



Compliance of Bangladesh's Domestic Laws with the International Legal Framework for Biodiversity Protection: A Critical Analysis

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Abstract

Bangladesh has built a sizeable body of biodiversity legislation, but how well it matches the country's international obligations has not been tested systematically. This article asks to what extent Bangladeshi law gives effect to the binding obligations in the Convention on Biological Diversity (CBD), the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit-sharing, and how it relates to the non-binding Kunming–Montreal Global Biodiversity Framework (KMGBF). The study is doctrinal. It compares selected treaty provisions with the Bangladesh Biodiversity Act 2017, the Wildlife (Conservation and Security) Act 2012, the Environment Conservation Act 1995 and Environment Conservation Rules 2023, the Biosafety Rules 2012 and related sectoral laws, as in force in September 2026. Each obligation is rated full, partial, inadequate or absent against stated criteria, and findings drawn from the text of legislation are kept apart from claims about implementation, which are based on official and judicial sources. Four gaps emerge. Bangladesh has biosafety rules but no stand-alone biosafety statute. The Biodiversity Act 2017 gives communities no role in decisions on access to genetic resources and associated traditional knowledge, which matters for the Nagoya Protocol (in force for Bangladesh since 10 April 2023). Designation, permit and institutional arrangements for protected places and species overlap. And no revised national strategy aligned with the KMGBF was publicly available at the time of writing. The article proposes reforms in three-time horizons, names the responsible authority and legislative vehicle for each, and draws lessons for other dualist states that implement multilateral environmental agreements through general environmental statutes.

Keywords: Biodiversity law, Convention on Biological Diversity, Nagoya Protocol, Biosafety, Access and benefit-sharing, Bangladesh, Kunming–Montreal Global Biodiversity Framework

Introduction

Bangladesh is a small, densely populated country with a large share of the region's biological wealth. The Sundarbans is the world's largest mangrove forest; it spans Bangladesh and India, and the larger part lies in Bangladesh (UNESCO World Heritage Centre, n.d.). The country also has hill forests, haor wetlands, rivers and a coastline that together hold several thousand species of flowering plants and hundreds of species of fish, birds, mammals, reptiles and amphibians (Ministry of Environment and Forests, 2016). Industrial growth, infrastructure, and the conversion of forests, wetlands and floodplains to farming, industry and housing put steady

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pressure on these habitats (Ministry of Environment and Forests, 2016; Shahid & Hossain, 2020).

Bangladesh has responded with legislation and by joining the main biodiversity treaties. It became a party to the CBD in 1994, to the Cartagena Protocol on Biosafety in 2004 and to the Nagoya Protocol in 2023 (CBD Secretariat, n.d.-a). At home, the Bangladesh Biodiversity Act 2017, the Wildlife (Conservation and Security) Act 2012 and the Environment Conservation Act 1995 form the core of the statutory framework. Whether this body of law gives effect to the treaties is a separate question from whether it exists, and it is the question this article addresses.

Treaties in Bangladeshi law: obligation, enforceability, incorporation and implementation

The argument of the article depends on four terms that are often run together. An *international legal obligation* binds the State on the international plane once it becomes a party to a treaty, and under the law of treaties a State cannot rely on its internal law to excuse non-performance (Vienna Convention on the Law of Treaties, 1969, art. 27). *Domestic enforceability* asks whether a court or a private person can rely on the treaty rule inside the State. *Incorporation* is the legislative act that makes a treaty rule part of domestic law. *Implementation* covers the administrative, institutional and enforcement steps that give a legal rule practical effect.

Bangladesh follows a dualist approach in practice, though not in express constitutional terms. Article 25 of the Constitution commits the State to respect international law and the principles of the United Nations Charter in its international relations. Article 145A requires treaties to be submitted to the President and laid before Parliament, but it does not say that a treaty becomes domestic law on ratification and does not require legislation to be passed. In *Hussain Muhammad Ershad v Bangladesh* (2001) 21 BLD (AD) 69, the Appellate Division accepted that international instruments are not directly enforceable unless incorporated, while allowing courts to draw on their principles where domestic law is unclear or silent. Karzon and Al-Faruque (1999) describe the resulting position as one in which treaty rules reach the courts mainly through legislation or through interpretation. For biodiversity, this means that a treaty duty becomes enforceable against a licensing authority, a developer or a collector of genetic resources only to the extent that a statute or rule reproduces it.

The distinction organizes the later analysis. Section 5 asks whether each treaty obligation has been *incorporated* in a form that creates a duty, a power or a right in Bangladeshi law. It treats *implementation* separately, because a defect on the face of a statute and a defect in how officials apply it call for different evidence and different remedies.

Research Gap and Contribution

Bangladeshi writing on biodiversity law has tended to describe individual statutes or to comment on one of them. The Biodiversity Act

2017 has attracted appraisals of its access and benefit-sharing provisions, and wildlife and fisheries legislation have been examined separately. International scholarship, for its part, has produced detailed commentary on the CBD and the Nagoya Protocol (Glowka et al., 1994; Greiber et al., 2012; Morgera et al., 2014) and a growing literature on how the Kunming–Montreal Framework is being carried into national law (Lehmann, 2023; Liu, 2025), but it says little about Bangladesh. What is missing is a provision-by-provision comparison of Bangladesh’s treaty obligations with its domestic law that separates binding duties from qualified ones, from soft-law expectations, and that tests the result against evidence of practice.

This article supplies that comparison. It makes three contributions. First, it sets out explicit criteria for rating compliance and applies them in a matrix that links each obligation to the treaty article, the Bangladeshi provision, the degree of implementation, the gap and the recommended reform (Table 3). Second, it corrects several points on which the existing description of Bangladesh’s framework is incomplete or out of date, including the status of biosafety regulation, the current Environment Conservation Rules, the dates on which the Nagoya Protocol took effect for Bangladesh, and the status of the Supplementary Protocol on Liability and Redress. Third, it uses the Bangladeshi case to draw wider lessons about treaty implementation through general environmental statutes in dualist systems (Section 6).

The article proceeds as follows. Section 2 states the method and compliance criteria. Section 3 outlines the international framework, with attention to which obligations are binding and how far they are qualified. Section 4 describes the domestic framework. Section 5 assesses compliance and sets textual gaps apart from implementation evidence. Section 6 draws out broader lessons, Section 7 sets out sequenced reforms, and Section 8 concludes.

Research Methods and Analytical Framework

Research questions

The study addresses four questions. (1) Which obligations in the CBD, the Cartagena Protocol and the Nagoya Protocol bind Bangladesh, and how far is each qualified by its own wording? (2) What provision, if any, of Bangladeshi law corresponds to each? (3) How complete is that correspondence, judged by the criteria below? (4) Where gaps exist, are they gaps in the text of the law or problems of implementation, and what reform would close them?

Legal materials and Selection

The method is doctrinal. The primary materials are treaty texts, decisions of the Conference of the Parties, the Constitution, statutes and subordinate legislation, and two judicial decisions. Treaties were chosen because Bangladesh is a party and because they deal directly with biodiversity: the CBD, the Cartagena Protocol and the Nagoya Protocol, and, for context, the Ramsar, CITES, Migratory Species and World Heritage

Conventions. Within the CBD, the provisions examined are Articles 3, 5 to 9, 14, 15, 8(j), 19 and 26, because they carry the substantive duties that national law must address. Within the Nagoya Protocol, they are Articles 5 to 7 and 12 to 17; within the Cartagena Protocol, Articles 7 to 11, 15 to 19 and 26 to 27. The Kunming–Montreal Framework is read as a COP decision and considered through the targets most relevant to Bangladesh’s legal system (Targets 1 to 3, 13, 14, 17 and 22).

