uzbekistan (www.stat.uz).

These figures highlight the relative importance and contribution of each sector to the overall economy of Uzbekistan, providing a context for assessing the macroeconomic environment and its relationship to biodiversity finance and conservation efforts in the country.

Figure 4 displays the state budget's revenues and expenditures over a span of three years, from 2020 to 2022. This data underscores a steady growth in both revenues and expenditures during this timeframe. In 2020, the revenues stood at UZS 132.9 trillion (USD 13.2 billion), which witnessed a significant increase of UZS 68.9 trillion (USD 6.2 billion) by 2022. Concurrently, the expenditures followed a parallel trajectory, rising from UZS 144.1 trillion (USD 14.3 billion) in 2020 to UZS 236.7 trillion (USD 21.4 billion) in 2022[11].

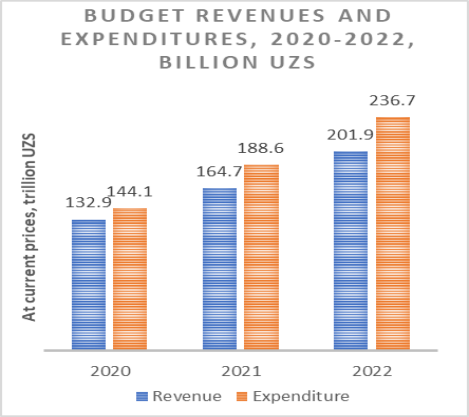


Figure 4. Budget revenues and expenditures

The fiscal deficit declined from 6.1% of GDP in 2021 to 4.2% in 2022, supported by higher revenues (source: World Bank)[12].

[9] Overview. (n.d.). Retrieved from https://www.worldbank.org/en/country/uzbekistan/overview#economy
[10] Overview. (n.d.). Retrieved from https://www.worldbank.org/en/country/uzbekistan/overview#economy
[11] Estimated public expenditure was derived from https://openbudget.uz/home
[12] Overview. (n.d.). Retrieved from https://www.worldbank.org/en/country/uzbekistan/overview#economy

Data illustrated in Figure 4 provides insights into the fiscal trends and conditions of the state budget. This understanding can be instrumental in gauging the allocation and potential resources for biodiversity-related activities in Uzbekistan.

3.3. Biodiversity finance profile

Uzbekistan's public finance system has been in flux, transitioning towards the integration of a medium-term (currently annual) and a results-based budgeting framework. The impetus behind these changes is to bolster accountability among budget stakeholders, improve reporting standards, and foster a transparent and participatory budgeting process, often referred to as "budget for citizens". Concurrently, the Government of Uzbekistan is contemplating the incorporation of green budgeting principles and is probing the feasibility of marking nature-positive expenditures within the budgeting process[13].

Incorporating green budgeting principles is to synchronize budgetary decisions with sustainability objectives thus endorsing investments that yield beneficial environmental outcomes, including those related to biodiversity conservation. Such initiatives could amplify the overall potency and eco-sustainability of Uzbekistan's public finance system.Predominantly, biodiversity financing in Uzbekistan, stemming from both the state budget and extrabudgetary sources, is primarily directed to and managed by the Ministry of Ecology, Environmental Protection and Climate Change (MoE). Yet, it forms a small portion of the total public environmental expenditures. The Fund for Ecology, Environmental Protection and Waste Management, under the aegis of the Ministry of Ecology, Environmental Protection and Climate Change (MoE), stands as the sole extrabudgetary state financial mechanism for biodiversity initiatives. Its revenues emanate from mandated environmental payments and penalties for infringements of ecological regulations. Environmental expenditures account for less than 1.62% (about USD 250 million) of Uzbekistan's total public expenditure, tallying up to an approximate USD 15.5 billion[14] (illustrated in Figure 5). Direct expenditures attributed to biodiversity conservation constitute an even smaller share, not exceeding 0.5% of all annual state expenditures. In 2022, these direct biodiversity expenditures amounted to approximately USD 70 million. A significant portion of this funding was allocated to the State Forestry Agency under the Ministry of Ecology, Environmental Protection and Climate Change (MoE) for afforestation and forest

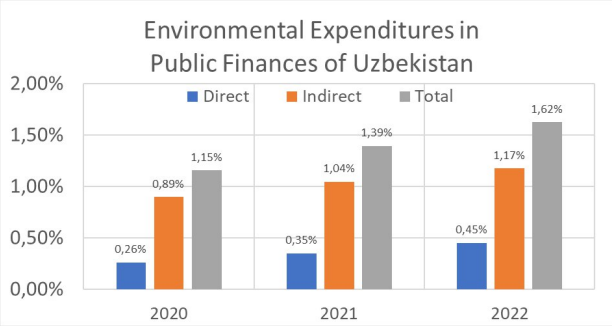


Figure 5. Share of environmental expenditure in public finances

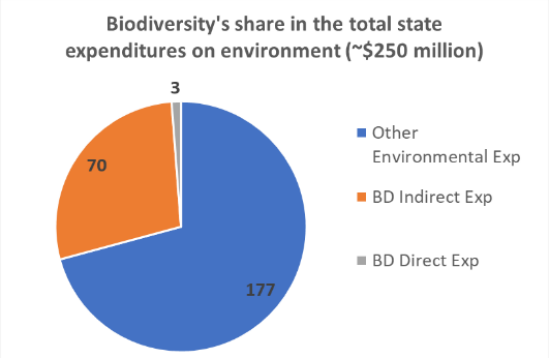


Figure 6. Biodiversity's share in the total state expenditures on environment

[13] Uzbekistan introduces green budgeting and SDG budgeting. (n.d.). Retrieved from https://www.undp.org/uzbekistan/news/uzbekistan-introduces-green-budgeting-and-sdg-budgeting

[14] Estimated total public expenditure was derived from https://openbudget.uz/home

upkeep, while only around USD 3 million was dedicated to tangible biodiversity conservation efforts in the country (illustrated in Figure 6). As a result, the average annual expenditure that the government designates solely for biodiversity conservation equates to approximately 0.02% of its overall public expenditures. These figures shed light on the fiscal commitment to biodiversity conservation against the backdrop of the broader public expenditure context in Uzbekistan.

Currently, the private sector's involvement in biodiversity financing in Uzbekistan is scant, if not entirely absent, owing to lack of a conducive environment. The government is still in the initial phase of establishing robust incentives to galvanize private sector participation. A discernible gap exists in terms of legislation and fiscal policies that could champion the voluntary integration of Environmental, Social and Governance (ESG) standards in domestic business practices on a grand scale.

Consequently, the lion's share of biodiversity-related initiatives and projects are funded by international partners as part of their Official Development Assistance (ODA) provisions. Among over 31 environmental initiatives implemented by the international donors in Uzbekistan between 2017 and 2022, aggregating to USD 563.2 million in value, a mere eight projects, totaling USD 27.7 million, focused on biodiversity[15]. This translates to an average annual funding nearing USD 4.6 million a year, which trumps the state's contribution.

The subsequent section of the report will delineate findings related to biodiversity financing in Uzbekistan, offering a deeper understanding of the financial resources and their allocation for the nation's biodiversity conservation pursuits.

[15] Details are provided in Annex C

4. Findings on the financing of biodiversity expenditure

4.1. State budget

This section provides an overview of the expenditures allotted to state organizations from the national budget. Each organization is represented by two graphs that depict the quantum and nature of expenditures. The first graph contrasts the total funds allocated to an organization from the state budget against its specific biodiversity outlays. These biodiversity expenses are further delineated into direct and indirect costs associated with biodiversity-related activities. To impart a more nuanced comprehension of biodiversity expenses, a secondary graph is incorporated. This visualization dives deeper into the precise facets of biodiversity that are recipients of fiscal allocations within the said organization. Through these graphs, the objective is to present a clear visual comprehension of how funds are earmarked and deployed for biodiversity-related purposes within each state organization. By juxtaposing the total funding against biodiversity-specific expenditures, and dissecting the segmentation of biodiversity expenses, a comprehensive picture of Uzbekistan's fiscal commitment to biodiversity conservation can be achieved.

