BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg
BG PULSE JOURNAL

IMPROVING THE INSTITUTIONAL AND LEGAL FRAMEWORK FOR THE CONSERVATION OF MEDICINAL PLANTS AND THEIR USE IN THE PHARMACEUTICAL SECTOR IN UZBEKISTAN

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Doi: https://doi.org/10.5281/zenodo.22917806

Abstract. This study examines the institutional and legal framework governing the conservation and sustainable use of medicinal plants in the Republic of Uzbekistan and their integration into the pharmaceutical sector. The research analyses the post-2020 regulatory reform trajectory, identifies structural governance gaps, and develops scientifically grounded proposals for legislative improvement.

Keywords: medicinal plants; institutional framework; legal reform; GACP; Nagoya Protocol; pharmaceutical sector; Uzbekistan; quota system; conservation law; access and benefit-sharing.

Design/Methodology/Approach: A combination of comparative legal analysis, normative-legal analysis, institutional assessment, and logical-statistical methodology is applied. Primary regulatory documents — including Presidential Decrees PP-4901 (2020), PP-251 (2022), PF-14 (2023), PF-149 (2024), MoECC Order No. 223 (2025), and Government Commission Minute No. 184 (2024) — are systematically evaluated against WHO GACP, GMP, ISO 17025, European Pharmacopoeia (Ph.Eur.), EAEU Pharmacopoeia, CITES, and the Nagoya Protocol standards. Comparative analysis covers five jurisdictions: China, Germany/EU, India, Russia/EAEU, and Turkey.

Findings: The study identifies seven structural governance gaps, including two critical deficiencies: the absence of an internationally accredited standardisation laboratory and non-accession to the Nagoya Protocol on Access and Benefit-Sharing. Three further high-priority gaps concern GACP non-mandatory status, enforcement failures in the quota system, and inter-agency competence conflicts. Quota allocations cover only 40–63% of documented market demand, creating structural incentives for illegal wild-harvesting. An original scientifically-based quota calculation model ($Q = P \times R \times S - C$) and a proposed Law 'On Medicinal Plant Resources' comprising twelve chapters are developed as the principal practical contributions.

Originality/Value: This is the first comprehensive legal-institutional analysis of Uzbekistan's post-2020 medicinal plant governance framework evaluated against international standards. The study addresses a documented gap in the scholarly literature and offers reform recommendations applicable to ongoing legislative processes.

1. INTRODUCTION

Medicinal plants occupy a foundational position at the intersection of ecological conservation, public health governance, and economic development. The global market for plant-derived pharmaceuticals has expanded substantially: exports of products classified under HS Code 1211 grew from USD 2.1 billion in 2010 to over USD 4.1 billion in 2023, driven by rising demand for phytotherapeutic products, functional foods, and bioactive compounds (Zamani et al., 2025; FAO, 2023). Within this expanding sector, countries with advanced processing and certification infrastructure capture up to 60% of final product value, while raw material suppliers including most biodiversity-rich developing states remain confined to low-margin extractive segments (Schippmann, Leaman & Cunningham, 2006).

Uzbekistan occupies a position of significant natural advantage in this market. The country's phytogeographic diversity spanning the Tian Shan, Pamir-Alay, Kyzylkum, and Fergana agro-ecological zones supports over 4,500 species of higher plants, approximately 750 of which possess recognised medicinal properties. The translation of this ecological endowment into sustainable economic value has, however, been constrained by institutional fragmentation, regulatory incoherence, and critical infrastructure deficits. Industrial processing covers only 15–20% of total medicinal plant production; over 70% of exports consist of unprocessed raw materials.

The reform trajectory initiated by the executive branch since 2020 represents a legislative response to these deficiencies. Presidential Decree PP-4901 (2020) established a cluster-based cultivation model and created the Scientific-Production Centre for the Cultivation and Processing of Medicinal Plants ('the Centre') as the sector's coordinating institution. Presidential Decree PP-251 (2022) deepened this framework, projecting plantation coverage expansion from 21,664 to 58,726 hectares by 2026 and introducing eighteen concrete implementation measures. Subsequent instruments PF-14 (2023) and PF-149 (2024) restructured the institutional architecture, transferring the Centre from the State Forestry Committee to the Ministry of Ecology, Environmental Protection and Climate Change (MoECC).

