ISSN 2413-2780

JAGANNATH UNIVERSITY JOURNAL OF LAW

Volume VII 2025

FACULTY OF LAW
Jagannath University

ISNN 2413-2780

Jagannath University Journal of Law

Volume VII **2025**

Faculty of Law
Jagannath University
Dhaka

Jagannath University Journal of Law

Volume VII, 2025

This journal is an official publication of the Faculty of Law, Jagannath University, Dhaka. Opinions expressed in the articles, however, are those of the authors and do not necessarily reflect the views of the Editorial Board,

ISSN: 2413-2780

Published by

Faculty of Law
Jagannath University, Dhaka, Bangladesh

Published on 1st June 2026

Printed by

DS Printing & Packaging
234/D New Elephant Road, Dhaka-1205

Price: BDT. 400 | USD 54

Jagannath University Journal of Law

Volume VII, 2025

Jagannath University Journal of Law Volume VII, 2025

Contents

Gender Disparities in Personal Laws: A Critical Examination of Legal Pluralism in India and Bangladesh

Gobinda Chandra Mandal*

Abstract: This article asks how far personal laws, operating within legal pluralism, entrench gender inequality in India and Bangladesh, and what reform path most credibly reconciles religious autonomy with constitutional equality. It answers through a theoretically informed comparative doctrinal method that couples historical analysis of codification with close reading of constitutions, statutes, and case laws, and with attention to administrative practice and enforcement. Four sites structure the inquiry: marriage and divorce, inheritance and property, guardianship and custody, and the interface between personal laws, dowry, and domestic violence. The analysis identifies convergent patriarchal logics across both jurisdictions, yet divergent reform trajectories, with India's statutory equalisation often blunted by uneven implementation, and Bangladesh's more limited formal changes further constrained by administrative capacity. The article contributes a calibrated model of pluralist reform that prioritises enforceable civil remedies, procedural parity and accessible registration, a consistent best interests standard in custody, and CEDAW-aligned harmonisation. It offers a sequenced agenda that is normatively defensible and institutionally feasible for both systems.

Keywords: Personal laws; Legal pluralism; Gender equality; Constitutional review; Personal law reforms in India and Bangladesh.

1. Introduction

Personal laws in India and Bangladesh regulate marriage and divorce, inheritance and property, guardianship and custody, and allied questions that determine women's substantive freedom in family life. This article asks how far legal pluralism, as practised through these regimes, entrenches gender inequality, and what reform pathway can reconcile religious autonomy with constitutional equality without sacrificing institutional feasibility.[1] The claim advanced is twofold. First, convergent patriarchal logics persist across both jurisdictions despite contrasting doctrinal trajectories. Secondly, meaningful change turns on enforcement architecture and procedural parity rather than on text alone.[2]

---

* Associate Professor, Department of Law, University of Dhaka, Contact No. 01716383031, Email: gobinda@du.ac.bd

1 Constitution of India arts 14–16; Constitution of the People's Republic of Bangladesh arts 27–29.

2 Convention on the Elimination of All Forms of Discrimination against Women (adopted 18 December 1979, entered into force 3 September 1981) 1249 UNTS 13, arts 2, 16; CEDAW Committee, 'General Recommendation No 33: Women's access to justice' (2015) paras 14–18.

The context is a layered history of colonial codification, post-independence constitutionalism, and selective statutory reform. The Constitution of India entrenches equality and non-discrimination, and has provided doctrinal footholds for incremental correction within personal law, including the equalisation of coparcenary rights and a growing repertoire of civil-protective remedies.[3] Bangladesh constitutionalises formal equality within an Islamic identity framework, retains the principal post-colonial reforms of Pakistan's Muslim Family Laws Ordinance of 1961, and has added civil-protective instruments against domestic violence and dowry, though with uneven administrative follow-through.[4] Both polities are parties to CEDAW, which requires the elimination of discrimination in marriage and family relations, including equal rights in property and inheritance.[5]

The contribution of the article is to pair a doctrinal comparison of four core sites of regulation with an institutional analysis of how remedies are realised, resisted, or deflected in practice. It brings together equality jurisprudence and granular statutory reading with attention to street-level frictions such as documentation, registration, partition and mutation practice, and access to low-cost forums. In India, the recognition of daughters as coparceners by birth and the consolidation of women's separate property mark important legal equalisation, yet partitions, family settlements, and evidentiary burdens often blunt these gains.[6] In Bangladesh, fixed-share inheritance rules remain largely intact for Muslims, with representation for orphaned grandchildren as a limited statutory mitigation, while Hindu succession remains uncodified, leaving women to navigate Dayabhaga-based rules and informal settlements; civil-protective frameworks on domestic violence and dowry sit alongside these personal-law baselines with variable effect.[7] The comparative inference is that pluralism can be made equality-consistent only where the remedial machinery is designed to deliver swift, executable, and affordable relief.

---

3 Constitution of India arts 14–15; Hindu Marriage Act 1955, s 13; Protection of Women from Domestic Violence Act 2005, ss 18–22.

4 Constitution of the People's Republic of Bangladesh (n 1) arts 2A, 27–28; Muslim Family Laws Ordinance 1961 (Bangladesh), ss 4, 6–7; Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh), ss 3–5; Dowry Prohibition Act 2018 (Bangladesh), ss 3–4.

5 CEDAW (n 2) arts 2, 16; CEDAW Committee, 'General Recommendation No 21: Equality in marriage and family relations' (1994) paras 26–36.

6 Hindu Succession Act 1956, s 6; s 14(1); Hindu Succession (Amendment) Act 2005, s 3; *Vineeta Sharma v Rakesh Sharma* (2020) 9 SCC 1 [57]–[61], [81]–[86].

7 Muslim Personal Law (Shariat) Application Act 1937 (Bangladesh), s 2; Muslim Family Laws Ordinance 1961 (Bangladesh), s 4; Hindu Widows' Remarriage Act 1856 (Bangladesh), s 2.

Methodologically, the article undertakes a close reading of constitutional text, statutes, and leading cases, and links these to treaty obligations. It distinguishes formal legal rules from administrative mechanisms and street-level practice, and evaluates whether doctrinal equalisation translates into women's material security. The method is selective rather than exhaustive, prioritising nodes where the interaction between personal laws and general civil-protective statutes produces either synergy or friction.[8]

The analysis is disciplined by limitations. First, it does not purport to survey the full diversity of community-specific personal laws or regional practice, but focuses on nationally salient doctrines and instruments that shape large-scale outcomes. Secondly, it relies on reported case law and enacted texts rather than ethnography, and therefore treats enforcement through the proxy of procedural design and remedial accessibility. Thirdly, it confines itself to India and Bangladesh to preserve analytical depth, while acknowledging that the conclusions may have a wider South Asian resonance. These constraints are candidly recognised so that normative claims track the evidential base.

The structure of the article is as follows: Section 2 sets out the theoretical and historical foundations, including the autonomy–equality tension and the colonial imprint on personal laws. Section 3 examines constitutional architectures and the scope of judicial review, contrasting India's jurisprudential innovation with more limited rights-based intervention in Bangladesh. Section 4 conducts a structured comparison across marriage and divorce, inheritance and property, guardianship and custody, and the interface with dowry and domestic-violence regimes, distinguishing rule-structure, gendered effects, and enforcement pathways. Section 5 assesses what courts can and cannot deliver without legislative and administrative follow-through. Section 6 proposes reform models within pluralism, emphasising targeted statutory fixes, administrative levers, and CEDAW-consistent harmonisation. Section 7 distils comparative lessons and policy implications. Section 8 concludes by reframing success in terms of women's durable control over assets, safety from violence, and effective exit, rather than formal parity alone.

[8] See *Shayara Bano v Union of India* (2017) 9 SCC 1 [101]–[104], [199]; Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh), ss 3–5; Protection of Women from Domestic Violence Act 2005 (India), ss 18–22.

2. Foundations of Legal Pluralism

Legal pluralism names a constitutional and institutional settlement in which multiple norm systems govern intimate life, with the state recognising, administering, or tolerating religiously grounded rules alongside general civil and criminal law. In South Asia, this settlement emerged through a layered history, beginning with colonial techniques of governance that translated scriptural and customary materials into state-applied personal laws, and continuing through post-independence constitutionalism that both entrenched equality and preserved domains of religious autonomy. The analytic puzzle for this article is not whether pluralism exists, but how its doctrinal architecture and administrative design shape gendered outcomes in India and Bangladesh, particularly in those domains that decide status, capacity, and control over resources.[9]

The autonomy–equality tension supplies the conceptual axis. Personal laws are defended as sites of identity, community self-government, and pastoral authority. Equality norms insist that the state cannot confer or sustain status rules that produce systematic disadvantage for women. In India, the equality code in Articles 14 to 16 has furnished tools for measured intervention within personal-law domains, even as religious freedom and the directive principle on a uniform civil code complicate the terrain.[10] Bangladesh constitutionalises a strong commitment to formal equality in Articles 27 and 28 while declaring Islam the state religion in Article 2A, a juxtaposition that has encouraged institutional caution in direct reform of personal laws coupled with selective reliance on general protective statutes.[11] In both settings, the question becomes one of translation: whether constitutional equality can be made effective where the operative rules are plural and normatively freighted.