4.2. Biodiversity expenditures of the Ministry of Ecology

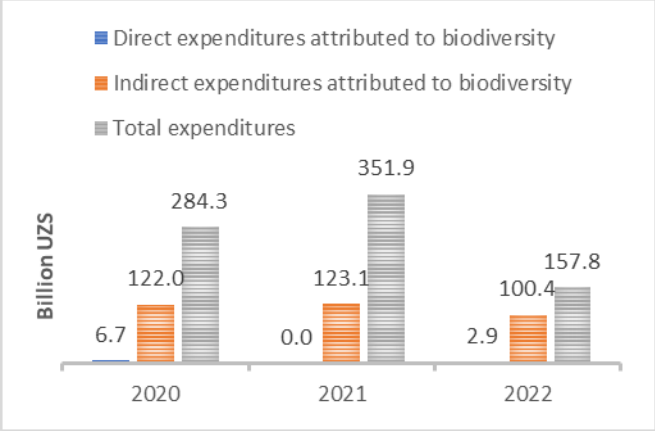


Figure 7. Expenditures of MoE

Figure 7 illustrates the total expenditures, including indirect and direct expenditures attributed to biodiversity spent by the Ministry of Ecology, Environmental Protection and Climate Change (MoE). In 2020, approximately UZS 6.7 billion (USD 0.7 million) was directly allocated to biodiversity conservation. This amount is dwarfed almost 18-fold by the indirect expenditures tied to biodiversity and is nearly 40 times smaller than the ministry's total expenditures. It is salient to note that primary conservation initiatives were not funded in 2021. Yet, the indirect conservation expenditures remained consistent with 2020 levels. An additional surge of UZS 65 billion (USD 6.1 million) was allocated from the state budget to the ministry in 2021 as state subsidies to fund prioritized activities. However, 2022 witnessed a considerable truncation, slashing the ministry's budget allocation by roughly half. These changes are specifically related to the privatization and commercialization of protected natural areas. With regards to conservation commitments in 2022, the direct and indirect expenditures stood at UZS 2.9 billion (USD 0.26 million) and UZS 100.4 billion (USD 9.1 million) respectively. These statistics underscore the oscillatory nature of fiscal commitments to biodiversity within the Ministry of Ecology over this triennial span. The fluctuations in budget allocation and changes in funding priorities are reflective of structural reforms and the ministry's recalibrated focus on protected natural areas.

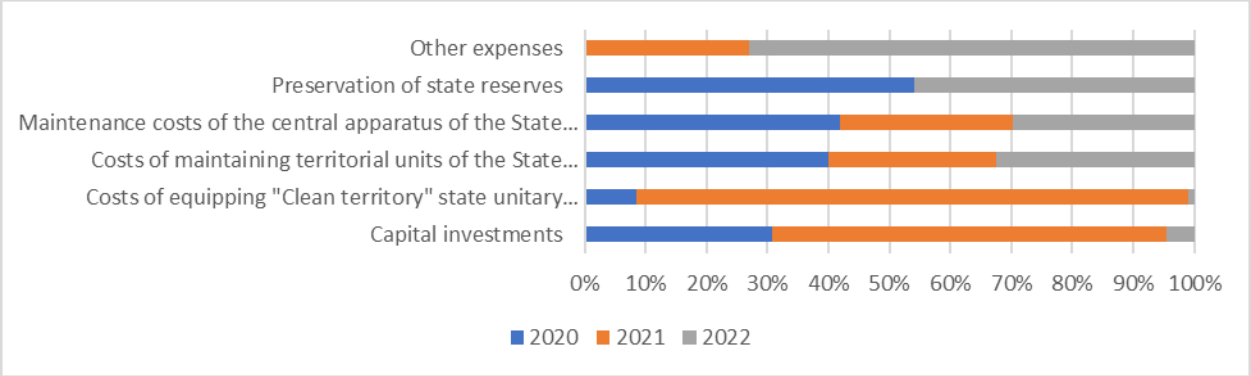


Figure 8. Direct and indirect expenditure for biodiversity

Detailed expenditure categorizations related to biodiversity conservation within the Ministry of Ecology over a three-year period are presented in Figure 8. Costs associated with preserving state reserves are categorized as direct expenditures, specifically for conservation of biodiversity within protected natural areas. Meanwhile, other types of expenses, including capital investments, maintenance costs for territorial units and the ministry's central apparatus, the "clean territory" (waste management) program and other expenditures, are classified as indirect biodiversity expenditures. While these expenses might not be explicitly earmarked for biodiversity conservation, they indirectly bolster biodiversity-related initiatives, playing a part in the broader environmental and ecological health.

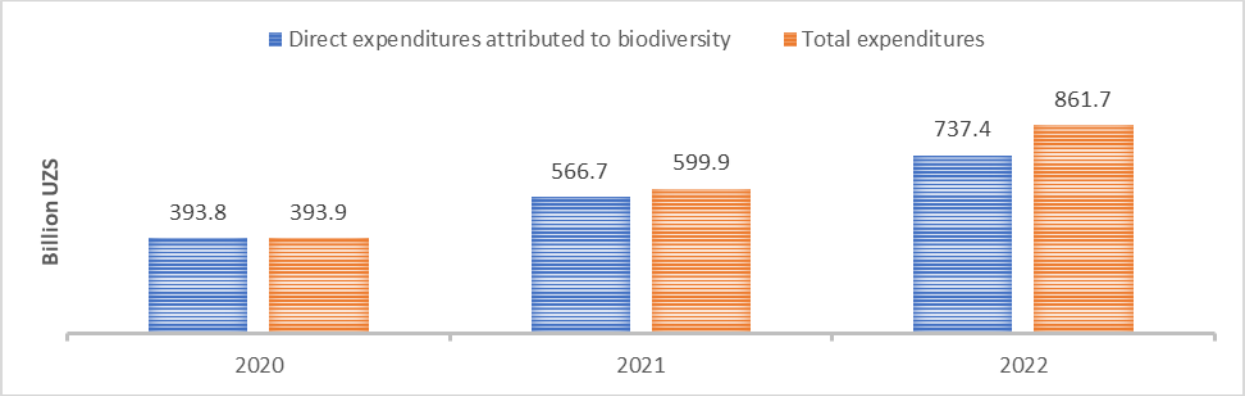


Figure 9. Direct vs total expenditures of the State Forestry Agency

4.3. Biodiversity expenditure of the Forestry Agency

A closer look at the funds allocated to the Forestry Agency (FA) reveals that a significant portion of the agency's activities directly impact biodiversity. In this report, the FA is treated as an independent state authority, even though it was integrated into the structure of the new Ministry of Ecology in early 2023 due to administrative reforms. In 2020, the amount designated specifically for biodiversity within the agency stood at UZS 393.8 billion (USD 39.1 million). This figure witnessed a surge in subsequent years, culminating at UZS 737.4 billion (USD 66.7 million) in 2022, as illustrated in Figure 9. The analysis also highlighted a steady increase in the total funds allocated to the agency during the review period.

The FA's direct biodiversity expenditures primarily cater to specific objectives. These funds are channeled towards the preservation of forests and protected natural areas, capacity development activities, capital investments, and other costs intrinsic to the forestry sector.

It is worth noting that biodiversity expenditure for various bodies and organizations – ranging from professional educational institutions and other enterprises to forestry and conservation initiatives – encompasses a diverse array of expense categories.

These expenditures span multiple facets:

1. Salaries and associated social compensation for personnel engaged in biodiversity-related activities.
2. Operational costs for both residential and non-residential facilities, which cover utilities electricity, water, and sewerage.
3. Transportation expenses specific to biodiversity conservation.
4. Budgeting for educational outreach and extension services, potentially inclusive of biodiversity conservation training programs and workshops.
5. Investments in ICT infrastructure to streamline biodiversity management.
6. Costs for office furniture and equipment necessary for biodiversity-related activities.
7. Expenditures for stationery and other administrative essentials.
8. Allocations for specialised uniforms or protective gear for personnel engaged in biodiversity conservation.
9. Funds dedicated to land management activities, including land surveying and strategic planning.
10. Expenses for topographical, geodetic, and cartographic works instrumental for spatial mapping and analysis.
11. Other miscellaneous expenditures that contribute to biodiversity conservation efforts.

These various expense categories reflect the diverse nature of biodiversity-related activities and the comprehensive approach required to effectively address them. The allocation of funds to these cost categories enables strategic planning and financial management for biodiversity conservation in Uzbekistan.