Despite the scope of this reform programme, no comprehensive legal-institutional analysis of its adequacy and coherence against international standards has been published in the scholarly literature. The present study addresses this gap. Drawing on primary regulatory documents and comparative analysis of five international jurisdictions, it identifies structural governance failures and develops an integrated reform agenda applicable to ongoing legislative processes in Uzbekistan.

2. LITERATURE REVIEW

The governance of medicinal plant resources has attracted substantial scholarly attention across multiple disciplines, though integrated legal-institutional analyses remain comparatively rare, particularly for the Central Asian context.

Hamilton (2004) and Lange (2006) identified inadequate monitoring of wild stocks, weak enforcement of collection regulations, and the absence of internationally harmonised standards as primary drivers of resource depletion in the global MAP sector. Both authors called for national regulatory frameworks integrating conservation obligations with commercial development incentives a challenge the post-2020 Uzbek reform programme attempts to address. Schippmann, Leaman and Cunningham (2006) documented the structural asymmetry in MAP value chain distribution, demonstrating that the highest margins are captured at standardisation, processing, and marketing stages requiring sophisticated regulatory infrastructure.

Within Uzbekistan and Central Asia, ethnobotanical inventories by Shomurodov (2003), Salikhov et al. (2010), and Botirov (2018) established that the country's flora contains species of exceptional therapeutic and commercial value, including Glycyrrhiza glabra (liquorice), Ephedra intermedia, and multiple Ferula species. Tursunov and Komilov (2021) examined cluster-based agricultural coordination as a mechanism for reducing transaction costs and improving quality, while noting that the legal framework for cluster governance remained insufficiently developed. Mirzaev (2019) provided a preliminary review of the normative basis for medicinal plant trade, identifying overlapping jurisdictions, but did not address the post-2020 reform architecture.

The importance of WHO GACP and GMP compliance as prerequisites for pharmaceutical market access has been documented across numerous studies (WHO, 2003; EMA, 2006; Taghouti et al., 2022). The global MAP market structure has been analysed by Zamani et al. (2025), who confirmed the sustained growth trajectory and value-added asymmetry documented in earlier literature. No study to date has comprehensively evaluated the PP-4901/PP-251 reform sequence against international standards the principal scholarly gap that the present research addresses.

3. RESEARCH METHODOLOGY

The research employs five methodological approaches in an integrated framework. Comparative legal analysis examines Uzbekistan's regulatory instruments against international standards (WHO GACP 2003; ISO/IEC 17025; Ph.Eur.; EAEU PhF; Nagoya Protocol) and the legislative experience of five comparator jurisdictions (China, Germany/EU, India, Russia, Turkey). Normative-legal analysis provides systematic interpretation of legislative and sub-legislative acts. Institutional analysis assesses inter-agency competencies and coordination mechanisms. The system approach evaluates the regulatory framework as an integrated governance architecture rather than a collection of isolated norms. Logical-statistical analysis uses quantitative data on plantation coverage, quota allocations, export volumes, and demand estimates to contextualise legal findings.

Primary data sources include: Presidential Decrees PP-4901 (2020), PP-251 (2022), PF-14 (2023), PF-149 (2024), PF-90 (2025); MoECC Order No. 223 (2025); Cabinet of Ministers Resolution No. 86 (2022); Government Commission Minute No. 184 (November 2024); and Annexes to PF-149 confirming the institutional organogram. Secondary sources encompass WHO, FAO, ITC Trade Map, and EDQM official publications, as well as peer-reviewed literature from environmental law, pharmacognosy, and institutional economics.

4. RESULTS AND FINDINGS

4.1 Institutional Architecture and Its Limitations

Prior to 2020, responsibility for medicinal plants was distributed among at least four state bodies the State Forestry Committee, the Ministry of Agriculture, the Ministry of Health, and the Academy of Sciences without a formal coordinating mechanism. PP-4901 partially addressed this through the creation of the Centre and the designation of twelve specialised medicinal plant state forestry enterprises. The 2023–2024 administrative reform cycle, however, introduced new fragmentation: PF-149 transferred the Centre to MoECC without issuing a formal inter-ministerial protocol delineating competence boundaries.

Table 1 presents the resulting institutional architecture and its principal identified weaknesses.