Domestic instruments were selected on one test: whether they regulate access to biological resources, protect species, habitats or ecosystems, regulate living modified organisms, or govern the environmental assessment of activities affecting biodiversity. On that basis the study covers the Biodiversity Act 2017, the Wildlife (Conservation and Security) Act 2012 and the Protected Area Management Rules 2017, the Environment Conservation Act 1995 with the Ecologically Critical Area Management Rules 2016 and the Environment Conservation Rules 2023, the Biosafety Rules 2012 and associated guidelines, the Forest Act 1927 and Social Forestry Rules 2004, and the fisheries legislation. The law is stated as it stood in September 2026. The 1997 Environment Conservation Rules and the Marine Fisheries Ordinance 1983 are mentioned only to record that they have been replaced.

Case law was handled selectively. The study does not claim a comprehensive survey of reported biodiversity decisions. It relies on two decisions that bear directly on its argument: *Ershad*, on the status of international instruments in domestic courts, and the Turag River litigation, in which the High Court Division and the Appellate Division considered the State’s duty to protect a natural resource under Articles 18A, 31 and 32 of the Constitution. Other judicial material is not analysed, and Section 5.5 notes this as a limit on what can be said about enforcement.

Secondary sources comprise peer-reviewed scholarship, official reports and assessments (including the Forest Department’s management effectiveness assessment of protected areas and national reports to the CBD), and reports of international bodies. Blog posts and newspaper commentary are not used to establish propositions of law.

Method of Comparison and Compliance Criteria

For each obligation the study (a) identifies the treaty text and records whether it is framed as a firm duty, as a duty qualified by phrases such as “as far as possible and as appropriate” or “in accordance with domestic law”, or as a non-binding expectation; (b) identifies the corresponding provision in Bangladeshi law; and (c) rates the correspondence using the four categories in Table 1. Qualified obligations are rated against what the qualified text actually requires. A State is not faulted for omitting a measure that the treaty leaves to its discretion, although the choice may still be criticised on policy grounds. Non-binding instruments are not rated for legal compliance; they are used as benchmarks and the comparison is labelled accordingly.

Table 1. Criteria for rating compliance.

Rating	Meaning
Full	A binding domestic provision reproduces the substance of the obligation and an operative mechanism exists to apply it (institution, procedure or sanction).
Partial	A binding domestic provision addresses the obligation but omits an element that the treaty text requires, or no mechanism applies it.
Inadequate	The domestic provisions touch the subject but do not meet the core of the obligation as the treaty text qualifies it.
Absent	No corresponding domestic provision was found in the instruments reviewed.

Two Kinds of Evidence

The study separates defects visible on the face of the law from defects of practice. A textual gap, such as the absence of a rule requiring community consent, can be shown by reading the statute. A claim that an institution lacks capacity, that decisions are inconsistent or that a law is poorly enforced is different. It needs evidence from outside the statute: official assessments, national reports, court decisions or empirical studies. Where the article makes a claim of the second kind it cites a source for it. Where no source was found, the article says that the point is a hypothesis for further study and does not state it as a finding.

Limits

The study is a desk-based legal analysis. It does not include interviews or field data. English texts of some Bangladeshi instruments are informal translations, and the Bangla text prevails where there is a difference. The conclusions on implementation are therefore limited to what published official and judicial sources support.

The International Legal Framework

The Convention on Biological Diversity

The CBD was adopted in 1992 and entered into force in December 1993. It has near-universal participation. Its three objectives are the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits from the use of genetic resources (CBD, 1992, art. 1). Bangladesh became a party in 1994 (CBD Secretariat, n.d.-a). The Convention is largely a framework treaty. Many of its operative provisions are qualified by the words “as far as possible and as appropriate” or by a reference to national legislation, and this affects how compliance can be judged (Glowka et al., 1994; Boyle & Redgwell, 2021).

Three general provisions frame the rest. Article 3 reaffirms that States have sovereign rights over their own resources under the Charter of the

United Nations and the principles of international law, together with a responsibility to ensure that activities within their jurisdiction or control do not damage the environment of other States or of areas beyond national jurisdiction. Article 5 requires cooperation, directly or through competent international organizations, in respect of areas beyond national jurisdiction and on other matters of mutual interest. The Convention does not describe biodiversity as the “common heritage of mankind”. Its preamble affirms that conservation of biological diversity is a “common concern of humankind”, a formula that leaves sovereignty over resources with the State. “Common heritage” belongs to a different body of law, concerned with areas such as the deep seabed, and should not be attributed to the CBD (Boyle & Redgwell, 2021; Sands & Peel, 2012). Article 6 asks each party to develop national strategies, plans or programmes for conservation and sustainable use, or to adapt existing ones, and to integrate these concerns into sectoral and cross-sectoral plans.

The substantive duties sit in Articles 7 to 9 and 14 to 15. Article 7 asks parties to identify and monitor important components of biodiversity and activities with significant adverse effects. Article 8 deals with *in-situ* conservation: a system of protected areas, regulation of biological resources and of risky activities, protection of ecosystems and habitats, rehabilitation of degraded ecosystems and recovery of threatened species, control of alien species, regulation of the risks of living modified organisms (art. 8(g)), legislation to protect threatened species (art. 8(k)), and respect for the knowledge, innovations and practices of indigenous and local communities (art. 8(j)). Article 9 deals with *ex-situ* conservation, ideally in the country of origin. Article 14(1)(a) asks parties to introduce environmental impact assessment for proposed projects likely to have significant adverse effects on biodiversity. Article 15 confirms national sovereign authority to determine access to genetic resources, requires access on mutually agreed terms and, unless the provider State decides otherwise, subject to its prior informed consent (art. 15(4)–(5)), and calls for measures to share benefits (art. 15(7)).

Two features of these provisions matter for compliance analysis. First, most of them are duties to take measures, not duties to reach a result. Second, Article 8(j) is expressly “subject to national legislation” and requires that wider application of traditional knowledge occurs “with the approval and involvement of the holders of such knowledge”. The article therefore gives communities a place in the process but leaves the form of that place to national law.

The Nagoya Protocol

The Nagoya Protocol (2010) entered into force internationally on 12 October 2014. Bangladesh signed it in 2011 but deposited its instrument of ratification only on 10 January 2023, and the Protocol took effect for Bangladesh on 10 April 2023 (United Nations, 2023; CBD Secretariat, n.d.-b). This matters for any doctrinal assessment. Obligations under the

Protocol cannot be applied to Bangladeshi measures adopted before April 2023 as if they had been in force at the time. The Biodiversity Act 2017 was adopted six years earlier. It can be measured against the CBD, which has bound Bangladesh since 1994, and against the voluntary Bonn Guidelines (2002), but not against the Protocol as a legal obligation in 2017. Since April 2023 the question is whether Bangladesh has adopted, or should now adopt, the measures that the Protocol requires. The instruments reviewed show no amendment to the Act since that date.

The Protocol's main provisions are drafted with care, and their qualifications are part of the obligation. Article 6(1) provides that access to genetic resources is subject to the prior informed consent of the provider Party, unless that Party decides otherwise. Article 6(3) lists what a Party requiring such consent must do: provide legal certainty, clarity and transparency; apply fair and non-arbitrary rules; give information on how to apply; give a clear and cost-effective written decision within a reasonable time; provide a permit or equivalent as evidence of the decision; and establish clear rules for mutually agreed terms. Article 5 requires benefit-sharing from the utilization of genetic resources on mutually agreed terms.

The treatment of communities is where the text is most easily overstated. Article 6(2) provides that each Party shall take measures, "as appropriate", with the aim of ensuring that the prior informed consent or approval and involvement of indigenous and local communities is obtained for access to genetic resources "where they have the established right to grant access". Article 7 applies, "in accordance with domestic law", to traditional knowledge associated with genetic resources held by indigenous and local communities, and speaks of "prior and informed consent or approval and involvement" and of mutually agreed terms. Article 5(2) and (5) provide for benefit-sharing with communities, again by reference to domestic legislation on established rights. Article 12 asks Parties to take into consideration the customary laws, community protocols and procedures of communities. The Protocol therefore does not require that every community give consent to every use of genetic resources or knowledge. It requires measures with that aim where domestic law recognizes established community rights, and it permits a choice between consent and approval and involvement (Greiber et al., 2012; Morgera et al., 2014).