The colonial coding of personal laws produced the contemporary doctrinal baseline. Rather than leaving family matters to decentralised custom, British Indian governance consolidated and administered religiously identified law through courts, texts, and selective legislation. The result was to crystallise and standardise rules that had previously been more fluid in practice. Muslim and Hindu materials were filtered into adjudication through authorised translations and treatises, then reinforced by statutory interventions that addressed specific injustices while preserving the overall structure. The nineteenth and early twentieth centuries saw

9 For constitutional equality baselines, see Constitution of India (n 1) arts 14–16; Constitution of the People's Republic of Bangladesh (n 1) arts 27–28.

10 Constitution of India (n 1) arts 14–16, 25, 44.

11 Ibid.

reforms such as the Hindu Widows' Remarriage Act of 1856, which removed the disability to remarry but attached forfeiture of subsisting property interests on remarriage, and the Hindu Inheritance (Removal of Disabilities) Act of 1928, which eliminated some status-based disqualifications yet expressly excluded those governed by the Dayabhaga school, thereby limiting the impact in Bengal.[12] For Muslims, the Muslim Personal Law (Shariat) Application Act of 1937 directed that in matters of intestate succession and other family questions, the rule of decision would be the Muslim personal law, displacing local custom.[13] The late-colonial Muslim Family Laws Ordinance of 1961, later continued in Bangladesh, introduced targeted procedural and distributive adjustments, notably representation for orphaned grandchildren, signalling an administrative rather than wholesale codifying approach to change.[14]

Post-independence trajectories diverged in institutional form while converging in their gendered effects. In India, the Constitution endowed courts with a vocabulary of equal protection and non-discrimination that, over time, permitted limited recalibration within personal laws. The Hindu Code Bills refashioned large tracts of Hindu family law, and later reforms delivered consequential equalisation. Most strikingly, the Hindu Succession (Amendment) Act of 2005 substituted a new section 6, recognising daughters as coparceners by birth with the same rights and liabilities as sons, a position authoritatively affirmed by the Supreme Court in Vineeta Sharma, which clarified that the father's being alive on the commencement date is irrelevant to the daughter's entitlement.[15] In the Muslim law domain, the Court's strike against instant triple talaq in *Shayara Bano* case relied on constitutional principles and statutory interpretation to invalidate a unilateral form of divorce that stripped women of bargaining power.[16] Parallel developments in civil-protective legislation, notably the Protection of Women from Domestic Violence Act of 2005, introduced residence and protection orders with a remedial, rather than penal, cast.[17]

---

12 Hindu Widows' Remarriage Act 1856 (India; in force in territories now Bangladesh), s 2; Hindu Inheritance (Removal of Disabilities) Act 1928 (India; in force in territories now Bangladesh), s 1(3).

13 Muslim Personal Law (Shariat) Application Act 1937 (India; applied in territories now Bangladesh), s 2.

14 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 4.

15 Hindu Succession (Amendment) Act 2005 (India) (n 6) s 3; Hindu Succession Act 1956 (India) (n 6) s 6, s 14(1); *Vineeta Sharma* (n 6) [57]–[61], [81]–[86].

16 *Shayara Bano* (n 8) [101]–[104], [199].

17 Protection of Women from Domestic Violence Act 2005 (India) (n 3) ss 18–22.

Bangladesh followed a different path. The constitutional equality code stands alongside Article 2A, and legislative energy within personal-law domains has been limited. The MFLO 1961 remains the principal framework for Muslim family law administration, retaining the classical structure while inserting procedural controls for polygamy and talaq, and representation for orphaned grandchildren in succession.[18] For Hindus, there has been no comprehensive codification of succession. Colonial statutes still exert force, including the forfeiture rule on widow remarriage, while administrative innovation has proceeded more strongly in the field of civil protection. The Domestic Violence (Prevention and Protection) Act of 2010 and its Rules of 2013 established a civil framework of protection and residence orders, complemented by the Dowry Prohibition Act of 2018, yet the effectiveness of these instruments hinges on registration, service, monitoring, and accessible forums.[19] The constitutional promise of equality, in short, is mediated through administrative law and local institutional capacity rather than through direct doctrinal reconstitution of personal laws.

The comparative method adopted in this article, therefore, attends to both rules and remedies. The analysis proceeds on three planes. First, it reads constitutional text and leading cases to identify the degree and mode of judicial engagement with personal laws. Secondly, it reconstructs statutory architectures, distinguishing between rule-substance and procedure, and between domains governed by personal laws and those governed by general civil-protective statutes. Thirdly, it follows the remedial pathway from right to outcome, asking whether registration, notice, forum design, presumptions, and costs enable women to convert paper entitlements into usable security. The premise is that equality is not tested solely by the content of rules, but by the reliability of mechanisms that deliver timely, executable relief. CEDAW supplies an external benchmark, obliging both states to eliminate discrimination in marriage and family relations, and to ensure effective access to justice.[20]

Two implications follow for the remainder of the article. First, the critique of pluralism offered here is not a plea for uniformity at all costs. It is an argument for equality-consistent pluralism, in which targeted statutory correction and procedural harmonisation are used to remove discriminatory asymmetries while respecting

---

18 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) ss 4, 6–7.

19 Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh) (n 4) ss 3–5; Domestic Violence (Prevention and Protection) Rules 2013 (Bangladesh) rr 5–8; Dowry Prohibition Act 2018 (Bangladesh) (n 4) ss 3–4.

20 CEDAW (n 2) arts 2, 16; CEDAW Committee, GR No 33 (n 2) paras 14–18.

religious affiliation. Secondly, the doctrinal map must be read with an administrative lens. In India, statutory equalisation within Hindu law has advanced, but its reach is conditioned by partition practice, mutation, and the costs of litigation, even after apex-court clarification. In Bangladesh, narrower textual reform within Muslim family law is matched by civil-protective instruments whose success depends on administrative design and budgetary support. The rest of the article operationalises this framework across the four selected sites, returns to the constitutional tools that structure judicial review, and closes with a reform template that aligns pluralism with equality in institutionally realistic steps.[21]

3. Constitutional Architectures and Review

This section analyses how the constitutional texts, doctrines, and review practices in India and Bangladesh locate the state's authority to engage personal laws, and identifies the levers and limits of equality review across the two jurisdictions.

The Indian Constitution supplies a dense equality code in Articles 14, 15, and 16, which has progressively shifted from the thin tiers of reasonable classification to a structured proportionality analysis. The Supreme Court has used this framework to test legislation and executive action that mediate or implement religiously framed family rules, including in adjacent domains that condition women's status and capacity. The effect is to open personal-law adjacent rules to equality review when channelled through state action or statute rather than purely private norms.[22] Indian religious freedom is textually qualified. Articles 25 and 26 are subject to public order, morality, health, and other fundamental rights. Courts have filtered claims to immunity through the essential religious practice doctrine and, more recently, through more direct rights analysis where the practice in question entrenches gender hierarchy. The upshot is that religious protection does not trump equality; the locus of contention is doctrinal calibration rather than textual possibility.[23]

The directive principles and the allocation of legislative power reinforce that personal-law reform is not solely a judicial enterprise. Article 44 of the Indian Constitution sets an aspirational vector toward uniform civil law, while the concurrent competence in the Seventh Schedule, Entry 5, places marriage and

---

21 See, for synthesis, Constitution of India (n 1) arts 14–16; Constitution of the People's Republic of Bangladesh (n 1) arts 27–28; *Vineeta Sharma* (n 6) [86]; MFLO 1961 (n 4) s 4.

22 Constitution of India 1950 (n 1) arts 14–16; *Modern Dental College and Research Centre v State of Madhya Pradesh* (2016) 7 SCC 353; *Shayara Bano* (n 8); *Joseph Shine v Union of India* (2019) 3 SCC 39.