Table 1. Key Institutions in Uzbekistan's Medicinal Plant Governance System (2025)

Institution	Primary Legal Mandate	Identified Weakness
MoECC (hosts Centre post-PF-149)	Biodiversity conservation; wild harvesting licensing; environmental monitoring	Cross-sectoral coordination protocol absent; primary mandate is environmental protection, not pharmaceutical value-chain development
Pharmaceutical Industry Development Agency (PIDA)	Pharmaceutical standards; export licensing; market monitoring	No jurisdiction over upstream cultivation; no GACP enforcement capacity
Ministry of Agriculture	Cultivation on agricultural land; cluster financing	No jurisdiction over forest-fund plantations; data systems not integrated with Forestry Agency
Forestry Agency (under MoECC)	Manages 12 medicinal plant enterprises; administers wild harvest quotas	Staff reduced significantly under PF-14; laboratory infrastructure absent through 2026
Institute of Botany / Academy of Sciences	Scientific opinion on sustainable harvest; Red Book assessment	Research outputs not systematically incorporated into quota-setting processes

Source: Author's compilation based on PF-149 (2024), PP-4901 (2020), PP-251 (2022)

Overall institutional effectiveness is estimated at 55–60% of target performance reflecting functional capacity in individual agencies constrained by system-level coordination failures and critical infrastructure gaps. Two criteria are assessed as CRITICAL: the quota enforcement mechanism and the absence of a standardisation laboratory.

4.2 Quota System: Demand-Supply Mismatch and Conservation Risk

The annual harvest quota system, administered by MoECC, constitutes the primary conservation instrument for wild populations. In 2025, MoECC Order No. 223 approved a supplementary quota of approximately 8,435 tonnes across 16 species distributed among 16 permit-holders. Ferula spp. (Sarsog'on) alone accounts for 6,750 tonnes over 80% of total approved volume. Studies by the Institute of Botany indicate that unregulated Ferula harvesting has already depleted natural stocks in accessible areas of Kashkadarya, Surkhandarya, and Samarkand regions, suggesting the approved quota may approach or exceed ecologically sustainable thresholds.

A more systemic problem concerns the structural mismatch between quota allocations and documented market demand. Analysis of ten commercially significant species reveals that allocated quotas represent only 40–63% of documented demand across all cases. The largest absolute gap is observed for rosehip (Rosa canina: 185 tonnes), while the largest relative shortfall is in Turkestan mallow (Gulxayri: 43.5% of demand covered). This persistent under-allocation generates four

compounding consequences: incentives for unlicensed wild-harvesting; reduced formal export capacity; diminished investment attractiveness; and weakened ecological control as informal harvesting bypasses monitoring mechanisms.

Order No. 223 contains no traceability requirement: no obligation on permit-holders to report actual harvest volumes, no GPS-tracked collection data, and no post-harvest verification. Enforcement is limited to reactive inspection, rendering the aggregate quota ceiling effectively unenforceable.

4.3 International Standards: Compliance Gap Analysis

The study assesses Uzbekistan's compliance across seven international standard dimensions. Table 2 presents the regulatory gap matrix.

Table 2. Regulatory Gap Matrix: Uzbekistan vs. International Standards (2025)

Governance Dimension	International Standard	Uzbekistan Status (2025)	Rating	Primary Gap
Conservation	IUCN Red List; CBD Art. 8	Quota orders maintained; Red List updated	MEDIUM	No species-specific plans; quota lacks traceability
Cultivation (GACP)	WHO GACP (2003)	PP-4901 mandates agrotechnology maps; PP-251 sets targets	HIGH	GACP not legally binding; no field inspection
Standardisation	Ph.Eur.; USP; ISO 17025	Laboratory planned (2026 operational, 2027 accredited)	CRITICAL	No internationally accredited lab as of 2025
Commercialisation	ICH Q10; EU Dir. 2004/24/EC	General export law; PIDA mandate extended by PP-251	HIGH	No API export certification pathway
Biodiversity Access (ABS)	Nagoya Protocol (2010)	Uzbekistan not party to Nagoya Protocol	CRITICAL	No domestic ABS framework; genetic resources unprotected
Inter-agency Coordination	OECD Regulatory Quality Principles	PF-14/PF-149 restructuring complete; no inter-ministerial protocol issued	HIGH	Competence vacuum across MoECC, MoAg, PIDA

Capacity-Building	WHO TRM Strategy 2014–2023	PP-251 §18 targets GACP specialists; curriculum undefined	MEDIUM	No accredited GACP training curriculum

Source: Author's compilation based on primary regulatory documents and WHO, ISO, EDQM, Nagoya Protocol official instruments

4.4 Comparative Analysis: International Governance Models

Five comparator jurisdictions are analysed in terms of their resolution of the governance challenge Uzbekistan faces: managing the transition from informal wild-harvesting to certified pharmaceutical-grade export production.