Articles 15 to 17 concern users. Parties are to take measures to ensure that genetic resources used within their jurisdiction were accessed in accordance with the provider country's requirements, to provide for cooperation in cases of alleged violation, and to monitor utilization, including through designated checkpoints. Article 13 requires a national focal point and one or more competent national authorities, and Article 14 establishes the Access and Benefit-sharing Clearing-House.

The Cartagena Protocol on Biosafety and the Supplementary Protocol

The Cartagena Protocol (2000) entered into force on 11 September 2003. Bangladesh ratified it on 5 February 2004, and it took effect for Bangladesh on 5 May 2004 (CBD Secretariat, n.d.-c). The Protocol applies to the transboundary movement, transit, handling and use of living modified organisms (LMOs) that may have adverse effects on biodiversity, taking into account risks to human health. Its central device is the advance informed agreement procedure for the first intentional transboundary movement of LMOs for intentional introduction into the environment (arts. 7–10), with a simpler procedure for LMOs intended for direct use as food, feed or for processing (art. 11). Where scientific information is insufficient, a Party may take a decision on import without waiting for certainty (arts. 10(6) and 11(8)), which is the Protocol's expression of the precautionary approach. Further provisions deal with risk assessment and risk management (arts. 15–16), unintentional movements (art. 17), handling, transport, packaging and identification (art. 18), competent national authorities and focal points (art. 19), the Biosafety Clearing-House (art. 20), public awareness and participation (art. 23) and socio-economic considerations (art. 26). Article 27 left the rules on liability and redress for later negotiation.

Those rules were adopted as the Nagoya–Kuala Lumpur Supplementary Protocol on Liability and Redress in 2010, which entered into force on 5 March 2018. According to the CBD Secretariat, Bangladesh is not a party to it (CBD Secretariat, n.d.-c). The Supplementary Protocol therefore creates no treaty obligation for Bangladesh. It can serve as a policy benchmark for domestic reform, and this is the only sense in which it is used in Section 7.

Other biodiversity treaties

The CBD operates alongside older treaties on particular parts of biodiversity. The Ramsar Convention (1971) asks parties to designate wetlands of international importance and to plan for the wise use of wetlands generally (arts. 2–3). Bangladesh acceded in 1992 and the Sundarbans Reserved Forest is a Ramsar site (Ramsar Sites Information Service, n.d.). CITES (1973) regulates international trade in specimens of listed species (arts. II–IV). The Convention on Migratory Species (1979) asks range States to cooperate in protecting migratory species and their habitats, which is relevant to the birds that use Bangladesh's wetlands. The World Heritage Convention (1972) requires parties to identify and protect natural sites of outstanding universal value; the Sundarbans was inscribed in 1997 (UNESCO World Heritage Centre, n.d.). These treaties are cited here where domestic law refers to them or where they bear on a protected place or species. They are not rated in the matrix, apart from the Ramsar duty of wise use.

Binding duties and soft-law expectations

Non-binding instruments produced under the CBD shape state practice, but they do not create the legal duties that the treaties do, and the article keeps them separate. The Bonn Guidelines (2002), the Strategic Plan for Biodiversity 2011–2020 with its Aichi Targets (Conference of the Parties to the CBD, 2010) and the Mo'otz Kuxtal Voluntary Guidelines on consent and benefit-sharing involving indigenous peoples and local communities (Conference of the Parties to the CBD, 2016) are all decisions of the Conference of the Parties and are voluntary in character.

The Kunming–Montreal Global Biodiversity Framework, adopted by Decision 15/4 in December 2022, has four goals for 2050 and 23 targets for 2030 (Conference of the Parties to the CBD, 2022). It is a decision of the Conference of the Parties and is not a treaty. The duty to which it attaches is existing treaty law: Article 6 CBD requires national strategies and plans, and Article 26 requires reports. Parties are asked to update national biodiversity strategies and action plans and to set national targets in line with the Framework. Recent comparative work shows that implementation has so far been uneven. Some targets are carried into binding law and others remain in policy documents (Liu, 2025), and the Framework's stronger positions on rights-based conservation and participation will depend on national legal change (Lehmann, 2023). The targets most relevant to Bangladesh's legal system are Target 3 (effective conservation of at least 30 per cent of land, inland waters and coastal and marine areas), Targets 1 and 2 (spatial planning and restoration), Target 13 (benefit-sharing from genetic resources and traditional knowledge), Target 14 (mainstreaming biodiversity into policy and planning), Target 17 (biosafety measures under Articles 8(g) and 19 CBD) and Target 22 (participation of indigenous peoples and local communities in decision-making, and respect for their rights).

The Domestic Legal Framework of Bangladesh

Constitutional basis

Article 18A, inserted by the Fifteenth Amendment in 2011, directs the State to protect and improve the environment and to preserve and safeguard natural resources, biodiversity, wetlands, forests and wildlife for present and future citizens. Article 23A, inserted at the same time, directs the State to protect and develop the unique local culture and tradition of tribes, minor races, ethnic sects and communities. Article 18A is a directive principle and is not itself enforceable in court, but the courts have read it together with the right to life in Article 31 and the protection of the law in Article 32 when dealing with environmental harm (see Section 5.5). Article 145A is discussed in Section 1.1.

The Bangladesh Biodiversity Act 2017 (Act No. II of 2017)

The Act's preamble adopts objectives that follow those of the CBD, but its operative provisions concentrate on regulating access and sharing benefits. The structure is as follows. Section 3 gives the Act overriding effect

over other law. Section 4 requires the prior approval of the National Committee before a person who is not a resident Bangladeshi citizen, or a foreign organization, collects traditional knowledge, extracts biological resources for research or commercial use, or receives research results derived from biodiversity. Section 5 deals with publication of research papers. Section 6 provides that no person may apply for intellectual property rights over an invention made using biological resources of or outside Bangladesh without the Committee's prior approval, which may carry conditions to secure equitable sharing of benefits. Section 7 sets the procedure, including a decision period of 90 days, review of refusals, and fees and conditions.

Section 8 constitutes the National Committee on Biodiversity. A minister or state minister chairs it; members include the Secretary of the Ministry of Environment, Forest and Climate Change, officials of other ministries, heads of research institutions, and the Director General of the Department of Environment as member-secretary. Sections 9 and 10 deal with its meetings and functions, and later sections set up a Technical Committee and committees at city, district, upazila, municipal and union levels. Section 28 allows local committees to form biodiversity management teams or associations at the grassroots, which may organise as cooperative societies and receive grants from the conservation fund. Section 30 governs benefit-sharing. After approval, the Committee is to secure fair and equitable sharing through measures that include notifying local authorities, technology transfer, involving local people in the research, and financial compensation to holders of knowledge and to conservers. Section 31 requires the government to prepare and update a National Biodiversity Strategy and Action Plan, identify biodiversity-rich areas, take conservation measures and preserve local traditional knowledge, and it allows the government to direct protection of a resource whose depletion is threatened. Section 32 allows the government to declare biodiversity-rich areas heritage sites after consulting local people, and Section 33 prohibits actions that adversely affect threatened species or the ecological character of critical habitats and Ramsar wetlands. The Act also creates offences and penalties, and it empowers the government to make rules.

Wildlife and protected areas

The Wildlife (Conservation and Security) Act 2012 (Act No. XXX of 2012) provides for national parks, wildlife sanctuaries, game reserves, community conservation areas, safari parks and eco-parks, for the protection of listed species, and for offences of hunting, killing and trading in protected species and their parts. Although its preamble refers to biodiversity, its text is concerned with wildlife, which is only one part of biodiversity as the CBD defines it. The Protected Area Management Rules 2017 and the Ecologically Critical Area Management Rules 2016 add detail on management, including co-management with local communities

(Irfanullah, 2024). The Forest Department administers the protected-area system.