23 Constitution of India 1950 (n 1) arts 25–26; *Indian Young Lawyers Association v State of Kerala* (2019) 11 SCC 1.

divorce within the domain of both the Union and States. This constitutional architecture authorises legislative equalisation within communities, whether by comprehensive codes for particular groups or by cross-cutting, personal-law neutral statutes that furnish remedies irrespective of religion. The legal authority exists; the political economy of reform determines pace and form.[24]

The Constitution of Bangladesh pairs a strong equality code with an Islamic identity clause. Articles 27 to 29 guarantee equality before the law and non-discrimination. Article 2A declares Islam the state religion, while expressly committing the State to ensure equal status and equal rights for other faiths. Rights to protection of law and due process secure the procedural flank of equality. The textual scheme, therefore, permits equality-advancing state action and review, with the identity clause operating as a political rather than doctrinal barrier when courts consider family-law disputes.[25]

In practice, judicial review in Bangladesh has concentrated on state action that administers or enforces family-law procedures rather than the core distributive tenets of religious personal law. Writ jurisdiction under Article 102 has been used to compel compliance with statutory procedures on talaq and polygamy under the Muslim Family Laws Ordinance of 1961, to police registration and notice regimes, and to support the remedial architecture of the Domestic Violence (Prevention and Protection) Act of 2010 and the 2013 Rules. Courts have been institutionally cautious about recasting foundational rules in inheritance or guardianship absent legislative intervention, but have not hesitated to correct arbitrary administration that undermines women's ability to invoke the modest protections of law.[26]

Structural constitutional doctrine underwrites that posture of legality. The basic-structure jurisprudence secures the platform for rights-based contestation of state action. The Appellate Division in the *Anwar Hossain Chowdhury* case entrenched judicial review and the separation of powers as features beyond amendment, framing a rule-of-law baseline for administrative regulation of family-law procedures. In the *Bangladesh Italian Marble Works* case, the Court invalidated the Fifth Amendment and reaffirmed constitutional supremacy, entrenching a review

---

24 Ibid., art 44 and Seventh Schedule, List III, Entry 5.

25 Constitution of the People's Republic of Bangladesh 1972 (n 1) arts 2A, 27–29, 31, 35; Ministry of Law website, art 2A.

26 Ibid., art 102; MFLO 1961 (n 4) ss 6–7; Domestic Violence Act 2010 (Bangladesh) (n 4); DV Rules 2013 (Bangladesh) (n 19).

culture in which executive and legislative choices in personal-law administration remain answerable to equality and legality.[27]

The comparative picture is instructive. Texts converge more than they diverge. Both constitutions establish robust equality clauses and qualify religious freedom by the claims of rights and order. Both allocate primary responsibility for personal-law reform to the legislature, and both permit the building of personal-law neutral, remedial statutes that operate across communities. The divergences are institutional and doctrinal rather than textual. Indian courts have been readier to invalidate gender-regressive practices when tied to statute or state action, while using proportionality and, at times, essential practices analysis to resist claims of religious immunity. Bangladeshi courts have focused on enforcing procedural safeguards and administrative compliance under the MFLO and domestic violence frameworks, and have been more reticent to recalibrate core distributive rules without parliamentary initiative. The decisive variable, therefore, is the mixture of judicial technique and enforcement architecture rather than constitutional language alone.

For the argument of this article, two implications follow. First, equality review reaches personal-law effects when the state is the juridical carrier, whether through codification, funding, or administrative enforcement. The design choice, then, is to widen the domain of personal-law neutral civil remedies and to insist on procedural parity across communities, a strategy that both constitutions permit. Secondly, institutional appetite matters. Where courts are cautious, as in Bangladesh, legislative and administrative levers become the principal route to material equality. Where courts are more willing to engage, as in India, judicial interventions can catalyse statutory follow-through but cannot substitute for it. Both systems, therefore, require a policy of calibrated pluralism that couples constitutionally permissible equality review with a sequenced programme of civil, procedural, and administrative reform.

4. Core Doctrinal Sites of Gender Disparity

4.1 Marriage and Divorce

Marriage and divorce rules structure bargaining power within intimate life. This section shows how unilateral exit devices, coerced cohabitation, registration deficits, and uneven procedures sustain gendered asymmetries across India and Bangladesh,

---

27 *Anwar Hossain Chowdhury v Bangladesh* (1989) 41 DLR (AD) 165; *Bangladesh Italian Marble Works Ltd v Government of Bangladesh* 62 DLR (AD) 298.

notwithstanding constitutional equality guarantees and CEDAW's insistence on parity within marriage and at its dissolution.

In India, the Hindu Marriage Act establishes a mixed regime of fault and consent. Restitution of conjugal rights remains in the statute and has been judicially sustained, despite its capacity to coerce women's bodies and labour back into the marital home.[28] Divorce on grounds of cruelty and desertion demands fact-heavy proof that often exceeds the practical capacities of economically dependent petitioners,[29] while mutual consent divorce supplies a less adversarial pathway but is hedged by temporal thresholds that can entrench delay.[30] The Special Marriage Act tracks similar fault and consent grounds for inter-community marriages, embedding a broadly secular template but without eliminating the structural costs of litigation for women.[31]

The most visible correction to unilateral male exit is the Supreme Court's invalidation of instant triple talaq in the *Shayara Bano* case. The majority treated *talaq-e-biddat* as arbitrary and therefore unconstitutional, a conclusion subsequently buttressed by Parliament's criminal prohibition of the instant form.[32] Yet this remains a limited victory. Other extra-judicial modes of talaq survive where procedurally regular, and there is no single, shared architecture that aligns proof, notice, and mediation across communities in the way a judicial divorce does. The post-*Shayara Bano* landscape, therefore, narrows the worst abuse but does not by itself deliver procedural parity.

Christian and Parsi personal laws have moved, if slowly, towards equalisation. Amendments to the Indian Divorce Act removed sex-based asymmetries in grounds, replacing the nineteenth-century hierarchy with a modern catalogue available to both spouses.[33] The Parsi Marriage and Divorce Act retains community forums but largely mirrors the general grounds, including cruelty and desertion, and recognises mutual consent, thereby reducing formal inequality while preserving distinctive institutional pathways.[34] These incremental reforms matter, not because they erase

---

28 Hindu Marriage Act 1955 (India) s 9; *Saroj Rani v Sudarshan Kumar Chadha* (1984) 4 SCC 90, 95–97.

29 Ibid., s 13(1)(i-a), s 13(1)(i-b); see *A Jayachandra v Aneel Kaur* (2005) 2 SCC 22, 30–33 [9]–[15].

30 Ibid., s 13B(1)–(2); cf *Amardeep Singh v Harveen Kaur* (2017) 8 SCC 746, 752–755 [16]–[23].

31 Special Marriage Act 1954 (India) s 27.

32 *Shayara Bano* (n 8), 101–104 (Nariman J), 198–199 (Joseph J); Muslim Women (Protection of Rights on Marriage) Act 2019 (India) ss 3–4.

33 Indian Divorce Act 1869 (India), as amended by the Indian Divorce (Amendment) Act 2001, s 10.

34 Parsi Marriage and Divorce Act 1936 (India) s 32; s 32B.

gendered disadvantage, but because they demonstrate the feasibility of doctrinal convergence upon fairer grounds and procedures.

The Muslim Family Laws Ordinance in Bangladesh is procedurally ambitious on paper. A husband's talaq must be notified in writing to the local Chairman, a reconciliation council must be convened, and dissolution becomes effective only after ninety days, or the conclusion of a pregnancy, whichever is later.[35] Polygamy is subject to prior permission and the stated consent of existing wife or wives, policed through the same local administrative machinery.[36] The design aims to temper unilateralism through notice, time, and third-party oversight. In practice, however, failure to notify, weak record-keeping, and inconsistent council functioning reduce the protective effect, allowing repudiation to revert to a de facto unilateral act. The gap between text and administration is decisive for women who need timely documentary proof for maintenance, custody, or social protection claims.

For non-Muslim communities in Bangladesh, the deficits are of a different kind. The Hindu Marriage Registration Act of 2012 creates a registration window but does not mandate registration, which leaves many marriages undocumented and women without ready proof of status.[37] Nor is there a codified general Hindu divorce statute. Women seeking to exit abusive unions must therefore rely on piecemeal strategies, including criminal process or informal separation, rather than a civil, status-altering decree with clear collateral effects. The result is not only substantive inequality, but systemic opacity that undermines access to remedies.

Against this background, constitutional and treaty norms supply an evaluative frame. Indian equality and liberty clauses require justification for sex-differentiated rules and for state-backed coercion of cohabitation.[38] In Bangladesh, the equality code sits alongside an Islamic state identity, but remains an enforceable standard that should discipline administrative practice in family matters.[39] The General Recommendation No. 21 of CEDAW calls for equal rights in marriage, equivalent grounds and procedures for divorce, and the removal of discriminatory customs that perpetuate dependency.[40] These commitments are realised, if at all, through procedural design. Notice, mediation with safeguards, auditable records, and

---

35 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 7(1), (3)–(5).
36 Ibid., s 6(1)–(5).
37 Hindu Marriage Registration Act 2012 (Bangladesh) s 3(1).
38 Constitution of India (n 1) arts 14–15, 21; see *Joseph Shine* (n 22) 63–69 [38]–[55].
39 Constitution of the People's Republic of Bangladesh (n 1) arts 27–28, 2A.
40 CEDAW Committee, GR No 21 (n 5) paras 40–44.

accessible forums are not formalities. They are the devices by which women convert rights into outcomes.

Comparatively, the Indian trajectory has been judge- and statute-centred. The repudiation of instant triple talaq and the equalisation of Christian divorce grounds narrow formal hierarchies, though restitution and onerous proof burdens continue to distort bargaining. The trajectory in Bangladesh has been administrative and local. The MFLO's design, if enforced as written, would constrain unilateralism and regulate polygamy. The difficulty is compliance and capacity at the point of administration. The inference for reform is direct. Where unilateral exit or coerced cohabitation persists, the remedy lies in procedural parity: mandatory registration, uniform notice and cooling-off, accessible civil dissolution across communities, and the removal of coercive remedies that are structurally incompatible with equality.