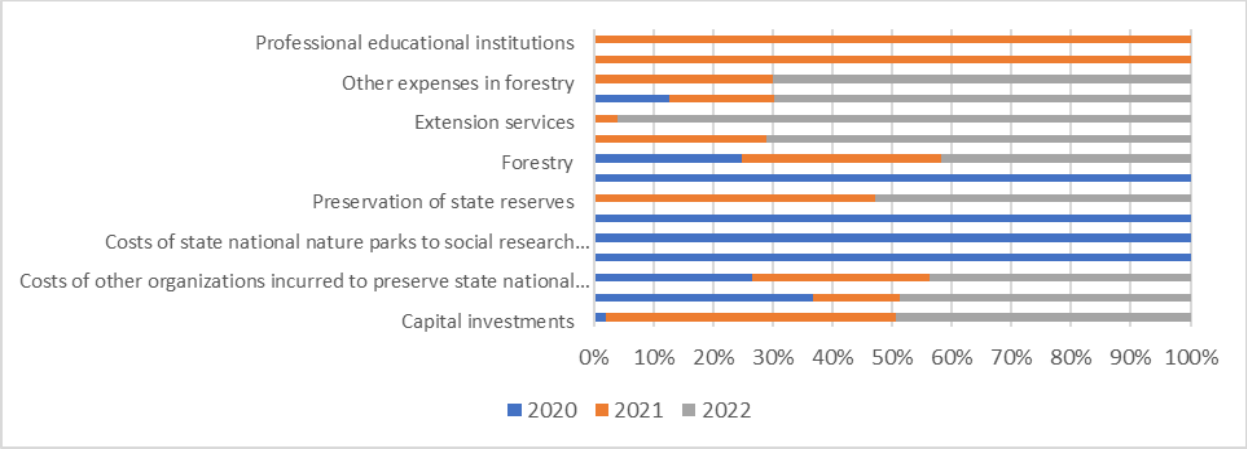


Figure 10. Direct expenditure for biodiversity

4.4. Biodiversity expenditure of the Ministry of Agriculture

The Ministry of Agriculture (MoA) in Uzbekistan indirectly aids biodiversity conservation through designated activities. As illustrated in Figure 11, these activities were funded by allocations of UZS 51 billion (USD 5 million) in 2020, UZS 321 billion (USD 30.2 million) in 2021 and UZS 20 billion (USD 1.8 million) in 2022. A noteworthy aspect of these allocations is the significant financial allocation in 2021, primarily attributed to state subsidies that were allocated specifically for the implementation of water-saving technologies on irrigated agricultural lands. Such an allocation underscores a deliberate strategy to advocate sustainable agricultural practices that subsequently benefit biodiversity conservation.

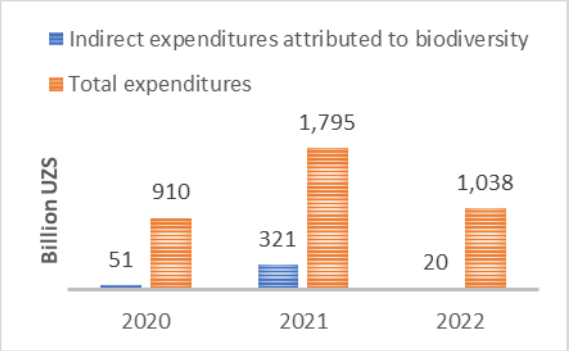


Figure 11. Expenditure of the MoA

Although the MoA's expenditures are not earmarked exclusively for biodiversity conservation, they indirectly fortify biodiversity. This support emerges through activities that emphasize sustainable land and water management, the adoption of conservation agriculture methodologies, supporting agroforestry initiatives, and the amplification of ecosystem services within farming landscapes.

These investments and subsidies are geared towards promoting environmentally responsible agricultural practices. These techniques not only mitigate potential detrimental effects on biodiversity but also pave the way for enduring long-term sustainability of agricultural production in Uzbekistan.

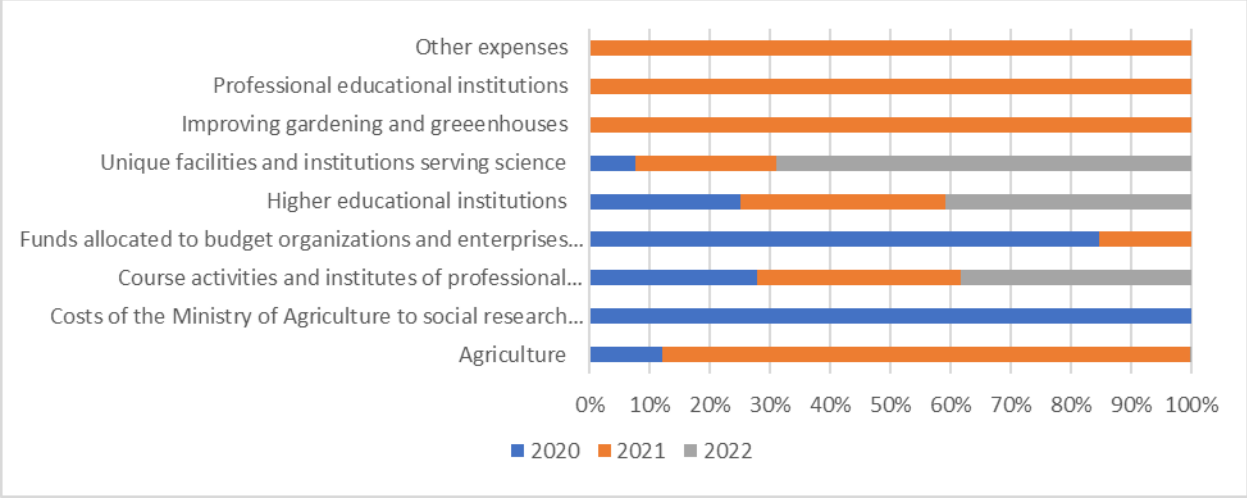


Figure 12. Indirect expenditure for biodiversity

Figure 12 provides a snapshot of the three-year funding trajectory at bolstering biodiversity conservation. In 2020, substantial funding was directed towards social research institutions, budget organizations, enterprises under the MoA, higher educational institutions, and professional

developmental courses. By 2021, the funding emphasis shifted towards agriculture enhancement, garden and greenhouse development, alongside sustained support for professional educational institutions and other agricultural initiatives. In 2022, scientific and educational pursuits in agriculture received financing backing from the state budget.

4.5. Biodiversity expenditure of the Ministry of Water Resources

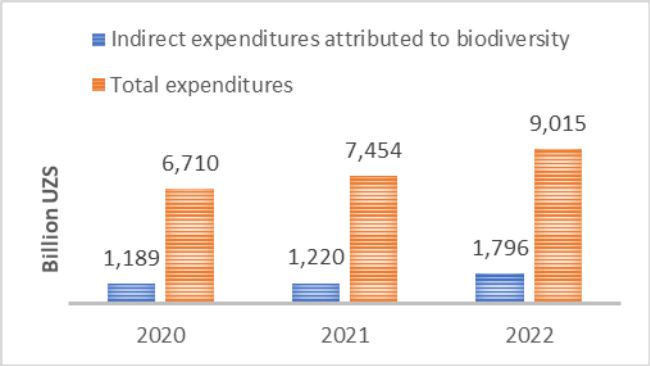


Figure 13. Expenditure of the MoW

The Ministry of Water Resources (MoW) spearheads efforts that indirectly promote biodiversity conservation in Uzbekistan. These endeavors largely revolve around the deployment of water-saving technologies, which subsequently aid the conservation of water in irrigation canals and rivers. These aquatic ecosystems are pivotal habitats for diverse flora and fauna. The ministry's indirect biodiversity expenditures tallied up to UZS 1,189.4 billion (USD 118.2 million) in 2020, 1,220.3 billion UZS (USD 114.7 million) in 2021 and UZS 1,796.1 billion (USD 162.6 million) in 2022 as delineated in Figure 13. This upward funding trajectory over the span of three years underscores the heightened emphasis on water resource management.

Such monetary allocations bolster schemes and projects that champion water conservation, irrigation efficiency, and the sustainable water resource management. Through the induction of water-saving technologies, the ministry's actions indirectly pave the way for the preservation of Uzbekistan's aquatic ecosystems and their inherent biodiversity.

The financial uptrend over these years mirrors the importance placed on water resource management and its integral link to biodiversity conservation efforts.

Figure 14 outlines the cumulative UZS 3,969.7 billion (USD 373.4 million) allocated for water management endeavors over the three years. From this pool, a specific allotment of UZS 233.5 billion (USD 21.9 million) was channeled to bolster irrigated land-related initiatives. These pursuits might encompass infrastructure projects, irrigation systems enhancements, and initiatives aimed at improving water management efficacy. Remarkably, in 2022, a significant portion of the funds, approximating UZS 1,583 billion (USD 143.3 million), was earmarked for facilities and academic institutions dedicated to water management and related research. These investments fortify research, foster technical expertise, and lay the ground for institutions committed to nurturing water management insights and techniques.

Overall, these financial provisions demonstrate the importance given to water management activities, cognizant of their cardinal role in sustaining water resources and the associated biodiversity in Uzbekistan.