Environmental clearance and ecologically critical areas

The Environment Conservation Act 1995 (Act No. 1 of 1995, as amended) requires environmental clearance before an industrial unit or project is established (s. 12) and empowers the government to declare an area ecologically critical where the ecosystem has reached or is threatened to reach a critical state (s. 5). Areas declared under it include the Sundarbans buffer and the Cox's Bazar–Teknaf peninsula. The Environment Conservation Rules 1997, which governed clearance and the management of ecologically critical areas for more than two decades, were replaced by the Environment Conservation Rules 2023 (SRO No. 53-Law/2023, 5 March 2023). The 2023 Rules sort industrial units and projects into categories (green, yellow, orange and red). Units in the yellow, orange and red categories must obtain both a location clearance and an environmental clearance certificate from the Department of Environment, and green-category units need only the certificate.

Biosafety instruments

Bangladesh does have binding biosafety regulation. The Biosafety Rules 2012 set out the approval process for genetically engineered products, whether developed in Bangladesh or imported, and no such product may be imported or sold without approval (Bangladesh Biosafety Portal, n.d.). The Rules sit alongside the National Biosafety Framework (2007), the Biosafety Guidelines (2007, published in the Gazette in 2008), standard operating procedures for genome-edited plants (2023) and the Biosafety Policy of Bangladesh (2024) (Bangladesh Biosafety Portal, n.d.). The regime has been used in practice: Bt brinjal became the first genetically engineered food crop approved in Bangladesh and has been grown commercially since 2014 (Shelton et al., 2019). What Bangladesh does not have is a stand-alone, comprehensive Biosafety Act. Rules are subordinate legislation and draw their force from an enabling statute. Section 5.3 considers what follows from this.

Forests, fisheries and policy

The Forest Act 1927 (Act No. XVI of 1927) continues to govern the reservation, management and protection of forest land, and the Social Forestry Rules 2004 regulate community-based planting. In fisheries, the Protection and Conservation of Fish Act 1950 and the Fish Protection and Conservation Rules 1985 apply to inland waters. The Marine Fisheries Ordinance 1983 has been repealed and replaced by the Marine Fisheries Act 2020, which now governs the marine fisheries regime. At the policy level, the National Biodiversity Strategy and Action Plan (NBSAP) 2016–2021 reflects the Aichi Targets (Ministry of Environment and Forests, 2016). The Department of Environment was reported in 2024 to be updating the NBSAP (Irfanullah, 2024).

Table 2. Domestic instruments: treaty obligations implemented, institutions, enforcement and remaining gaps.

Instrument	Treaty obligation implemented	Institution	Enforcement	Remaining gap
Biodiversity Act 2017	CBD arts 6, 7, 8(j), 15; Ramsar wise use (s. 33)	National Committee (s. 8), Technical Committee, local committees; DoE as member-secretary	Approval regime (ss. 4, 6–7); offences and penalties	No community rights or consent mechanism; no user measures; no MAT requirement; no review cycle for NBSAP
Wildlife (Conservation and Security) Act 2012; Protected Area Management Rules 2017	CBD arts 8(a), 8(k), 9; CITES (trade controls)	Forest Department; Wildlife Advisory Board	Offences for hunting, killing and trade; protected-area management	Wildlife only; plants, microbes and aquatic biodiversity outside protected areas not covered; low enforcement scores in protected areas (Ahsan et al., 2016)
Environment Conservation Act 1995; Environment Conservation Rules 2023; Ecologically Critical Area Management Rules 2016	CBD arts 8(d), 14(1)(a)	Department of Environment	Clearance before project start; ECA declaration (s. 5)	Clearance categories turn on project type, so the link to biodiversity effects is indirect
Biosafety Rules 2012, Biosafety Guidelines 2008, National Biosafety Framework 2007, Biosafety Policy 2024	CBD art 8(g); Cartagena Protocol arts 7–11, 15–16	Bodies established under the Rules; Ministry of Environment, Forest and Climate Change	Approval required for import, sale and release of genetically engineered products	No stand-alone statute; liability and redress, offences and institutional powers rest on the parent Act
Forest Act 1927; Social Forestry Rules 2004	CBD art 8(c)–(d) (habitat and resource management)	Forest Department	Reservation and forest offences; community planting rules	Older statute without biodiversity mandate; overlaps with Wildlife Act

Instrument	Treaty obligation implemented	Institution	Enforcement	Remaining gap
vProtection and Conservation of Fish Act 1950; Fish Protection and Conservation Rules 1985; Marine Fisheries Act 2020	CBD art 8(c) (regulation of biological resources); sustainable use	Department of Fisheries	Licensing and fishing restrictions	Overlap with Wildlife Act at marine protected areas; sector-specific

Compliance Assessment

Table 3 sets out the assessment in matrix form. The sections below discuss the findings that need explanation, in the order of the instruments. Section 5.5 then separates textual gaps from implementation evidence, and Section 5.6 deals with fragmentation.

Table 3. Compliance matrix: international obligation, Bangladeshi provision, rating, gap and reform.

Obligation (instrument and article)	Bangladesh provision	Rating	Gap and consequence	Recommended reform
National strategies and integration (CBD 6; Target 14)	Biodiversity Act s. 31; NBSAP 2016–2021	Partial	Duty to prepare and update exists but no timetable. Last published plan expired in 2021	Statutory review cycle; revised NBSAP
Identification and monitoring (CBD 7)	Biodiversity Act ss. 31–32	Partial	Identification of rich areas but no monitoring or reporting duty found	Monitoring database; reporting duty
In-situ conservation, protected areas, threatened species (CBD 8(a), (d), (k); Ramsar 3)	Wildlife Act 2012; ECA Act 1995 s. 5; Forest Act 1927; Biodiversity Act ss. 32–33	Partial	Wildlife-centred. Plants, microbes and aquatic biodiversity outside protected areas lack a conservation mandate. Overlap in management	Widen scope; coordinate designations

Obligation (instrument and article)	Bangladesh provision	Rating	Gap and consequence	Recommended reform
Ex-situ conservation (CBD 9)	Wildlife Act (safari parks, eco-parks)	Partial	No framework for gene banks, botanic gardens or recovery programmes found	Ex-situ provisions in amended Biodiversity Act
Impact assessment (CBD 14(1)(a))	ECA Act 1995 s. 12; ECR 2023	Partial	Clearance categories organised by project type; link to biodiversity effects indirect	Add biodiversity criteria to clearance
Access, State PIC, MAT, benefit-sharing (CBD 15; Nagoya 5, 6(1), 6(3))	Biodiversity Act ss. 4, 6, 7, 30	Partial	Approval regime for non-residents. MAT and permit not stated as required elements. Domestic users not clearly covered	Amend ss. 4 and 7; MAT rules
Communities and traditional knowledge (CBD 8(j); Nagoya 5(2), 6(2), 7, 12) — qualified duties	Biodiversity Act ss. 28, 30; Constitution art. 23A	Inadequate	No recognized community rights; Committee alone decides. Duty under Nagoya applies from 10 Apr 2023 where rights are established in domestic law	Recognize rights; consent or approval-and-involvement; register
User measures, checkpoints (Nagoya 15–17)	Biodiversity Act s. 6 (IPR applications) only	Absent	No duty on Bangladeshi users of foreign genetic resources; no checkpoint	User-side provisions; designate checkpoints
Approval, risk assessment, risk management of LMOs (Cartagena 7–11, 15–18; CBD 8(g))	Biosafety Rules 2012; Guidelines 2008; NBF 2007; Policy 2024	Partial	Approval system exists in subordinate legislation. No stand-alone Act. Rule-level fit with each article not assessed	Biosafety Act; revise Rules

Obligation (instrument and article)	Bangladesh provision	Rating	Gap and consequence	Recommended reform
Liability and redress (Cartagena 27; Supplementary Protocol — not binding on Bangladesh)	None specific	Benchmark only	No treaty obligation under the Supplementary Protocol. Domestic remedies depend on general law	Liability provisions in Biosafety Act, using the Supplementary Protocol as benchmark
Area-based conservation (KMGBF Targets 1–3) — non-binding	Wildlife Act; ECA Act; Forest Act	Benchmark only	No statutory national target; categories not aligned with the Framework's wording	Common statutory definitions; national target
Benefit-sharing and participation (KMGBF Targets 13, 22) — non-binding	Biodiversity Act s. 30	Benchmark only	Same gap as the Nagoya row on communities	As above
Biosafety measures (KMGBF Target 17) — non-binding	Biosafety Rules 2012	Benchmark only	Measures exist; statutory footing missing	Biosafety Act

Note: PIC = prior informed consent; MAT = mutually agreed terms; NBF = National Biosafety Framework; KMGBF = Kunming–Montreal Global Biodiversity Framework. “Benchmark only” marks instruments that do not bind Bangladesh. Ratings state the position on the face of the law in September 2026; the findings of practice are in Section 5.5.