4.2 Inheritance and Property

This section examines how inheritance and property regimes structure women's asset bases in India and Bangladesh, and evaluates whether formal legal equalisation produces effective control over property in practice.[41]

Indian Hindu law now recognises daughters as coparceners by birth in Mitakshara joint family property. The 2005 amendment substituted a new section 6 in the Hindu Succession Act of 1956, conferring on daughters the same rights and liabilities as sons, while section 14 consolidates women's separate property by converting limited estates into absolute ownership where the property is possessed by a female Hindu.[42] The Supreme Court has confirmed that the daughter's coparcenary right is by birth and is not dependent on the father's being alive on the date of the amendment, resolving earlier uncertainty.[43] Earlier decisions that appeared to limit the temporal reach have been re-read in light of this clarification; the Court has disapproved the view that the amendment assists only those whose fathers survived beyond 9 September 2005.[44] Doctrinally, therefore, the coparcenary barrier is dismantled and women's titles are fortified; practically, partitions, family settlements, and evidentiary deficits continue to dilute women's enjoyment of equal shares.[45]

41 Hindu Succession Act 1956 (n 6) s 6; s 14(1).
42 Hindu Succession (Amendment) Act 2005 (India) (n 6) s 3; Ibid., s 6, s 14(1).
43 *Vineeta Sharma* (n 6) [57]–[61], [81]–[86].
44 *Prakash v Phulavati* (2016) 2 SCC 36 [23]–[26]; clarified in *Vineeta Sharma* (2020) 9 SCC 1 [57]–[61], [81]–[86]; see also *Danamma @ Suman Surpur v Amar* (2018) 3 SCC 343 [20]–[23].
45 Hindu Succession Act 1956 (n 6) s 6; *Vineeta Sharma* (n 6) [86].

Bangladesh retains the classical structure of Quranic fixed shares in Muslim succession, administered through the Shariat Application Act of 1937 and ordinary civil courts. The baseline rule that a female's share is typically half that of a similarly situated male persists, subject to specific kin configurations.[46] The principal post-colonial statutory innovation is section 4 of the Muslim Family Laws Ordinance of 1961, which introduces representation for orphaned grandchildren to inherit the share that their deceased parent would have taken, thereby mitigating the disinheritance of granddaughters in such cases.[47] The broader pattern, however, remains anchored in fixed shares, with administrative implementation dependent on documentation and access to civil process.

For Bangladeshi Hindus, the Dayabhaga pattern continues to govern, since there has been no comprehensive codification equivalent to Hindu Succession Act in India. Colonial-era enactments still shape outcomes. While the Hindu Widows' Remarriage Act of 1856 removed the disability on remarriage, section 2 effects a forfeiture of the widow's subsisting property interests upon remarriage unless expressly preserved, with practical consequences for economic security.[48] The Hindu Inheritance (Removal of Disabilities) Act of 1928 eliminated some status-based disqualifications, yet expressly excluded those governed by the Dayabhaga school, curtailing the statute's reach in Bengal and, after Partition, in Bangladesh.[49] The absence of a modern Hindu succession code leaves women reliant on piecemeal rules, informal settlements, and family pressure.

Across both jurisdictions, social waiver and dowry operate as substitutes for formal shares. Women frequently relinquish legal entitlements in favour of brothers in exchange for immediate marriage transfers, with the result that paper entitlements fail to translate into durable assets. Where women seek judicial enforcement, success depends on timely registration, proof of partition or possession, and access to legal aid, all of which impose costs that disproportionately deter claimants with limited resources.[50] These frictions underscore a central theme of this article: rule-text matters, but enforcement architecture and social bargaining power determine material outcomes.

---

46 Muslim Personal Law (Shariat) Application Act 1937 (Bangladesh) (n 7) s 2.

47 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 4.

48 Hindu Widows' Remarriage Act 1856 (Bangladesh) (n 7) s 2.

49 Hindu Inheritance (Removal of Disabilities) Act 1928 (Bangladesh) s 1(3).

50 Code of Civil Procedure 1908 (India) ss 9, 96; Evidence Act 1872 (India) ss 101–103; Code of Civil Procedure 1908 (Bangladesh) ss 9, 96; Evidence Act 1872 (Bangladesh) ss 101–103.

Constitutional equality guarantees a normative and doctrinal frame for reform. In India, Articles 14 and 15 have underwritten a line of property and family-law decisions that insist on parity of status and capacity. In Bangladesh, Articles 27 and 28 articulate formal equality and non-discrimination, inviting careful calibration of personal-law rules with constitutional commitments.[51] Internationally, CEDAW requires the elimination of discrimination in marriage and family relations, including equality in ownership, acquisition, management, administration, enjoyment, and disposition of property. The General Recommendation No. 21 of the CEDAW Committee stresses that inheritance laws must treat women equally with men.[52] These sources justify targeted statutory correction and administrative design that secure women's effective control over assets, rather than nominal shares alone.

The comparison is instructive. In India, statutory equalisation of Hindu coparcenary, reinforced by authoritative judicial exposition, has altered the formal structure of rights; yet partitions, settlements, and bureaucratic delay often blunt the reform's effect. Bangladesh has retained fixed-share rules for Muslims, modestly adjusted by representation for orphaned grandchildren, and has not enacted a modern Hindu succession code, thereby channelling change through litigation and informal settlement. The inference for policy is clear. Legislative equalisation assists, but without systematic documentation, presumptions in favour of recorded female title, and low-cost forums for partition and mutation, women's asset accumulation will remain fragile.[53]

4.3 Guardianship and Custody

Guardianship and custody expose the tension between status-based paternal defaults and the judicial turn to a child-centred welfare principle; both India and Bangladesh retain paternal baselines in black-letter law, yet courts increasingly mediate outcomes through welfare reasoning and institutional design.

In India, the statutory starting point remains paternal. Section 6 of the Hindu Minority and Guardianship Act identifies the father, and after him the mother, as the natural guardian of a legitimate child, a formulation that encodes a gendered priority which litigants must dislodge in contested cases.[54] The Guardians and

---

[51] Constitution of India (n 1) arts 14–15; Constitution of the People's Republic of Bangladesh (n 1) arts 27–28.

[52] CEDAW (n 2) arts 2, 16; CEDAW Committee, GR No 21 (n 5) paras 26–36.

[53] See, illustratively, Hindu Succession Act 1956 (n 6) s 6; MFLO 1961 (n 4) s 4; Constitution of India (n 1) arts 14–15; Constitution of the People's Republic of Bangladesh (n 1) arts 27–28.

[54] Hindu Minority and Guardianship Act 1956 (India) s 6.

Wards Act requires courts to consider welfare when appointing a guardian and restricts appointment where the father is alive and not unfit, thereby entrenching a threshold paternal presumption.[55] Against that backdrop, the Supreme Court has read the welfare principle capaciously. In *Githa Hariharan v Reserve Bank of India* the Court construed "after" in section 6 to mean "in the absence of" in a functional sense, enabling recognition of the mother as natural guardian when the father is indifferent or unavailable, and anchoring the analysis in the child's best interests.[56] Later cases have consolidated this stance. *Nil Ratan Kundu v Abhijit Kundu* emphasised that welfare, not parental right, is controlling, listing factors such as the proposed guardian's character, stability, and the child's educational and emotional needs.[57] *Vivek Singh v Romani Singh* reiterated that custody turns on holistic welfare, including continuity of care and the child's preferences where age-appropriate.[58] Family Courts jurisdiction has improved procedural focus and remedial flexibility, while interim custody and residence protections under the Domestic Violence Act intersect with guardianship disputes, although conciliation without safeguards may reproduce coercion where abuse is alleged.[59]

Bangladesh relies on the common colonial framework. The Guardians and Wards Act governs appointments and custody, directing courts to the child's welfare while preserving a practical paternal preference through entry-point presumptions.[60] The equality code of the Constitution frames the analysis, yet doctrinal development has been cautious.[61] The Family Courts Act supplies jurisdiction over guardianship and custody, but thin capacity, limited legal aid, and a strong pull of informal settlements frequently tilt outcomes toward paternal relatives, particularly where mothers lack independent income or documentation.[62] Protective statutes provide residence and allied civil orders that can stabilise a child's living conditions during disputes, though implementation is uneven.[63]

Comparatively, both systems start from paternal defaults that mothers must overcome through welfare-centred litigation. Indian apex-court jurisprudence has developed a

---

55 Guardians and Wards Act 1890 (India) ss 17, 19.

56 *Githa Hariharan v Reserve Bank of India* (1999) 2 SCC 228 243–247 [18]–[26].

57 *Nil Ratan Kundu v Abhijit Kundu* (2008) 9 SCC 413 428–430 [52]–[59].

