



UZBEKISTAN

BIODIVERSITY FINANCE POLICY AND INSTITUTIONAL REVIEW



Tashkent 2023



UNDP partners with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in nearly 170 countries and territories, we offer global perspective and local insight to help empower lives and build resilient nations.

Prepared by: Perepada L. and Radjabov T.

Editorial board: Umarova Sh., Somodi Cs., Cumming T.

Data collection: Aripjanov Sh. and Nurjanov R.

Biodiversity Finance Policy and Institutional Review in Uzbekistan. Perepada L. and Radjabov T. Tashkent – 2023, 54 pages

Publication «Biodiversity Finance Policy and Institutional Review in Uzbekistan» was prepared within the framework of the global Biodiversity Finance Initiative (BIOFIN) to inform stakeholders about policy and institutional frameworks for biodiversity conservation in Uzbekistan.

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.

The views set out in this publication are those of the authors and do not necessarily reflect the opinion of UN Development Programme

© UN Development Programme, 2023
All rights reserved

CONTENT

ABBREVIATIONS AND ACRONYMS	3
EXECUTIVE SUMMARY	7
I. INTRODUCTION	8
II. BIODIVERSITY POLICY FRAMEWORK	10
2.1. BIODIVERSITY RELATED LEGISLATION	10
A. UZBEKISTAN’S REGIONAL AND INTERNATIONAL COMMITMENTS	10
B. CHALLENGES IN INFORMATION, SCIENTIFIC SUPPORT, AND PUBLIC AWARENESS FOR BIODIVERSITY CONSERVATION	11
C. BIODIVERSITY IN NATIONAL LEGISLATION	12
D. NBSAP IN ACTION.	14
2.2. OVERVIEW OF THE BIODIVERSITY FINANCE SPECIFIC REGULATIONS	15
III. BIODIVERSITY INSTITUTIONAL FRAMEWORK	17
3.1. OVERVIEW OF UZBEKISTAN’S BIODIVERSITY INSTITUTIONAL FRAMEWORK	17
A. EVOLUTION AND TRANSFORMATION OF THE MINISTRY OF ECOLOGY	17
B. ADMINISTRATIVE STRUCTURE AND BIODIVERSITY MANAGEMENT IN UZBEKISTAN	18
3.2. STAFFING/GENDER EQUALITY	19
3.3. ANALYSIS OF SECTORS’ INSTITUTIONAL ARRANGEMENTS AND IMPACTS ON BIODIVERSITY.	19
A. PROTECTED NATURAL AREAS (PNA)	20
B. FORESTRY	23
C. TOURISM AND RECREATION.....	24
D. FISHERIES	25
E. HUNTING ECONOMY	26
F. WATER RESOURCES.....	26
G. AGRICULTURE.....	27
H. OIL AND GAS SECTOR	28
I. ENERGY	29
J. SCIENCE.....	29
IV. STATE SUBSIDIES AND BIODIVERSITY BUDGETING PROCESSES	30
V. NON-GOVERNMENTAL SECTOR	34
5.1. NON-GOVERNMENTAL ORGANIZATION	34
5.2. INTERNATIONAL ORGANIZATIONS AND PARTNERSHIPS	34
5.3. PRIVATE SECTOR	34
VI. CONCLUSIONS AND RECOMMENDATIONS	36
6.1. CONCLUSIONS	36
6.2. RECOMMENDATIONS	36
ANNEXES	39

ABBREVIATIONS AND ACRONYMS

AS	Academy of Sciences
ASBP	Aral Sea Basin Programme
BD	Biodiversity
BCV	Base calculated value approved on the territory of the Republic of Uzbekistan
BER	Biodiversity expenditure review
CBD	United Nations Convention on Biological Diversity (Rio de Janeiro, 1992)
CCD	United Nations Convention to Combat Desertification in Those Countries Experiencing Severe Drought and/or Desertification, especially in Africa (Paris, 1994)
CEIS	Common Environmental Information System
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, 1973)
EIA	Environmental Impact Assessment
Environmental Fund	Fund for ecology, environmental protection and waste management under the Ministry of Ecology, Environmental Protection and Climate Change.
FAO	International Food and Agriculture Organization
FNA	Financial needs assessment
GEF	Global Environment Fund
GEF SGP	Global Environment Facility Small Grants Programme
GHG	Greenhouse gases
GMOPS	State monitoring of the environment
GDP	Gross domestic product
GVA	Gross Value Added
CACILM	Initiatives of the Central Asian Countries on Integrated Land Management
ICSD	Interstate Commission for Sustainable Development
ICWCA	Interstate Coordination Water Commission of Central Asia
IFAS	International Fund for Saving the Aral Sea
IGCSA	Interstate Council on the Problems of the Aral Sea Basin
IUCN	International Union for Conservation of Nature and Natural Resources

IWC	International Census of Waterfowl
JSC	Joint Stock Company
KPI	Key Performance Indicators
MoA	Ministry of Agriculture of the Republic of Uzbekistan
MoE	Ministry of Energy of the Republic of Uzbekistan
MES	Ministry of Emergency Situations of the Republic of Uzbekistan
MEF	Ministry of Economy and Finance of the Republic of Uzbekistan
Ministry of Ecology	Ministry of Ecology, Environmental Protection and Climate Change (evolved from former Ministry of Natural Resources, and State Committee for Ecology and Environmental Protection)
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
MoT	Ministry of Transport of the Republic of Uzbekistan
MWR	Ministry of Water Resources of the Republic of Uzbekistan
NAP	National Adaptation Plan
NAPCDD	National Action Programme of the Republic of Uzbekistan to Combat Desertification and Drought
NAPCD	National Action Programme to Combat Desertification
NEAP	National Environmental Action Plan
NFP	National Framework Programme
NBSAP	National Biodiversity Strategy and Action Plan
NSSD	National Strategy for Sustainable Development
ONC	Overview National Contribution
PIR	Policy and Institutional Review
PNA	Protected Natural Areas
PPP	Public Private Partnership
RAMCAR	Convention on Wetlands
RCM	Resolution of the Cabinet of Ministers of the Republic of Uzbekistan
RES	Renewable Energy Sources
SCVALD	State Committee of Veterinary and Livestock Development of the Republic of Uzbekistan
FA	Forestry Agency (former State Committee of on Forestry)

SDG	Sustainable Development Goals
SFF	State Forest Fund
SNC	Second National Communication of the Republic of Uzbekistan under the UN Framework Convention on Climate Change
TNC	Third National Communication of the Republic of Uzbekistan under the UN Framework Convention on Climate Change
TPP	Thermal Power Plant
UNEP	United Nations Environment Programme
UNCCC	United Nations Framework Convention on Climate Change
UNDP	UNDP United Nations Development Project
UNESCO	Specialized Agency of the United Nations Educational, Scientific and Cultural Organization
Uzhydromet	Agency of Hydrometeorological Service under the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan
UzRDB	Red Book of the Republic of Uzbekistan
UZS	Uzbek Soum (national currency of Uzbekistan)
UzSPB	Society for the Protection of Birds of Uzbekistan
Uzbekokhotrybolovsportobedinenie	The name of the NGO hunters and fishermen of Uzbekistan
VOC	Volatile organic compounds

LIST OF ANNEXES

Annex 1: BIOFIN Methodology

Annex 2: National Policy Framework for Biodiversity Conservation and Restoration in Uzbekistan

Annex 3. Biodiversity related legislation and financing

Annex 4. Mandates and duties of state bodies of the Republic of Uzbekistan in relation to biodiversity conservation and ecosystem services

Annex 5. Potential impact of economic sectors on biodiversity and ecosystems

Annex 6. Assessment of key institutions, their interaction on the impact on priority drivers and financial instruments of biodiversity (material technical capacity/human resources/knowledge and expertise)

Annex 7. Other subsidies introduced and implemented in Uzbekistan as of August 2023

EXECUTIVE SUMMARY

This Biodiversity Finance Policy and Institutional Review (PIR) has been undertaken within the framework of the UNDP Biodiversity Finance Initiative (BIOFIN) in the Republic of Uzbekistan. The initiative focuses on biodiversity conservation and the enhancement and preservation of ecosystem services, including climate change mitigation and adaptation. The methodological foundation for this report is the BIOFIN Workbook 2018, a tool widely adopted in national BIOFIN programmes worldwide.

The report delves into several areas. Firstly, a synopsis of the prevailing environmental policy, legislation, and institutional arrangements which directly or indirectly affect biodiversity conservation, environmental safeguarding, and related legal enforcement. Secondly, it looks at Uzbekistan's execution of obligations under the CBD and other international biodiversity conservation treaties, and its efforts to expand ecosystem services. Thirdly, the report inspects state subsidies to various sectors and their consequent impact on biodiversity and ecosystem service development. Finally, the report provides for an assessment of the status and trajectories of biodiversity, pinpointing primary adverse trend drivers and proposing mitigation measures.

Despite the evident progress in the creation of contemporary national legislation and strategies that positively influence biodiversity and climate change in Uzbekistan, some major obstacles that remain are:

- Existing **legal framework and laws are fragmented** and occasionally contradictory. Many are outdated and unaligned with contemporary biodiversity trends. The *private sector lacks an enabling environment, clear tenure rights, and effective frameworks for biodiversity risk disclosure.*
- Current economic planning approaches **overlook the integration of biodiversity** conservation and climate change adaptation measures.
- There is a **deficit in public awareness and advocacy**, public cognizance of environmental states, and statistics highlighting the advantages of green economy and ecosystem services.
- Essential areas of **biodiversity conservation are underfunded**, evident in both public finances and the private sector.

Some recommendations derived from the report's findings include:

- **Legislation unification.** Adoption of a consolidated Environmental Code, while ensuring inclusiveness and participation of all stakeholders.
- Creation of **enabling environment** for wider private sector engagement.
- **Accession to the Convention** on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.
- Further **intensification of international cooperation** through strengthened partnership with donors and financial institutions for biodiversity programmes.
- **Economic integration.** Establishment of obligatory **biodiversity targets** for each sector of the economy, reinforced by stricter sanctions for violations.
- Develop and implement **effective communication strategies** to elevate public environmental consciousness and emphasize a green economy.
- Embedding **biodiversity financing mechanisms** into public finances.

The report incorporates tables and charts for detailed insight. It harnesses data from the Sixth National Report of the Republic of Uzbekistan on The Conservation of Biological Diversity (2018), government websites, official statistics, and international institutions such as IMF, OSCE, GEF, and UNDP. All data was authenticated in collaboration with pertinent governmental and non-governmental entities.

I. INTRODUCTION

Biodiversity, essential for human sustenance, provides not only food but also ecosystem services like pollination and pest control. However, recent research¹ shows a concerning decline in biodiversity. Since 1900, local biodiversity in major habitats has decreased by 20%, and numerous species, including amphibians, corals, and marine mammals, are under threat. The loss of a single species can lead to widespread ecological consequences, affecting human well-being and global ecology.

In 2010, 193 nations signed the United Nations' Convention on Biodiversity (CBD), endorsing 20 global biodiversity conservation targets, known as the Aichi Targets. Aichi Target 17 stresses revising National Biodiversity Strategic Action Plans (NBSAPs) - the CBD's core blueprint. However, earlier NBSAP revisions lacked strategies for resource mobilization. Recognizing this, Aichi Target 20 encouraged nations to determine financial needs for the CBD Strategic Plan. The 10th Conference of the Parties (COP10) further emphasized resource mobilization. Since its inception in 2012, the global UNDP Programme "Biodiversity Finance Initiative" – the BIOFIN – promotes financial support required to mobilize financial resources to address biodiversity challenges. It aligns with the CBD, helping countries determine their financial needs, paving the way for more cohesive biodiversity management. The 2022 Kunming-Montreal Global Biodiversity Framework (GBF) marked a significant milestone, pushing for reversing biodiversity loss and protecting 30% of the Earth by 2030. These efforts demand strong financial strategies, as the global financial gap surpasses \$700 billion annually.

Uzbekistan's 2021 inclusion in BIOFIN programme underscores its commitment to conservation. This report, based on the BIOFIN methodology (see Annex 1), seeks to identify and address biodiversity financial

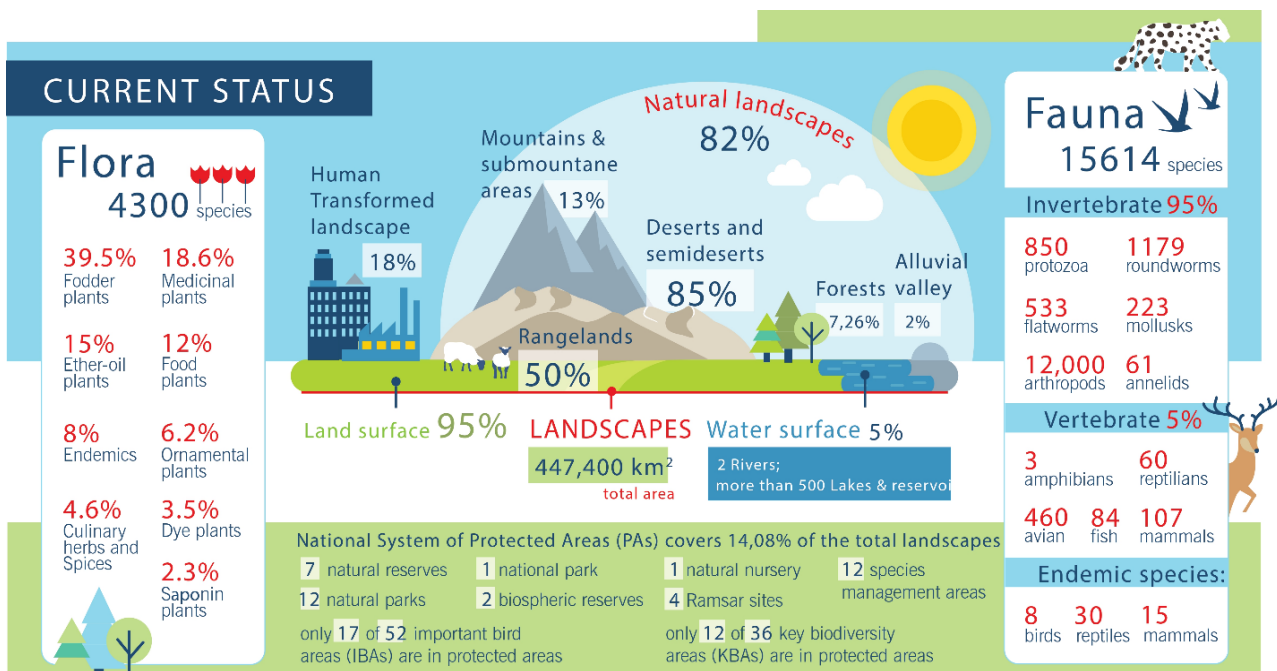


Figure 1. Current status of biodiversity in Uzbekistan

gaps in Uzbekistan. It provides a comprehensive view of Uzbekistan's biodiversity finance-related policies and frameworks. As the nation progresses in its commitment to conserving its rich biodiversity, this report aims to serve as a foundational guide for subsequent change in current policymaking and undertaking effective strategic endeavors.

Uzbekistan, situated in southwest Central Asia, encompasses an area of 447,400 km² (about 44.9 million hectares), with 95% being land, positioning it 56th worldwide by land area. The nation boasts diverse ecosystems: deserts and semi-deserts occupy 85% of the natural landscape (37.1 million hectares); mountains and foothills cover 13% (5.2 million hectares); water bodies include the famed Aral Sea, myriad rivers, and

¹ IPBES (2019): Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn, Germany. 1148 pages. <https://doi.org/10.5281/zenodo.3831673>

forests. However, a considerable 82% of these landscapes show signs of anthropogenic disturbances, with the remaining 18% consisting of human-altered terrains like farmlands, cities and industrial zones.

Uzbekistan sources 55% of its water from the Syrdarya and Amudarya rivers, with smaller rivers providing 33%, groundwater 10%, and collector-drainage flow approximately 2%. The country has 17,777 watercourses, mostly under 10 km in length, and over 500 lakes, predominantly under 1 km² in size. With a sharp continental and arid climate, Uzbekistan's aridity index, according to UNEP, ranges between 0.03 and 0.20. This climate results in intense desertification, recurrent droughts, and long summers with significant temperature fluctuations. Uzbekistan's temperature has risen by 1.6°C since 1880, exceeding global averages, leading to heightened climate vulnerabilities such as water and food shortages, health risks, and other hazards like floods. These shifts intensify ecological challenges, particularly in areas like the Aral Sea, Karakalpakstan, Surkhandarya, Bukhara, and Khorezm.

The country boasts a rich biodiversity with around 27,000 identified species, including about 11,000 species and over 15.6 thousand species. Notably, 8% of the higher vascular plants are endemic, with 10-12% being relic endemics. Waterbird monitoring reveals declining populations from 2014-2020, as per the Bird Protection Society of Uzbekistan. Endemic vertebrates in the region include 53 species and subspecies. While

Table 1: Distribution of rare and threatened species of vertebrate animals of Uzbekistan in the existing system of protected areas

Class / Number of species in UzRDB	Number/Share of the total number of species in UzRDB, %					
	Reserves (Ia IUCN)	Landscape Reserve (Ib IUCN)	National Natural Parks (II IUCN)	Monuments of nature (III IUCN)	Reserves, BSP "Jeyran" (IV IUCN)	Biosphere reserves
Fish/18	12/66.7	-	5/27.8	-	2/11.1	7/38.9
Reptiles/21	7/33.3	3/14.3	4/19.0	7/33.3	3/14.3	3/14.3
Birds/52	20/38.5	5/9.6	17/32.7	-	37/71.2	19/36.5
Mammals/32	18/56.3	7/22.0	11/34.4	-	7/22.0	8/25.0
Total/123	52/43.0	13/10.6	37/30.1	7/33.3	49/39.8	37/30.1

reptiles and fish have high endemism rates at 50%, mammals and birds have 14% and 1.7% rates, respectively. The diversity of flora and fauna is intrinsically tied to ecosystem health.

Uzbekistan, with its distinct geography and climate, faces heightened environmental vulnerabilities, including cross-border impacts. These are exacerbated by its fragile arid and mountainous ecosystems and limited water resources. The country's predominant irrigated agriculture, combined with issues like salinization, water pollution, and deforestation, has contributed to habitat loss and species decline. Currently, the International Red Book recognizes 91 fauna species, while Uzbekistan's Red Book lists 324 flora and 184 fauna species. Parties to the CBD have recently committed to protect 30% of their land by 2030, as part of the Global Biodiversity Framework. At same time, Uzbekistan has dedicated 14.08% of its territory as a PNAs that correspond to various IUCN classifications. As of 2019, the nation's forest reserve was 11.6 thousand hectares, or 25.7% of its total area, majorly serving ecological and socio-economic purposes. Forests near populous regions and industrial zones bear the brunt of human impact.