The Convention on Biological Diversity

Strategies and planning (Article 6). Bangladesh has a national strategy, and Section 31 of the Biodiversity Act makes the preparation and updating of one a statutory duty. This is more than many parties have done. The statute does not set a review cycle, and the most recent published plan covers 2016–2021 and is tied to the Aichi Targets (Ministry of Environment and Forests, 2016). The incorporation is partial for that reason. A duty that exists on paper without a date for performance does little to make the strategy current.

Identification, monitoring and in-situ conservation (Articles 7 and 8). The protected-area system under the Wildlife Act and the ecologically critical area power under the Environment Conservation Act give Bangladesh a legal basis for area-based protection, and Sections 32 and 33 of the Biodiversity Act add heritage-site declarations and a prohibition on harmful actions. The gap lies in scope. The Wildlife Act protects wildlife. Plant genetic resources, microbial and aquatic biodiversity outside protected areas, and agrobiodiversity are not addressed by a single statute with a conservation mandate, so the Article 8 duty to regulate and manage biological resources important for conservation is met in part. Article 7

asks for identification and monitoring. Section 31 refers to identifying biodiversity-rich areas, but the instruments reviewed contain no statutory monitoring or reporting duty, and the Department of Environment and the Forest Department each hold different parts of the data.

Ex-situ conservation (Article 9). The Wildlife Act's provisions on safari parks and eco-parks cover some *ex-situ* work with animals. The instruments reviewed do not set out a statutory framework for gene banks, botanic gardens or culture collections, or for the recovery and reintroduction of threatened species that Article 9(c) contemplates. The obligation is qualified ("predominantly for the purpose of complementing *in-situ* measures"), so this is rated partial.

Impact assessment (Article 14). Section 12 of the Environment Conservation Act and the Environment Conservation Rules 2023 require clearance before projects proceed, and the 2023 Rules are the current instrument. Their categories are drawn by type of project and are used to decide the level of clearance. Article 14(1)(a) is directed at projects likely to have significant adverse effects on biodiversity. How far the clearance process tests those effects depends on whether the project lies in an ecologically critical area or protected area and on the scope set for the particular assessment. The incorporation is therefore partial: a clearance duty exists and is current, but its link to biodiversity effects is indirect.

Access and benefit-sharing (Articles 15 and 8(j)). The Biodiversity Act regulates access through the National Committee (ss. 4, 6–7) and provides for benefit-sharing (s. 30). A regime of approval, conditions and shared benefits in the hands of a national authority is consistent with Article 15's recognition of State authority over access. The shortcomings are specific. Section 4 targets persons who are not resident Bangladeshi citizens, so access by domestic users and by foreign users working through resident intermediaries is a matter the text does not clearly reach. Mutually agreed terms, which Article 15(4) makes the basis of access, are not stated as a required element of an approval. And the Act provides no place for communities beyond notification of local authorities and compensation to knowledge-holders under Section 30. The difference matters because Article 8(j) asks that wider application of traditional knowledge take place with the approval and involvement of its holders. That duty is "subject to national legislation", so the national statute is where the content must be supplied, and the Act does not supply it. The rating for the community dimension is *inadequate*.

The Nagoya Protocol

What the Protocol requires of Bangladesh since April 2023. The measures to be assessed are those in Articles 5 to 7, 12 to 14 and 15 to 17, and the assessment is of law in force from 10 April 2023.

Access to genetic resources (Articles 6(1) and 6(3)). The Biodiversity Act provides a national authority, a decision period and conditions (ss. 7, 8). Several elements of Article 6(3) are met in outline: a competent authority

exists, a time limit applies, and decisions on refusal may be reviewed. Others cannot be confirmed from the Act. The Act does not say that the Committee must issue a permit or equivalent as evidence of the decision (art. 6(3)(e)), and it does not set out rules for mutually agreed terms (art. 6(3)(g)). The rating is partial.

Communities and traditional knowledge (Articles 5(2), 6(2), 7 and 12). This is the part of the analysis where a firm conclusion of non-compliance is least safe, and the article does not draw one on the strength of the wording of the Act alone. The Protocol's duty is to take measures "as appropriate" and "in accordance with domestic law", and Article 6(2) applies where communities have an "established right to grant access". The first step is therefore to ask whether Bangladeshi law recognizes any such right. Article 23A of the Constitution protects the culture and tradition of ethnic communities as a goal for the State. The Biodiversity Act, however, vests control over access to traditional knowledge in the National Committee and speaks only of "local" people and communities, not of indigenous peoples. It does not say that a community holds rights over its knowledge or genetic resources, and it provides no procedure through which a community could grant, withhold or condition access. Without a recognized right, Article 6(2) has little to operate on, and the conclusion is that Bangladesh has not yet taken measures with the aim the Protocol describes. The Act's provision for consultation and compensation (s. 30) and for community management teams (s. 28) falls short of "approval and involvement" in decisions on access. The rating is *inadequate*, and the weakness lies in the absence of the underlying domestic rights, not in the omission of a word such as "consent".

Consent standards. The instruments use different formulas and they should not be treated as interchangeable. "Prior informed consent" is the standard that Article 6(1) of the Protocol applies to the *State* providing the resource. "Prior and informed consent or approval and involvement" is the wording for communities in Articles 6(2) and 7, which allows a State to choose approval and involvement in place of consent. "Free, prior and informed consent" appears in the United Nations Declaration on the Rights of Indigenous Peoples (2007) and in the voluntary Mo'otz Kuxtal Guidelines (Conference of the Parties to the CBD, 2016). Neither the Declaration nor the Guidelines is binding. The recommendation in Section 7 is therefore framed in terms of the Protocol's standard, with free, prior and informed consent presented as a policy option that the legislature may adopt, and not as something the Protocol compels.

User measures (Articles 15–17). These require Parties to ensure that genetic resources used within their jurisdiction were accessed in line with the provider country's rules, and to monitor use through checkpoints. Section 6 of the Biodiversity Act reaches intellectual property applications made "in or outside" Bangladesh, which protects Bangladesh's own resources, but the instruments reviewed contain no duty on Bangladeshi

users of other countries' genetic resources and no checkpoint system. The rating is *absent*. Because the Protocol has bound Bangladesh for only a short time, the absence is better described as work not yet done than as a breach that has lasted years.

The Cartagena Protocol

An earlier version of this article described Bangladesh as having “no dedicated legislation” on LMOs. That statement was incomplete. Bangladesh has binding subordinate legislation in the Biosafety Rules 2012, which require approval of genetically engineered products, supported by the Biosafety Guidelines, the National Biosafety Framework, procedures for genome-edited plants and the Biosafety Policy of 2024. The correct finding concerns the *form and strength* of the regime, not its existence: Bangladesh has no stand-alone, comprehensive Biosafety Act.

Does the form matter? Three consequences follow from a regime resting on rules made under a general environmental statute. First, the content of the rules is limited by the enabling power. Rules can establish an approval procedure and committees, but liability, remedies and the powers of inspectors and courts are usually matters for a statute. Second, Article 27 of the Cartagena Protocol and the Supplementary Protocol both concern liability and redress for damage from LMOs, and a regime of rules provides a weak footing for civil liability or restoration orders. Third, the Biosafety Policy of 2024 states aims but is not law. On these points, the Rules, Guidelines and Policy are adequate as an approval system and thinner as a system of enforcement and redress. The rating for the Protocol is therefore *partial*. The assessment of individual rules against Articles 7 to 11, 15 to 18 and 26 requires a rule-by-rule reading of the authentic Bangla text of the Rules, which is outside what this article attempts, and it is listed among the limits in Section 2.5. Bangladesh has proposed amendments to the Rules and Guidelines (Bangladesh Biosafety Portal, n.d.); the reforms in Section 7 are designed to run alongside that process.