58 *Vivek Singh v Romani Singh* (2017) 3 SCC 231 242–245 [26]–[35].

59 Family Courts Act 1984 (India) s 7; Protection of Women from Domestic Violence Act 2005 (India) (n 3) ss 21, 23.

60 Guardians and Wards Act 1890 (Bangladesh) ss 17, 19.

61 Constitution of the People's Republic of Bangladesh 1972 (n 1) arts 27–28.

62 Family Courts Act 2023 (Bangladesh) s 5.

63 Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh) s 15.

robust best-interests approach coupled with the tools of the Family Courts. Bangladeshi courts apply the same nineteenth-century statute with more conservative baselines and weaker institutional supports, a divergence that bears directly on the child's immediate welfare and on women's substantive caregiving roles.[64]

4.4 Dowry and Domestic-Violence Interactions

General criminal and civil-protective statutes often do more practical work for women than personal-law doctrines, yet their effect depends on how they are fitted to marital status rules and routine administration. In India, the Dowry Prohibition Act criminalises giving, taking, or demanding dowry, and defines the offence independently of personal-law affiliation. Civil remedies under the Domestic Violence Act then supply immediate protection, residence security, and monetary relief that can be pursued without dissolving the marriage.[65] These orders matter when the dowry demand is woven into threats of expulsion from the shared home or coercive control over stridhan. The Acts together create a route to urgent relief, but weak police registration, reluctance to treat economic abuse as actionable, and the evidentiary burdens of criminal prosecution continue to blunt the protective arc.[66]

Bangladesh similarly criminalises dowry across religious communities. The 2018 Act defines dowry to include transfers demanded during the life of the marriage, and makes both demanding and giving offences, while voiding any agreement for dowry.[67] The Domestic Violence (Prevention and Protection) Act, read with the 2013 Rules, provides for protection applications, standardised forms, and designated officials, yet frontline capacity and coordination with police and local authorities remain uneven.[68] Where personal-law procedures shape leverage in intimate disputes, these public-law tools often decide whether a woman can stabilise her living conditions. The talaq notice and reconciliation machinery under the Muslim Family Laws Ordinance is illustrative: when dowry-related coercion accompanies a

---

64 CEDAW (n 2) art 16(1)(d); CEDAW Committee, GR No 21 (n 5) para 24; CEDAW Committee, GR No 35 (2017) paras 31–33.

65 Dowry Prohibition Act 1961 (India) ss 2, 3–4; Protection of Women from Domestic Violence Act 2005 (India) (n 3) ss 17–21.

66 Protection of Women from Domestic Violence Act 2005 (India) (n 3) ss 18–21.

67 Dowry Prohibition Act 2018 (Bangladesh) s 2, s 3, s 4, s 5.

68 Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh) (official portal); Domestic Violence (Prevention and Protection) Rules 2013 (Bangladesh) (n 19) rr 2–9.

threatened repudiation, timing and documentary practice under the Ordinance can either preserve space for protective orders or allow rapid exit that defeats them.[69]

The comparative lesson is straightforward. In both jurisdictions, the formal reach of general statutes has outpaced personal-law reform. The decisive variable is enforcement: accessible registration, prompt service of protection orders, and routine recognition of economic abuse as actionable harm. Without these, criminal prohibitions and civil orders sit on paper while personal-law processes continue to structure women's dependency.

5. Judicial Pathways: Catalysts and Constraints

Courts in India and Bangladesh have, at critical moments, disrupted entrenched gender hierarchies within plural personal-law regimes. Yet adjudication has proved a catalyst rather than a destination. Durable change has followed, where judicial interventions have been embedded in statute and supported by administrative compliance. Where legislation or frontline enforcement has lagged, even ambitious decisions have struggled to shift everyday outcomes for women.[70]

In India, the Supreme Court has used a repertoire of techniques to align personal-law practices with constitutional equality. Arbitrariness review supplied the fulcrum in the case of *Shayara Bano*, where a plurality invalidated instant triple talaq on grounds of inequality and dignity, signalling that personal-law rules cannot evade basic constitutional guarantees.[71] Interpretive harmonisation has been equally significant. In the case of *Danial Latifi*, the Court read the Muslim Women (Protection of Rights on Divorce) Act of 1986 to require a fair and reasonable provision for a divorced wife, thereby reconciling a communally sensitive statute with the equality code without striking it down.[72] In the Hindu-law field, the *Vineeta Sharma* case consolidated the effect of the 2005 amendment to section 6 of the Hindu Succession Act by clarifying that daughters are coparceners in their own right, irrespective of the father's survival on the amendment date, which the Court framed as a measure of substantive equality rather than a merely prospective adjustment.[73] These doctrinal moves show that courts can unsettle patriarchal baselines through equality-centred review and rights-consistent interpretation.

---

[69] Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 7.

[70] Constitution of India 1950 (n 1) arts 14–16, 25, 44; Constitution of the People's Republic of Bangladesh 1972 (n 1) arts 27–29, 65(3).

[71] *Shayara Bano* (n 8), 101–104 (Nariman J, plurality).

[72] *Danial Latifi v Union of India* (2001) 7 SCC 740, 28–32.

[73] *Vineeta Sharma* (n 6), 67–70; Hindu Succession (Amendment) Act 2005 (n 6) s 3.

Procedural infrastructure has been another judicial lever. Recognising that remedies are often defeated by evidentiary deficit, the Court in the *Seema v Ashwani Kumar* case insisted upon systematic marriage registration to aid enforcement across communities. Registration, notice, and standard forms of service were treated as preconditions for meaningful relief in matrimonial and maintenance disputes.[74] These directions illustrate a broader judicial intuition that documentary architecture can translate formal rights into practical remedies.

The judiciary in Bangladesh has been more cautious in recasting personal-law norms through constitutional adjudication, but courts have been central to the enforcement of procedural checks within the Muslim Family Laws Ordinance of 1961. Section 6 requires prior written permission for polygamy from the Arbitration Council, and section 7 structures talaq by written notice to the Chairman and a ninety-day period for reconciliation. Judicial practice has affirmed that non-compliance with these procedures has legal consequences, a stance that, if implemented, tempers unilateral male power.[75] The promise of protective civil relief has also grown under the Domestic Violence (Prevention and Protection) Act of 2010 and through the Family Courts Act of 2023, which supplies orders and maintenance within a civil forum. Here, too, outcomes hinge on timely service, monitoring, and access to legal aid, variables over which courts have only partial control.[76]

The comparative lesson is twofold. First, courts in both jurisdictions can trigger important doctrinal and procedural corrections. Secondly, adjudication cannot substitute for legislation and administration. Equality gains in India have been most durable where judicial pronouncements have been consolidated by statutory text and supported by registration and notice regimes. In Bangladesh, judicial insistence on MFLO procedures and civil-protective orders can protect women only if councils, police, and legal-aid systems discharge their duties. International obligations under CEDAW, particularly Article 16 and General Recommendation No. 21, supply an external yardstick, but their domestic effect still depends on statutory incorporation and sustained institutional practice. Courts can open the door, yet what happens beyond the threshold is decided by legislators and administrators.[77]

---

74 *Seema v Ashwani Kumar* (2006) 2 SCC 578, 22–23.

75 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) ss 6–7.

76 Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh) (n 4) ss 5–7, 8–10, 14–15; Family Courts Act 2023 (Bangladesh) (n 62) s 5.

77 CEDAW 1979 (n 2) art 16; CEDAW Committee, GR No 21 (n 5) para 16.

6. Reform Models within Pluralism

This section advances a calibrated reform programme that secures women's substantive equality without erasing religious diversity, combining targeted statutory change, administrative redesign, and treaty-anchored harmonisation in India and Bangladesh.

A first pillar is principled, incremental legislation that removes rules which demonstrably impair autonomy while preserving space for community rites. In India, Parliament should repeal restitution of conjugal rights, a remedy that is structurally misaligned with bodily integrity and decisional privacy, and that distorts negotiations around maintenance and residence.[78] A neutral, cross-community replacement would be a civil protection order keyed to separation-of-residence and economic stabilisation, administered through Family Courts with summary procedure.[79] Bangladesh can move on a parallel track by enacting a personal-law-neutral separation and maintenance code, available irrespective of marriage form, that operates alongside existing religious rites but secures minimum economic floors and swift residence protections.[80] Evidence from domestic-violence frameworks shows that personal-law-neutral remedies travel across communities and are enforceable when housed in accessible fora.[81]

A second pillar is procedural parity in entry, modification, and exit from marital status. Registration, notice, and effectuation rules should be standardised in religion-neutral terms and enforced through time-bound administrative defaults. Bangladesh already possesses workable levers in the Muslim Family Laws Ordinance of 1961, notably the notice and reconciliation architecture for talaq and for polygamy; these can be generalised as baseline procedural guarantees for all communities without disturbing religious solemnisation.[82] India can converge by codifying uniform minimums for notice, cooling-off, and proof across personal laws, embedding them

78 Hindu Marriage Act 1955 (India) (n 28) s 9; *K S Puttaswamy v Union of India* (2017) 10 SCC 1, 298 (Chandrachud J).

79 Family Courts Act 1984 (India) (n 59) ss 7–8; Protection of Women from Domestic Violence Act 2005 (India) (n 3) ss 18–23.