II. Biodiversity Policy Framework

2.1. Biodiversity Related Legislation

This PIR provides an in-depth look into the prevailing environmental policies, the institutional structures set up for their enactment, and the legal regulations that oversee biodiversity conservation, environmental protection and law enforcement in this area. Additionally, this review examines the nation's economic and budgetary landscape, emphasizing the financial aspects of biodiversity. The insights presented are informed by various national-level studies, notably including the 6th National Report of the Republic of Uzbekistan on Biodiversity Conservation (2018).

A. Uzbekistan's Regional and International Commitments

Since achieving independence in 1991, Uzbekistan has been proactive in establishing itself as an integral member of the international community. In the years that followed, the nation not only ratified but also integrated into its local laws several international treaties pertaining to biodiversity. These include:

- UN Framework Convention on Climate Change (June 20, 1993)
- UN Convention on Biological Diversity (May 6, 1995), and as its part the Cartagena Protocol (October 14, 2019)
- UN Convention to Combat Desertification (31 August 1995)
- UN Convention for the Protection of the World Cultural and Natural Heritage (22 December 1995)
- Protocol to the Energy Charter on Energy Efficiency and Related Environmental Aspects (22 December 1995)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (April 25, 1997)
- Convention on the Conservation of Migratory Species of Wild Animals (May 1, 1998)
- Convention on Wetlands of International Importance, chief as a waterfowl habitat (December 12, 2003)
- Agreement for the Conservation of African-Eurasian Migratory Waterbirds (April 1, 2004).

Uzbekistan, backed by various international donors, actively undertakes initiatives and fulfills responsibilities arising from international environmental accords. In 1992, Uzbekistan initiated the establishment of the International Fund for Saving the Aral Sea (IFAS) to address Aral Sea basin's challenges. This led to the foundation of interstate entities like IFAS (based in Almaty) and the Interstate Council for the Problems of the Aral Sea Basin (ICAS) with an Executive Committee chaired by the Minister of Water Resources of Turkmenistan (headquartered in Tashkent), between 1992 and 1994. IFAS activities have resulted in the development, adoption, and implementation of three Assistance Programmes for the Aral Sea Basin countries (ASBP-1, ASBP-2, ASBP-3). IFAS comprises two commissions: the Interstate Coordinating Water Commission of Central Asia (ICWC) and the Interstate Commission for Sustainable Development (ICSD).

Established in Ashgabat on July 19, 1994, ICSD oversees regional cooperation in environmental protection and sustainable development in Central Asia. Its main functions include developing a regional sustainable development strategy and coordinating efforts for environmental conventions with transboundary dimensions.

In 2016, as a result of a joint project between the Republics of Uzbekistan, Kazakhstan, and Kyrgyzstan, the Western Tien Shan was included in the UNESCO World Heritage List as a transboundary natural heritage site. This decision was made at the 40th session of the UNESCO World Heritage Committee in Istanbul. The Western Tien Shan comprises 11 sites within seven specially protected natural areas across the three countries. In 2019, the three countries signed a trilateral memorandum of cooperation, which included the establishment of a coordinating working group and the development of a site monitoring programme. This marked Uzbekistan's first natural heritage site. Uzbekistan is dedicated to strengthening regional cooperation in Central Asia and has revised its stance on water and energy issues to become climate change resilient, conserve natural ecosystems as well as ensure food security. In recent years, bilateral cooperation in transboundary waters and environmental protection has grown rapidly.

The Multi-Partner Trust Fund (MPTF) for human security in the Aral Sea region is a significant Uzbekistan initiative. It aims to streamline the efforts of the Government and the international community to mitigate the effects of the Aral Sea disaster, ultimately contributing to the region's sustainable development and the conservation of biodiversity.

Uzbekistan joined the UN Framework Convention on Climate Change (UNFCCC) in 1993 and ratified the Paris Agreement in 2018, committing to reduce greenhouse gas emissions per GDP unit by 10% by 2030, and by 35% from 2010 levels. Strategies to achieve these targets include increasing renewable energy to 25% of total electricity, doubling energy efficiency, halving GDP energy intensity, and reducing industrial natural resource consumption.

The adoption of the new Global Biodiversity Framework outlined in the Kunming-Montreal Agreement signed by majority of countries – parties to the CBD, in December 2023, was a significant step forward. Uzbekistan joined the agreement and expressed its readiness to embrace new biodiversity targets that supersede Aichi targets. This includes joining and committing to the GEF's GBS EAS Programme, which envisages a revision of the current NBSAP and an increase in financing of the biodiversity. Currently, Uzbekistan, UNDP, and the Green Climate Fund are developing a National Adaptation Plan (NAP) to identify vulnerable economic sectors and regions and propose adaptation measures. The plan, expected in 2023 – early 2024, will address agriculture, water management, healthcare, construction, and natural disaster risk reduction, aligning with UNFCCC and Paris Agreement obligations. The plans prioritize sector-specific climate adaptation but also address ecosystem resilience. They propose 15 innovative financial instruments, including subsidies for organic agriculture, ecosystem payments, and renewable energy incentives. Additionally, a second NAP project phase could focus on ecosystems and biodiversity.

B. Challenges in Information, Scientific Support, and Public Awareness for Biodiversity Conservation

Uzbekistan's biodiversity has been negatively impacted by prevalent environmental nihilism and a consumerist approach to natural resources. Though the 1998 National Environmental Action Plan (NEAP) emphasized environmental education and public engagement, significant measures were initiated only in 2017, with the restructuring of the former State Committee for Nature Protection. Despite ongoing efforts, as highlighted in the Fifth National Report (2015), to promote biodiversity conservation awareness, there remains a glaring absence of a systematic approach to biodiversity management and financing. Although some policies and strategies exist, their operationalization lacks detailed sectoral plans, specified budgets, and international standard practices.

The publication of national reports by countries on the state of their environment is considered an important tool for global environmental management. In the past, publications by leading government bodies in Uzbekistan in the field of ecology and environmental protection, such as the "National Report on the State of the Environment in the Republic of Uzbekistan" (NRSEU), did not contain comprehensive information about global environmental initiatives or the state of biodiversity. The first NRSEU was published in 1990 and covered the period from 1986 to 1990. According to common global practice, it was planned to regularly release such reports every three to four years to inform and support sustainable ecological development. In Uzbekistan, reports were issued until 2011, after which there was a long break associated with an extended period of administrative reform of the ecology and environmental protection system. Only in 2023 was the former State Committee on Ecology transformed into the Ministry of Ecology, Environmental Protection, and Climate Change, which ultimately facilitated the collection of data for future reports.

The publication of the latest NRSEU² in December 2023, compiled according to the recommendations of international partners and in accordance with the DPSIR³ methodology, became the first most complete and informative in this series of reports in terms of analyzing the causes and consequences of the biodiversity crisis in the country.

The country's participation in international conventions like the 1998 Aarhus Convention is commendable, but it hasn't ratified the Convention yet, despite its significance for public environmental awareness. Modern geoinformation tools are used in various environmental sectors, but funding constraints limit comprehensive research. Institutes like those of Botany and Zoology, reliant on international grants, focus on specific biodiversity segments, emphasizing the need for a holistic national approach.

² Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan. (2023). National report on the state of the environment: Uzbekistan. International Institute for Sustainable Development. (<https://uznature.uz/yz/legislation/download?type=pdf&filename=765>)

³ DPSIR – Drivers-Pressures-State-Impacts-Responses Framework

C. Biodiversity in National Legislation

At present, the Republic faces challenges in terms of a holistic governance approach towards environmental conservation. Despite the pressing need, a comprehensive Environmental Code remains absent. This gap underscores the urgency to integrate all pieces of legislation and address inter-sectorial issues cohesively. Currently, biodiversity matters are not seamlessly integrated across key sectors; they are only addressed within the confines of general ecological plans. It's imperative to move beyond this limitation and prioritize the assimilation of biodiversity concerns across various sectors. In light of these observations, the development of a Biodiversity Finance Plan (BFP) becomes crucial to streamline efforts and allocate resources effectively for preserving our nation's rich biological diversity.

Uzbekistan's Constitution prioritizes biodiversity protection as part of environmental conservation. Specifically, the Constitution:

- Asserts the obligation of every citizen to protect a favorable environment and the obligation of the state to create conditions for public control in the field of urban planning activities to ensure the environmental rights of citizens and prevent negative impacts on the environment.
- Recognizes natural resources as national wealth, emphasizing their rational use; the state takes measures to improve, restore and protect the environment, maintain ecological balance, as well as to protect and restore the ecological system, social and economic development of the Aral Sea region.
- Advocates for property management and rights that prevent environmental harm; emphasizes the state's duty to preserve a healthy ecological environment and protect biological diversity.

Outside the Constitution, numerous laws, (Annex 2) focus on environmental and biodiversity protection, defining key terms, organizational structures, and financing methodologies. To support these foundational laws, the nation has introduced over 15 presidential legal acts, 50 resolutions, and several ministerial regulations.

However, Uzbekistan's legal approach to the environment is somewhat fragmented and occasionally struggles to address current biodiversity challenges effectively. This fragmentation results in inconsistencies, contradictions and duplication, making law enforcement problematic. As environmental issues become more pronounced, and their link to sustainable development clearer, efforts are underway to harmonize the nation's legal structures. The inaugural 2020 National Strategy on Human Rights of Uzbekistan highlighted the need to integrate environmental regulations with socio-economic laws, emphasizing citizen's rights to a pristine environment. This was also reflected in the new version of the national Constitution.

In 2021, the President's Decree directed the former State Committee on Ecology and Environmental Protection (now Ministry of Ecology) to collaboratively devise a draft Environmental Code by the end of 2022. The proposed Code was intended to:

- Consolidate and refine legal acts
- Elevate public oversight in environmental protection
- Implement clear biodiversity conservation mechanisms and incentives.
- Clarify the environmental responsibilities of government organizations and public.
- Enumerate techniques for varied environmental oversight, including green economy initiatives.
- Set protocols for strategic environmental evaluations.

While the draft Environmental Code was in progress when this report was created, its approval could bolster the nation's legal scaffolding, integrating economic planning with environmental conservation, and potentially attracting increased biodiversity funding.

As is known, the conservation and sustainable utilization of diverse ecosystem functionalities stand primary requisites of global environmental conventions and agreements. These conventions catalyze the formulation and enactment of a variety of national strategies, initiatives, and action plans. Upholding its obligations under the CBD, Uzbekistan inaugurated its first NBSAP in 1998. This strategic move was echoed in the following national strategic documents:

- National Action Programme to Combat Desertification (NAPCD, 1999),
- National Framework Programme (NFP, 2006) and Supplement to NFP (2009) prepared within the framework of the Central Asian Countries Initiative for Land Management (CACILM) designs and implemented under the UNCCD,

- National Action Programme of the Republic of Uzbekistan to Combat Desertification and Drought (NAPCDD, 2015) prepared based on the decision of the Conference of the Parties (13/COP.9) of the UNCCD to review and update national action plans and programmes and bring them into line with the ten-year strategy of the UNCCD UN (2008-2018).

Further, measures addressing specific climate change mitigation and adaptation measures for ecosystems and national economic sectors were incorporated into several strategic national documents, including:

- Second and Third National Communications of the Republic of Uzbekistan under the UN Framework Convention on Climate Change (SNC, 2008 and TNC, 2016).
- National Strategy of the Republic of Uzbekistan to reduce greenhouse gas emissions for 2000-2010 in the Low-Carbon Development Strategy of the Republic of Uzbekistan and the Roadmap for the medium and long term (2015).
- Main Directions for the Transition to a Resource-Efficient Development Model. Vision 2030 (2016).
- National Strategy for Sustainable Development (NSDS, 1999); in Agenda 21 for the Republic of Uzbekistan (2002).
- Strategy for improving the welfare of the population of the Republic of Uzbekistan for 2013-2015 (2013).
- The 2017-2021 Action Strategy, focusing on reducing economy’s energy and resource intensity, expanding renewable energy use, and mitigating global climate change and Aral Sea drying impacts on agriculture and livelihoods.
- The Uzbekistan – 2030 Strategy (September 2023).



Figure 2. Green Economy Transition Strategy 2022-2026

In recent years, Uzbekistan has exhibited a steadfast commitment to environmental sustainability. Marking this shift, the “Concept of Environmental Protection in Uzbekistan till 2030” was introduced in a 2019 Presidential Decree, addressing environmental concerns including rampant tree-cutting, influenced by ecological advocates. Simultaneously, the “Strategy for Transition to a Green Economy 2019-2030” (Figure 2) was ratified, underscoring the nation's devotion to green development. It champions enhanced energy efficiency, diversified energy consumption with a tilt towards renewable sources, climate change adaptation, efficient resource use, and establishing mechanisms to advance the green economy. Key initiatives include improving water-use efficiency, revamping hydraulic infrastructures,

promoting water-conservative irrigation, restoring pastures and forests, and halting water contamination from agriculture. Moreover, the strategy commits to reducing greenhouse gas emissions, modernizing power supply towards renewable centrality, promoting green transportation, and phasing out hydrocarbon fuels. Though the strategy stipulates annual action plans, details on funding and monitoring are yet to be clarified. Originating from the 2017 “Action Strategy for Five Priority Areas of Development,” a unified development strategy was unveiled for 2022-2026 (Figure 3), maintaining the nation's strategic trajectory. This dovetails with the revised national SDG 2030 framework that accentuates the conservation of natural ecosystems.

Adopted on 11 September 2023, the ambitious Strategy “Uzbekistan-2030” is a testament to Uzbekistan's dedication to environmental reform and sustainability. At its core, Section 3.2. outlines a comprehensive plan that commits to a radical improvement in the nation's ecological state, targeting the elimination of environmental challenges that directly impact human lives. Integral to this vision is the enlargement of the "Yashil Makon" (Green Space) initiative, which ambitiously seeks to green the entire country, with plans to plant an impressive 200 million trees annually and a pronounced emphasis on the expansion of urban green zones. Alongside this, the strategy introduces agrobiological monitoring, focusing on sustainable agricultural practices.

The country's tourism sector is also set for a boost with initiatives that promote forest expansion and eco-tourism, with designated forests to combat soil erosion. Addressing one of Uzbekistan's most pressing environmental issues, efforts are ramping up to stabilize the deteriorating condition of the Aral Sea region. In its commitment to biodiversity, the strategy presents a comprehensive plan that includes increasing the land area of protected natural zones to 12%, implementing geobotanical monitoring, intensifying regulations against the illegal exploitation of natural resources, and enhancing the ecological awareness among citizens. Animal welfare, especially the treatment and rehabilitation of wild species, is a focal point of this strategy.



Figure 3. New Uzbekistan Development Strategy 2022-2026

Furthermore, the country is bracing for a waste management revolution, aiming to achieve 65% efficiency in household waste collection, disposal, and recycling, coupled with a 50% reduction in waste dump sites. Pollution control is a cornerstone of the strategy, with a pledge to reduce atmospheric contaminants by 10.5%. Businesses with significant environmental footprints are mandated to upgrade to greener technologies. Also, the construction and renovation of localized purification systems will be a priority in 249 industrial enterprises. Strategy 2030, in essence, represents Uzbekistan's stride towards harmonizing its developmental goals with environmental sustainability, laying the foundation for a future where nature and progress coexist.

D. NBSAP in action.

Uzbekistan’s primary guiding document for enacting specific state policies in biodiversity conservation is the **National Strategy for the conservation of biological diversity (NBSAP)**. Ratified by the Government of the Republic of Uzbekistan on June 11, 2019, the NBSAP 2019-2028 charts out: national measures for conserving and sustainable using biodiversity, plans for expanding of protected natural areas; measures to combat the degradation of natural ecosystems; strategies to rehabilitate endangered and rare species; approaches to bolster collaboration with international partners for a period of ten years.

The revised NBSAP draws its conceptual underpinning from the country’s strategic goals and objectives, which were crafted in alignment with both domestic biodiversity conservation imperatives and the

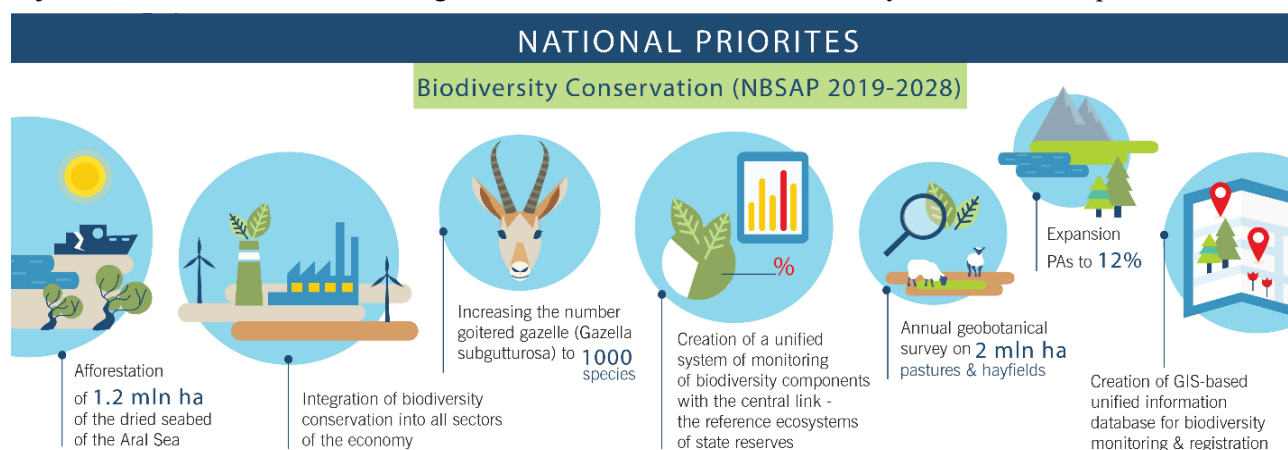


Figure 4. Current NBSAP 2019-2028

global targets set in Aichi in 2010. These national goals and targets were collaboratively developed with participation of key government ministries, agencies, civil society representatives, and international stakeholders. The targets holistically encompass priority biodiversity issues, the nation's socio-economic landscape, and existing capacities, ensuring they are specific, and time bound.