The Nagoya–Kuala Lumpur Supplementary Protocol does not bind Bangladesh. Its standards can be used as a benchmark in designing a liability and redress mechanism, and nothing in this article suggests that Bangladesh is currently in breach of it.

The Kunming–Montreal Global Biodiversity Framework

Because the Framework is not binding, the question is what legal and policy change it requires if Bangladesh is to meet its own national targets. Four targets stand out.

Target 3 (area-based conservation). The protected-area and ecologically critical area powers provide a legal basis for expanding coverage. Counting what qualifies toward Target 3 depends on the Framework's requirement that areas be effectively managed and equitably governed, and this raises the issue of management effectiveness discussed in Section 5.5. The legal change required is a statutory definition of conservation categories that fits the Framework's language, so that

ecologically critical areas, reserved forests, community conservation areas and marine protected areas can be counted consistently.

Target 13 (benefit-sharing) and Target 22 (rights and participation). These touch the weakest part of the Biodiversity Act. Meeting Target 22 would require legal recognition of the role of communities in decisions that affect them, which is the same reform that Nagoya Articles 6(2) and 7 call for.

Target 17 (biosafety). This calls for biosafety measures under Article 8(g) CBD. Bangladesh has the Rules; the further step is to give them a statutory footing.

Target 14 and the NBSAP. Target 14 asks for biodiversity to be mainstreamed into policy and planning. Section 31 of the Act already creates a statutory vehicle for the national strategy. The change required is a revised NBSAP with national targets, and a statutory timetable for review. As of the sources consulted, the NBSAP 2016–2021 is the last published plan and an update was under way in 2024 (Irfanullah, 2024).

Gaps in the law and problems of implementation

The findings above are of the first kind: gaps visible on the face of the law. The second kind, problems in practice, can be shown only with evidence from outside the statutes, and the evidence available is uneven.

Protected areas. The Forest Department's assessment of 37 protected areas, using the Management Effectiveness Tracking Tool, found that law enforcement scored 41 per cent across the system, against 100 per cent for legal status. It reported that only 22 per cent of areas had functional management plans, that all areas faced an acute shortage of staff against their approved organograms, and that many were supported by project budgets or had no funding beyond staff salaries (Ahsan et al., 2016). The finding is that the legal designation of protected areas has run ahead of the means to manage them. This is an implementation defect, and it dates from 2016. The assessment should be repeated.

National performance. The sixth national report to the CBD was presented in 2019. Officials at its validation workshop observed that progress on and attention to biodiversity in Bangladesh had been limited compared with other development areas (United Nations Development Programme [UNDP], 2019). This is evidence of low priority and not of any particular legal failure.

Judicial protection. In the Turag River case (*Human Rights and Peace for Bangladesh v Government of Bangladesh*, Writ Petition No. 13989 of 2016), the High Court Division treated a river as a legal person and issued directions against encroachment, and the courts invoked Articles 18A, 31 and 32 of the Constitution and the public trust doctrine. The Appellate Division in *Nishat Jute Mills Ltd v Human Rights and Peace for Bangladesh* (Civil Petition for Leave to Appeal No. 3039 of 2019, 17 February 2020) upheld the survey-based findings of encroachment and the directions to remove structures, set aside the declaration that a 2003 sale deed was void,

and held that the courts could not themselves declare a new principle such as the polluter-pays principle to be binding law, since that is for Parliament. The two decisions show that the courts will use the Constitution to protect natural resources. They also show a limit that matters for this article. The courts will not create obligations that the legislature has not enacted, which is the dualist point in Section 1.1 and the reason statutory incorporation matters. Neither decision concerns the CBD or its Protocols, and neither shows how the Biodiversity Act is enforced.

What cannot be shown. The article does not state as findings that the National Committee decides arbitrarily or inconsistently, or that it lacks capacity. The Committee's composition (Biodiversity Act, s. 8) is bureaucratic, and the Act does not require independent scientific advice or reasoned decisions beyond the procedure in Section 7. Those are structural features of the text. Whether they have produced poor decisions in practice is a question for empirical work: published decisions of the Committee, applications and their outcomes, and interviews with applicants and communities. No such study was found, and the article treats that as a topic for further research and does not fill the gap by assertion.

Fragmentation: concrete examples

Bangladesh's biodiversity law is spread across statutes made at different times, for different ministries, with no common vocabulary. The Biodiversity Act's Section 3 declares that it overrides any other law, which in principle settles conflicts of text. It does not coordinate institutions, permits or procedures. Four examples show how the overlap arises.

Several designations over one place. The same part of the Sundarbans can be a reserved forest under the Forest Act 1927, a wildlife sanctuary under the Wildlife Act 2012, part of an area declared ecologically critical under the Environment Conservation Act 1995, a Ramsar site and a World Heritage property. The first two are administered by the Forest Department and the third by the Department of Environment, under different rules (the Protected Area Management Rules 2017 and the Ecologically Critical Area Management Rules 2016). The statutes do not say which management plan, permit or penalty prevails when they point in different directions.

Several approvals for one act of collecting. Section 4 of the Biodiversity Act requires National Committee approval for certain persons to collect biological resources for research or commercial use. Collection of protected species or in protected areas is separately controlled under the Wildlife Act and the Forest Act, and fish and fish products fall under the fisheries legislation. Nothing in the instruments reviewed provides for a single application or for mutual recognition between these approvals.

Two assessment systems. The Environment Conservation Act and Rules 2023 require environmental clearance from the Department of Environment, while the Biodiversity Act also provides for assessment of

activities that affect biodiversity. The two are administered by different bodies and the Act does not state how they relate.

Two protection regimes at sea. The Wildlife Act has been used to declare marine protected areas such as the Swatch of No Ground, while marine fisheries are regulated under the Marine Fisheries Act 2020. Which regime governs fishing inside a marine protected area is a question the two statutes raise but do not answer.

These examples show jurisdictional overlap and lack of coordination. A comparison of penalties and definitions across the statutes would add a further layer, but this requires a section-by-section audit of offence provisions that the article does not undertake. The finding on fragmentation is therefore limited to the structural overlaps above.

Wider Lessons

Bangladesh is one of many dualist or partly dualist States that have joined the main biodiversity treaties and carry them out through general environmental statutes and subordinate rules. Three lessons follow from its experience.

First, the form of the implementing instrument decides how far a treaty duty can be enforced. Bangladesh's biosafety obligations are met by rules, and its access and benefit-sharing obligations by a statute. The rules can set up an approval procedure, but a statute is needed for liability and for the rights of communities and courts. States that rely on delegated legislation for treaty implementation should ask what the enabling Act can bear.

Second, a treaty's qualifications are part of its content, and the analysis of compliance should say so. Much criticism of national ABS laws assumes that consent of communities is required in every case. The Nagoya Protocol requires measures aimed at consent or approval and involvement where domestic law recognizes established community rights. That makes the recognition of rights in national law the first step, and it explains why a State whose law does not yet recognize community rights over genetic resources, as in Bangladesh, faces a different task from a State that already has them. Benefit-sharing scholarship points the same way: fairness depends on process and participation as much as on the amount shared (Morgera, 2016; Oberthür & Rosendal, 2014).

Third, soft-law frameworks such as the Kunming–Montreal Framework move through domestic systems in two ways: by being written into statute, and by being kept in policy documents. The comparative evidence suggests that the second is more common (Liu, 2025). For dualist systems, there is a case for linking policy targets to a statutory duty, as Section 31 of the Biodiversity Act begins to do for the national strategy. A statutory duty to adopt and review a strategy against the Framework would turn a voluntary expectation into a legal obligation owed domestically, without changing the Framework's status internationally. Constitutional environmental rights, as in Article 18A, can support this, but the

Bangladeshi cases show that courts will not create duties that the legislature has left out (May & Daly, 2014; Razzaque, 2004).