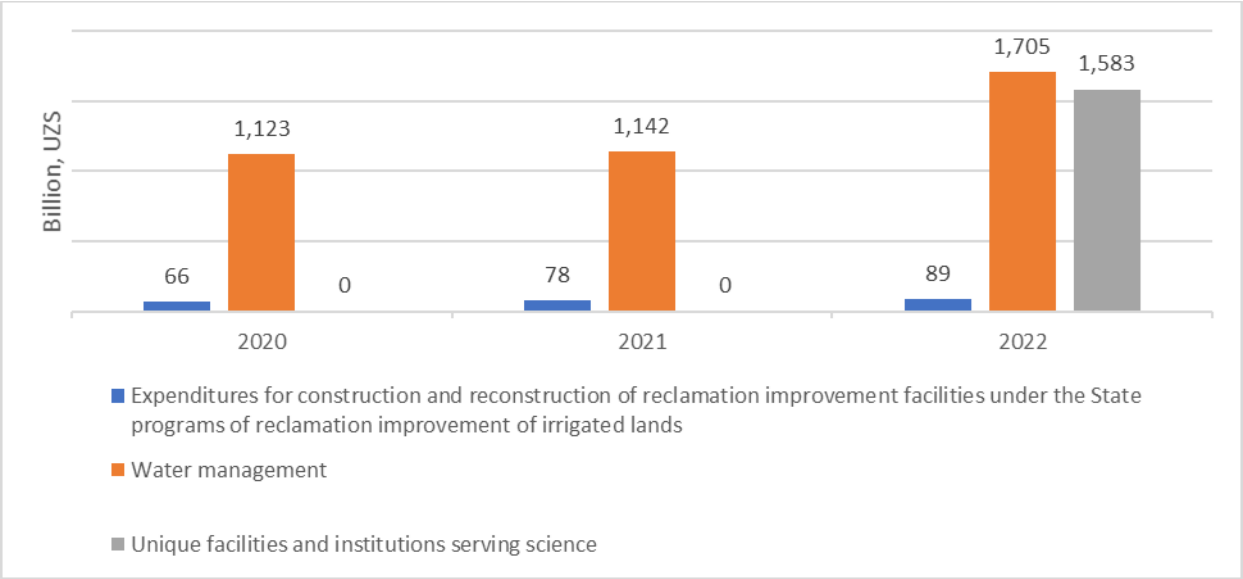


Figure 14. MoW's indirect expenditure for biodiversity

4.6. Biodiversity expenditure of Cadaster Agency

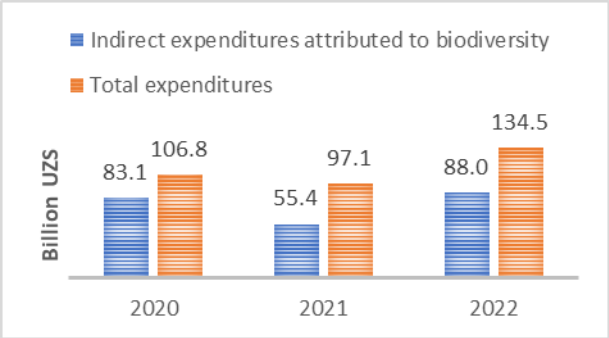


Figure 16. Expenditure of Cadaster Agency

In compliance with the Decree of the Cabinet of Ministers №484, the Cadaster Agency has been entrusted with the task of generating and systematizing cadastral documentation and databases for all protected natural areas in Uzbekistan using GIS technologies. To assess the agency's commitment to this directive, a financial review spanning three years was conducted. The results indicated that over this duration, the Cadaster Agency benefited from a total of UZS 338.4 billion (USD 31.9 million) from the state budget. Out of this amount, UZS 226.5 billion (USD 22 million) was channeled towards activities that serve to indirectly promote biodiversity conservation as illustrated in Figure 15. Year-wise, the agency's indirect biodiversity expenditure was distributed as follows: UZS 83.1 billion (USD 8.2 million) in 2020, UZS 55.4 billion (USD 5.2 million) in 2021 and UZS 88 billion (USD 7.9 million) in 2022. For a more granular understanding, Figure 16 delineates the financial

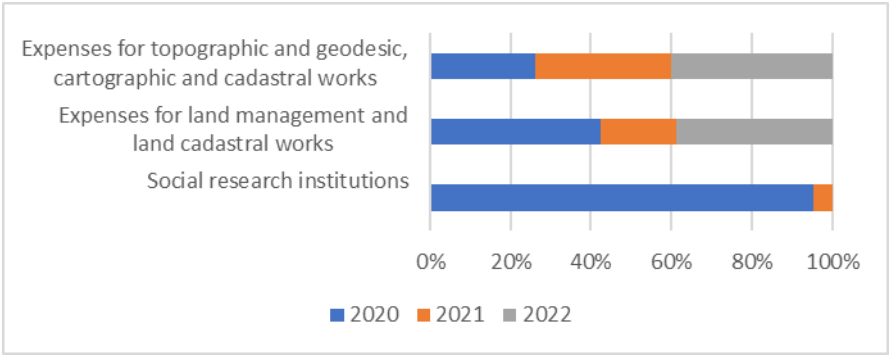


Figure 15. Cadaster Agency's indirect expenditure for biodiversity

distribution within the Cadaster Agency. The funds primarily catered to topographic and geodesic works, cartographic and cadastral tasks, land management and support for social research institutions.

These budgetary decisions highlight the significance Uzbekistan places on formulating and preserving cadastral records and databases to its protected natural areas. The funding not only fosters the creation of these records but also ensures the establishment and sustenance of holistic geospatial information systems. Such systems are quintessential for effective biodiversity conservation and management.

4.7. Biodiversity expenditure of the Uzhydromet Agency

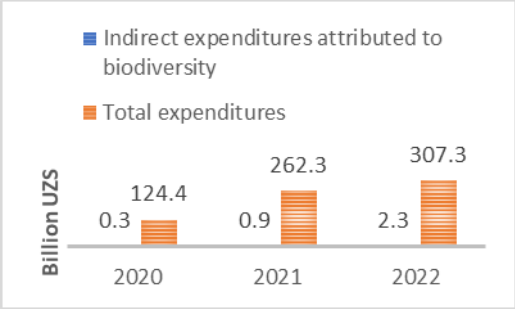


Figure 17. Expenditure of the Uzhydromet Agency

Given the mandate of the Uzhydromet Agency[16], a portion of its research activities indirectly support biodiversity conservation in Uzbekistan. Figure 17 provides an overview regarding the agency's total financial inflow from the state budget over the 2020-2022 period, juxtaposing it with the fraction earmarked for indirect biodiversity contributions. Over these three years, the agency's cumulative expenditure reached UZS 694 billion (USD 65 million). Yet, the portion specifically allocated to biodiversity stood at UZS 3.5 billion (USD 0.33 million). It is important to note that, relative to the agency's overall budget, the biodiversity-related funds are considerably modest. As Figure 18 elaborates, the funds reserved for within the Uzhydromet predominantly cater to scientific and research-driven activities.

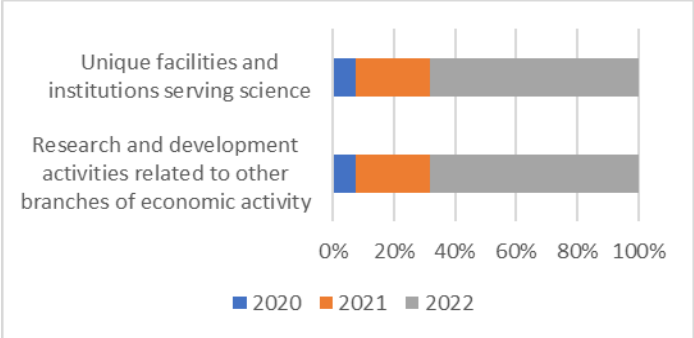


Figure 18. Indirect expenditure for biodiversity

Through Uzhydromet's direct financial commitment to biodiversity initiatives appears restrained, the overarching research and scientific exploration it undertakes carry implicit value for biodiversity in Uzbekistan. Such efforts yield indispensable data and insights that can inform decision-making and policies for biodiversity conservation and sustainable environmental management.

[16] Uzhydromet is a specially authorized state body under the Law on Hydrometeorological Activities, adopted 21.01.2022 (text in Uzbek and Russian can be found at https://www.lex.uz/uz/docs/5819321)

4.8. Extra-budgetary fund of the Ministry of Ecology

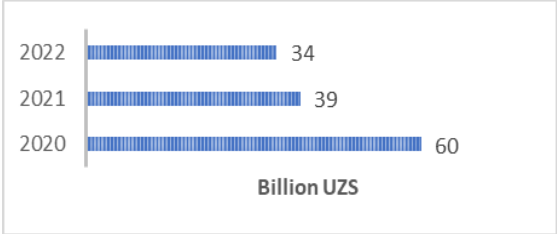


Figure 19. Revenues of extra-budgetary Fund of the MoE

The extra-budgetary Fund of the Ministry of Ecology receives revenues from several sources, notably fees for the use of natural resources in protected areas and green spaces. Additionally, fines and compensations related to breaches in environmental laws also funnel into this fund (See Annex B).

Fugure 19 charts the Fund's revenue trajectory over a three-year period. While 2020 witnessed revenues touching roughly UZS 60 billion (USD 5.9 million), there was a noticeable contraction to UZS 34 billion (USD 3.1 million) by 2022. The revenue slump could be attributed to multiple factors, such as changes in natural resource consumption, enhanced stringency in enforcing environmental regulations, or overarching economic dynamics.