Realizing these targets mandates a multifaceted strategy that integrates political, social, economic, ecological, legal, educational, environmental considerations. This is pivotal as biodiversity is not just a critical resource but also the bedrock of the country's environmental stability. The NBSAP details 23 section points distributed across four strategic objectives that drive seven national targets. To gauge the progress towards attaining these biodiversity targets, pertinent indicators and results metrics have been defined and assigned to specific state authorities.

It is important to note the progress made by national authorities in achieving some of the current NBSAP targets. For instance, the area of Protected Areas (PAs) has increased from 5% to 14%, which is 2 % higher of the target set in the current NBSAP. It is worth noting that the Government of Uzbekistan back in 2018 (PKM 820) brought national legislation on protected areas in line with IUCN standards and categories.

Uzbekistan's accession to the new Global Biodiversity Framework (GBF) under the Kunming-Montreal Agreement, signed in December 2022 in Montreal (Canada) during the 15th Conference of the Parties to the CBD, demonstrates the government's commitment and proactive approach to the conservation of biodiversity. As part of this agreement, the CBD member countries agreed, among other things, to undertake a short-term review of their current NBSAPs in order to align them with the new goals and objectives reflected in the new GBF program. Created in August 2023, the Fund to implement the new global GBF program within the GEF allows funding to be received from all sources, quickly distributed among participating countries through simplified procedures, providing increased access to indigenous peoples and local communities in accordance with their own priorities. The Fund also provides an opportunity to significantly increase the participation of multilateral development banks and development finance institutions, which will contribute to the mainstreaming of biodiversity issues necessary for the implementation of the global GBF program.

In this regard, it should be noted the importance of an early review by the Government of Uzbekistan of the current or preparation of a new NBSAP, which will not only take advantage of new international funding opportunities but will also ensure a timely transition to the implementation of updated national biodiversity goals. The GEF, as the international institution responsible for the implementation of the global GBF program, has already begun providing advisory and technical assistance to participating governments in revising their national NBSAPs through the GBF Early Action Support projects, including in Uzbekistan. This review is intended not only to reflect achievements to date, but also to set new, ambitious targets that are consistent with the GBF Global Framework and the country's biodiversity needs.

2.2. Overview of the biodiversity finance specific regulations

Biodiversity finance is the practice of raising and managing capital and using financial and economic tools to support sustainable biodiversity management. In Uzbekistan, the importance of biodiversity and its contributions to economic, cultural, and ecological spheres is recognized in various regulations and policies which have been enacted to guide biodiversity financing.

The Constitution of the Republic of Uzbekistan provides a foundation for the country's commitment to ecological balance and biodiversity preservation. It emphasizes the right of citizens to a healthy environment and the responsibility of the state to safeguard natural resources. Adopted in 1998, the NBSAP set out a comprehensive plan for biodiversity conservation in Uzbekistan. It highlighted the need for financial resources and called for both domestic investments and international cooperation. The National Strategy and Action Plan for the Conservation and Sustainable Use of Biodiversity of Uzbekistan (NBSAP), adopted between 2019 and 2028, is a key document aimed at preserving biological diversity in the country. This strategy and action plan are developed in accordance with Uzbekistan's obligations under the Convention on Biological Diversity, which the country has ratified.

The Law on Nature Protection (1992) established the framework for the country's environmental policy, emphasizing sustainable use and conservation of natural resources. The law mandates budgetary allocation for biodiversity conservation and paves the way for private investments in the sector. In particular, which came into force in 1993. The law prescribes financial measures to protect the environment, including biodiversity. He advocates a system of fines for damage to biodiversity, with revenues reinvested in biodiversity conservation.

The Law on Hunting and Hunting Organization (2020) transitioned the management of hunting to private entities and independent hunter associations. It stressed the role of scientifically informed planning, conservation, and wildlife protection.

Decree of the President of the Republic of Uzbekistan No. PP-4919 (2020) emphasizes the importance of sustainable water use and the introduction of water-saving technologies that indirectly benefit aquatic biodiversity.

In connection with the adoption of the new Global Biodiversity Framework at the Kunming-Montreal meeting held in December 2022 as part of COP15 of the Convention on Biological Diversity, it is planned to review or develop a new National Biodiversity Strategy and Action Plan. Within the framework of the Global Environment Facility (GEF), projects have been initiated aimed at early assistance to countries in this process, including Uzbekistan. One such project is the Global Framework for Early Action, launched on April 12, 2023. This project is focused on supporting the Government of Uzbekistan in updating the national biodiversity strategy and action plan in accordance with the new international guidelines established by the Kunming-Montreal Global Framework.

As part of the adopted “Concept of Environmental Protection until 2030,” a number of important legislative initiatives are envisaged, including the revision and reform of the environmental impact assessment (EIA) system. As part of this initiative, the Ministry of Environment, in collaboration with international partners, has developed a draft Law “On Environmental Assessment”. The adoption of this law would allow the Government of Uzbekistan to provide a systematic strategic approach in planning state programs and development projects, both at the national and sectoral levels, taking into account priorities in the field of environmental protection in general and biodiversity in particular.

As earlier presented, Uzbekistan is a party to several international treaties, like the Convention on Biological Diversity (CBD), which obliges member states to mobilize financial resources for biodiversity conservation. There are specific financial tools, such as the Fund for Ecology, Environmental Protection and Waste Management under the Ministry of Ecology, aimed at accumulating and disbursing funds for environmental projects, including biodiversity conservation. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 649 of December 7, 2023 amends Resolution of the Cabinet of Ministers of October 20, 2014 No. 290, which concerns the regulation of the use of biological resources and the procedure for passing permitting procedures in the field of environmental management. These changes are aimed at strengthening legal sanctions for non-compliance with legislative acts in the field of protection of flora and fauna. In particular, the Resolution notes that in recent years, Uzbekistan has been implementing comprehensive measures to preserve and use biodiversity, as well as to ensure stable living conditions for flora and fauna, including rare and endangered species listed in the Red Book of the Republic of Uzbekistan. The Resolution also raises the issue of the need to review the amount of compensation for damage caused by illegal handling of flora and fauna, which includes species listed both in the Red Book of the Republic of Uzbekistan and in the International Red Book. These changes were made in order to ensure the implementation of the Decree of the President of the Republic of Uzbekistan No. 81 dated May 31, 2023 “On measures to transform the sphere of ecology and environmental protection and organize the activities of the authorized state body”, as well as the Decree of the President of the Republic of Uzbekistan No. 171 dated the same date “On measures for effective organizing the activities of the Ministry of Ecology, Environmental Protection and Climate Change.”

Despite certain challenges in biodiversity conservation, there have been several commendable advancements. Stricter legal repercussions have been introduced, particularly through the Code of the Republic of Uzbekistan on Administrative Responsibility, which has seen the establishment of more rigorous accountability measures. Compared to 2015, administrative fines have seen significant increases for the following violations:

- Hunting and fishing violations (Article 90): elevated from 100 to 300 USD.
- Destruction of forest fauna (Article 83): elevated from 100 to 400 USD.
- Breach of fire safety in forests (Article 84): elevated from 50 to 100 USD.
- Violation the state reserve regime (Article 82): elevated from 50 to 150 USD.
- Illegal tree cutting and damages (Article 79): raised from 100 to 350 USD.

Furthermore, the Code now includes punitive measures for:

- Possessing, using, selling, or transporting unauthorized hunting and fishing tools (Article 901), which can cause widespread harm to fauna.
- Improper use of plant life (Article 791).

III. Biodiversity Institutional Framework

In 2017, Uzbekistan reformed its environmental funds by combining the Republican Fund with 14 regional funds, resulting in the establishment of the Fund for Ecology, Environmental Protection and Waste Management under the Ministry of Ecology. However, the Fund's operational rules and procedures remain opaque. Based on preliminary estimations, between 2012 and 2019, environmental protection expenditures (excluding off-budget funds) accounted for 0.06% of total government expenditures. This spending represented a mere 0.02% of the GDP, a concerning figure given the country's environmental challenges. At the same time, these figures reflect the reality in most developing countries, where, for obvious reasons, social and economic priorities take precedence over others.

The pollution charges system has largely remained static since 2010, covering a vast number of air and water pollutants. From 2019 onwards, pollution charge rates became more resilient to inflation. However, these charges primarily fund the environmental fund and the state budget.

3.1. Overview of Uzbekistan's biodiversity institutional framework

The Republic of Uzbekistan's state planning system includes both long-term (5 years) and short-term (1 year) development periods. The management and governance of biodiversity and ecosystems occur at two levels: central/national and local. Key state institutions influencing the conservation and financing of biodiversity are:

1. Central institutions: Ministry of Ecology, Ministry of Economy and Finance, Ministry of Agriculture, Ministry of Water Resources, Ministry of Energy, Ministry of Transport, State Committee for Veterinary and Livestock Development, and the Academy of Sciences.
2. Regional institutions: local executive authorities (khokimiyats) at regional and district levels, and regional and district subdivisions of the central institutions
3. Non-governmental institutions: NGOs, private companies, and organizations.

The diverse roles and powers of these institutions in the realm of biodiversity conservation are stipulated in a plethora of laws, by-laws, and government resolutions. However, an overarching coherence and synchronization in their efforts, particularly with the Ministry of Ecology, remains an imperative.

A. Evolution and Transformation of the Ministry of Ecology

Prior to April 2017, the State Committee of the Republic of Uzbekistan for Nature Protection acted as the foundational entity overseeing environmental concerns, directly answering to the Senate of the Oliy Majlis. This committee played a predominant role in safeguarding the nation's environment. The reforms launched in 2017 brought a major change: the State Committee was restructured into the State Committee on Ecology and Environmental Protection. This transition amplified its responsibilities to embrace sanitation and waste management. Accompanying this was the consolidation of 14 nature protection funds into a singular entity, the Fund for Ecology, Environmental Protection, and Waste Management. An additional significant shift was the transformation of Gosbiokontrol (Biological Safety Agency) into Bioinspektsiya (Inspection for control in the field of ecology and environmental protection), leading to a substantial reduction in its workforce.

The year 2023 marked another watershed moment in Uzbekistan's commitment to environmental protection. Reforms propelled the decentralization of biodiversity management within the committee. Taking it a step further, the State Committee on Ecology and Environmental Protection was elevated and rechristened first as the Ministry of Natural Resources and a few months later was renamed as a Ministry of Ecology, Environmental Protection and Climate Change. This crucial transformation not only emphasized the escalating priority accorded to environmental issues in the national discourse but also sought to arm the ministry with extended powers and resources to address urgent ecological imperatives. The metamorphosis from a committee to a ministry denotes an expanded remit, superior jurisdiction, and centralization of authority, ensuring an integrated and coordinated approach to the nation's environmental initiatives and strategies. This evolution stands as a testament to Uzbekistan's steadfast dedication to championing environmental sustainability and biodiversity conservation, especially when viewed against the backdrop of pressing global environmental challenges.

Parallel to this, the role of other institutional bodies cannot be understated. Alongside the Ministry of Ecology, several entities, including the also newly established Ministry of Economy and Finance, State Committee for Veterinary and Livestock Development, Ministry of Water Resources, and the Academy of Sciences, work in tandem. Their territorial offshoots and local administrative authorities (khokimiyats) also play an indispensable part in addressing issues related to biodiversity conservation and the provision of ecosystem services.

B. Administrative Structure and Biodiversity Management in Uzbekistan

Uzbekistan is administratively divided into the Republic of Karakalpakstan, 12 regions, 159 districts, 119 cities, 1' towns of "republican significance", 1,071 urban settlements, and 267 rural gatherings of citizens. Laws and government decisions delineate the roles and functions of these institutions. Biodiversity management and protection powers are shared as follows:

1. Cabinet of Ministers:
 - Ensures a unified state policy;
 - Oversees state programmes and coordinates related bodies;
 - Determines nationally significant protected areas.
2. Ministry of Ecology
 - Supervises the overall environmental and ecological framework of the country ensuring conservation and sustainable use of natural resources.
3. Forestry Agency under the Ministry of Ecology:
 - Helps draft and implement programmes and regulations.
 - Manages the state forest fund
4. Local Public Authorities:
 - Develop and oversee territorial programmes;
 - Control and determine local protected areas.
5. Academy of Sciences:
 - Provides scientific input on biodiversity management and the Red Book of Uzbekistan.
6. Non-State Actors:
 - Engage in programme implementation and public control.

Revenues from biodiversity utilization go to different state structures. While the Ecology, Environment, and Waste Management Fund is a major recipient, the Forestry Development Fund and the Academy of Sciences also benefit. Specific allocations include:

- For Red Book species use: 80% to local budgets, 8% to the Academy of Sciences, and 12% to the Ecology Fund.
- Commercial fishing: 60% to local budgets and 40% to the Ecology Fund.
- Red Book species export: 80% to local budgets and 20% to the Ecology Fund.
- Other flora and fauna export: 60% to local budgets and 40% to the Ecology Fund.
- Licorice products export: 60% to the Republican budget and 40% to the Ecology Fund.
- Use of non-Red Book plants in forestry: 100% to the Forestry Development Fund.

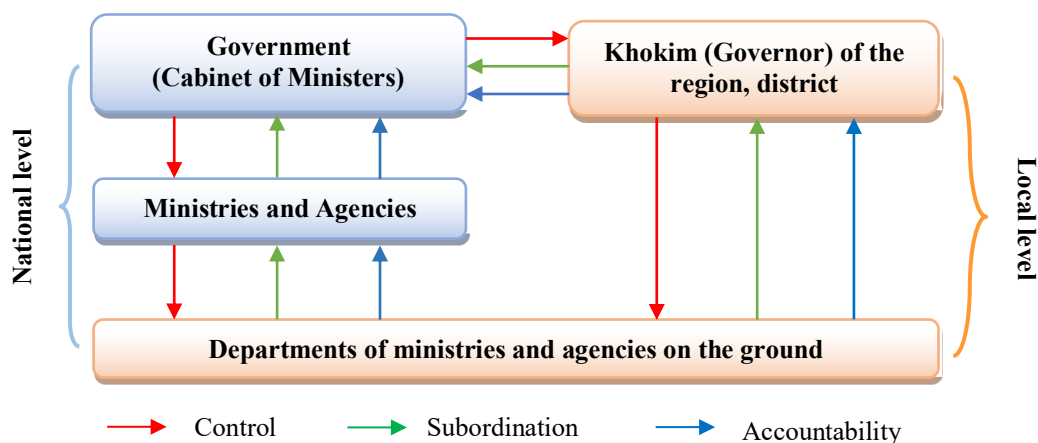


Figure 5. National biodiversity accountability structure

The distribution of powers and income related to the management and protection of biodiversity in Uzbekistan occurs in accordance with Decree of the President of Uzbekistan No. 81 of May 31, 2023 and Government Resolution No. 171 of the same date. These documents establish the structure and principles for the distribution of responsibilities and financial flows in this area.

The Cabinet of Ministers of Uzbekistan is responsible for the formation and implementation of a unified state policy in the field of biodiversity. This includes the coordination of various government agencies and the management of national programs, as well as the identification of protected areas of national importance.

The Ministry of Ecology, Environmental Protection and Climate Change (Ministry of Ecology) plays a central role in monitoring the country's environmental condition and the sustainable use of natural resources.

The Forestry Agency under the Ministry of Ecology develops and implements programs in the field of forestry and manages the state forest fund.

Local government authorities have the task of developing and monitoring territorial programs and identifying local protected areas.

The Academy of Sciences of Uzbekistan provides scientific support in matters of biodiversity management and maintains the Red Book of Uzbekistan.

Non-state actors participate in program implementation and exercise public control.

Revenues from the use of biodiversity go to various government agencies, including the Fund for Ecology, Environment and Waste Management, the Forestry Development Fund and the Academy of Sciences of Uzbekistan. Income distribution varies depending on the specific source of income, such as the use of endangered species, commercial fishing, exports and use of forest resources.

These documents represent an integrated approach to the management and conservation of biodiversity in Uzbekistan, ensuring coordination of actions at all levels of government and the involvement of both state and non-state actors.

3.2. Staffing/gender equality

A shortage of skilled personnel persists in forest conservation and development, despite educational initiatives by the government between 2017 and 2020. This educational sector needs further enhancement. Gender disparity is prominent in biodiversity-related fields. 2020 statistics reveal women representing 17.1 to 34.1% in managerial roles within the nature protection sector.

Significant contributions by women to biodiversity include:

- A Department head at the Ministry of Agriculture developed a unique grape collection.
- At the Institute of Botany, most female researchers contribute to biodiversity conservation through institutional grants. 17 of 36 employees on biodiversity projects at the Institute of Zoology are women.
- The female, former director of the Dekhkanabad State Forestry was recognized for significant environmental efforts, leading initiatives to create expansive plantations.
- 84% of the workforce at the Environmental Pollution Monitoring Service of Uzhydromet, overseeing aquatic ecosystem biodiversity, are women.
- Notable achievements include a senior lecturer at Samarkand University being named among BBC's 100 most influential women in 2018 and several women gaining recognition for their innovative environmental projects.

Emphasizing the CBD Action Plan 2015-2020's gender equality goals, half of the experts for the Sixth National Report were women.⁴

3.3. Analysis of sectors' institutional arrangements and impacts on biodiversity.

Uzbekistan boasts a diverse economic landscape, with sectors like agriculture, oil and gas, energy, chemicals, and mining industries standing out as prominent contributors to the national GDP.

Historically, priorities skewed towards socio-economic development, often at the expense of environmental considerations. This has had implications for the country's rich biodiversity, as sectoral growth sometimes led to environmental degradation. Over the past few years, there's been a shift in this trend. The

⁴6th National report of the Republic of Uzbekistan on the conservation of biological diversity 2018.

government of Uzbekistan is displaying an encouraging pivot towards the environmental realm. This is evident in their attempts to weave the environmental agenda into the broader economic development strategies. However, while the emphasis on addressing climate change issues within these strategies is commendable, there is a significant oversight: the specific challenges and needs of biodiversity conservation remain largely untouched in many sectoral plans.

Biodiversity serves as the backbone of sustainable economic development. It offers resilience against environmental shocks, contributes to food security, health, and provides raw materials for various industries. A loss in biodiversity could thus have cascading effects on economic stability and growth. Hence, the pressing need of the hour is to integrate nature conservation targets comprehensively into sectoral plans. Simply addressing the broader environmental concerns won't suffice. Specific strategies and actionable targets geared towards halting biodiversity degradation must be front and center in development blueprints. By mainstreaming these biodiversity-focused targets, Uzbekistan can not only ensure the preservation of its unique ecosystems but also foster an economic environment that is sustainable and resilient in the face of future challenges.