Recommendations

The reforms below follow from the gaps found in Section 5. They are grouped by the time they would need and tied to the authority responsible and the legislative vehicle. Table 4 sets them out. The paragraphs after the table explain the reasoning for the reforms that need it.

Table 4. Recommended reforms by time horizon, responsible authority and legislative mechanism.

Horizon	Reform	Responsible authority	Legislative mechanism
Short term (up to 2 years)	Revise NBSAP and set national targets in line with the Framework	Ministry of Environment, Forest and Climate Change; Department of Environment	Policy revision approved by the Cabinet
Short term	Complete the amendments to the Biosafety Rules and Guidelines	Ministry of Environment, Forest and Climate Change	Amendment of subordinate legislation
Short term	Inter-agency protocol on permits and one point of application for researchers	National Committee; Forest Department; Department of Environment; Department of Fisheries	Administrative agreement or circular
Short term	Make or revise rules under the Biodiversity Act on mutually agreed terms, written permits and community consultation	Ministry of Environment, Forest and Climate Change	Rules under the Biodiversity Act 2017
Medium term (2–5 years)	Amend the Biodiversity Act: recognize community rights; consent or approval-and-involvement; community benefit-sharing; traditional knowledge register; user-side measures and checkpoints; NBSAP review cycle	Ministry of Environment, Forest and Climate Change with the Ministry of Law, Justice and Parliamentary Affairs; Parliament	Amending Act
Medium term	Enact a Biosafety Act covering approval, risk assessment, offences, liability and redress	Ministry of Environment, Forest and Climate Change; Parliament	New statute

Horizon	Reform	Responsible authority	Legislative mechanism
vMedium term	Widen conservation statutes to plant, microbial, aquatic and agricultural biodiversity	Ministry of Environment, Forest and Climate Change; Ministry of Agriculture; Ministry of Fisheries and Livestock	Amendment of the Wildlife Act or Biodiversity Act
Medium term	Fund and staff the protected-area system; set up a public biodiversity monitoring database	Forest Department; Department of Environment	Budget allocation; administrative order
Long term (5 years and more)	Consider ratifying the Nagoya–Kuala Lumpur Supplementary Protocol once the Biosafety Act is in force	Ministry of Foreign Affairs; Ministry of Environment, Forest and Climate Change	Ratification under Constitution art. 145A
Long term	Consolidate biodiversity statutes into a Biodiversity Code	Ministry of Law, Justice and Parliamentary Affairs; Law Commission; Parliament	Codifying statute

Biosafety. In the short term, the draft amendments to the Biosafety Rules should be completed, with the aim of closing procedural gaps against Articles 7 to 11 and 15 to 18 of the Cartagena Protocol. In the medium term, Parliament should enact a Biosafety Act that gives statutory force to the approval procedure and sets out the powers of the competent authority, offences, and liability and redress. The Nagoya–Kuala Lumpur Supplementary Protocol should be used as a policy benchmark in drafting the liability provisions. Bangladesh is not a party to it, and ratification is a separate decision for the longer term, to be taken after the Act is in place.

Communities and traditional knowledge. The Biodiversity Act should be amended, and rules made under it, to recognize the rights of local and indigenous communities over their traditional knowledge and associated genetic resources, and to require, for access to such knowledge or resources, the consent or the approval and involvement of the communities concerned, with the community-level mutually agreed terms recorded in writing. The legislature may choose a free, prior and informed consent standard. The Protocol does not require it, but the standard is consistent with Target 22 of the Framework and with the voluntary guidelines, and it would reduce the risk of dispute. A statutory register of traditional knowledge, kept by communities, would support the system. The reform should also add user-side measures: a duty on Bangladeshi users of foreign genetic resources, and a designated checkpoint, such as the patent and trademark offices, in line with Articles 15 to 17 of the Protocol.

Coordination. The overlaps in Section 5.6 can be reduced in the short term by administrative means: an inter-agency protocol between the National Committee, the Forest Department, the Department of Environment and the Department of Fisheries on joint or recognized permits, and on a single point of application for researchers. In the longer term, the statutes should be harmonized, either by amending them to cross-refer or by consolidating them in a Biodiversity Code. Codification is a large undertaking, and it should come after the substantive gaps are fixed, so that the Code consolidates settled law and does not carry the gaps into a new instrument.

Strategy and institutions. The NBSAP should be revised in line with the Framework and set national targets, including a target for Target 3. Section 31 of the Biodiversity Act should be amended to fix a review cycle. Funding, staffing and monitoring need attention because the evidence in Section 5.5 shows that capacity limits the use of legal powers that already exist. A publicly accessible biodiversity monitoring database, linked to the CBD Clearing-House Mechanism, would help meet Article 7 and support reporting.

8. Conclusions

The question was how far Bangladesh's domestic law gives effect to its obligations under the CBD, the Cartagena Protocol and the Nagoya Protocol, and how it relates to the Kunming–Montreal Framework. The answer is that Bangladesh has incorporated many of the CBD's framework-level duties, in particular on strategies, protected areas, impact assessment and a national authority for access. Gaps remain under the CBD itself, the Cartagena Protocol and the Nagoya Protocol, and the Kunming–Montreal Framework has not yet been reflected in a revised national strategy. Four findings follow from the text of the law.

First, biosafety is regulated by subordinate rules and policy, and Bangladesh has no stand-alone Biosafety Act. The Cartagena Protocol has bound Bangladesh since 2004. The rules provide an approval system but a weak basis for liability, redress and enforcement. Second, the Biodiversity Act 2017 gives communities no recognized rights over their traditional knowledge or genetic resources and no part in decisions on access. Since 10 April 2023 this has mattered for Articles 6(2) and 7 of the Nagoya Protocol, although those provisions are qualified and do not require community consent in every case. Third, the Biodiversity Act has no user-side measures of the kind Articles 15 to 17 of the Nagoya Protocol call for. Fourth, designations, permits and institutional mandates over protected places and species overlap across at least five statutes, without a rule for coordination.

The Kunming–Montreal Framework is not binding, and the article does not find Bangladesh in breach of it. The Framework nonetheless sets a benchmark, and the main legal consequence is that the national strategy must be revised and its review put on a statutory footing. The Nagoya–

Kuala Lumpur Supplementary Protocol is likewise a benchmark, because Bangladesh is not a party.

The evidence on implementation is thinner than the evidence on text. The Forest Department's assessment shows weak enforcement and planning in protected areas, and the Turag River litigation shows that courts will use constitutional provisions to protect natural resources but not to create statutory duties. Claims about decision-making in the National Committee remain to be tested.

The study contributes a compliance method that distinguishes binding duties from qualified ones and from soft-law expectations, and a matrix that can be updated as the law changes. It corrects the account of Bangladesh's biosafety, environmental-clearance, fisheries and Nagoya Protocol position, and it identifies reforms that are specific to the instrument, the authority and the time horizon. Future work could usefully add a systematic review of case law, an analysis of the National Committee's decisions, and field research with communities in the Chittagong Hill Tracts and the Sundarbans region.

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References

- Ahsan, M. M., Aziz, N., & Morshed, H. M. (2016). *Assessment of management effectiveness of protected areas of Bangladesh*. Bangladesh Forest Department. <https://bforest.portal.gov.bd/>
- Bangladesh Biodiversity Act, 2017 (Act No. II of 2017) (Bangladesh).
- Bangladesh Biosafety Portal. (n.d.). *Biosafety regulatory documents*. Retrieved September 2026, from <https://bangladeshbiosafety.org/bangladesh-documents/biosafety-regulatory-documents/>
- Bangladesh Environment Conservation Act, 1995 (Act No. 1 of 1995) (Bangladesh).
- Biosafety Rules, 2012 (Bangladesh).
- Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of Their Utilization. (2002). Decision VI/24, Conference of the Parties to the Convention on Biological Diversity, 6th meeting, The Hague.
- Boyle, A., & Redgwell, C. (2021). *Birnie, Boyle, and Redgwell's international law and the environment* (4th ed.). Oxford University Press.
- Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Jan. 29, 2000, 2226 U.N.T.S. 208 (entered into force Sept. 11, 2003).