A geographical revenue breakdown is illustrated in Figure 20. This figure underscores that the regions of Karakalpakstan (UZS 73 billion or USD 6.9 million) and Tashkent city (UZS 33 billion or USD 3.1 million) stand as the predominantly contributors to the Fund. In contrast, the Fergana valley, especially in the Fergana (UZS 0.7 billion or USD 66 thousand), Namangan (UZS 0.3 billion or USD 28 thousand) and Andijan regions (UZS 0.6 billion or USD 56 thousand), account for the slenderest slices of the revenue pie.

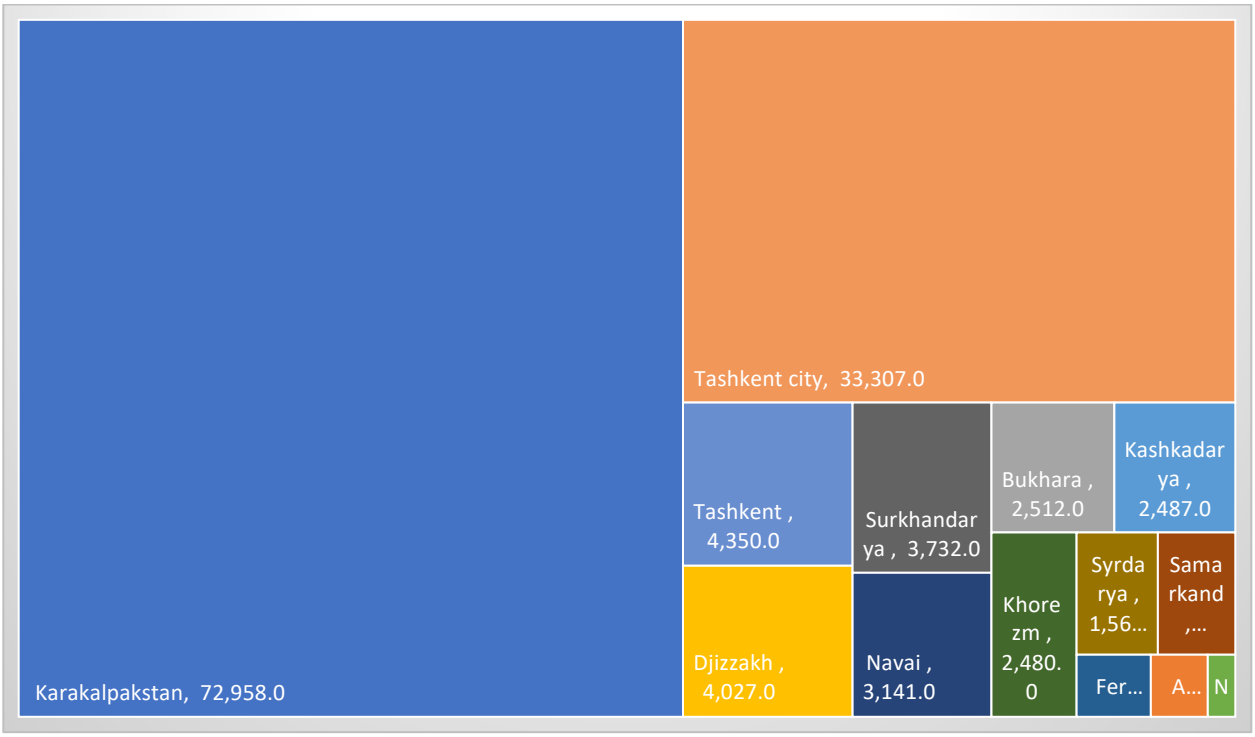


Figure 20. Extra-budgetary Fund revenue distribution across regions, in billion UZS

These regional patterns offer a window into the heterogeneity in natural resource exploitation and the rigor of environmental law enforcement across Uzbekistan's expanses. They spotlight the

differences in revenue generation potential and highlight the need for equitable distribution and management of resources to ensure sustainable and balanced development across the country.

4.9. International donors and Private sector

International donors (UNDP, GIZ, GEF, USAID…)

Between 2020 and 2022, international donor institutions, alongside research and development organizations played a significant role in biodiversity conservation in Uzbekistan through their projects.

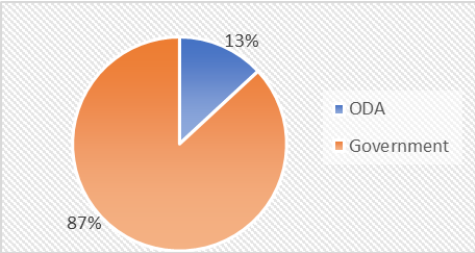


Figure 21. Comparison of ODA to overall Government funding in the biodiversity sector

As evident from Figure 21 biodiversity funding from international donors constitutes 13% of the total biodiversity expenditure in the country.

Annex C catalogues the projects undertaken by these international organizations in the country. The United Nations Development Program (UNDP), for instance, allocated USD 4.7 million both directly and indirectly, toward biodiversity conservation through its nine distinctive projects. A salient example is the "Sustainable Development of Mountain Ecosystems" project, geared towards promoting sustainable practices and conservation measures in mountain terrains.

Another initiative, "Assisted Afforestation of Vulnerable Terrains" focuses on supporting afforestation efforts in areas particularly susceptible to degradation or deforestation. The aim is to replenish tree cover and rejuvenate the vegetative landscape, therefore bolstering biodiversity conservation and restoring vital ecosystem services.

Moreover, the "Sustainable management of lakes and wetlands" project emphasizes the holistic management of lakes and wetland ecosystems. This project encompasses a range of activities, from in-depth studies and strategic management blueprints to pragmatic actions safeguarding the biodiversity and ecological integrity of Uzbekistan's lakes and wetlands.

These are projects and initiatives within biodiversity conservation, encompassing habitat revitalisation, community outreach, capacity building, and the sustainable resource management. They fortify the endeavors of Uzbekistan's domestic organizations, fostering biodiversity conservation and embedding sustainable development practices.

The harmonized interplay between international donors, along with research and development institutions, accentuates the symbiotic importance of pooling expertise, fostering innovation, and bolstering resource allocation in tackling the multifaceted challenges of biodiversity conservation.

The Food and Agricultural Organization (FAO) of the United Nations champions biodiversity preservation via its programs. Between 2020 and 2022, the organization rolled out a plethora of projects, incurring an expenditure of USD 6.4 million which either directly or indirectly bolstered biodiversity conservation. A representative initiative, the "Sustainable Management of Upland and Lowland Forests" centers around endorsing sustainable forest stewardship, conserving forest biodiversity, and amplifying the reach of ecosystem services across disparate forest terrains.

The “Restoration of Degraded Forests and Other Lands” is poised to rejuvenate and revitalize degraded forestry and other terrestrial expanses, creating ripple effects beneficial for biodiversity conservation. Restoration activities may involve reforestation, afforestation, and other interventions to enhance habitat quality and ecological vigor.

Moreover, the “Addressing Degradation in Drylands” initiative by the FAO potentially channels efforts toward combating land degradation in dryland ecosystems. This project might entail the propagation of sustainable land management, soil conservation, and enhancing the resilience of dryland ecosystems, which are pivotal for biodiversity conservation in regions with arid and semi-arid climatic conditions.

Several international organizations, including Global Environment Facility (GEF), German International Cooperation Agency (GIZ) and WILO SE have made inroads into various biodiversity conservation projects. Collectively, their financial commitment, both directly and indirectly, to biodiversity conservation approximates USD 23.5 million.

These international organizations with their plethora of projects and funding, inject invaluable expertise, robust resources, and technological prowess, supporting biodiversity conservation and proliferation of sustainable best practices within Uzbekistan.

Private sector

Globally, the private sector is recognized for playing an important role in achieving developmental objectives including those outlined in international biodiversity-related agreements. Many countries such as the Philippines, Vietnam, China, Mongolia etc. actively engage the participation of the private sector in biodiversity financing. According to the statistics, USD 6.6-13.6 billion is spend for biodiversity by public sector[17].

However, in Uzbekistan, private sector financing for biodiversity conservation remains absent. This gap is primarily attributable to the lack of legal framework or mandates for private businesses in this domain. Notably, international companies operating in sectors like chemical or oil and gas – including Lukoil, UzKorGas and Maxam – reportedly allocate funds for environmental remediation and rehabilitation to adhere to international corporate standards.

While there may be minor in-kind contributions from private companies, such as labor assistance or equipment provision for biodiversity protection, there is no legal documentation to validate these contributions. As a result, this analysis does not incorporate biodiversity financing from the private sector.

[17] Ines, R. E. A. L. E. (2020). A Comprehensive Overview of Global Biodiversity Finance.