A. Protected Natural Areas (PNA)

Central to the nation's conservation strategy are its Protected Natural Areas (PNA). These sanctuaries play a key role in safeguarding endangered species, maintaining ecological balance, and preserving habitats from anthropogenic disturbances. While PNAs symbolize the country's commitment to nature conservation, they also face challenges. Expanding industrialization, pressures from tourism, and sometimes inadequate funding or management can threaten the integrity of these conservation havens. It's crucial to evaluate the current state, governance, and efficacy of these PNAs, ensuring they not only remain pristine but also effectively contribute to Uzbekistan's overarching environmental and socio-economic goals. The vast majority of public funding to ensure biodiversity conservation is linked to the establishment of a comprehensive network of protected natural areas where detrimental human-induced activities are curtailed. The present National Biodiversity Strategy and Action Plan (NBSAP) for this domain delineates two primary objectives:

- To increase the expanse of protected natural areas to encompass 12 % of the country's total land area.
- To initiate a cohesive monitoring system for various biodiversity components, anchored by the reference ecosystems of state reserves.

In alignment with the "Law on Protected Natural Territories" and the guidelines prescribed by the International Union for Conservation of Nature (IUCN), protected areas are classified into distinct categories, each delineated by its purpose and operational framework:

- Category 1: State reserves
- Category 2: Complex (landscape) reserves
- Category 3: Natural parks (comprising national and local parks)
- Category 4: State-designated nature monuments
- Category 5: Special territories earmarked for the preservation, regeneration, and restoration of select natural entities and complexes (like zakazniks, natural nurseries, and fishery zones)
- Category 6: Protected landscapes, which encompass resort zones, recreational areas, water safeguard zones, coastal stretches, sanitation zones surrounding water bodies, and zones that foster surface and groundwater formation.
- Category 7: Territories designated for the management of specific natural resources, such as leshozes and hunting estates.

While the legislation permits private entities and individuals to establish protected areas within categories 2 to 5, all currently established protected areas have been initiated by the government.

Protected Natural Areas (PNAs)

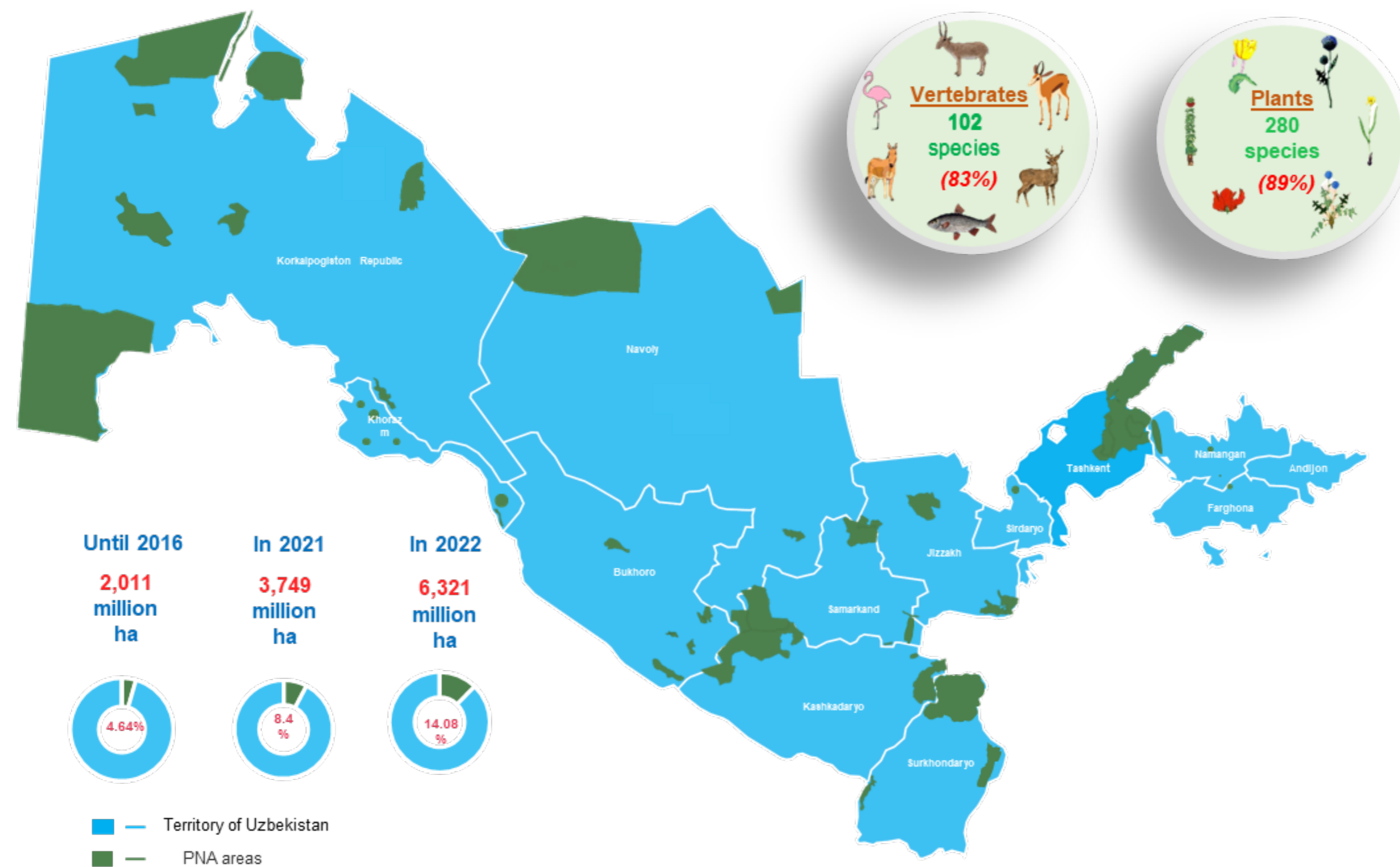


Figure 6. Increase of PNAs' area and share of species covered in Uzbekistan

Protected Natural Areas (PNAs)

I – category PNAs		III – category PNAs		IV – category PNAs		V – category PNAs	
State reserves (ha)		National natural parks (ha)		Natural monuments (ha)		Wildlife sanctuaries (ha)	
1. Zaaminsky	26,840	1. Zaamin	24,110	1. Vardanzi	124	1. Arnasay	63,300
2. Nuratis	17,752	2. Ugam-Chatkal	506,941	2. Mingbulak	1,000	2. Dengizkul	50,000
3. Gissarsky	(80,986) 78,986	3. Zarafshan	2,426.5	3. Chust	96	3. Karakir	30,000
4. Kyzylkum	10,311	4. Khorezm	21,687.5	4. Yazyavan steppes	1,471.5	4. Sudochye-Akpetki	280,507
5. Surkhansky	23,802	5. Kitab geological	3,938	5. Akbarobod	39.5	5. Mubarek	264,469
6. Chatkal biosphere	24,706	6. "Southern Ustyurt"	1,447,143	6. Zilkha	22.2	6. Aktau	15,420
7. Aktau-Tamdinsky	40,000	7. "Central Kyzylkum"	1,200,000	7. Bustonbuva	8.5	7. Karnabchul	25,000
Total	(224,397) 222,397	8. "Aralkum"	1,000,000	8. Yangibazaar	470	8. Koshrobat	16,500
		9. "Pap"	10,000	9. Paykent	30	9. Nurabad	40,000
		10. "Upper Tupalang"	27,851	10. Varakhsha	7	10. Kumsulton	4,900
		11. Babatag	12,064	11. Urungach	43	11. Khadicha	11,300
		12. "Omankutan"	1,500	Total	3,311.7	12. Barsakelmes (2022)	280,000
		Total	4,257,661			Total	1,081,396
				State biosphere reserves (ha)		12. BSP "Djeyran"	16,522
				1. Lower-Amudarya	68,717.8	Total for category	1,097,918
				2. Ugam-Chatkal	42,952.8	National parks (ha)	
				Total	111,670.6	Durmen	32.4
II – category PNAs (ha)						Total	32.4
Complex (landscape) reserves						VII – category PNAs	
"Saiga" KLZ	628,300					Territories for management of selected natural resources	11,738,100
Total	628,300					Total	11,738,100

Today in the republic there are 7 state reserves, 1 complex (landscape) reserve, 12 natural parks, 1 national park, 11 natural monuments, 2 state biosphere reserves, 12 reserves, 1 specialized nursery "Jeyran". Their total area is **6,321,258.21** hectares .

According to the classification of the International Union for Conservation of Nature (IUCN), the area of protected areas of categories I-IV and biosphere reserves is **6.321 million hectares** or **14.08%** of the total area of the country .

Figure 7. PNAs in Uzbekistan by categories

Between 2012 and 2022, the Republic expanded its protected natural areas (PNAs), adding various reserves, parks, and the Bukhara "Jeyran" nursery. By 2022, PNAs covered 14.08% (6.321 million hectares) of the country's land using national classifications. In 2018, rules for ecological tourism in PNAs were set, and information centers promoting environmental education were established. Different entities, including the Ministry of Ecology and local administrations, oversee PNAs, each ensuring their specific jurisdiction over certain PNAs. While the Ministry of Ecology oversees state reserves and several other PNAs, the rest fall under the purview of various entities (one per each), such as the State Forestry Agency, State Committee for Geology, local administrations, and JSC "Uzbekiston Temir Yollari" (state owned company Uzbekistan Railways). While the Ministry of Ecology oversees state reserves and other protected areas, one protected area is under the jurisdiction of various organizations, such as the Ministry of Mining and Geology (oversees the Kitab Geological Park), local administrations and Uzbekistan Temir Yollari JSC (the state railway company oversees the Ugam-Chatkal reserve). In total, the Ministry of Ecology oversees 177 national natural heritage sites. These objects include 16 biological objects (forests, juniper groves, bush thickets, natural areas), 82 hydrological objects (springs, lakes, rivers, waterfalls, streams, the Aral Sea), 31 geological objects (caves, gorges, mountains, cliffs and rocks, deserts, dunes, dunes) and the paleontological object "Trace of the Dinosaur". The list also includes 7 state reserves, 1 complex (landscape) reserve, 13 game reserves, 13 national natural parks and 11 natural monuments.

Financially, the reserves are supported through a blend of extra-budgetary funds from state bodies, local budgets, JSC "Uzbekiston Temir Yollari", and revenue from ecosystem services within the PNAs. However, funding coordination proves complex, requiring synchronization with financial authorities during the state budget formation and allocation processes. There's a pressing need to address funding shortages to realize the objectives set for PNAs. An in-depth review on this matter is anticipated in the BIOFIN Biodiversity Expenditure Review of 2023.

B. Forestry

Uzbekistan's forests vary by region, with 84.6% (9.53 million hectares) in sandy deserts and the rest in mountains, floodplains, and valleys. Tugai forests, important for rare species, occupy 75% of the country's total forests and 20% of the entire of Central Asia. Their declining expanse is a cause of concern for associated rare and endangered species. Nowadays, these forests remain in fragmented stretches along river valleys, acting as crucial ecological corridors for wildlife.

The FAO's 2015 Global Forest Resources Assessment reveals 83% of these forests combat desertification, while 12% preserve biodiversity. In Uzbekistan's dry climate, forests safeguard river basins, offer wind and dust protection, and play a pivotal role in conserving biodiversity. While not expansive, they provide non-timber products like pistachios, almonds, fruits, berries, and medicinal plants to support local communities.

Given their ecological importance, commercial logging is banned. They function as stable carbon sinks, with potential CO₂ sequestration in Uzbekistan estimated at 8.2 million tons annually⁵. Challenges include overgrazing, using trees for fuel, and deforestation. Yet, there's potential to grow local timber sustainably.

Presently, 3.26 million hectares are forested, overseen by the Forestry Agency (FA) under the Ministry of Ecology, which manages 86 entities including state forestry businesses and natural parks. Given Uzbekistan's climate, forest fire protection is a priority. Before its integration into the newly established Ministry of Ecology in early 2023, the SFA (previously known as the State Committee for Forestry) functioned as an autonomous public entity. It boasted robust funding from the state budget and had a dedicated Fund for the management of extra-budgetary financial resources. Unlike other environmental public institutions, the efficiently structured and well-financed SFA remained relatively stable amidst administrative changes.

The pivotal role of the FA in environmental stewardship was further cemented with the formulation of the "Concept for the Development of the Forestry System of the Republic of Uzbekistan until 2030". This was ratified by the Decree of the President of the Republic of Uzbekistan on October 6, 2020, under No. 4850. The primary objectives outlined in this decree were centered on combating desertification and initiating afforestation efforts, especially in regions facing the threats of Aral Sea desertification. To this

⁵The first biennial update report of the Republic of Uzbekistan. Prepared in accordance with the UNFCCC. (2021). <https://unfccc.int/sites/default/files/resource/FBURUZeng.pdf>

end, expansive measures were taken to establish protective forest plantations over the desiccated bed of the Aral Sea. Between 2019 and 2023 alone, initiatives spanned across more than 1.7 million hectares, and these efforts are still underway.

For holistic forestry development and to thrive in a "green economy," public participation in forest regeneration is pivotal. Particularly, empowering non-state forest enterprises can ensure financial stability, providing protection, sustaining ecosystem services, and promoting businesses. Amid climate challenges, this multifaceted forestry approach is crucial to preserve Uzbekistan's biodiversity and ensure sustainable growth. The "Yashil Makon" (Green Space) national project (2022-2026) aims for comprehensive afforestation in Uzbekistan. It emphasizes enhanced tree plantation systems, expanded nurseries, and advanced scientific research on soil-climate. By developing regional-specific maps, focusing on native ornamental trees, and establishing "green parks" and efficient watering systems, it strives for environmental enhancement.

With funding of approximately \$30 million from various sources, the project is poised for success. However, current tree planting and park creation practices raise biodiversity conservation concerns. For an ecologically rich nation, any oversight could be detrimental. The "Yashil Makon" project, while ambitious, must integrate biodiversity conservation at its core to be truly sustainable. Ensuring afforestation without disturbing ecological harmony defines real sustainable development.

Hence, understanding the impact of afforestation on biodiversity and ecosystem operations is crucial. Afforestation can lead to profound shifts in ecosystem dynamics, influencing factors like shading, micro-climate, production, nutrient cycles, and water balance, all of which can impact biodiversity. There is ample evidence that transitioning from open landscapes to forested areas can adversely affect species acclimated to open environments. Consequently, it is vital to incorporate biodiversity conservation measures in forest planning and management, prioritizing areas with unique habitats or rare species⁶

C. Tourism and recreation

Between 2016 and 2019, Uzbekistan revamped its tourism industry, leading to a threefold rise in foreign tourists to 6.7 million. In 2018 alone, foreign tourists grew by 98%. The tourism sector also saw a 131% growth in firms, with tourists from Central Asia and non-CIS countries growing by 22-25% and 50% annually, respectively. Domestic tourism nearly doubled, with 14.7 million local tourists in 2019. Infrastructure expanded, with hotels and hostels increasing from 750 to 1308, and tour operators tripling. Visa-free access was granted to 90 nations. However, the 2020 pandemic drastically reduced foreign tourists to 1.5 million and tourism service volume to \$261 million, from over \$1.5 billion in 2019. Tourism exports accounted for 38.2% of total service exports. Ecotourism, a sustainable sector showcasing Uzbekistan's biodiversity, such as the Nurata Mountains and "Jeyran" nursery, offers great potential. Globally, ecotourism is booming, but unchecked growth could strain resources, as cautioned by UNEP in 2011.

Despite the increasing discussions in recent years about the potential of ecotourism, the absence of a solid legislative framework and prevailing land tenure challenges are significant barriers to unlocking its full promise. While several development strategies identify ecotourism as a key developmental prospect, practical steps towards its realization are wanting. For instance, the NBSAP's Chapter 2, Paragraph 6, emphasizes ecotourism as a rapidly emerging and potentially lucrative sector. A marked increase in public interest towards recreational areas, especially those in the mountains and foothills proximate to major cities, underscores this potential. As the popularity of these areas grows, the resulting recreational pressures have notable implications on biodiversity. Hence, the Strategy advocates for methodical efforts to institute a structured ecotourism mechanism within the nation.

To make the most of this potential, a renewed focus on improving the sector's regulatory framework and professionalizing its workforce is vital. According to RCM No. 13 of 2018, the government of Uzbekistan recognized the need to develop ecotourism in state reserves, protected natural parks and biosphere reserves. Although there are currently certain restrictions on access to these areas for ecotourism activities, there is also a lack of adequate regulation in this area. Additional challenges include a lack of trained ecotourism personnel, limited marketing experience, legal restrictions on land leasing in protected

⁶ Elmarsdóttir, Ásrún & Fjellberg, Arne & Halldórsson, Guðmundur & Ingimarsdóttir, María & Nielsen, Olafur & Nygaard, Per & Oddsdóttir, Edda & Sigurdsson, Bjarni. (2008). Effects of afforestation on biodiversity.

areas, and immature public-private partnership structures. These factors create obstacles to the development of ecotourism and require a comprehensive solution to improve the current situation.

At the moment, most agricultural enterprises and farms located in categories of protected natural areas with a less strict protection regime face restrictions in the development of ecological and agroecotourism as potential sources of additional income. This is due to the insufficient development of the regulatory framework within the framework of national legislation and the limited capabilities of local administrative and regulatory authorities in the field of support and development of such types of tourism. To enhance ecological and agroecotourism in these territories, strengthening regulatory support and improving administrative mechanisms at the local level are required.

D. Fisheries

Uzbekistan, with its almost 750 thousand hectares of water resources, has considerable potential for fisheries. The country boasts over 500 lakes, with 32 of them surpassing 1,000 hectares. Historically, the Aral Sea was the primary fishing hub. However, its decline since the 1960s led to a rise in pond fish farming. Today, most fishing takes place in lakes, many of which are man-made, while reservoirs are mainly for irrigation.

Of the total fisheries area, lakes cover 602.5 thousand hectares and reservoirs 146.5 thousand hectares. Key government and state enterprises manage about 576 thousand hectares. Until 2017, the Republic of Karakalpakstan's reservoirs and the Aydar-Arnasay lake system accounted for 60% of the fish catch. As of 2014, 319 fishing farms operated across 415.3 thousand hectares. Fisheries significantly contribute to Uzbekistan's economy and food security. The nation's leadership consistently focuses on enhancing fish catch and sustainable fishery development. Due to its landlocked location and dry climate, over 60% of Uzbekistan's fish rearing uses intensive methods, cultivating species like silver carp, grass carp, and introducing tropical fish like tilapia and trout.