China's Traditional Chinese Medicine Law (2017) established a comprehensive national regulatory model, making GAP compliance mandatory and creating a mechanistic linkage between certified cultivated supply and wild-harvest quota volumes: the quota database automatically reduces wild-harvest allowances as GAP-certified cultivation for each species grows. India's National Medicinal Plants Board (NMPB) conducts an annual demand-supply balancing survey across all states, providing the evidential basis for quota-setting and directly addressing the demand-allocation mismatch documented above. Germany and the EU, through Directive 2004/24/EC, made GACP documentation legally mandatory for all herbal drug dossiers, while the EDQM accreditation network ensures pharmacopoeial compliance across all member states.

Russia represents Uzbekistan's most commercially proximate comparator: as Uzbekistan's largest export market, EAEU GMP and pharmacopoeial alignment with Russia carries higher near-term commercial priority than EU alignment. Turkey offers a replicable model of dual EU/EAEU market certification capacity achieved through progressive alignment: TÜRKAK ISO 17025 accreditation (recognised under the ILAC MRA), Turkish Pharmacopoeia harmonisation with Ph.Eur., and Nagoya Protocol ratification (2014) each represent steps within reach of Uzbekistan's planning horizon.

The five jurisdictions share three features absent in Uzbekistan: a sector-specific primary law; mandatory GACP compliance with a designated certification authority; and at least one internationally accredited laboratory capable of issuing pharmacopoeia-compliant certificates of analysis.

4.5 Original Scientific Contributions: Quota Model and Proposed Law

The study develops two original analytical contributions not previously formulated in the scholarly literature.

First, a scientifically-based quota calculation model is proposed (Formula 1), adapted from the Maximum Sustainable Yield concept applied in fisheries law under UNCLOS and extended to terrestrial plant resource governance in Indian, Chinese, and German regulatory frameworks:

$$Q = (P \times R \times S) - C$$

Table 3. Variables of the Proposed Quota Calculation Formula (Formula 1)

Variable	Definition	Value Range / Source	Rationale

Q	Permissible annual wild harvest quota (tonnes)	Output variable; legally approvable collection volume per species per region	Provides an ecologically grounded and legally enforceable annual ceiling
P	Wild stock population density (tonnes/ha)	Institute of Botany field surveys; Sentinel-2 NDVI remote sensing; existing MoECC inventory records	Anchors quota to verified field data rather than administrative convention
R	Species recovery coefficient (dimensionless)	0.10–0.40; literature-derived biometric parameters per species; updated every 3 years by Institute of Botany	Accounts for species-specific biological capacity to regenerate after harvest
S	Ecological safety coefficient (dimensionless)	0.60 for Red Book-adjacent species (Paeonia, Berberis); 0.70 for moderate-pressure species; 0.80 for non-threatened species	Incorporates a precautionary buffer proportional to conservation risk
C	Annual cultivated production volume meeting the same demand category (tonnes)	PIDA plantation production data; Centre annual production reports under PP-251	Creates a structural incentive: as C grows, Q decreases automatically, progressively reducing pressure on wild stocks

Source: Author's formulation based on MSY principles (UNCLOS); calibrated to Uzbekistan's institutional data environment

Table 4. Illustrative Application of Formula 1 to Three Priority Species

Species	P (t/ha)	R	S	C (t, cultivated)	Q Calculated (t)	2025 Approved Quota (t) — Order No. 223
Ferula spp. (Sarsog'on)	0.18	0.20	0.70	~0 (nascent)	~3,000 (if habitat = 120,000 ha)	6,750 likely exceeds ecological ceiling
Glycyrrhiza	0.35	0.30	0.75	~150	Requires	1,500 (export-

glabra (Shirimmiya)					updated area mapping to set ceiling	driven pressure confirmed)
Paeonia spp. (Dasarbosh)	0.04 (fragile)	0.15	0.60	0	Very low; consistent with current 0.1 t approval	0.1 (near Red Book threshold)

Source: Author's illustrative calculations based on Formula 1; field parameters require validation through Institute of Botany surveys prior to formal implementation

The Ferula calculation is of particular regulatory significance. Applying Formula 1 to an estimated accessible habitat of 120,000 hectares yields a scientifically-grounded quota of approximately 3,000 tonnes, compared to the 6,750 tonnes approved under Order No. 223 (2025) a ratio suggesting that the current approved volume exceeds the estimated ecological ceiling by a factor of approximately 2.25. The formula additionally incorporates a structural regulatory incentive: as cultivated production (C) increases in line with PP-251 plantation targets, the permissible wild harvest quota (Q) decreases automatically, progressively reducing pressure on wild populations as the sector transitions toward cultivated supply. This dynamic linkage is absent from the current quota methodology.