80 Constitution of the People's Republic of Bangladesh 1972 (n 1) arts 27–29; cf a personal-law-neutral maintenance and residence regime on the model of special civil statutes.

81 Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh) (n 4) ss 4–6, 10–11; Domestic Violence Rules 2013 (Bangladesh) (n 19) rr 5–9; Protection of Women from Domestic Violence Act 2005 (India) (n 3) ss 18–20.

82 Muslim Family Laws Ordinance 1961 (East Pakistan Ordinance No VIII of 1961) (n 4) ss 6–7.

in the Family Courts Act and allied rules.[83] In both jurisdictions, failures by local officials to register marriages or to process notices ought to trigger automatic legal consequences in favour of the applicant, including deemed registration and interim monetary relief.[84]

A third pillar is asset-based equalisation. The 2005 coparcenary reform in India was a major step, yet its effect is dulled by land-records inertia and social waiver pressures; administrative mechanisms, not only rules, determine outcomes.[85] A statutory presumption of joint acquisition for post-marital property, rebuttable on evidence, would discipline judicial discretion and counter informational asymmetry, while remaining community-neutral.[86] Bangladesh should pair strict enforcement of Quranic fixed shares with civil devices that protect women's effective control, including compulsory registration of gifts and a presumption against coerced waivers.[87] Both systems would benefit from inexpensive summary suits for moveables and bank deposits, with capped fees and shifting cost orders against non-compliant respondents.[88]

A fourth pillar concerns guardianship and child welfare. Courts in both jurisdictions increasingly invoke a child-centred best-interests standard, but the statutory text still embeds paternal defaults. India should amend the Hindu Minority and Guardianship Act to replace the "natural guardian" hierarchy with a joint-guardianship presumption and an explicit best-interests test.[89] Bangladesh can legislate a similar reform within the Guardians and Wards Act 1890, coupled with case-management rules that compress timelines and require reasoned orders when departing from sibling unity or the child's stated preferences.[90]

A fifth pillar is institutional delivery. Reform statutes underperform when street-level agents are under-resourced or unaccountable. Dedicated family benches, protected lists, and continuous-hearing models should be mandated in the trial courts of both

[83] Family Courts Act 1984 (India) s 9 and Sch II.

[84] General Clauses Act 1897 (India) s 21; Constitution of India 1950 (n 1) art 226; Constitution of the People's Republic of Bangladesh 1972 (n 1) art 102.

[85] Hindu Succession (Amendment) Act 2005 (India), s 6; *Vineeta Sharma* (n 6) [55]–[57].

[86] Special Marriage Act-style matrimonial property presumptions as proposed; cf *Joseph Shine* (n 22) [88]–[90].

[87] Registration Act 1908 (Bangladesh) ss 17–18; Evidence Act 1872 (Bangladesh) ss 101–104.

[88] Code of Civil Procedure 1908 (India), Or 37; Code of Civil Procedure 1908 (Bangladesh) ss 96, 151.

[89] Hindu Minority and Guardianship Act 1956 (India) (n 54) ss 6–7; Guardians and Wards Act 1890 (India) (n 55) s 17.

[90] Guardians and Wards Act 1890 (Bangladesh) (n 60) ss 7, 17.

countries, with statutory deadlines for interim relief. Civil legal-aid schemes must ring-fence funds for women's family-law litigation and for enforcement, including service of process and execution against income and assets.[91] Arbitration Councils in Bangladesh and mediation cells in India should be retooled as rights-compatible case-management hubs rather than gatekeepers, with clear duties to record compliance and to refer for protection orders where risk is detected.[92]

The comparative lesson is that calibrated pluralism is not a half-measure but a design strategy. The higher appetite for judicial innovation in India enables faster removal of outlier rules, yet sustainable gains depend on procedural parity and administrative execution. he more cautious judicial posture in Bangladesh makes legislative and administrative routes primary, but the MFLO architecture offers a ready scaffold for cross-community procedural design. In both systems, CEDAW offers a normative and technical template: states must eliminate discrimination in marriage and family relations, ensure effective access to justice, and reshape social norms that sustain private ordering to women's detriment.[93] Treaty-anchored reporting and follow-up, tied to budget lines and measurable indicators, can discipline ministries to publish data on registration, notice compliance, interim relief, and execution, thereby aligning pluralism with equality.

Two guardrails close the model. First, participation: any statutory change to personal-law adjacencies should be preceded by structured consultation with affected groups, with published reasons for accepting or rejecting proposals.[94] Secondly, insulation from identity politics: reforms should be framed, drafted, and implemented as religion-neutral improvements to procedure, remedies, and administrative capacity. Properly sequenced, these measures do not homogenise norms, but they do guarantee that, whatever rite one chooses, the state secures the same floor of freedom from violence, economic abandonment, and procedural opacity.

7. Comparative Lessons and Policy Implications

The comparative exercise yields a restrained, practical conclusion. Reform that travels is procedural rather than theological. Where procedures are even-handed,

---

91 Legal Services Authorities Act 1987 (India), ss 12–13; Legal Aid Services Act 2000 (Bangladesh), ss 7–9.

92 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 7 and r 3; Family Courts Act 1984 (India) (n 83) s 9.

93 CEDAW (n 2) arts 2, 5, 16; CEDAW Committee, GR No 21 (n 5) paras 15–17; CEDAW Committee, GR No 33 (n 2) paras 14, 51–52.

94 Constitution of India 1950 (n 1) art 14; Constitution of the People's Republic of Bangladesh 1972 (n 1) art 27.

auditable, and accessible, women convert formal guarantees into lived security. Where procedures are porous, identity politics fills the gap and equality recedes.

First, procedural parity is the transferable core. Uniform notice, documented reconciliation opportunities, cooling-off periods, and written records create levers that any forum can enforce. Bangladesh already sketches this template in the Muslim Family Laws Ordinance through written notice to the Chairman, Arbitration Council oversight, and a ninety-day interval before dissolution takes effect. The secular architecture in India for civil dissolution, particularly mutual-consent divorce and convergent grounds across communities, shows how parity can be normalised without erasing pluralism.[95]

Secondly, coercive and asymmetry-preserving incidents should be removed or strictly neutralised by procedure. Remedies that compel cohabitation entrench bargaining deficits. Likewise, divorces that bypass notice or verification collapse into de facto unilateral repudiation. The path is therefore twofold: retire restitution, and operationalise a universal discipline of notice and record-keeping for any extra-judicial exit.[96]

Thirdly, sequence matters. Quick wins lie in mandatory, low-cost registration of marriages and divorces, short statutory timelines, default orders for non-appearance, and standardised forms. Status-laden questions can follow once administrative capacity hardens. Civil-protective remedies such as residence and maintenance orders are status-neutral tools that stabilise the vulnerable while larger reforms mature.[97]

Fourthly, evaluate success by material outcomes rather than text. Track maintenance realisation, secure housing, time to decree, and compliance rates. This aligns with CEDAW's insistence on substantive equality in marriage and dissolution, and on understanding violence and economic dependency as forms of discrimination.[98]

Finally, borrow judiciously across the border. India can adapt the codified notice-and-cooling-off sequence of Bangladesh as a general template for any extra-judicial dissolution, not only the instant triple talaq already invalidated. Bangladesh can

---

95 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 7(1), (3)–(5); Special Marriage Act 1954 (India) (n 31) s 27; Hindu Marriage Act 1955 (India) (n 30) s 13B.

96 Hindu Marriage Act 1955 (India) (n 28) s 9; *Shayara Bano* (n 8), 101–104 (Nariman J); MFLO 1961 (Bangladesh) (n 4) s 7(1), (5).

97 Hindu Marriage Registration Act 2012 (Bangladesh) (n 37) s 3(1); Protection of Women from Domestic Violence Act 2005 (India) (n 3) ss 18–23.

98 CEDAW Committee, GR No 21 (n 5) paras 40–44; CEDAW Committee, GR No 35 (n 64) paras 21–24.

adapt judge-centred civil pathways, equalised divorce grounds, and family-court case-management of India, while retaining community legitimacy through transparent local administration.[99] The constant is institutional design: fixed timelines, consequences for non-compliance, legal-aid entitlements, and routine data publication. These are the safeguards that insulate equality-consistent pluralism from partisan contest and deliver improvements that women can bank.