However, the 2019 CBD report revealed a decline in fish resources from overexploitation. In 2018, Uzbekistan imported fish products worth \$6.5 million and exported only \$2.2 million worth. Challenges include outdated cultivation technologies, limited processing methodologies, and a shortage of skilled experts. To address these challenges, the government-initiated reforms, such as the 2018 “Programme of Measures for the Accelerated Innovative Development of the Fishing Industry” and a 2022 decree promoting household fish breeding. The government has also permitted recreational fishing since the 1990s, allowing daily catches up to 5 kg per person, though this led to concerns about overfishing.

Various plans between 2018 and 2022 sought to promote the industry, offering tax benefits and subsidies to pond fish farmers and households engaged in fish farming. While these measures are conducive to the rise of artificial fish farming, especially for valuable species, and could help stabilize the market and curb illegal fishing, their potential impact on the endemic fish populations in the natural habitats need to be studied and thoroughly analyzed for possible threats. This is especially important in light of the Thematic Assessment Report on Invasive Alien Species and their Control that was issued by IPBES⁷ in early September 2023. In the report invasive alien species were identified as one of the main direct drivers of biodiversity loss worldwide. The rapidly growing threat that invasive alien species pose to biodiversity, ecosystem services, sustainable development and human well-being is, however, generally poorly quantified and little understood by decision makers.

In the wake of these findings, it's recommended that invasive alien species control be a key pillar in the forthcoming version of the NBSAP, aligning with the GBF (Kunmin-Montreal Targets). Parallely, it's imperative to dovetail these measures into sector-specific development plans, like agriculture, hunting, fishery, and forestry. Steps such as dedicated research, robust monitoring, heightened public awareness campaigns, legislative fortification, and international collaboration should be earnestly considered to maintain a judicious balance between economic progression and biodiversity preservation.

⁷ IPBES (2023). Summary for Policymakers of the Thematic Assessment Report on Invasive Alien Species and their Control of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Roy, H. E., Pauchard, A., Stoett, P., Renard Truong, T., Bacher, S., Galil, B. S., Hulme, P. E., Ikeda, T., Sankaran, K. V., McGeoch, M. A., Meyerson, L. A., Nuñez, M. A., Ordonez, A., Rahlao, S. J., Schwindt, E., Seebens, H., Sheppard, A. W., and Vandvik, V. (eds.). IPBES secretariat, Bonn, Germany (<https://www.ipbes.net/ias>).

E. Hunting economy

In 2020, the Law on Hunting and Hunting Organizations was introduced, privatizing hunting management to individual entities and hunter associations. This law emphasizes:

- Science-based planning.
- Wildlife conservation and sustainable use.
- Measures for wildlife protection and reproduction.

However, full enactment is pending due to a lacking mechanism. Currently, Uzbekistan has 50+ hunting farms, covering 4.77 million hectares (10.6% of the country's area), associated mainly with the Sports Association of Hunters and Fishermen of Uzbekistan, the FA, and some private entities. With over 38,000 registered hunters, the annual hunting rate for licensed species fluctuates between 10% and 25%. To obtain a license, affiliation with a hunter's association and a hunting history is mandatory. Approximately 2,000 new permits are issued yearly. The sole existing hunter association charges an entry and yearly fee of 1 BCV (apprx. 26 USD), with the state obtaining 20% when hunting activities occur.

Data on game species trends and quotas is limited. However, some mammal populations, such as wild boar and hare, are growing, maintaining stable hunting quotas. Conversely, certain bird species, like the Asian partridge, are declining. Poaching is a considerable concern, affecting 69% of game mammals and 56% of endangered mammal species, either for consumption or illegal trade. Challenges like poaching and species decline require attention, and the latest laws await full implementation.

Table 2. Use of the main hunting species of animals on the lands of the forest fund and hunting farms (number / quota / used)

	2016	2017
Boar	5,210 / 180 / 59	5,917 / 180 / 125
Badger	5,067 / 450 / 134	8,639 / 400 / 213
Hare	158,803 / 12,000 / 6,588	186,066 / 15,000 / 12,784
Partridge	226,468 / 51,000 / 11,980	251,509 / 51,000 / 26,879
Pheasant	196,664 / 6,000 / 3297	171,725 / 9,770 / 7,462

Table 3. Use of quotas for catching the main game species on the lands of the forest fund and hunting farms (quota / used)

2014	180/97	450/101	10,000/8,240	6,000/2,116	50,000/21,567
2015	180/54	450/27	10,000/4,846	6,000/1,680	51,000/9,500
2016	180/59	450/134	12,000/6,588	6,000/3,297	51,000/11,980
2017	180/125	400/213	15,000/12,784	9,770/7,462	51,000/26,879

F. Water resources

Water is essential element for life and its diversity. The relationship between the water sector and biodiversity is twofold: the sector's effects on biodiversity and the advantages it gains from the ecosystem services that biodiversity offers. Thus, the water sector ought to prioritize preserving biodiversity, not only for its own benefits but also for the broader community.⁸

Uzbekistan acknowledges the significance of water resource management, creating a dedicated Ministry of Water Resources in 2017. The current water management approach draws from the Water Resources Development Concept for Uzbekistan 2020-2030, emphasizing:

- Integrated water resource management.
- Assured water supply for the population and economic sectors.
- Enhanced water quality and environmental balance.

⁸ Secretariat of the Convention on Biological Diversity (2015) Water and Biodiversity: Summary of the findings of (GBO4) and implications for action as they relate to water. Montréal, 9 pages.

Uzbekistan, in the Aral Sea basin, primarily depends on the Amudarya and Syrdarya rivers, along with inland rivers and groundwater. Annually, the Aral Sea basin provides 116.2 billion cubic meters of water, with Uzbekistan's withdrawal limited to 64 billion cubic meters. However, climate change and regional water disputes have reduced this to 51-53 billion cubic meters.

Existing infrastructure consists of a 28.4 km irrigation system, 54,000+ hydraulic structures, and 70 reservoirs. The country's water infrastructure is grappling with aging irrigation systems, leading to water losses and land salinization. Water availability per capita has decreased over the past 15 years. The expanding energy industry also increases the water demand. Currently, 80% of Uzbekistan's water is sourced externally, primarily from the Amu Darya and Syr Darya, with agriculture consuming 85%.

Table 4. Water consumption by sectors of the economy in 2018

	km ³	%
Agriculture	50.4	90
Utilities	2.3	4.1
Energy	1.3	2.3
Industry	0.73	1.3
Fisheries	0.67	1.2
Other	0.6	1.1

Climate change impacts predict a glacier volume reduction of up to 78% with a 4°C rise in temperature. By 2050, the Syr Darya and Amudarya basins may face water reductions of 5% and 15%, respectively. This could intensify droughts and pose economic challenges. The water deficit may reach 15 billion cubic meters by 2050. Furthermore, inefficient water use and outdated facilities have led to inadequate drinking water access in regions like Karakalpakstan, Khorezm, and Bukhara.

The President's Decree № PP-4919 (December 11, 2020) proposes several solutions:

- Introduction of economical and advanced irrigation techniques.
- Laser leveling for uniform irrigation.
- State subsidies of 1.5 trillion soums (USD 136.4 billion) supporting water-saving technologies and relevant bank loans.
- A 30% state-backed discount on local automated land-planning units with laser installation.
- Subsidies are conditional on a five-year commitment to these water-saving techniques.
- Taxation on water extraction from natural sources.

This initiative aims to address high water consumption, outdated infrastructure, and environmental consequences, such as wetland loss, by promoting efficient water use. If implemented effectively, these measures will safeguard critical biodiversity hotspots that are currently degrading due to diminishing water resources. Healthy aquatic ecosystems play a pivotal role in supporting biodiversity and maintaining ecological equilibrium. Through sustainable water management, we can preserve rivers, lakes, wetlands, and other aquatic habitats.

Table 5. Water use tax 2015, 2019 sum/m³

Water users	Surface sources of water resources		Underground water sources	
	2015	2019	2015	2019
Power plant	17.9	30	26.6	50
Public service organizations	34.0	60	43.9	80
Manufacturers of soft drinks	10,000	19,040	10,000	19,040
Vehicle washing companies	–	1,200	–	1,200
Industrial enterprises	61.9	360	78.6	430
Other sectors of the economy	61.9	120	78.6	150

G. Agriculture

Agriculture both utilizes and can positively impact biodiversity. With its dominance over one-third of the world's land, sustainable agricultural practices can uphold vital ecosystem functions such as water purification, erosion prevention, natural pest control, and pollination. The longevity of these ecosystem

services for future generations hinges on our present-day comprehension, appreciation, and management, both within and beyond agricultural frameworks. Collaborative efforts across various sectors are essential to realize this vision.⁹

The agriculture sector in Uzbekistan is governed by the 2020-2030 Strategy for the Development of Agriculture of the Republic of Uzbekistan for 2020-2030, adopted in 2019. This strategy focuses on sustainable natural resources use, environmental protection, and modern management systems. A key goal is reducing agricultural greenhouse gas emissions by 50% by 2030. However, challenges include unsustainable pasture and land use, desertification, soil degradation, worn irrigation networks, and climate change impacts.

Animal husbandry, contributing over 40% to the gross agricultural production, significantly impacts natural ecosystems. Increased load on state forest fund lands, especially highland pastures, leads to degradation and overgrowth in unused pastures. Climate change exacerbates land degradation and desertification, particularly in the Aral Sea region, Ustyurt plateau, Kyzylkum desert, mountainous forests, and foothill areas. This results in various land degradation issues, such as erosion, reduced productivity, deforestation, habitat loss, reduced carbon sequestration, and increased natural disasters.

The Ministry of Agriculture manages agriculture, while the Committee for Veterinary Medicine and Livestock Development oversees animal husbandry. The 2022-2026 Livestock Industry Development Programme focuses on systematic natural resources exploitation, environmental protection, and increasing livestock productivity. It aims to strengthen the forage base, build fodder production capacity, and ensure sustainable pasture use.

Despite challenges, the agriculture sector in Uzbekistan has shown stable growth over the past 5-7 years, even with a reduction in some agricultural crops' sown areas (see Table 6).

Table 6. The main indicators for agriculture sector 2014-2021.

Indicators	2014	2015	2016	2017	2018	2019	2020	2021
Sown area of agricultural crops, thousand hectares	3,678.2	3,694.2	3,706.7	3,474.5	3,396.0	3,309.4	3,396.1	3,260.7
Agricultural products, bln. UZS	81,794.3	99,604.6	115,599.2	148,199.3	187,425.6	216,283.1	250,250.6	303,415.5
including:								
<i>Crop production</i>	43,194.3	55,429.2	61,755.1	83,303.4	98,406.4	111,904.8	123,858.8	152,130.4
<i>Livestock products</i>	38,600.0	44,175.4	53,844.1	64,895.9	89,019.2	104,378.3	126,391.8	151,285.1
Growth rates of agricultural production, as %age of the previous year	106.3	106.1	106.3	101.0	100.2	103.3	102.7	103.9
including:								
<i>Crop production</i>	105.9	105.5	105.7	98.2	95.8	104.8	103.2	104.3
<i>Livestock products</i>	106.7	106.9	107.0	104.1	105.7	101.6	102.1	103.5

H. Oil and Gas Sector

The oil and gas sector is pivotal to Uzbekistan's industrial framework and economic restructuring, contributed significantly to investments in 2011 and 2012. This dominance is emphasized by medium-term industrial plans allocating 57% of investments to the sector, mainly in petrochemicals. Three major projects have transformed the sector and economy: Surgil and Mubarek Gas and Chemical Complexes (GCC) for polyethylene and polypropylene production, and synthetic liquid fuel production at Shurtan GCC.

Regulation for this sector is anchored by the Laws "On subsoil" and "On licensing, permitting and notification procedures", with oversight by the Ministry of Energy and the Ministry of Mining Industry and Geology. Enterprises within the sector, due to their high environmental impact, must adhere to stringent environmental standards including mandatory monitoring and staffing of ecologists.

Although pipelines, being the most efficient fossil fuel transport method, offer relative safety, concerns persist around environmental and residential impacts, including threats to biodiversity. These concerns are augmented by the industry's emissions, with notable pollutants like carbon monoxide, carbon dioxide, and methane. Fortunately, gas flaring, a significant environmental concern, saw a decline in Uzbekistan from 2013 to 2018, a trend attributable to reduced oil production and targeted measures by oil companies.

⁹ FAO. 2018. Sustainable Agriculture for Biodiversity – Biodiversity for Sustainable Agriculture. (<https://www.fao.org/3/I6602E/i6602e.pdf>)

A joint project by UNDP/GEF/Ministry of Ecology 2010-2015 “Integrating the principles of biodiversity conservation into the oil and gas sector of Uzbekistan” sought to address biodiversity concerns within the sector, proposing a conservation-focused approach. This initiative, bolstered by a four-year biodiversity monitoring on the Ustyurt Plateau, informed a comprehensive Biodiversity Monitoring Plan. It also catalyzed legislative suggestions and laid groundwork for more stringent environmental scrutiny of future projects. In addition, resources were developed for industry professionals, reinforcing best practices. A notable accomplishment is the establishment of the Saigachiy complex landscape reserve under the Ministry of Ecology. Despite the project's current dormancy, its revival could further solidify Uzbekistan's commitment to biodiversity conservation and ecosystem protection.

I. Energy

The energy sector in Uzbekistan leans heavily on the gas industry, with 75-80% of electricity and heat generated from natural gas. Despite its relatively clean combustion, facilities like Angrenskaya and Novo-Angrenskaya TPPs still produce significant emissions. The Ministry of Energy oversees energy optimization, and while nuclear energy presents environmental benefits, its proposed location near the ecologically significant Lake Tuzkan is a cause for concern.

A 2013 World Bank report emphasized Uzbekistan's substantial energy efficiency potential, pinpointing issues like reduced efficiency in gas power plants and considerable electrical network losses. In response, various strategies have been deployed, such as introducing energy-efficient street lighting, phasing out specific incandescent bulbs, and applying energy standards for industrial processes. However, the nation's energy intensity remains elevated, and there's an over-reliance on traditional hydrocarbon fuels like natural gas.

Efforts to save electricity and natural gas are underway, targeting reductions of about 5% and 3.6% in their respective annual consumptions. This approach has seen the primary energy intensity of GDP drop significantly from 2010 to 2016, indicating progress, though there's more ground to cover.

J. Science

Academy of Sciences of the Republic of Uzbekistan specialists conduct winter waterbird counts in the main reservoirs of Tashkent, Jizzakh, Navoi, and Bukhara regions. Within the planned activities of the GMOP for 2016-2020, the ecological and hydrological status of the Kuyimazar and Tudakul reservoirs was monitored, leading to their inclusion in the Ramsar List. This inclusion resulted in permanent state funding for such activities, sourced from the non-budgetary funds of the State Committee for Ecology.

K. Education

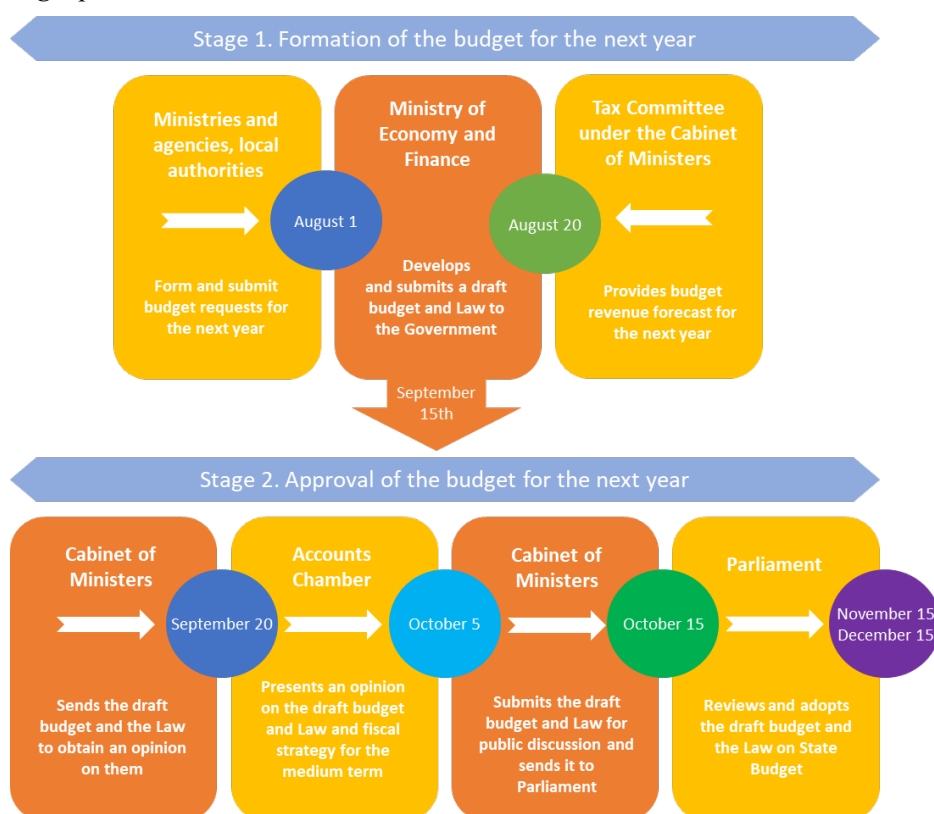
In 2019, the Government of the Republic of Uzbekistan approved the Concept for the Development of Environmental Education, which incorporated biodiversity conservation topics into various ecology and natural science educational programmes and integrated them into the curriculum of all educational institutions. This initiative aims to enhance ecological awareness and knowledge about the significance of addressing environmental issues, including biodiversity, among the youth. The implementation of this concept does not require additional expenses and is executed within the annual budget allocations to ministries.

IV. State subsidies and biodiversity budgeting processes

Biodiversity financing primarily comes from the state budget, trust funds, and extra-budgetary funds of various ministries and departments. From 2012-2020, environmental protection expenditures, excluding extra-budgetary funds, averaged 0.06% of total public expenditures and about 0.02% of GDP. These figures are extremely low, considering the environmental challenges the country faces.