- CBD Secretariat. (n.d.-a). *Bangladesh: Country profile*. Convention on Biological Diversity. Retrieved September 2026, from <https://www.cbd.int/countries/profile?country=bd>
- CBD Secretariat. (n.d.-b). *Parties to the Nagoya Protocol*. Convention on Biological Diversity. Retrieved September 2026, from <https://www.cbd.int/abs/nagoya-protocol/signatories>
- CBD Secretariat. (n.d.-c). *Parties to the Cartagena Protocol and its Supplementary Protocol on Liability and Redress*. Biosafety Clearing-House. Retrieved September 2026, from <https://bch.cbd.int/protocol/parties>
- Conference of the Parties to the Convention on Biological Diversity. (2010). *Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets* (Decision X/2). 10th meeting, Nagoya.
- Conference of the Parties to the Convention on Biological Diversity. (2016). *Mo'otz Kuxtal Voluntary Guidelines* (Decision XIII/18). 13th meeting, Cancun.
- Conference of the Parties to the Convention on Biological Diversity. (2022, December 19). *Kunming-Montreal Global Biodiversity Framework* (Decision 15/4). 15th meeting, Montreal.
- Constitution of the People's Republic of Bangladesh, 1972 (as amended), arts. 18A, 23A, 25, 31, 32, 145A.
- Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 69 (entered into force Dec. 29, 1993).
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 993 U.N.T.S. 243 (entered into force July 1, 1975).
- Convention on the Conservation of Migratory Species of Wild Animals, June 23, 1979, 1651 U.N.T.S. 333 (entered into force Nov. 1, 1983).
- Convention Concerning the Protection of the World Cultural and Natural Heritage, Nov. 16, 1972, 1037 U.N.T.S. 151 (entered into force Dec. 15, 1975).
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Feb. 2, 1971, 996 U.N.T.S. 245 (entered into force Dec. 21, 1975).
- Ecologically Critical Area Management Rules, 2016 (Bangladesh).
- Environment Conservation Rules, 2023 (SRO No. 53-Law/2023, Mar. 5, 2023) (Bangladesh).
- Fish Protection and Conservation Rules, 1985 (Bangladesh).
- Forest Act, 1927 (Act No. XVI of 1927) (Bangladesh).
- Glowka, L., Burhenne-Guilmin, F., & Synge, H. (1994). *A guide to the Convention on Biological Diversity* (Environmental Policy and Law Paper No. 30). IUCN.
- Greiber, T., Peña Moreno, S., Åhrén, M., Nieto Carrasco, J., Kamau, E. C., Cabrera Medaglia, J., Oliva, M. J., & Perron-Welch, F. (2012). *An*

- explanatory guide to the Nagoya Protocol on Access and Benefit-sharing* (Environmental Policy and Law Paper No. 83). IUCN.
- Human Rights and Peace for Bangladesh v. Government of Bangladesh, Writ Petition No. 13989 of 2016 (High Court Division, Supreme Court of Bangladesh, 2019).
- Hussain Muhammad Ershad v. Bangladesh, (2001) 21 BLD (AD) 69 (Appellate Division, Supreme Court of Bangladesh).
- Irfanullah, H. M. (2024, July 8). Bangladesh's way forward to biodiversity conservation. *The Daily Star*. <https://www.thedailystar.net/opinion/views/news/bangladeshs-way-forward-biodiversity-conservation-3651096>
- Karzon, S. H. R., & Al-Faruque, A. (1999). Status of international law under the Constitution of Bangladesh. *Bangladesh Journal of Law*, 3(1), 23–47.
- Lehmann, I. (2023). Inspiration from the Kunming-Montreal Global Biodiversity Framework for SDG 15. *International Environmental Agreements: Politics, Law and Economics*, 23, 207–214. <https://doi.org/10.1007/s10784-023-09608-8>
- Liu, A. (2025). National implementation of the Kunming–Montreal Global Biodiversity Framework: A comparative law perspective. *Laws*, 14(6), Article 92. <https://doi.org/10.3390/laws14060092>
- Marine Fisheries Act, 2020 (Bangladesh).
- Marine Fisheries Ordinance, 1983 (Bangladesh) (repealed by the Marine Fisheries Act, 2020).
- May, J. R., & Daly, E. (2014). *Global environmental constitutionalism*. Cambridge University Press.
- Ministry of Environment and Forests, Government of the People's Republic of Bangladesh. (2016). *National biodiversity strategy and action plan of Bangladesh 2016–2021*.
- Morgera, E. (2016). The need for an international legal concept of fair and equitable benefit sharing. *European Journal of International Law*, 27(2), 353–383. <https://doi.org/10.1093/ejil/chw014>
- Morgera, E., Tsiumani, E., & Buck, M. (2014). *Unraveling the Nagoya Protocol: A commentary on the Nagoya Protocol on Access and Benefit-sharing to the Convention on Biological Diversity*. Brill Nijhoff.
- Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, Oct. 29, 2010 (entered into force Oct. 12, 2014).
- Nagoya–Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, Oct. 15, 2010 (entered into force Mar. 5, 2018).
- Nishat Jute Mills Ltd. v. Human Rights and Peace for Bangladesh, Civil Petition for Leave to Appeal No. 3039 of 2019 (Appellate Division, Supreme Court of Bangladesh, Feb. 17, 2020).

- Oberthür, S., & Rosendal, G. K. (Eds.). (2014). *Global governance of genetic resources: Access and benefit sharing after the Nagoya Protocol*. Routledge.
- Protected Area Management Rules, 2017 (Bangladesh).
- Protection and Conservation of Fish Act, 1950 (East Bengal Act No. XVIII of 1950) (Bangladesh).
- Ramsar Sites Information Service. (n.d.). *Sundarbans Reserved Forest* (designated 21 May 1992; Site No. 560). Retrieved September 14, 2026, from <https://rsis Ramsar.org/>
- Razzaque, J. (2004). *Public interest environmental litigation in India, Pakistan and Bangladesh*. Kluwer Law International.
- Sands, P., & Peel, J. (2012). *Principles of international environmental law* (3rd ed.). Cambridge University Press.
- Shahid, S., & Hossain, Z. M. (2020, June 5). *Protecting the planet and people: National-international dimensions and local perspectives of conserving biodiversity*. International Centre for Climate Change and Development. <http://www.icccad.net/blog/protecting-the-planet-and-people/>
- Shelton, A. M., Hossain, M. J., Paranjape, V., Prodhan, M. Z. H., Azad, A. K., Majumder, R., Sarwer, S. H., & Hossain, M. A. (2019). Bt brinjal in Bangladesh: The first genetically engineered food crop in a developing country. *Cold Spring Harbor Perspectives in Biology*, 11(10), Article a034678.
- Social Forestry Rules, 2004 (as amended) (Bangladesh).
- United Nations. (2023). *Depositary notification C.N.12.2023.TREATIES-XXVII.8.b: Nagoya Protocol, Bangladesh: Ratification*. <https://treaties.un.org/doc/Publication/CN/2023/CN.12.2023-Eng.pdf>
- United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295 (Sept. 13, 2007).
- United Nations Development Programme. (2019, November 18). *6th national diversity report tabled* [Press release]. <https://www.undp.org/bangladesh/press-releases/6th-national-diversity-report-tabled>
- UNESCO World Heritage Centre. (n.d.). *The Sundarbans* (inscribed 1997; World Heritage List No. 798). Retrieved September 14, 2026, from <https://whc.unesco.org/en/list/798/>
- Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331 (entered into force Jan. 27, 1980).
- Wildlife (Conservation and Security) Act, 2012 (Act No. XXX of 2012) (Bangladesh).