5. Biodiversity spending towards Aichi targets

This section of the report establishes the linkage between the estimated public biodiversity expenditure in Uzbekistan and international commitments, notably the Aichi strategic goals (refer to Table 1). It is noteworthy that there is no biodiversity tagging system in the public finance and budgeting process in Uzbekistan, that could help correlate specific public expenditures with distinct CBD, Kunming-Montreal Global Biodiversity Framework, or any other national commitments and objectives. Consequently, it is challenging to directly associate specific public costs with commitments and targets specified in the CBD, Aichi targets, or other national directives. In light of this, the estimated biodiversity expenses were matched to the five Aichi strategic goals through consultation with national stakeholders. These goals encompass various aspects of biodiversity conservation, sustainable use, and the fair and equitable sharing of benefits derived from biodiversity.

By consulting with relevant stakeholders, the estimated expenditures were allocated to the Aichi strategic goals in a manner that aligns with the national priorities and objectives for biodiversity conservation in Uzbekistan.

Despite the challenges brought on by the lack of a tagging system, engaging with stakeholders has been instrumental. It ensured that the estimated biodiversity spending are strategically aligned with overarching objectives outlined in international commitments and raised awareness of global biodiversity goals and targets.

Table 1. Aichi strategic goals

#	Strategic goal	Description
1	Strategic goal A	Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
2	Strategic goal B	Reduce the direct pressures on biodiversity and promote sustainable use
3	Strategic goal C	To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
4	Strategic goal D	Enhance the benefits to all from biodiversity and ecosystem services
5	Strategic goal E	Enhance implementation through participatory planning, knowledge management and capacity building

The data representation of public biodiversity expenditures over the three years (as shown in Figure 22) indicates that the lion's share, 66%, is earmarked for Strategic Goal B. This goal focuses on reduction of biodiversity stressors and champions the sustainable use of natural resources. Expenses under this umbrella include water management, agricultural management, and the "clean territory" state program focusing on waste management and pollution mitigation.

Following this, a substantial portion of the public biodiversity expenditures allocated to Strategic goal C which concentrates on uplifting the state of biodiversity via conservation practices. Activities funded under this goal encompass the preservation of state reserves, national natural parks, maintaining territorial units of protected natural areas, and forest conservation within protected areas.

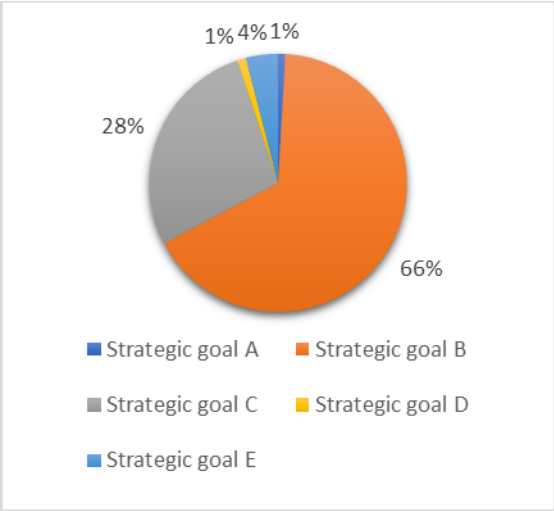


Figure 22. Distribution of public biodiversity expenditures to the Aichi target goals

Strategic goal E, accentuating planning, knowledge management and capacity enhancement for efficient biodiversity conservation activities, absorbs 4% of the public biodiversity expenditures. Costs related to this goal include education, land management, land cadastral works, topographic and geodetic activities, cartographic and cadastral works, as well as research and developmental activities.

Only 1% of the biodiversity expenditures is allocated to Strategic Goal A, offsetting the maintenance costs of the central apparatus of the Ministry of Natural Resources and the Forestry agency. Strategic Goal D, with a similar 1% allocation, covers private sector efforts in championing ecosystem restoration and conservation.

In essence, these allocations highlight how public biodiversity are spread across different strategic goals, reflecting the national focus within the Uzbekistan's biodiversity conservation agenda. By steering funds towards these objectives, Uzbekistan is poised to counter prevailing challenges, advocate sustainable practices, and enhance conservation and management of its biodiversity.

The analysis of Aichi targeted biodiversity expenditure over a three-year period shows that there has been a remarkable increase in public finance allocated to Strategic goal B and C (as shown in Figure 23). On the other hand, the allocated public finance for the other three Aichi target goals has remained unchanged.

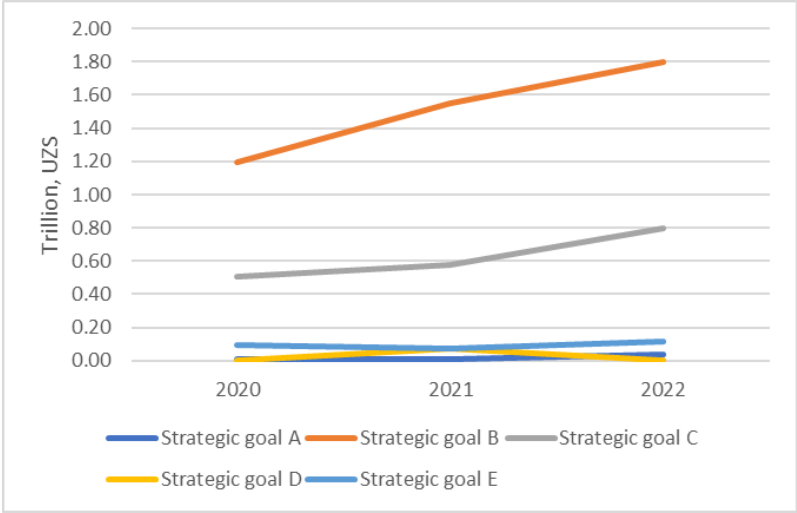


Figure 23. Trend of public biodiversity expenditure targeted Aichi strategic goals

Strategic goal B, which focuses on the reduction of pressures on biodiversity and the promotion of sustainable use of natural resources, has experienced a significant increase in public finance. This reflects the recognition of the importance of addressing the drivers of biodiversity loss and implementing sustainable practices in resource management.

Similarly, Strategic goal C, which aims to improve the condition of biodiversity through conservation practices, has also seen a notable increase in public finance. This underscores the commitment to biodiversity conservation and the recognition of the need for proactive conservation measures.

However, the public finance allocated to the remaining three Aichi target goals has remained unchanged. This may indicate a need for further attention and investment in these areas to effectively achieve the objectives outlined in the Aichi targets.

The analysis highlights the shifting priorities and resource allocation within the national biodiversity agenda, with a stronger emphasis on sustainable resource use and biodiversity conservation. It also underscores the importance of monitoring and evaluating the allocation of public finance to ensure that resources are effectively targeted and utilized to achieve the desired outcomes in biodiversity conservation.

6. Scenario development

Scenario analysis is conducted to demonstrate potential trajectories of future direct biodiversity public expenditures. The main driving forces of scenario projections include reforming policies, international cooperation, and structural changes in natural resource management. These drivers help in forecasting assumed biodiversity expenditure for the period 2024-2028. Figure 24 showcases the forecasted direct biodiversity public expenditures under three distinct scenarios – Scenario A, Scenario B, and Scenario C.

Scenario A. Business as Usual (Baseline Scenario)

The "business as usual" scenario projects biodiversity expenditure based on the figures from the baseline year. Here, biodiversity expenditure remains constant, with any increase in the financial amount merely reflecting currency inflation.

Scenario B. Optimistic Scenario (increase due to national strategies and enhanced international cooperation)

Under this scenario, a surge in biodiversity expenditure is anticipated. The increase stems from the implementation of national strategies, including the National Biodiversity Strategy and Action Plan (NBSAP) (2019-2028)[18], New Uzbekistan Development Strategy (2022-2026) and Measures to Increase the Efficiency of Reforms for the Transition of the Republic of Uzbekistan to a "Green" Economy by 2030.

Moreover, intensification of cooperation with international partners is expected to boost resource mobilization for biodiversity conservation from global development funds and organizations such as the Global Environment Facility (GEF), including the new Global Environment Facility (GEF) hosted Fund. Bilateral collaboration involving entities like the German International Cooperation Agency (GIZ), The United States Agency for International Development (USAID), the Japan International Cooperation Agency (JICA), the Korea International Cooperation Agency (KOICA) will also play a part.

Scenario C. Reduction of Public Spending due to Structural Changes in Natural Resources Management

A decline in public biodiversity expenditure may happen due to structural changes in natural resources management system. The decree issued by the President of the Republic of Uzbekistan on the 31st of May 2023 (№171) titled "Measures for effective organization of the activity of the ministry of ecology, environment protection and climate change", highlighted that certain waste polygons will transition to Public Private Partnerships (PPP). Future shifts in the natural resource management system may further reduce public biodiversity spending. For example, the management of natural protected areas might shift to Public Private Partnerships (PPP) models or joint stock companies. An exemplar of such model is the Ugam-Chatkal state biosphere reserve currently overseen by JSC "Uzbekistan Railways". While Public Private Partnerships (PPPs) are generally beneficial for fostering collaboration across different sectors and advancing advocacy, it can be precarious to entrust protection responsibilities to Public Private Partnerships (PPPs) without first ensuring the necessary expertise, capacity, and infrastructure are robustly established, and ensuring effective monitoring, verification and reporting mechanisms are in place.