The budget process in the republic is governed by the Budget Code and the Law of the Republic of Uzbekistan "On the Budget System." This law specifically establishes a mechanism for the formation, approval, execution, and control over the execution of budgets of all categories. However, it unfortunately does not define primary expenditure items related to biodiversity conservation or other environmental protection issues. Additionally, in the context of state subsidies and biodiversity budgeting, it's noteworthy that, despite persistent efforts over several years to shift towards mid-term budgeting with a three-year framework, Uzbekistan continues to employ a short-term, annual budget model. This reluctance or delay in adopting mid-term budgeting could be attributed to the continually evolving economic and administrative landscapes resulting from ongoing reforms, among other factors. The dynamics of these transformations can create uncertainties, which might challenge the transition to a longer-term budgeting perspective.

Figure 8. Budget process:



In 2021, biodiversity incurred damages amounting to 40.8 billion UZS (USD 3.71 million), leading to more than 1800 administrative and 22 criminal cases. Of the total damages, 25 billion UZS (USD 2.3 million) were recovered, and 17.2 billion UZS (USD 1.5 million) were recovered for illegal tree felling.

The agricultural sector plays a pivotal role in Uzbekistan's economy and society. As the nation advances towards modern agriculture, state subsidies are instrumental in fostering growth, driving technological adoptions, and mitigating risks for farmers. This chapter outlines various state subsidies targeting the agriculture sector and evaluates their potential impact on biodiversity. The subsidies under the agriculture sector highlight the state's efforts to prioritize sustainable farming practices, efficient water use, and advanced agricultural methodologies. These measures can have varied impacts on biodiversity.

Table 7. List of state subsidies and their expected impact on biodiversity in the agriculture sector

Document Ref.	Objective	Duration	Mechanism	Recipients	Funds Allocated (2018-22 in billion UZS)	Allocation for 2023 (in billion UZS)	Funds Disbursed (as of 01.07.2023 in billion UZS)	Potential Biodiversity Impact (subject to in-depth study)
Presidential Decree #144 & Decree of Cabinet of Ministers #95	Implementation of water-saving technologies in crop cultivation	Unlimited	Partial reimbursement for technology deployment	Agricultural producers (farmers, clusters, cooperatives, etc.)	1,457.90	463.2	24.9	Neutral to Positive
Presidential Decree #4767	Drilling wells for water supply in challenging areas	Unlimited	Covering well drilling costs	General population & cooperatives	112.9	100	40.595	Harmful to Neutral
Cabinet of Ministers Decree #320	Covering electricity costs for water pumps for cotton and grain cultivation	Unlimited	Covering electricity costs for pump stations	Farm enterprises and clusters	693.1	170	0	Neutral
Presidential Decree #6059	Construction of wells and pump stations in pasture lands	Unlimited	Covering construction costs	Food industry entities	4.9	20	10.074	Harmful
Cabinet of Ministers Decree #368	Support for exported animal feed and forage	Unlimited	Support for entities engaged in animal feed export	Feed industry entities	0.4	3	1.502	Harmful to Neutral
Presidential Decree #5017 & Cabinet of Ministers Decree #434	Subsidies for products sold by poultry, fishery, and livestock industries	Until 01.01.2024	Subsidies for sold products	Poultry, fishery, and livestock industries	536.2	400	279.874	Harmful to Neutral
Presidential Decree #4576 & Cabinet of Ministers Decree #-280	Buying purebred cattle, sheep, goats, fish, and birds	Until 01.01.2024	Subsidies for buying animals	Livestock enterprises	163.8	6.5	4.083	Harmful
Cabinet of Ministers Decree #-460	Encouraging the use of biological protection in agriculture	Unlimited	Subsidies for buying bio-protection measures for agricultural exports	Farm enterprises and clusters	0	0*	0	Positive

*The document considered as a basis for allocating funds was adopted after the state budget parameters were formed

By promoting water-saving technologies, there's a potential reduction in over-extraction from natural water bodies, aiding aquatic ecosystems. Subsidies that promote biological protection in agriculture deter the excessive use of harmful pesticides, benefitting soil organisms and the broader ecosystem. Some subsidies might neither harm nor benefit biodiversity directly. For instance, covering electrical costs for water pumping doesn't inherently impact biodiversity but should be monitored for indirect effects. There are concerns with subsidies that facilitate intensive farming or those that might lead to habitat destruction. For instance, subsidies for drilling wells in certain areas might affect groundwater ecosystems or promote unsustainable water use.

While the subsidies aim to bolster the agriculture sector, it is crucial to assess their long-term impact on biodiversity. Finding a balance between agricultural productivity and ecological sustainability remains paramount. Proper implementation, monitoring, and periodic review of these subsidies can ensure that agriculture in Uzbekistan progresses in harmony with nature.

Table 8. Other examples of harmful and positive subsidies in biodiversity

No	Name	Impact
Harmful subsidies		
1.	Construction of a nuclear power plant (11 billion USD) in Jizzakh region.	Potential habitat loss for migratory birds and other inhabitants of the Arnasay lake system. Pollution risks to the reservoir. Risk of extinction of endangered species. Possible loss of Ramsar Convention status.
2.	Stimulation of direct foreign investments by tax exemption, with no biodiversity conservation conditions based on the following volumes of foreign investment: <ul style="list-style-type: none"> • from 300K USD to 3 mln USD - for a period of 3 years; • over 3 mln USD up to 10 mln USD - for a period of 5 years; • over 10 mln USD - for a period of 7 years. (Decree of the President of the Republic of Uzbekistan No. 3394 of 11.04.2005).	Biodiversity loss risks due to harmful production. Decline in ecosystem services. Increases water and energy resource.
3.	Tax reduction for companies operating new oil and gas fields. (Article 414, Tax Code)	Increased oil and gas production. Growth in harmful emissions. hindered growth of renewable energy sources. Water overconsumption. Regional biodiversity risk.
Positive subsidies		
1.	Afforestation in the dried Aral Sea region (1.2 million USD). (Decree of the President of the Republic of Uzbekistan No. 4850 of 10.6.2021).	Soil erosion prevention. Biodiversity habitats conservation. Combating desertification. Water resources conservation. Carbon emissions offset.
2.	State support for households' fish farming (Resolution of the President of the Republic of Uzbekistan No. 83 of 01.13.2022).	Enhanced food security without harming water biodiversity. Reduced poaching.
3.	National project "Green Land" (Decree of the President of the Republic of Uzbekistan No. 46 of 12.30.2021)	Moratorium on tree/shrubs felling. Double penalties for illegal felling. funding for pest control and tree inventories (2% from additional sources of local budgets) Allocation for tree planting and urban landscaping (64.8 billion UZS (6.2 million USD from local budgets).

In its bid to boost various sectors, the Uzbek government has initiated diverse subsidy programs spanning agriculture, industry, tourism, education, and the social realm. Agriculture subsidies, aimed at select farmers and crops, present mixed outcomes for biodiversity. For instance, fostering greenhouse agriculture

could curtail deforestation, but heightened mineral fertilizer use might taint water sources, adversely affecting aquatic life.

Tourism-related subsidies for hotel construction and domestic aviation offer both potential risks and rewards. Encouraged tourism might prompt habitat damage, but it could also uplift ecotourism, beneficial for biodiversity. Nevertheless, aviation's carbon emissions exacerbate climate change, indirectly impinging on biodiversity. Education subsidies largely revolve around vocational training and student accommodation, posing minimal biodiversity concerns. Similarly, social subsidies, targeting unemployment and student rentals, have a generally neutral biodiversity impact, unless infrastructure construction disrupts ecosystems. These subsidies reflect Uzbekistan's active push in pivotal sectors, yet their biodiversity ramifications differ. While some pose neutral or subtle effects, others, especially within agriculture and construction, can bear direct consequences. Such incentives necessitate thorough scrutiny, ensuring a balance between economic progression and biodiversity preservation.

Biodiversity financing decisions hinge on funding origins. State budget allocations, proposed by relevant entities during annual drafting, don't always get green-lit. This is because financial strategies must accommodate primary expenditure mandates (like social welfare) and international directives on budget deficits, capped at 4% of GDP as of 2022. Other funding channels include ministry trust funds, like the Ecology and Waste Management Fund. These are annually sanctioned by respective ministry heads, in collaboration with the Finance Ministry. Besides state sources, biodiversity financing also stems from private and donor contributions, though data on private biodiversity investments remains scanty.

V. Non-Governmental Sector

5.1. Non-governmental organization

In recent times, non-profit NGOs have become pivotal in disseminating environmental information and safeguarding citizens' interests in Uzbekistan's political landscape. To bolster these organizations, entities like the "National Association of Non-Governmental Organizations" and the "Public Fund for Support of NGOs under the Oliy Majlis" were established. Currently, over 250 environmental-centric public associations and NGOs exist nationwide, with 35+ in the capital.

Key NGOs dedicated to biodiversity conservation are the Ecological Party of Uzbekistan, NANNOUz, the Ecoforum of NGOs of Uzbekistan, and others. Their primary objectives include:

- Environmental protection and education.
- Public involvement in ecological activities and information dissemination.
- Focus on sustainable development, climate change, and mountain region development.
- Biodiversity conservation and water resource management.

These NGOs actively engage in forums, media discussions, and environmental events, and produce their own publications.

5.2. International organizations and partnerships

International projects like the BirdLife Partners programme are integral to biodiversity preservation. The Spring Alive project in 2016 aimed at nurturing children's nature appreciation and involvement in conservation efforts. In Uzbekistan, this initiative involved over 1,800 participants in bird observations and related activities. International bodies like UNDP, GEF, and World Bank actively assist in biodiversity projects. The Sports Association of Hunters and Fishermen of Uzbekistan also aids in biodiversity monitoring by hiring experts to document game species.

Accurate and complete data on biodiversity play a key role in shaping government strategies and plans for its conservation. Despite significant efforts, as of 2019, there is a need to improve the biodiversity monitoring system in Uzbekistan. Although the last forest inventory was carried out back in 1987, the adoption of the updated national Red Data Book in 2019 was a significant step forward. This update more closely aligns with the International Union for Conservation of Nature's (IUCN) global assessment methods and criteria, providing more up-to-date information on the status and threats facing the country's rare and endangered flora and fauna.

5.3. Private Sector

The private sector plays a pivotal role in numerous sectors, and environmental conservation is no exception. Particularly when considering the financing aspects of biodiversity and sustainable development, businesses can be significant contributors, harnessing their reach, resources, and innovation. In developed countries with a heightened awareness of environmental issues, the private sector has emerged as a principal player in biodiversity financing. Numerous multinational corporations allocate significant portions of their budgets for conservation initiatives, both as a part of their corporate social responsibility (CSR) and as a long-term investment in sustainable business practices. Contrary to global trends, the financing of biodiversity by the private sector in Uzbekistan remains largely underdeveloped or entirely absent. While there's burgeoning interest and an emerging understanding of environmental concerns within the nation's business community, the translation of this interest into actionable, financed projects is lagging.

One of the primary reasons for this deficiency is the absence of an enabling environment. The nation lacks comprehensive policies, legislation, and incentives that would promote or necessitate private sector involvement in environmental financing. Without these legislative and policy-driven guidelines, businesses often prioritize short-term gains over long-term sustainable approaches, which could be more beneficial both economically and ecologically in the long run.

Environmental, Social, and Governance (ESG) criteria are a set of standards for a company's operations that socially conscious investors use to screen potential investments. An effective ESG framework attracts investments, promotes sustainable practices, and ensures long-term profitability. Uzbekistan's lack of

such a national framework indicates missed opportunities in mobilizing resources from its burgeoning private sector. As an example, in Norway, a country with a robust national ESG framework, private companies are not only required to integrate ESG into their operational strategies, but they are also incentivized to do so through tax breaks and other financial benefits. As a result, Norway sees private sector contributions of approximately \$500 million annually towards environmental and biodiversity projects, a testament to the potential of ESG-driven initiatives.

For Uzbekistan the path ahead involves both challenges and opportunities. Yet, with concerted efforts, the private sector in Uzbekistan can be transformed into a powerhouse for environmental conservation and sustainable growth. The likely growth of the market will also depend on factors such as private sector adoption of mechanisms such as the Working Group on Nature-related Financial Disclosure (TNFD) Guidelines and the Science-Based Targets for Nature (SBTN) Guidelines. Regulatory factors are also likely to play a significant role in the development and growth of ESG investing in the market in the coming years.

In this regard, the official launch of Chapter Zero in Uzbekistan in July 2023 under the Climate Governance Initiative (CGI) can be seen as one of the first steps in this direction. Organized by Westminster International University in Tashkent and supported by the EBRD, Deloitte Uzbekistan and Dentons Uzbekistan, this platform supports company directors in their transition to a net zero economy, an important step towards sustainable development. Joining Uzbekistan's business community with Chapter Zero can help company directors gain access to a wealth of knowledge and experience that will help them reduce carbon emissions and contribute to the conservation of the country's natural resources.¹⁰

¹⁰ <https://chapterzerouzbeistan.wiut.uz/ru/events-ru/oficialnyy-zapusk-chapter-zero-v-uzbekistane>

VI. Conclusions and Recommendations

6.1. Conclusions

The present situation reveals important challenges in biodiversity conservation and related sectors in the Republic of Uzbekistan. Although efforts have been made to address threats to biodiversity and support environmental protection, these measures are unsystematic and often negated by policies that inadvertently encourage harmful practices. The absence of comprehensive biodiversity accounting, insufficient fines for violations, lack of public information on environmental impacts, jurisdictional complexities, and misunderstanding of laws contribute to ineffective biodiversity management. Inadequate representation of biodiversity specialists limits systematic approaches to environmental protection.

Despite the annual GDP growth, there is no official data on 'green' production or ecosystem services growth. This, coupled with the lack of a cohesive link between strategies and development plans across public administration sectors, results in a fragmented approach to addressing environmental and biodiversity issues. The dual subordination of regional units of ministries and departments to local authorities leads to non-fulfillment of central government goals and objectives. Therefore, there is a need for a comprehensive, systematic, and interdepartmental approach to environmental protection and biodiversity conservation, incorporating international best practices.

The current challenges faced in biodiversity conservation, environmental protection, and climate change adaptation underline the urgent need for a comprehensive Environmental, Social, and Governance (ESG) framework. While there are positive steps being taken in various sectors, the efforts are often unsystematic, haphazard, and sometimes contradictory. Furthermore, the absence of a cohesive and systematic link between strategies and development plans across various sectors of public administration indicates a gap in the current approach to sustainable development.

An ESG framework is essential to ensure that environmental, social, and governance factors are integrated into the decision-making process across all sectors of the economy and public administration. This framework will help in aligning the interests of different stakeholders, promoting transparency and accountability, and ensuring a proactive and phased approach to addressing environmental and social challenges.

6.2. Recommendations

A. Policy and Legislation:

- An expedited preparation, adoption and implementation of the updated NBSAP in line with the goals and objectives of the new Global Biodiversity Framework (GBF), along with a comprehensive plan for its financing.
- Develop and adopt an Environmental Code that consolidates various legislative acts, addressing discrepancies, contradictions, and obsolescence of legislative norms.
- Further reform and integration of the environmental impact assessment (EIA) system into the proposed Code, such as the adoption of an Environmental Assessment Law that includes aspects of strategic environmental assessment.
- Updating the Law on Environmental Expertise and introducing mandatory environmental expertise of planned economic activities receiving government subsidies.
- Accession to the Aarhus Convention of 1998.
- Develop and implement a legislation that promotes the environmental entrepreneurship as a new economic sector. New legislation should provide for new categories of objects and subjects of environmental activities, their land use rights commensurate with the goals and objectives of their activities, as well as the development and legislative support of innovative business models and financial mechanisms that ensure an effective compromise between socio-economic and environmental issues. One such mechanism could be a “biodiversity credit,” which is similar in design to a “carbon credit.”
- Legislate long-term land use rights for environmental entrepreneurs to restore and develop ecosystem services (conservation, ecotourism, hunting, organic and regenerative agriculture,

etc.), subject to specific development plans and commitments to preserve and restore ecosystems. Such a legislative act could be the “Law on Natural Capital and Ecosystem Services”, following the example of the Law on Nature Restoration, adopted by the European Union in 2023.¹¹

- Develop multilateral donor projects related to biodiversity, ecosystem services, and climate change adaptation.

B. Sectoral policies:

- Integrate biodiversity conservation issues into sectoral strategies and plans, through the introduction of the practice of analyzing the consequences of the implementation of sectoral policies, including the possible impact on biodiversity, the environment and the health of citizens.
- Develop and implement a phased plan aimed at improving the environmental situation, protecting the environment and biodiversity, as well as developing ecosystem services in all sectors of the economy.
- Define and implement sectoral objectives and targets related to biodiversity, ecosystem services, climate change adaptation and environmental protection.
- Further strengthen sanctions against offenses in the field of biodiversity and environmental protection.
- Create an enabling environment for the development and implementation of national ESG reporting frameworks to ensure the integration of environmental, social and governance factors into business processes and production cycles in all sectors of the economy, as well as in the management of public assets.

C. Institutional capacity:

- Establish a permanent structure under the Administration of the President of the Republic of Uzbekistan to ensure comprehensive work on the development, promotion and coordination of state policy in the field of transition to a “green economy”, conservation of biodiversity and adaptation to climate change.
- Further strengthen the status of the Ministry of Ecology and vesting it with the powers of supervision and coordination over government bodies regarding their activities on environmental protection, biodiversity conservation and adaptation to climate change.
- Reform/establish the National Environmental Fund into a modern financial mechanism with broad powers, the organizational structure and activities of which comply with international standards of transparency and accountability, which will increase the flow of external funding.

D. Budget, Taxation and Incentives:

- Introduce green budgeting tools, including revenue and expenses tagging in the field of biodiversity.
- Improve statistical reporting on the ‘green economy’ and the potential of ecosystem services.
- Create a separate budget line for research, monitoring and accounting in the field of adaptation to climate change and environmental protection, including issues of biodiversity conservation.
- Integrate biodiversity protection into any government funding to prevent potential adverse impacts on native species and their natural habitats.
- Conduct a comprehensive assessment of current subsidies across industries to identify those posing a threat to biodiversity. Once such subsidies are identified, it is recommended that they be reviewed and/or reformed so that they are better aligned with biodiversity conservation objectives.
- Consider the possibility of providing tax benefits and subsidies that stimulate environmental entrepreneurship and contribute to the further development of the environmental industry.