8. Conclusion

This article has shown that legal pluralism, as practised through personal laws in India and Bangladesh, sustains gendered hierarchies unless constitutional and administrative disciplines are brought to bear upon it.[100] Across marriage and divorce, inheritance and property, guardianship and custody, and the interface with dowry and domestic-violence regimes, formal rules matter, but institutions that convert paper rights into usable remedies matter more. The comparative record is clear. India has travelled further in statutory equalisation within Hindu law, notably by recognising daughters as coparceners and by consolidating women's separate estates. Yet uneven enforcement, partition tactics, and settlement pressures continue to blunt these gains.[101] Bangladesh has moved cautiously, retaining fixed-share rules in Muslim succession and modest procedural controls in marriage and divorce, with limited codification for non-Muslim communities. Administrative capacity and access to forums remain decisive constraints.[102]

A calibrated reform path follows. First, equality clauses and treaty obligations should anchor incremental change that respects religious affiliation while insisting on parity of status and capacity.[103] Secondly, targeted statutory adjustments must be matched with administrative design: reliable registration, short limitation windows for mutation and partition, presumptions favouring recorded female title, and low-cost local forums capable of giving swift, executable orders.[104] Thirdly, courts should

99 Family Courts Act 1984 (India) (n 59) ss 7–10; Indian Divorce Act 1869 (n 33) s 10; Domestic Violence (Prevention and Protection) Act 2010 (Bangladesh) (n 4) ss 15–18; Domestic Violence Rules 2013 (Bangladesh) (n 19) rr 4–7; *Vineeta Sharma* (n 6) 55–57.

100 Constitution of India (n 1) arts 14–15; Constitution of the People's Republic of Bangladesh (n 1) arts 27–28.

101 Hindu Succession Act 1956 (n 6) s 6; s 14(1); *Vineeta Sharma* (n 6) [57]–[61], [81]–[86].

102 Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 4; ss 6–7; Muslim Personal Law (Shariat) Application Act 1937 (Bangladesh) (n 7) s 2.

103 CEDAW (n 2) arts 2, 16; CEDAW Committee, GR No 21 (n 5) paras 26–36.

104 For title, possession, and mutation, see Hindu Succession Act 1956 (n 6) s 6; Code of Civil Procedure 1908 (India) (n 50) ss 9, 96; Code of Civil Procedure 1908 (Bangladesh) (n 50) ss 9, 96.

continue to use structured techniques of review to remove discriminatory asymmetries while leaving space for legislatures to craft comprehensive schemes.[105]

The comparative inference is not that uniformity is the only principled destination. Rather, pluralism can be rendered equality-consistent where rules are procedurally harmonised, remedies are accessible, and budgeting and training align with women's material security. The experience of India illustrates the promise, and the limits, of statutory equalisation without sustained enforcement. The experience of Bangladesh illustrates the risks of narrow textual reform untethered to robust administrative levers. The normative task, for both jurisdictions, is to build institutions that make rights reliably legible in everyday life.[106] The empirical task, for future work, is to measure outcomes by durable asset control, safety from violence, and effective exit, not by formal rules alone.[107]

---

[105] *Shayara Bano* (n 8) [101]–[104], [199].
[106] Muslim Family Laws Ordinance 1961 (Bangladesh) (n 4) s 4; *Vineeta Sharma* (n 6) [86].
[107] CEDAW (n 2) art 16; CEDAW Committee, GR No 33 (n 2) paras 14–18.

Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System

Munira Jahan Sumi*

Abstract: This research study investigates the legal status of the plain land Indigenous Peoples in Bangladesh, focusing on the coherence between their customary practices and the formal governance system. The study aims to identify the gaps in legal recognition, explore socio-economic challenges, and propose actionable policy mechanisms to uphold their constitutional rights. Employing an empirical analytical approach, the research relies on qualitative methods such as interviews, case studies, and focus group discussions. It finds that plain land Indigenous Communities in Bangladesh face significant marginalization, including land disputes, cultural erosion, and limited access to resources, due to the lack of state recognition for communal land ownership and customary governance systems. The study highlights that only 10% of respondents feel their customary practices are fully recognized by the state, leading to frequent conflicts between traditional and formal systems. While 65% of respondents adhere to customary laws for managing land and resources, the absence of legal acknowledgment exacerbates socio-economic vulnerabilities. The findings emphasize the need for hybrid governance models that integrate traditional practices with formal legal frameworks, alongside targeted interventions to promote education, capacity building, and cultural preservation. Finally, the study offers a roadmap to policymakers and stakeholders that would harmonize customary and formal governance systems to protect their rights and dignity of Indigenous Peoples. foster inclusivity and equity for Indigenous communities in Bangladesh.

Keywords: Indigenous rights, Customary governance, Legal recognition, Socio-economic challenges, Bangladesh.

1. Introduction

Bangladesh is a unique nation characterized by its diversity in communities, languages, religions, and cultural traditions. While the Constitution of the People's Republic of Bangladesh recognizes the country's religious diversity, it does not yet officially acknowledge other forms of diversity.[1] As the supreme legal framework

---

* Associate Professor, PhD, Department of Law, Jagannath University, Dhaka. This Article is the modified version of the Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023. Moreover, Significant portion of the data used here are taken from the PhD thesis (Awarded) of the Author.

[1] The Constitution of the People's Republic of Bangladesh 1972.

governing the country, the Constitution requires that all state actions align with its provisions, but the reality differs significantly. For example, Bangladesh is home to over seventy-five marginalized Indigenous communities, totaling about 3 million people.[2] However, their participation in local, regional, and national political institutions and government services is minimal, and they receive limited attention in the national budget. Over time, these communities have experienced exclusion in social, political, and economic spheres.[3] They have faced neglect, insecurity, loss of cultural identity, and social oppression. Mainstream development efforts have either overlooked their needs or negatively impacted them.[4] For example, regarding the question of land ownership, the Constitution of Bangladesh only recognizes three types of ownership namely, state ownership, cooperative ownership, and private form of ownership.[5]

Historically, most of the plain land indigenous communities possesses unique language, culture, and social patterns that are distinguishable from those of others. In spite of all the hardship, they continue to practice their traditional tribal rituals. Originally, most of them were nomadic individuals who engaged in hunting and gathering. However, during the British colonial era in India (1757-1947), they relocated to other regions, including Bangladesh. They relocated to other regions, primarily flat terrain, in pursuit of employment opportunities to sustain their life. Zamindars would exploit them by using them as laborers in agricultural and agriculture-related tasks, such as working as agricultural laborers or assisting in the installation of railway tracks.[6] Thus, they have been faceing significant social, religious, political, economic, and developmental marginalization. They have been denied constitutional status, leading to feelings of fear and insecurity. Additionally, they have experienced a loss of cultural identity and have been subjected to social and religious abuse.[7]

Over time, the British Crown altered its strategy and acquired dominion over the territories belonging to indigenous populations. The native Chiefs' claim of

---

2 Mesabaha Kamala, *Mapping of Multilingual Education Programs in Bangladesh* (UNESCO Dhaka and SHIKHON Program of the Save the Children in Bangladesh 2014).

3 Research and Development Collective (RDC), *Coherence between Customary Practices of Selected Marginal Ethnicities and Formal Governance System in Chittagong Hill Tracts and North-West Bangladesh* (2013).

4 ibid.

5 The Constitution of the People's Republic of Bangladesh.

6 Muhammad Samad, 'The Santals in Bangladesh: Problems, Needs and Development Potentials' [2006] Journal of Ethnic Affairs, Ethnic Community Development Organizations 192.

7 Kamala (n 3).

ownership of the land was dismissed, and it was declared that the lands were exclusively vested in the British Crown. The subject of indigenous peoples settling on their ancestral land and implementing their own system of land management was disregarded. In addition, without taking into account their customary adherence to oral tradition instead of written legislation,[8] the British administrators enacted the CHT Regulation of 1900. This legislation established a group of landholders within the evolving society who took advantage of the native population by employing them as temporary workers.[9] In addition, the establishment of the impractical Indo-Pakistani border in 1947, referred to as Radcliffe's line, to divide the subcontinent based on religion, had a severe effect on the ethnic and territorial identity, sense of belonging, and marginalized status of indigenous groups such as the Santals in Bangladesh.[10] The partition caused extreme violence. This led to the emergence of one of the most significant mass movements in history, causing enduring hardships for indigenous populations both within and beyond the nation's borders.[11]

The decline of the British Empire did not lead to the cessation of colonial governance.[12] After the Partition of 1947, the legacy persisted and had a greater detrimental effect on the Islamic nation-state of Pakistan. The split resulted in the territorial, political, and cultural separation of indigenous populations throughout the subcontinent.[13] Unfortunately, this historical tradition persists in contemporary Bangladesh, which established itself as a sovereign country following a violent struggle against neo-colonial Pakistan. In Bangladesh, the concerns that directly impacted the lives of the indigenous populations, particularly the land-related matters, were disregarded. Following the country's independence in 1972, several land reform measures were implemented. However, the majority of these laws and initiatives have faced limitations in terms of their execution.[14] On top of that, the indigenous populations were deliberately marginalized from government initiatives

8 Adnan, Shapan & Dastidar, Ranjit, *Alienation of the Lands of Indigenous Peoples in the Chittagong Hill Tracts of Bangladesh*, CHTC & IWGIA, Bangladesh, (2011), at pp. 37-39.