Second, the study proposes the first draft structure for a Law of the Republic of Uzbekistan 'On Medicinal Plant Resources', comprising twelve chapters encompassing: general provisions and definitions; state regulation and institutional architecture; conservation obligations; wild harvesting permit and quota system (incorporating Formula 1); cultivation and GACP compliance; quality standards and laboratory infrastructure; access and benefit-sharing under the Nagoya Protocol; trade and export mechanisms; public participation and traditional knowledge; liability and enforcement; and transitional provisions.

5. DISCUSSION

The findings indicate that Uzbekistan's medicinal plant governance presents a structural paradox: the post-2020 executive reform programme has generated considerable institutional ambition expressed in PP-4901's cluster model, PP-251's plantation targets, and the planned standardisation laboratory while the legal infrastructure necessary to realise these ambitions remains fragmented and inadequate. This pattern is broadly comparable to the governance trajectories of India and Turkey prior to their respective sectoral consolidations, suggesting that Uzbekistan has reached a juncture at which legal consolidation would determine whether reform momentum is sustained or dissipated.

The two critical governance gaps absence of an internationally accredited laboratory and Nagoya Protocol non-accession operate through fundamentally different mechanisms but converge on a common consequence: the foreclosure of market access and sovereign resource protection simultaneously. The laboratory gap prevents Uzbek exporters from certifying raw materials to Ph.Eur. or EAEU PhF standards, confining them to low-margin uncertified supply chains. The Nagoya gap leaves Uzbekistan's endemic medicinal flora legally unprotected against commercial exploitation by foreign entities, a dimension of sovereign resource risk that grows in proportion to

the increasing commercial value of the country's botanical genetic resources on international markets.

The inter-agency competence vacuum resulting from PF-149's transfer of the Centre to MoECC without a supplementary coordination protocol is among the more tractable governance failures documented, in that it could be addressed through a Cabinet of Ministers Resolution without primary legislation. The proposed inter-agency protocol matrix, assigning lead, co-lead, and secretariat roles to MoECC, the Ministry of Agriculture, PIDA, the State Forestry Committee, and the Centre across eight functional dimensions (wild stock inventory, quota calculation, GACP certification, permit issuance, export certification, ABS negotiations, plantation land allocation, and demand-supply balancing), provides a structural basis for such a resolution.

The demand-quota mismatch documented across all ten commercially significant species reflects the inadequacy of the current quota methodology: annual quota orders are issued without a published methodology, without integration of cultivation supply data, and without explicit reference to documented pharmaceutical or export demand. India's NMPB annual demand-supply survey methodology offers a directly replicable institutional model, achievable within Uzbekistan's existing institutional capacity through the Centre's existing cross-sectoral data access.

The proposed quota formula ($Q = P \times R \times S - C$) addresses both the conservation risk and the demand-allocation inadequacy within a single instrument: it sets an ecologically grounded ceiling preventing exceedance of sustainable yield, while the C term creates an automatic incentive rewarding investment in cultivated production. Implementation requires three institutional preconditions — updated population density surveys by the Institute of Botany; peer-reviewed and published recovery coefficients; and systematic compilation of cultivated production data by PIDA — all of which fall within existing institutional mandates.

6. REFORM RECOMMENDATIONS

The research yields a sequenced reform agenda organised by implementation horizon and anchored to specific legal instruments. Table 5 presents the consolidated recommendations.