¹¹ <https://www.unep.org/ru/novosti-i-istorii/istoriya/evropeyskiy-soyuz-predlagaet-vvesti-zakon-o-voosstanovlenii-prirody>

E. Sustainable Ecotourism Development:

- Analyze and improve the legislative and regulatory framework for ecotourism, with the aim of eliminating bottlenecks and ensuring sustainable and responsible growth in this sub-sector.
- Implement a national ecotourism certification system to standardize and improve the quality of eco-friendly tourism services.
- Consider providing subsidies specifically targeted at ecotourism initiatives, promoting its growth while ensuring environmental responsibility.
- Capacity building in the ecotourism sector through training programmes, workshops and educational initiatives to enhance knowledge of sustainable tourism practices.

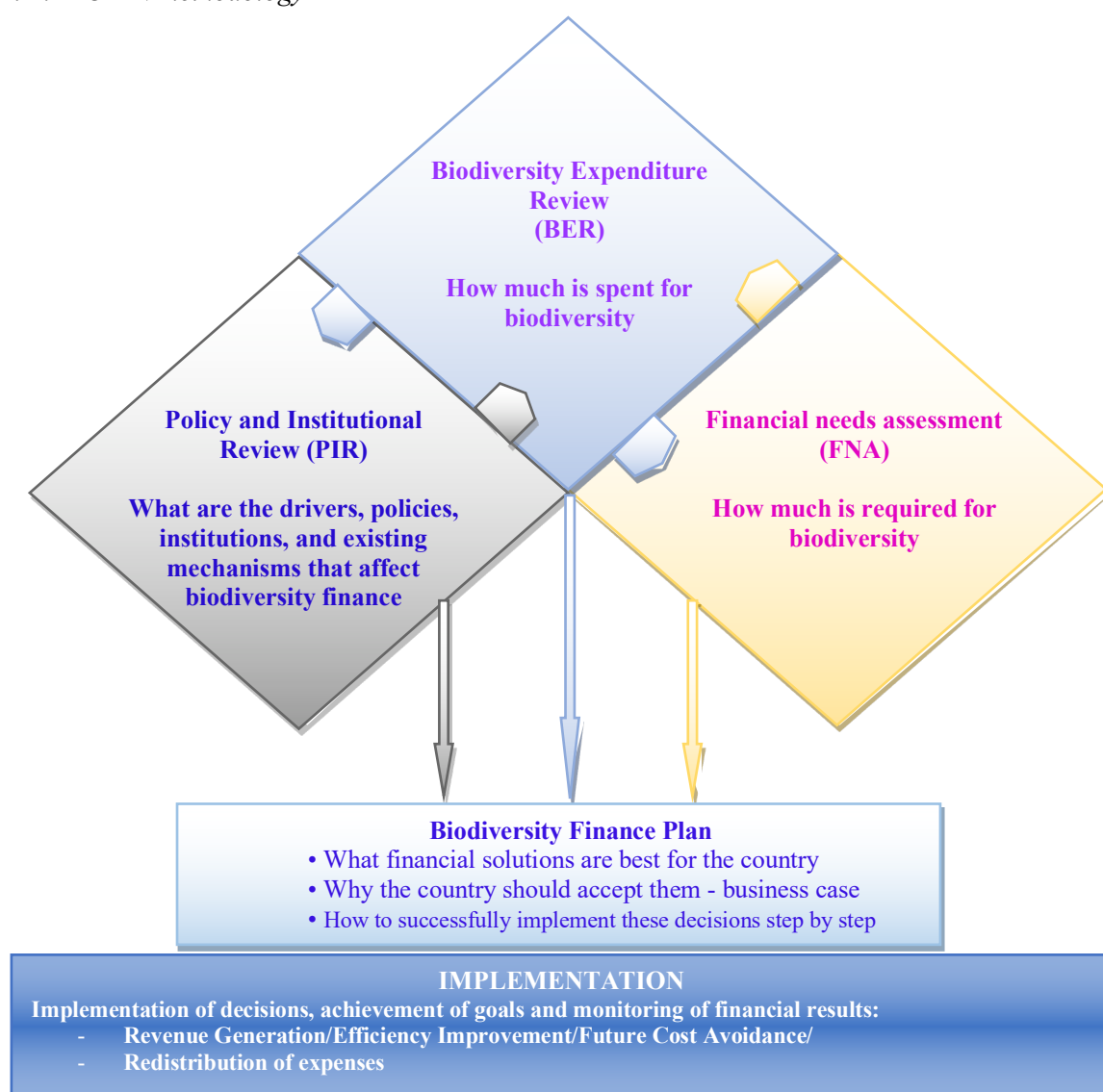
Annexes

Annex 1: BIOFIN Methodology

The BIOFIN initiative aims to increase funding for biodiversity, change spending where it matters most (e.g. greening harmful subsidies), reduce future costs by investing in preventive measures (e.g. stopping spreading alien species), and increasing efficiency for every dollar spent. This work leads to better management of biodiversity and the well-being of people who depend on nature's services.¹² BIOFIN is a kind of tool for achieving the goals of sustainable economic development of the country within the framework of the principles of the “green economy”, in particular the principle of conservation and sustainable use of biodiversity.

BIOFIN is based on a methodology that is designed as a process of five consecutive technical steps.

Diagram 1: BIOFIN methodology



Each of these steps are interconnected and overlap with each other:

The first step is the Biodiversity Finance **Policy and Institutional Review (PIR)** that analyses the policy and institutional context for biodiversity finance in the country. The assessment gathers diverse background information, establishing the baseline situation for the remainder of the BIOFIN Process. The PIR

¹²BIOFIN Workbook 2018

considers the relationship between the state of nature and a country's fiscal, economic, legal, policy, and institutional framework to identify:

- An improved understanding of how the management of biodiversity and ecosystem services supports national sustainable development goals and visions
- A comprehension of key policy and institutional drivers of biodiversity change
- A first-time catalogue of existing biodiversity finance mechanisms, incentives, subsidies and other instruments, including sources of biodiversity revenues.

The second step is **Biodiversity Expenditure Review (BER)** – where data on public, private and non-profit organization budgets, allocations and expenditures are processed to inform and promote improvements in biodiversity policy, funding and results. The BER should result in a comprehensive report, a clear executive summary and policy briefs to help policymakers understand general trends, challenges and opportunities in biodiversity expenditures. The BER should cover:

- Spending basics: Traces who spends money, on what types of actions, and how much is spent or invested.
- Biodiversity categories: Specifies expenditure categories that sort biodiversity expenditures and investments by key biodiversity targets, actors, strategies, goals and plans.
- Policy alignment: Analyses the degree to which spending aligns with stated government priorities.
- Delivery patterns: Considers whether the budget is allocated fully and to what extent the allocation has been disbursed and spent
- Financing sources: Addresses the main government revenues coming from nature-based sources, how flows originate and are transmitted through the system.
- Future spending: Identifies biodiversity expenditure trends and data to estimate future spending.
- Analysis and finance solutions: Highlights which thematic areas are better financed and why. It analyses opportunities for improved delivery. It compares biodiversity and sectoral expenditures to government budgets and GDP to explore opportunities for improved fiscal planning and finance solutions.

The third step is the **Financial Needs Assessment (FNA)** – which is a comprehensive estimate of the financial resources needed to achieve the national and subnational biodiversity targets articulated in the National Biodiversity Plans and other key national planning instruments. National biodiversity targets are typically articulated in biodiversity plans and other key national planning instruments, such as national development plans, sectoral development plans and climate change plans. The FNA compares these financial needs to projected biodiversity expenditures over a medium- to long-term planning horizon as part of an assessment of unmet financing needs. The FNA seeks to specifically:

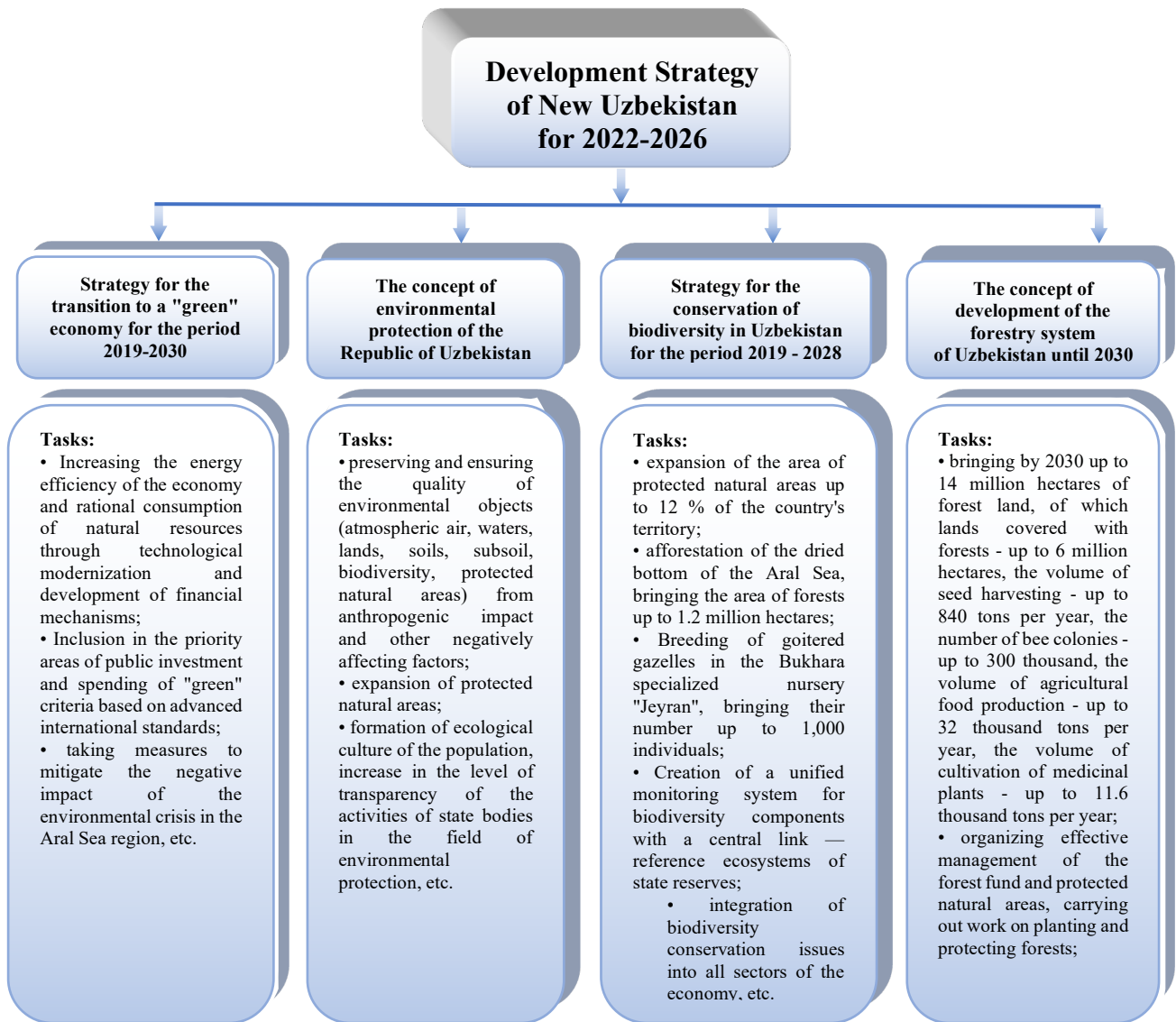
- Clarify strategies and actions in national biodiversity plans (i.e. NBSAPs) to describe “costable actions” that link to expected biodiversity results in a logical framework that lends itself to prioritization and detailed costing.
- Cost actions by defining unit costs and quantities over the target time period.
- Use this costing as a basis to develop detailed budgets to make a stronger case for biodiversity finance – linking the costs of achieving specific results to the national budget processes.
- Prioritize biodiversity strategies and actions based on specific biodiversity and cost criteria.
- Estimate unmet biodiversity financing needs.

The fourth step is the preparation of a **Biodiversity Finance Plan (BFP)** - which is the main document for implementing optimal financial decisions and achieving national biodiversity goals. The plan should be a national document covering the public, private sector and civil society and aim to achieve four financial outcomes: generating revenue, redistributing spending, improving outcomes and avoiding future spending.

The final step is the **implementation of finance solutions** – which provides for a step-by-step implementation of the biodiversity finance plan, focusing on the implementation of individual finance decisions, promoting the institutionalization of biodiversity finance functions.

This report details the first of the steps, political and institutional analysis. It reviews and discloses the current state of conservation and sustainable use of biodiversity in various sectors of the economy such as agriculture, energy, mining, tourism, and others. The report identifies existing negative or positive state subsidies and suggests their revision with aim to reduce harmful and increase green subsidies, which are beneficial for development of ecosystem services and ensure economic returns.

Annex 2. National Policy Framework for Biodiversity Conservation and Restoration in Uzbekistan



Annex 3. Biodiversity related legislation and financing

Title	Financing mechanism provisions	Institutional provisions
Law on nature conservation	<ul style="list-style-type: none"> - Fees for special use of natural resources, for environmental pollution (including waste disposal) and other types of harmful effects on it. - Transport vehicle recycling fee. - Tax, loan, and other benefits for using low-waste and resource-saving technologies and activities with positive environmental impact. - Tax burden for use of technologies and activities harmful to the environment. - Licensing (permits) of environmental pollutions and harmful activities. 	<ul style="list-style-type: none"> - Cabinet of Ministers - Senate of Oliy Majlis - Ministry of Ecology - Local Governments - Fund for ecology, environmental protection, and waste management under the Ministry of Ecology
Law on protected natural areas	<ul style="list-style-type: none"> - Access of citizens to certain protected natural areas may be based on payment, as established by the Cabinet of Ministers of the Republic of Uzbekistan (Article 8). - The State Cadastre of Protected Natural Territories is maintained with funds from the State Budget of the Republic of Uzbekistan (Article 14). 	<ul style="list-style-type: none"> - Ministry of Ecology in conjunction with the Academy of Sciences maintains the State Cadastre of Protected Natural Areas (Article 14); - Coordination of scientific research of state reserves is carried out by the Academy of Sciences - Local Governments
Law on forestry	<ul style="list-style-type: none"> - Allocation of funds for reforestation projects. Subsidies for sustainable forestry practices. Penalties for illegal logging activities. 	<ul style="list-style-type: none"> - Cabinet of Ministers - Ministry of Ecology - Local Forestry Departments - Local Governments
Budget Code	<ul style="list-style-type: none"> - The annual or biennial budgets might have specific allocations or line items related to biodiversity conservation. 	<ul style="list-style-type: none"> - Cabinet of Ministers - Ministry of Finance - Ministry of Ecology - Local Governments
Tax Code	<ul style="list-style-type: none"> - The specific provisions of the Uzbek Tax Code related to financing mechanisms and institutional arrangements for biodiversity conservation were not 	<ul style="list-style-type: none"> - Cabinet of Ministers - Ministry of Finance - Tax Committee - Local Governments
Land Code (1998)	<ul style="list-style-type: none"> - Rules or stipulations about the establishment, maintenance, and management of protected areas like national parks, nature reserves, and wildlife sanctuaries (Articles 71-75). 	<ul style="list-style-type: none"> - Cabinet of Ministers - Cadaster Agency

	<ul style="list-style-type: none"> - Includes restrictions on land use activities that can harm biodiversity, such as certain types of agricultural practices, construction, or resource extraction in sensitive ecological areas (articles 83-85). - Provisions that address land degradation and require measures for reclamation or rehabilitation, especially in ecologically sensitive areas. - Rules about how and where land can be allocated for different purposes, ensuring that ecologically valuable lands are preserved or used sustainably. 	- Local Governments
Law on water and water use	<ul style="list-style-type: none"> - Protected water areas focused on vital aquatic ecosystems like wetlands, springs, lakes, or specific river sections (Articles 67-69, 97-102). - Intergovernmental use of water in the Aral Sea region (Articles 83-84) - Water Use Fees: Fees for extracting and using water resources, a portion of which might be allocated for the conservation of aquatic ecosystems. - Fines or Penalties: For polluting or over-extracting water, potentially using these funds for restoration efforts (Articles 114-116). 	<ul style="list-style-type: none"> - Cabinet of Ministers - Ministry of Ecology - Fund for ecology, environmental protection and waste management under the Ministry of Ecology, Environmental Protection and Climate Change - Local Governments
Law on the protection and use of wildlife (2016)	<ul style="list-style-type: none"> - There are provisions describing protection of animal world and related measures and requirements (Articles 15 – 28) - There are provisions, restrictions and rules associated with hunting, capturing, or using wildlife for specific purposes, which can be used to finance conservation efforts. - Penalties and Fines for illegal hunting, habitat destruction, or other activities that harm wildlife. - Conservation Funds 	<ul style="list-style-type: none"> - Cabinet of Ministers - Ministry of Ecology - Local Governments
Law on the protection and use of flora (2016)	<ul style="list-style-type: none"> - There are provisions, restrictions and rules associated with collection, use, or commercialization of specific plant resources, especially if they are rare or endangered (Articles 10-18). - Penalties for illegal collection, deforestation, or habitat destruction, with the collected amounts potentially used for restoration or conservation projects. 	<ul style="list-style-type: none"> - Cabinet of Ministers - Ministry of Ecology - Local Governments
Criminal Code <i>(Section IV. Crimes in the field of ecology, Chapter XIV. Crimes in the field of environmental protection and nature management)</i>	<ul style="list-style-type: none"> - The Code enforces environmental protection laws by instituting a range of penalties, from fines to imprisonment. Fines are determined by the nature of the violation (Articles 193-204) and are calculated as multiples of the base settlement value (BSV), currently set at UZS 330,000 (approximately \$29). Fines range from a minimum of 50 BSVs (around \$1,450) to a maximum of 200 BSVs (about \$5,790). In certain instances, the most severe punishment is a 5-year imprisonment, which can, in some cases, be substituted with a compensation of three times the damage caused. 	<ul style="list-style-type: none"> - National criminal courts - Local Governments

Annex 4. Mandates and duties of state bodies of the Republic of Uzbekistan in relation to biodiversity conservation and ecosystem services

STATE BODIES	FOUNDING LEGAL ACT	BIODIVERSITY RELATED POWERS AND TASKS
CABINET OF MINISTERS	Law on Cabinet of Ministers (06.05.1993)	<p>Ensuring a unified state policy for biodiversity protection, use, and maintenance of protected areas.</p> <p>Approval and execution of state programs in biodiversity and protected areas.</p> <p>Coordinating activities of state and economic management bodies in the field of biodiversity and protected areas.</p>
MINISTRY OF ECOLOGY, ENVIRONMENTAL PROTECTION AND CLIMATE CHANGE	Presidential Decree #171 (31.05.2023)	<p>Developing and enacting unified environmental and climate policies, including nature conservation, resource management, waste handling, and climate change.</p> <p>Conducting state environmental supervision covering air, land, water, forests, protected areas, and biodiversity.</p> <p>Enhancing forest conservation, reproduction, and sustainable use.</p> <p>Organizing hydrometeorological services and monitoring environmental pollution and climate shifts.</p> <p>Collaborating with civil institutions on nature protection, fostering ecological awareness, research, and education.</p> <p>Promoting green initiatives, reducing emissions, and mitigating human impact on nature.</p> <p>Incorporating digital tech in environmental protection and automating monitoring tasks.</p> <p>Advancing eco-tourism, hunting and safari activities, leveraging forest resources and national parks while ensuring sustainable infrastructure.</p> <p>Enforcing environmental legislation and promoting sustainable resource use.</p> <p>Monitoring environmental health and identifying threats to human life and health.</p>
MINISTRY OF ECONOMY AND FINANCE	Legal document not published yet	<p>Planning effective placement of production forces to enhance competitiveness and diversify the economy.</p> <p>Developing strategies for the country's industry based on effective resource utilization.</p> <p>Determining key indicators for monitoring industry development levels and implementing "green economy" principles.</p> <p>Formulating a unified state policy for urban development and housing construction.</p> <p>Implementing programs for the modernization and diversification of primary industries.</p> <p>Coordinating the development of programs for the modernization and technical updating of industrial complexes.</p>
THE MINISTRY OF INVESTMENT, INDUSTRY, AND TRADE	Presidential Decree #111 (21.07.2023)	<p>Support the Ministry of Ecology, Nature Protection and Climate Change to:</p> <ul style="list-style-type: none"> - attract foreign investments in the fields of ecology, forestry, and hydrometeorology: \$20 million USD in 2023, and from 2024 onwards, no less than \$100 million USD annually. In this regard, a dedicated staff member from the Ministry of Investment, Industry, and Trade will be attached to the Ministry to provide practical assistance.