[18] To be revised in 2023 and published in a new revision.

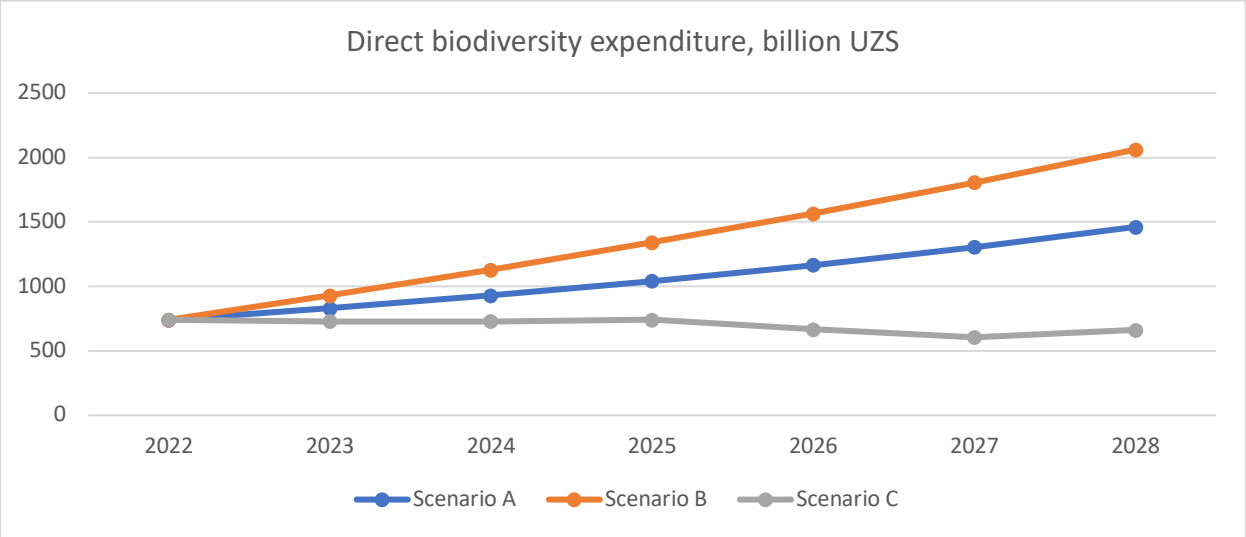


Figure 24. Biodiversity expenditure scenario analysis

Conclusions and Recommendations

Uzbekistan's public expenditure on biodiversity, as explored in various sections, has demonstrated both commitment and potential areas for improvement. While there is a notable allocation towards biodiversity conservation, the discrepancy between overall agency budget and direct biodiversity spending requires attention. The significant involvement of international organizations, including The United Nations Development Program (UNDP), The German International Cooperation Agency (GIZ), The Global Environment Facility (GEF), and The United States Agency for International Development (USAID), among others, is indicative of a collaborative spirit. These international collaborations bring both financial and technical expertise to the table, bolstering Uzbekistan's conservation efforts. The future projections based on different scenarios (from maintaining the status quo to both optimistic and pessimistic alterations in spending) provide a clear roadmap of potential outcomes. They underscore the impact of policy reforms, international cooperation, and structural changes in determining the future trajectory of biodiversity expenditure.

Recommendations:

Recommendation 1. Develop a biodiversity finance tagging system. One of the major challenges identified was the absence of a biodiversity expenditures tagging system in the public finance and budgeting process. Establishing such a system would allow for more precise tracking of expenses related to biodiversity and facilitate alignment with international commitments, such as the Convention on Biological Diversity (CBD) Kunming-Montreal Global Biodiversity Framework targets.

Recommendation 2. Intensify international collaborations. To capitalize on the benefits of international collaboration, Uzbekistan should further strengthen its ties with existing partners and seek new alliances. This will not only increase financial support but also provide exposure to global best practices in biodiversity conservation.

Recommendation 3. Strategic allocation of resources. The scenario development section points towards the importance of strategic resource allocation. Considering the vast majority of resources are currently allocated towards Strategic goal B, it may be worth revisiting the allocations to ensure a balanced approach that equally addresses all strategic goals, including those receiving lesser attention currently.

Recommendation 4. Establish a national Environmental, Social and Governance (ESG) framework. To attract both public and private sector investments in environmental and climate solutions, the government should cultivate an enabling environment. This entails adopting a comprehensive policy and legal structure, complemented by an institutional setup, to boost environmental expenditures. Initially, this system can be mandatory for public entities and optional for the private sector, with a plan to eventually make it obligatory for all businesses, including SMEs.

Recommendation 5. Promote public-private partnerships. There is potential in leveraging Public Private Partnerships (PPP) models for biodiversity conservation. This could be expanded beyond waste management to include other facets of biodiversity conservation, providing a sustainable model that leverages the strengths of both the public and private sectors.

Recommendation 6. Capacity building and awareness. While financial allocation is pivotal, it's equally important to build capacity at the ground level. Regular training programs, workshops, and seminars should be organized for stakeholders involved in biodiversity conservation. Simultaneously, awareness campaigns targeting the general public can foster a culture of conservation.

Recommendation 7. Review and update of state strategies and policies. Given the changing landscape of biodiversity conservation, both globally and in Uzbekistan, it's essential to regularly review and update policies. This will ensure that the strategies employed remain relevant and effective. The unaltered public funding for Aichi target goals A, D, and E suggests that these areas may require amplified focus and resources to fully realize the intentions set out in the Aichi targets. The assessment underscores evolving national priorities in biodiversity, leaning towards sustainable resource consumption and biodiversity preservation. It also emphasizes the need for continuous oversight and assessment of public financial allocations, ensuring the efficient channeling of resources for optimal results in biodiversity conservation.

Annex A

Biodiversity related activities, explanations, and their attribution to biodiversity

#	Organization	Expenditure/Program/Activities	Explanation	Attributed percentage of expenses to biodiversity	Towards Aichi targets
1	Ministry of Natural Resources	Preservation of state reserves	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
2		Costs of maintaining territorial units of the State Committee for Ecology and Environmental Protection of the Rep of Uzb	Financial flow is mainly directed aimed at natural resource management	75%	Strategic goal C
3		Maintenance costs of the central apparatus of the State Committee for Ecology and Environmental Protection of the Rep of Uzb	Financial flow is mainly directed aimed at natural resource management	75%	Strategic goal A
4		Costs of equipping "Clean territory" state unitary enterprises with special machinery and equipment	Financial flow spent for waste disposal purpose. Waste management indirectly supports biodiversity conservation.	10%	Strategic goal B
5		Capital investments	Financial flow is mainly directed aimed at natural resource management	75%	Strategic goal C
6		Other expenses	Half of financial flow is directed to promote natural resources	50%	Strategic goal C
7	Forestry agency	Costs of state national natural parks to develop material and technical base for educational purpose	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
8		Costs of state national nature parks to social research institutions	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
9		Preservation of forests of state national nature parks	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
10		Costs of maintaining national parks	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
11		Costs of other organizations incurred to preserve state national nature parks	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
12		Forestry	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
13		Maintenance costs of the central apparatus of the State Forestry Committee of the Republic of Uzbekistan	Financial flow is fully directed to manage and facilitate forestry	100%	Strategic goal A
14		Other expenses of state national nature parks	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
15		Capital investments	Financial flow is fully directed aimed at forestry management	100%	Strategic goal C
16		Professional educational institutions	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal E
17		Extensive services	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal E
18		Educational other expenses	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal E