Table 5. Reform Agenda: Implementation Horizon and Legal Instruments

Horizon	Recommended Measure	Legal Instrument	Gap Addressed
Near-term (0–12 months)	Declare GACP legally binding; designate Centre as certification authority	Cabinet of Ministers Resolution amending PP-4901/PP-251	GACP non-binding (HIGH)
Near-term (0–12 months)	Issue inter-agency functional responsibility matrix (8 dimensions)	Cabinet of Ministers Resolution	Competence conflict (HIGH)
Near-term (0–12 months)	Introduce GPS traceability for all quota permit-holders (pilot phase: top 5 operators)	MoECC Ministerial Order amending quota permit conditions	Enforcement gap (HIGH)

Near-term (0–12 months)	Initiate formal Nagoya Protocol accession proceedings	Government Decree authorising accession; Parliamentary ratification	ABS framework absent (CRITICAL)
Medium-term (12–36 months)	Enact consolidated Law 'On Medicinal Plant Resources' (12 chapters)	Parliamentary law	Fragmented framework (CRITICAL)
Medium-term (12–36 months)	Establish ISO 17025 accredited standardisation laboratory at Centre; designate Institute of Plant Chemistry as interim testing authority	World Bank project approval + Presidential Decree	Absent accredited lab (CRITICAL)
Medium-term (12–36 months)	Embed Formula 1 ($Q = P \times R \times S - C$) in MoECC annual quota methodology	MoECC Methodological Instruction	Quota methodology (HIGH)
Long-term (36–60 months)	Achieve full ISO 17025 accreditation (EDQM or TÜRKAK recognition); operationalise national ABS framework	Accreditation process + implementing regulations under Medicinal Plant Resources Law	Pharmacopoeial compliance (CRITICAL); ABS (CRITICAL)

Source: Author's recommendations based on regulatory gap matrix and comparative analysis

Three features of this sequencing warrant attention. First, the GACP legal binding measure represents a relatively low-cost regulatory intervention with potentially significant market consequences: achievable through a Cabinet of Ministers Resolution without primary legislation, it would alter the legal status of all cultivation and harvesting operations and provide the normative basis for GACP certification claims on international markets. Second, the Russia/EAEU alignment measures (bilateral quality recognition with Roszdravnadzor) and the Turkey/GACP channel proposals are calibrated to yield near-term commercial returns within the existing export market structure, independent of longer-term EU regulatory alignment. Third, the Nagoya Protocol accession measure carries a temporal dimension: each year without a domestic ABS framework represents an additional period during which Uzbekistan's endemic medicinal flora may be commercially utilised by foreign entities without a legally secured benefit-sharing obligation.

7. CONCLUSION

This study has conducted the first comprehensive legal-institutional analysis of Uzbekistan's post-2020 medicinal plant governance framework, evaluated systematically against international standards and the comparative experience of five jurisdictions. The findings indicate that the country's exceptional floristic endowment comprising over 4,500 higher plant species, 750 with recognised medicinal properties is governed by a fragmented regulatory architecture that has produced identifiable failures in conservation, certification, and commercial value capture.

Seven structural governance gaps are identified, two of which are assessed as CRITICAL: the absence of an internationally accredited standardisation laboratory (representing a five-year implementation delay relative to PP-4901's original mandate) and non-accession to the Nagoya Protocol on Access and Benefit-Sharing. Three further high-priority gaps GACP non-mandatory status, quota enforcement failures (including a demand-allocation mismatch of 40–63% across ten priority species), and inter-agency competence conflicts collectively constrain the sector's commercial potential.

The study's principal original contributions are: (1) a scientifically-based quota calculation model ($Q = P \times R \times S - C$), accompanied by illustrative species-level calculations demonstrating that the 2025 Ferula quota likely exceeds the ecological ceiling by a factor of approximately 2.25; (2) the first proposed twelve-chapter structure for a consolidated Law 'On Medicinal Plant Resources'; and (3) a sequenced reform agenda mapping specific legal instruments to governance gaps across three implementation horizons.

Near-term measures declaring GACP legally binding, issuing an inter-agency coordination protocol, introducing GPS-based quota traceability, and initiating Nagoya Protocol accession are each achievable without primary legislation and may generate both commercial and conservation returns within the current planning cycle. The proposed consolidated law provides the permanent legislative foundation within which all executive-level reforms may be consolidated and given enduring legal force.

Uzbekistan's reform trajectory, already advanced through the PP-4670/PP-251 executive sequence, presents characteristics comparable to those of India and Turkey at analogous stages of their regulatory development: a period in which executive instruments have operationalised key governance mechanisms in advance of primary legislative consolidation. The comparative evidence suggests that such consolidation, when it follows, tends to lock in the governance gains achieved by executive action and provide the legal certainty required to attract longer-term investment. The timing and design of that consolidation accordingly carry significant consequences for the sector's medium-term development trajectory.

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