		<ul style="list-style-type: none"> - ensure the establishment of a credit line in commercial banks for businesses amounting to \$100 million USD, using funds from international financial institutions. This is for the installation of dust and gas cleaning devices, local water purification facilities, and automated monitoring systems.
MINISTRY OF AGRICULTURE	Cabinet of Ministers Decree #571 (21.07.2023)	<p>Implement a unified state policy in agriculture and food security, focusing on digitalization and modern technology introduction.</p> <p>Coordinate state support measures for agriculture to ensure financial stability and increase export potential.</p> <p>Conduct soil appraisals and research in soil science.</p> <p>Stimulate agricultural mechanization and product processing through financial services.</p> <p>Develop a seed production and export system, including biotechnological varieties.</p> <p>Implement a unified state policy in plant protection and soil conservation.</p> <p>Enhance the competitiveness and diversification of domestic food products.</p> <p>Promote domestic food products on global markets and increase export potential.</p> <p>Coordinate activities for organic product production and best agricultural practices.</p> <p>Implement state control over agricultural land use and protection.</p>
STATE FORESTRY AGENCY	Presidential Decree #2966 (13.05.2017)	<p>Implement a unified state policy in forestry, focusing on the expansion and rational use of forest resources.</p> <p>Organize effective management of forests and protected areas.</p> <p>Develop measures against desertification, reforestation, and afforestation.</p> <p>Keep records and study the forest fund, fauna, and flora while introducing best practices.</p> <p>Attract grants for ecological tourism development.</p> <p>Participate in the development and implementation of biodiversity programs and legal acts.</p> <p>Implement control over the protection and use of biodiversity on state forest lands.</p> <p>Maintain records of biodiversity objects and their usage on state forest lands. Participate in maintaining the Red Book of Uzbekistan. Carry out biotechnical measures for biodiversity conservation.</p>
MINISTRY OF ENERGY	Cabinet of Ministers Decree #108 (10.02.2019)	<p>Oversee the nation's fuel and energy industry.</p> <p>Ensure energy security, sustainable supply of energy, and promote renewable energy.</p> <p>Regulate production, distribution, and consumption of energy resources.</p> <p>Implement legal and technical regulations in the energy sector.</p> <p>Encourage innovative technologies for energy efficiency.</p> <p>Train and educate energy sector personnel.</p>

STATE COMMITTEE FOR VETERINARY AND LIVESTOCK DEVELOPMENT	Presidential Decree #4254 (29.03.2019)	Implement a unified state policy in veterinary medicine, animal husbandry, and breeding. Coordinate efforts in preventing infectious animal diseases. Monitor and supervise the quality and circulation of veterinary medicines. Oversee training and retraining of specialists in the field.
MINISTRY OF WATER RESOURCES	Legal document not published yet	Manage and protect water resources. Ensure the efficient use of water resources for the population, economy, and environment. Maintain reservoirs, flood reservoirs, and other water facilities. Advocate resource-saving technologies in water management. Integrate digital technologies in water facility management. Facilitate training and advanced training for water management specialists.
ACADEMY OF SCIENCES	Cabinet of Ministers Decree #331 (05.076.2017)	Conduct scientific research across various disciplines. Integrate science with education and industry. Develop recommendations based on global and domestic scientific achievements. Foster international scientific cooperation. Contribute to the training of high-qualified personnel. Support biodiversity conservation through research, maintenance, and outreach.
LOCAL AUTHORITIES (KHOKIMYATS)	Law on local authorities (02.09.1993)	Participate in the development and implementation of biodiversity protection programs. Approve and implement local programs on biodiversity conservation. Monitor state control in biodiversity conservation within their territories. Consider issues related to forming protected natural areas of local importance.

Annex 5. Potential impact of economic sectors on biodiversity and ecosystems

Criteria	Description
Sector	Agriculture, Forestry and Fisheries
GDP	26.9% of total GDP ¹³
Jobs	3,502.1 thousand people or 25.9% of the employed population ¹⁴
Foreign exchange earnings	1,360.9 mln. USD ¹⁵
Impacts	Degradation of vegetation and soil cover. Excessive water consumption and water use. Unsustainable use of rangelands and hayfields. Forest fires, insufficient financing of forestry.
Sector	Industry
GDP	27.8% of total GDP.
Jobs	1,883.3 thousand people or 13,9% of the employed population.
Foreign exchange earnings	8,604.0 mln. USD
Impacts	Pollution of soil, water and air, as well as other biodiversity habitats. Felling of trees in connection with the construction of industrial facilities. Excessive carbon emissions into the atmosphere.
Sector	Construction
GDP	6.7% of total GDP
Jobs	1,286.8 thousand people or 9,5% of the employed population
Foreign exchange earnings	14.6 mln. USD
Impacts	Loss of habitat of biological species; Cutting down trees.
Sector	Transportation
GDP	5.06% of total GDP
Jobs	648.5 thousand people or 4,8% of the employed population
Foreign exchange earnings	1,744.1 mln. USD
Impacts	Air pollution. Loss of species habitats.

¹³ <https://stat.uz/ru/ofitsialnaya-statistika/labor-market>

¹⁴ <https://stat.uz/ru/ofitsialnaya-statistika/labor-market>

¹⁵ <https://stat.uz/ru/ofitsialnaya-statistika/labor-market>

Annex 6. Assessment of key institutions, their interaction on the impact on priority drivers and financial instruments of biodiversity (material technical capacity/human resources/knowledge and expertise)*

Main institutions	Analysis of strategies, policies and their relationship to biodiversity and climate change	Linkages between sectoral and national development programmes with biodiversity finance	Opportunities for the implementation of strategies and policies	Analysis of potentially harmful subsidies applied in the field of biodiversity	The possibility of reforming financial instruments that have a harmful impact	Analysis of the effectiveness of the use of financial instruments	Potential to influence biodiversity drivers and trends
MINISTRY OF ECOLOGY	2/1/1	2/1/1	2/1/1	2/1/1	2/1/1	2/1/1	2/1/1
SFA	1/2/ND	1/2/ND	1/2/ND	1/2/ND	1/2/ND	1/2/ND	1/2/ND
MEF	2/2/ND	2/2/ND	2/2/ND	2/2/ND	2/2/ND	2/2/ND	2/2/ND
MA	1/2/ND	1/2/ND	1/2/ND	1/2/ND	1/2/ND	1/2/ND	1/2/ND
MWR	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND
MTS	2/ ND /ND	2/ ND /ND	2/ ND /ND	2/2/ND	2/2/ND	2/2/ND	2/2/ND
ME	2/ ND /ND	2/ ND /ND	2/2/ND	2/2/ND	2/ ND /ND	2/ ND /ND	2/2/ND
SCVALD	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND
MT	2/2/1	2/2/1	2/2/1	2/2/1	2/2/1	2/2/1	2/2/1
AS	1/1/2	1/1/2	1/1/2	1/1/2	1/1/2	1/1/2	1/1/2
CHS	1/2/2	1/2/2	1/2/2	1/2/2	1/2/2	1/2/2	1/2/2
LG	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND	1/1/ND
NGOs	1/ND/ND	1/ND/ND	1/ND/ND	1/ND/ND	1/ND/ND	1/ND/ND	1/ND/ND
Private sector	ND	ND	ND	ND	ND	ND	ND

Legend:

1-low, 2-middle, 3-high level, which says that (logistics at the highest level / provision of personnel at the highest level / level of knowledge of personnel at the highest level.

ND – no relevant data.

* The rankings in the table above are derived from limited data accessible in public sources, as well as insights gathered by the authors through personal interviews and discussions with staff and management of the relevant institutions.

Annex 7. Other subsidies introduced and implemented in Uzbekistan as of August 2023

Sector	Relevant Legal Act	Goal / Purpose	Duration	Application Mechanism	Beneficiary	Allocated/paid funds		Allocated funds in 2023 (in bln. UZS)	Paid as of 01.07.23
						Period	in bln. UZS		
Agriculture	Presidential Decree #5200 (28.07.2021)	Support for vineyard & orchard plantations	Indefinite	Subsidy for water supply systems, renewable energy tools, local "in-vitro" method seeds, natural wine export without ethyl spirit, and equipment for grape cultivation, drying & processing.	To legal entities	2021-22	235.9	66.7	6.3
Agriculture	Presidential Decree #4610 (19.02.2020)	Subsidy for lemon agriculture	Indefinite	Subsidy covering costs related to heating equipment using alternative energy (compared to natural gas), establishing new lemon orchards, and purchasing seedlings.	To legal entities	2022	2.6	66.7	0
Agriculture	Presidential Decree #4716 (18.05.2020)	Support for greenhouses, irrigation, seeds, and aid to certain demographics in agricultural cooperatives	Indefinite	Subsidies for greenhouse setup, tool purchase, and capital support for cooperatives aiding unemployed, underprivileged families, and returned migrants.	To individuals	2021-22	166.0	66.7	17.9
Social sector	Cabinet of Ministers Decree #252 (11.05.2022)	"Master-Apprentice" training in vocational centers	Indefinite	Subsidies for youth training in challenging professions, equipment for independent work, website setup, and online marketing.	To legal entities and individuals	2022	0.4	208.0	0.4

Agriculture	Presidential Resolution #5742 (25.02.2020)	Support drilling and operating vertical wells (10m depth or 5m for Karakalpakistan) for individual water needs. Providing wells for at least 30 agricultural plots (0.15 to 2 hectares) leased for 30 years via electronic bidding. Utilizing unused agricultural land with vertical wells and pump installation.	Indefinite	Covering expenses for drilling small-scale wells and extracting water from rivers, canals, and other sources. Covering expenses for drilling large-scale wells, buying, and installing water extraction tools for plots in single or double contours. Subsidizing expenses for drilling and installing equipment.	To legal entities and individuals	2021-22	0.0	100.0	40.7
Agriculture	Presidential Decree #4410 (31.07.19)	Partial coverage of expenses for agricultural equipment produced locally and purchased by companies with 25% localization	Indefinite	Subsidizing part of the costs when agricultural companies buy locally-produce	To legal entities	2021-22	53.6	40.0	16.2
Agriculture	Presidential Decree #4268 (04.04.19)	Subsidy for Agriculture Machinery Interest	Indefinite	Subsidies for interest exceeding 10% of the rate set by banks/leasing firms on agricultural machinery.	To legal entities	2021-22	43.4	60.0	15.1
Ecology and forestry	Presidential Decree #4850 (06.10.20)	Support for Hiring Registered Unemployed	Indefinite	Subsidies to cover salaries when hiring those registered as unemployed at the Employment Support Center.	To individuals	2021-22rr.	0.6	8.8	0.27
Social sector	Presidential Resolution #5785 (20.08.19)	Insurance for Temporary Overseas Labor Migrants	Indefinite	Annual one-time subsidies for insurance covering life, health, and risks of each overseas labor migrant.	To legal entities	2021-22	7.3	23.3	4.3

Social sector	Presidential Resolution #6155 (03.02.21)	Support for Entrepreneurship & Self-employment	Indefinite	Subsidies for unemployed individuals, including those listed in the "Iron", "Women's", and "Youth's" registers, to buy tools and equipment, and to cover losses in bus routes within cities or urban outskirts.	To individuals	2021-22	170.7	23.3	106.5
Social sector	Presidential Decree #5033 (23.03.21)	Master-Apprentice Tradition Subsidy	Indefinite	Subsidies for artisans (including potters) teaching skills to youth based on master-apprentice traditions, covering apprentice preparations, essential tool purchases, and apprentices' wages.	To individuals	2021-22	1.2	23.3	0.7
Social sector	Cabinet of Minister's Decree #273 (17.09.12)	Subsidy for Free and Concessionary Transport	Indefinite	Subsidies to cover income losses from providing free and concessionary transport for certain citizen groups, ensuring full revenue collection, and services provided at capped rates for transporting passengers and luggage on urban public transport.	To legal entities	2021-22	569.7		315.7
Social sector	Presidential Decree #92 (19.01.22)	Support for Young People Registered in "Ёшлар дафтари". Expenses for driver training courses in state and non-state educational institutions. Purchase of seeds and seedlings, tools and work instruments for agriculture. 6-month	Indefinite	Expenses for participation in local rounds of olympiads, competitions, and contests in science, sports, arts, and culture. Medical treatment expenses for sick youth. Full coverage of the service fee from the travel call reserve for socially vulnerable youth. Monthly rental	To individuals	-	-	150.0	78.0

		courses for youth to acquire modern professions. 6-month courses in science, sports, arts, and culture for socially vulnerable talented youth.		subsidies for socially vulnerable young families					
Social sector	Presidential Decree #4227 (05.03.19)	Training & Employment Expenses. Entrepreneurship Start-up Support. Hiring from Socially Needy Groups	Indefinite	Cover expenses for training, retraining, and skill-upgrading for employees referred by employment assistance centers. Cover registration costs for unemployed wanting to start as individual entrepreneurs and registration of micro-firms. Cover costs for hiring beyond minimum quota: pay fee equal to 2 times the base calculation amount/employee for 12 months.	To legal entities	2021-22	1.3	82.5	0.1
Social sector	Presidential Decree #214 (21.04.22)	Entrepreneurs in Neighbourhoods: Household Business Support	Indefinite	One-time payment equivalent to 3 months' average income of each householder. Subsidy up to 50% of equipment costs but capped at 15 times the basic calculation.	To legal entities	2022	2.3	82.5	1.0
Social sector	Presidential Decree #57 (27.12.21)	Employers of Persons with Disabilities	Indefinite	Subsidy for hiring individuals with disabilities.	To legal entities	2022	0.9	82.5	1.5

Social sector	Presidential Decree #366 (30.08.22)	Business Entities Employing Land Owners: Agriculture & Livestock Support	Indefinite	Subsidies for: poultry and its necessities; grape seedlings; beehives and supplies; rabbits and their cages; and fish hatcheries and ponds. Capped at 20 times the basic calculation.	To legal entities	2022	1.4	82.5	3.8
Agriculture	Presidential Decree #5178 (08.07.21)	Growing Cocoons at Home Subsidy.	2022-25	5,000 soums per kilogram of wet cocoons produced annually.	To individuals	2022	107.6	120.2	0.0
Export	Presidential Decree #4707 (07.05.20)	Export of Introduced & Re-exported Products: Transportation Subsidy. Insurance Premium Subsidy	Indefinite	Up to 50% compensation for export transportation costs by car and air. Compensation of insurance premium payment costs for exporters using insurance services as collateral.	To legal entities	2021-22	56.7	418.2	27.2
Industry	Presidential Decree #5011 (02.03.21)	Export of Electrical Engineering & Household Products: Transportation Subsidy	Indefinite	Subsidy to cover part of the transportation costs by road, rail, and air to all countries.	To legal entities	2021-22	50.8	42.3	24.0
Export	Presidential Decree #4069 (20.12.18)	Promoting Local Products & Brands: Implementation of standards & obtaining certificates of conformity. Conducting presentations & advertising campaigns in foreign markets- Participation in international tenders & competitions.	Indefinite	Reimbursement	To legal entities	2021-22	278.0	89.4	92.1
Agriculture	Presidential Decree #4525 (20.11.19)	Export of Selected Products: Issuance of necessary permits & certificates for exporting	Indefinite	Reimbursement (Subsidy)	To legal entities	2021-22	58.4	89.4	10.1

		fruits, vegetables, textile products & articles.							
Tourism	Presidential Decree #4095 (05.01.19)	Support to cover expenses for newly built hotels	Indefinite	Subsidies for investors to construct hotels	To legal entities	2021-22	62.3	80.0	39.2
Tourism	Presidential Resolution #6165 (09.02.21)	Subsidy to cover part of the air ticket on domestic tourism routes.	Indefinite	To cover domestic Tourism Routes	To legal entities	2021-22	28.1	30.0	5.6
Education	Presidential Decree #3651 (05.04.18)	Subsidy to cover part of the expenses of organizations based on public-private partnership	Indefinite	Preschool Education	To legal entities	2021-22	3,654.5	2,259.4	1270.6
Education	Cabinet of Ministers Decree #563 (09.09.21)	To cover part of the costs of student accommodation construction projects	Indefinite	Student Accommodation Construction	To legal entities	2022	177.8	210.0	144.4
Social sector	Presidential Resolution #6208 (20.04.21)	For students of public higher education institutions living in rented houses not covered by a dormitory and not owned by them or their legal representatives	Indefinite	Student Rent Support	To legal entities	2022	61.7	74.0	36.9
Social sector	Presidential Resolution #5886 (28.11.19)	To cover part of the initial payment and/or interest on mortgage loans for certain individuals with low income needing improved housing conditions	Indefinite	Mortgage Loan Support	To legal entities	2021-22	1,158.9	1,100.0	882.2