19		Preservation of state reserves	Financial flow is fully directed aimed at biodiversity conservation	100%	Strategic goal C
20		Other expenses in forestry	Financial flow is mainly directed aimed at biodiversity conservation	100%	Strategic goal C
21	Ministry of Agriculture	Funds allocated to budget organizations and enterprises within the Ministry of Agriculture of the Republic of Uzbekistan	Financial flow allocated to agricultural organizations aimed at promoting sustainable agricultural production and agro-ecology	25%	Strategic goal B
22		Course activities and institutes of professional development	Financial flow is directed to promote sustainable agricultural, fishery and forestry management	10%	Strategic goal E
23		Agricultural production	Financial flow allocated to farms aimed at promoting sustainable agricultural production and agro-ecology	25%	Strategic goal B
24		Unique facilities and institutions serving science	Financial flow is directed to promote sustainable agricultural, fishery and forestry management	10%	Strategic goal E
26		Higher educational institutions	Financial flow is directed to promote sustainable agricultural, fishery and forestry management	10%	Strategic goal E
27		Costs of the Ministry of Agriculture to higher educational institutions	Financial flow is directed to promote sustainable agricultural, fishery and forestry management	10%	Strategic goal E
28		Professional educational institutions	Financial flow is directed to promote sustainable agricultural, fishery and forestry management	10%	Strategic goal E
29		Improving gardening and greenhouses	Financial flow is directed to promote gardening and greenhouses	25%	Strategic goal B
30		Other expenses	Other expenses of Ministry of Agriculture include expenses of scientific-research and experimental-constructive activities to promote sustainable agriculture, to improve resilience of agro-ecosystem.	25%	Strategic goal B
31	Ministry of Water resources	Water management	Water management program indirectly supports biodiversity and contains following activities: 1) controlling, monitoring and reporting use of water resources in agriculture, industry and other economic sectors; 2) coordinating the introduction and adaptation of innovative water saving technologies into irrigation system in order to ensure sustainable use of water resources in the regions; 3)	25%	Strategic goal B
32		Costs of co-financing projects implemented with foreign investment	Activities focus on sustainable use of water resources jointly funded by foreign investment. These activities indirectly support biodiversity conservation.	10%	Strategic goal B

33		Expenditures for construction and reconstruction of reclamation improvement facilities under the State programs of reclamation improvement of irrigated lands	Financial flow is allocated to monitor systematically the technical condition of the irrigation system channels to ensure their consistent operation	25%	Strategic goal B
34		Priority areas of scientific and technical programs	Financial flow is allocated to research and technical activities focus on integrated water management	25%	Strategic goal B
35	Uzhydromet	Research and development activities related to other branches of economic activity	Financial flow is allocated to research and development activities focusing on weather and climate patterns.	25%	Strategic goal E
36		Unique facilities and institutions serving science	Financial flow is allocated to climatological science	25%	Strategic goal E
37	Cadaster agency	Social research institutions	Financial flow is allocated to support monitoring of plant and animal species in protected areas	75%	Strategic goal E
38		Expenses for land management and land cadastral works	Financial flow is allocated to develop GIS based database of protected areas	90%	Strategic goal E
39		Expenses for topographic and geodetic, cartographic and cadastral works	Financial flow is allocated to develop GIS based database of protected areas	90%	Strategic goal E

Annex B

Names of fees and fines for using the natural resources in the territory of protected natural areas

Fees for special use of biological resources
100% compensation fee for the damage to the flora and fauna of the forest fund lands;
Grazing livestock in the authorized areas of the forest fund, mowing hay in the forest fund plots, placing beehives and boxes in the forest fund plots, collecting firewood and branches without cutting trees and bushes in the forest fund plots, cultural-educational, educational, health promotion from the state forest fund plots , 50% of fees for use for recreational and aesthetic purposes (for cutting down trees and bushes, as well as damage to plant cover during activities not related to forestry management on the lands of the forest fund);
Allocations in the amount of 10% of the funds received for the development funds of forestry, forestry, hunting, specialized forestry, and national nature parks included in the system of the State Forestry Committee of the Republic of Uzbekistan (fees specified in sub-paragraphs "a", "b", "v" of this paragraph are deducted without);
50% of the proceeds from the sale of wood and branches obtained as a result of felling for rehabilitation and maintenance on the lands of the forest fund;
100% of the proceeds from the use of forest fund lands to individuals and legal entities based on a lease agreement;
Income from Certification activities

Annex C

Biodiversity finance from international donors

No.	Name of the organization	Name of the project or its component	Project implementation timeline	Founding States	Budget	Attribution to BD	Biodiversity expenditure
1	The United Nations Development Program (UNDP)	Sustainable Development of Mountain Ecosystems	2017-2022	Uzbekistan	USD 3.87M	50%	USD 1.935M
2	The United Nations Development Program (UNDP)	Developing climate resilience	2014-2022	Uzbekistan	USD 1.91M	50%	USD 0.955M
3	The United Nations Development Program (UNDP)	Sustainable Management of Water Resources in Rural Areas	2016-2021	Uzbekistan	USD 1.16M	30%	USD 0.348M
4	The United Nations Development Program (UNDP)	Supporting an inclusive transition to a “green” economy	2016-2021	Uzbekistan	USD 0.4M	50%	USD 0.2M
5	The United Nations Development Program (UNDP)	Enhancing Multi-Hazard Early Warning System	2021-2028	Uzbekistan	USD 0.8M	30%	USD 0.24M
6	The United Nations Development Program (UNDP)	Promoting Sustainable Rural Development in the Aral Sea	2022-2025	Uzbekistan	USD 0.4M	50%	USD 0.2M
7	The United Nations Development Program (UNDP)	Enhance resilience of local population in Aral Sea	2022-2026	Uzbekistan	USD 0.5M	50%	USD 0.25M
8	The United Nations Development Program (UNDP)	Assisted Afforestation of the Vulnerable Terrains	2022-2023	Uzbekistan	USD 0.5M	100%	USD 0.5M
9	The United Nations Development Program (UNDP)	Sustainable management of lakes and wetlands (PPG)	2020-2021	Uzbekistan	USD 0.1M	100%	USD 0.1M
10	The Food and Agricultural Organization (FAO)	Sustainable management of upland and lowland forests	2018-2023	Uzbekistan	USD 3.3M	100%	USD 3.3M

11	Swiss Agency for Development and Cooperation (SDC)	"National Water Resources Management Project in Uzbekistan" Phase II	2020 -2023	Uzbekistan	USD 4.6M	30%	USD 1.38M
12	European Union	Mutual recognition and harmonization of master's programs in environmental protection	2020	Uzbekistan	USD 1.2M	80%	USD 0.96M
13	Swiss Agency for Development and Cooperation (SDC)	National Water Resources Management Project Phase II	2020	Uzbekistan	USD 7.3M	10%	USD 0.73M
14	World Bank, IDA	Water Services and Institutional Support Project	2020-2027	Uzbekistan	USD 210.9M	10%	USD 21.09M
15	GIZ	Rational use of land and natural resources	2021-2023	Uzbekistan	USD 7.0M	30%	USD 2.1M
16	EBRD	Implementation of the Hadley Agreement on Environmental Remediation Operations for Central Asia (previously uranium remediation and remediation of uranium deposits)	2021	Uzbekistan	USD 7.0M	70%	USD 4.9M
17	KOICA	Investments "Green Renaissance" to overcome the consequences of the Aral Sea crisis in the Republic of Karakalpakstan	2021	Uzbekistan	USD 5.6M	80%	USD 4.48M
18	GIZ	Development of an environmentally oriented economy in the Aral Sea region	2021	Uzbekistan	USD 4.8M	80%	USD 3.84M
19	GEF	Creation and sustainable use of wetlands, lakes and tributary ecosystems along the Aral Sea	2021	Uzbekistan	USD 4.0M	100%	USD 4.0M

20	FAO	Restoration of degraded forests and other lands	2021-2025	Uzbekistan	USD 2.0M	100%	USD 2.0M
21	ADB	Climate Adaptive Water Resources Management in the Aral Sea Basin Sector Project	2021	Uzbekistan	USD 162.7M	10%	USD 16.27M
22	AFD, EU	Upgrade and extension of Sanitation Systems in the cities of Kitob-Shakhrisabz (Kashkadarya provinces) and Karmana (Navoi Province)	2021	Uzbekistan	€105.0M	10%	USD 11.4M
23	European Union	New master's programs in sustainable bioeconomy in Uzbekistan	2021-2023	Uzbekistan	USD 1.1M	70%	USD 0.77M
24	GEF	Improving the conservation and sustainable use of natural resources and biodiversity of the high mountain ecosystems of Uzbekistan	2021-2022	Uzbekistan	USD 6.5M	100%	USD 6.5M
25	GIZ	Project of sustainable development of agriculture (equipment of the laboratory of experimental biology was purchased).	2021	Uzbekistan	USD 0.2M	100%	USD 0.2M
26	FAO	Support for the implementation of inclusive agricultural policies	2021	Uzbekistan	USD 0.1M	70%	USD 0.07M
27	German company WILO SE	Sustainable and resource-saving irrigation in agriculture in Uzbekistan	2022-2025	Uzbekistan	USD 0.3M	10%	USD 0.03M

28	FAO	Naming degradation in drylands	2022	Uzbekistan	USD 2.0M	50%	USD 1.0M
29	GEF	Ecosystem Restoration and Integrated Management in Sustainable Natural Resource Management in Uzbekistan	2022	Uzbekistan	USD 6.8M	100%	USD 6.8M
30	KOICA	Investments of "green recovery" of the Republic of Karakalpakstan to overcome the consequences of the Aral Sea crisis	2022	Uzbekistan	USD 1.8M	70%	USD 1.26M
31	The Future of the US Green World Supported by the US Forest Service	Recreational Infrastructure Development at the Small Forest Board	2022-2023	Uzbekistan	USD 0.4M	70%	USD 0.28M