9 Wolfgang Mey, 'Genocide in the Chittagong Hill Tracts, Bangladesh' (IWGIA 1984) Report 51.

10 Lucy Chester, 'The 1947 Partition: Drawing the Indo-Pakistani Boundary' (American Diplomacy: Foreign Service Despatches and Periodic Reports on US Foreign Policy 2002) Commentary and Analysis: A Look Back, American Diplomacy.

11 ibid.

12 Mrinal Kanti Debnath, 'Living on the Edge: The Predicament of a Rural Indigenous Santal Community in Bangladesh' (PhD Thesis, Department of Sociology and Equity Studies in Education, University of Toronto 2010) <https://utoronto.scholaris.ca/server/api/core/bitstreams/90d97c43-ab1f-453e-9c66-e25fc06e1465/content> accessed 15 July 2025.

13 ibid.

14 Sadeka Halim and others, 'Natural Resource Management Country Studies' (UNDP 1996).

and from the official policy on the allocation of Khas land (property owned by the state) to those without land.[15] Instead of becoming beneficiaries, they were the victims of these discriminatory and exclusionary government policies. An example of this is the Vested Property Act of 1974.[16] Before the Independence of Bangladesh, it was known as the Enemy Property Ordinance 1969 and ironically, it still governs the enemy property of Bangladesh.[17] The validity of the *Vested Property Act* of 1974 has been questioned by the supreme judiciary of Bangladesh in a number of cases like *Binoy Bhusan Bardhan Case,*[18] *Rahima Akhtar Case*.[19] It was realized that following the legacy of earlier Ordinances, the said Act was oppressive and therefore amended and renamed as the Restoration of Vested Property Act of 2001. This new Act made provision that the land that vested in the Government before 1969 shall be returned to the original owners. Thus, it ignored the property vested after 1969 in different illegal ways, i.e., by corrupted officials in collusion with local miscreants.[20] The latest Amendment (7th Amendment) to this Act was enacted in 2013, which shows that the government continues to provide little or no remedies to address the plight of these indigenous peoples who have been deprived of their ancestral lands.

The non-recognition of communal land ownership practices by the indigenous communities of the country has furthered the violation of their customary land rights practices.[21] In the absence of recognition under the Constitution of Bangladesh therefore, the basis of traditional land rights practices of indigenous peoples primarily lies under International Legal Instruments.[22] On the other hand, some national legal instruments and mechanisms, basically applicable to the indigenous communities of CHTs, are also unavailable for the indigenous peoples living in the plain land area of the country. The basic and fundamental law for the management of land in Bangladesh is said to be the State Acquisition and Tenancy Act (SAT) of 1950. Unfortunately, there is a single legal provision under Section 97 of this Act that exclusively applies to plain land indigenous peoples. Unfortunately, these

---

15 Abul Barakat and Proshanto Ray, *Political Economy of Land Litigation in Bangladesh : A Case of Colossal National Wastage* (Pathak Shamabesh 2018).

16 Debnath (n 13).

17 Mohammad Towhidul Islam, *Land Law : Text, Cases & Materials* (2nd edn, Centre for Human Rights & Legal Research, 2018).

18 *Binoy Bhusan Bardhan vs Sub-Divisional Officer, Brahmanbaria* [1978] AD DLR (30).

19 *Rahima Akhtar vs Asim Kumar Bose & ors* [1988] AD DLR (23).

20 Debnath (n 13).

21 ibid.

22 Munira Jahan Sumi, 'International Best Practices and Dealings with Indigenous Land Rights: Lessons for the Santal Community in Bangladesh' (2024) 6 Jagannath University Journal of Law 38.

vulnerable poor people can hardly afford the opportunity of recovering their ancestral lands and getting legal remedies under the said provision under the formal legal system.

Despite this, these marginalized communities continue to practice their traditional customs and practices within the government's enforcement of a formal local governance system.[23] In this context, while major challenge lies in the coexistence of these two systems, the study aims to find ways to harmonize the relationship between customary practices and the formal governance system in the north-western region, ensuring the inclusion of these marginalized communities. To understand the customary practices and formal governance systems followed by the plain land Indigenous people in Bangladesh, and to develop a policy mechanism for their constitutional rights and legal status, qualitative methods were used, including structured questionnaires, FGDs, and key informant interviews with local leaders, lawyers, journalists, common people, and grassroots representatives from both governance systems. The research focuses on the north-western plains to provide a comprehensive perspective. The study found that while customary practices coexist with formal governance systems, there is a notable lack of coordination. In the north-western plains, elected representatives often ignore customary leaders and exclude them from decision-making, which deepens the division between the two systems. Therefore, the study highlights the need for improved coordination between these two systems to strengthen both. Respondents emphasized that such coordination would promote good governance and resolve conflicts between customary practices and state laws, especially on issues like legal recognition.

2. Rights of Indigenous Peoples under International Law

The ILO has been the oldest, most consistent voices on issues relating to the rights of Indigenous and tribal peoples since the 1920s, with the adoption in 1957 of the Indigenous and Tribal Populations Convention (ILO Convention No. 107). [24] It contained an early definition in which it had been recognized that Indigenous and tribal populations are those who have experienced conquest or colonization and yet continue to retain part or all of their own social, economic, cultural, and political institutions.[25] While it differentiates between the 'Indigenous' and 'tribal'

[23] Mahmud M Hasan, 'Politics of Recognition and Indigenous Peoples in Bangladesh' (2024) 30 Journal of. International Law 102.

[24] Hurst Hannum, 'New Developments in Indigenous Rights' (1988) 28 Virginia Journal of International law.

[25] ibid.

communities, the difference is minimal as both categories are looked at as historically disadvantaged.[26]

On the other hand, the ILO Convention No. 169 adopted in the year 1989, extends the criteria of recognition of Indigenous Peoples in adding the principle of self-identification, therefore saying that communities have the right to declare them Indigenous, irrespective of approval from the government. It describes the Indigenous and tribal peoples as descendants of the original populations of a country, region, or territory who have continuously maintained distinct social, cultural, and economic conditions, often under their own customs or traditions or specific legislation.[27]

Besides that, the United Nations Declaration on the Rights of Indigenous Peoples, adopted in 2007, recognizes self-identification as important but does not define it to avoid excluding any groups. Though UNDRIP does not rigidly define Indigenous Peoples, it reflects principles guiding ILO conventions respecting issues of equality and non-discrimination, including all parts of human rights.[28]

In the case of Bangladesh, recognition as 'Indigenous Peoples' of Adibasi communities is still a debated issue. While international law, like ILO Conventions and UNDRIP, recognizes the right to self-identification, the usual role of government is to assimilate them into the mainstream culture, hence burying their Indigenous identity. However, most of the Adibasi groups strongly claim their Indigenous identity, putting them in line with the definitions brought forward by international standards based on their cultural and social life.[29] By referring to international standards like ILO Conventions 107 and 169, and UNDRIP, the self-identification of the Adibasi communities and their struggle for recognition become part of the wider struggles of peoples around the world for Indigenous Peoples' rights.

3. Conceptual Framework

3.1 Definition of Indigenous Peoples

The concept of 'Indigenous Peoples' remains very complicated and contentious both in Bangladesh and at the international level, with different jurisdictions having

[26] ibid.
[27] Hasan (n 24).
[28] ibid.
[29] RD Roy, 'Challenges for Juridical Pluralism and Customary Laws of Indigenous Peoples: The Case of the Chittagong Hill Tracts, Bangladesh' (2004) 21 The Arizona Journal of International and Comparative Law 113.

different definitions and recognitions. In the absence of a single definition of Indigenous Peoples that is universally accepted, various international bodies and scholars have put forward criteria for their identification. For instance, a definition that has been in use since the 1986 Report by José Martínez Cobo, who has defined Indigenous Peoples as groups with historical continuity with pre-colonial societies. These groups consider themselves distinct from dominant societies and often seek to preserve their cultural identity and ancestral lands. Key elements of this continuity include hereditary territories, common ancestry, cultural distinctiveness, language, and specific geographic locations.[30]

S. James Anaya gives another definition and says that Indigenous Peoples are descendants of pre-invasion inhabitants and their identity is intrinsically linked to traditional lands. International Labour Organization Convention No. 169 gives clarity and says that Indigenous Peoples are defined by distinct social, economic, and cultural characteristics and usually possess their own customs or special legislation.[31]

The concept of 'Indigenous Peoples' does not exist in the legal provisions in Bangladesh; as such, the term itself is considered controversial in this country. However, the Indigenous Communities of Bangladesh are referred to by many names, including 'aboriginal', 'tribal', 'Adivasi', 'hillmen', 'ethnic minority', 'upajati', and many others.[32] These numerous names reflect the multiple identities of these groups. As a result of the lack of any legal recognition as 'Indigenous Peoples' in the constitution of the country, their rights have been breached, especially their rights over land.[33]

But, in Bangladesh, the plain land Indigenous communities meet most of the international standards, i.e., their history with the land, cultural identity, and distinctiveness provide ample reasons for recognition and protection under international law.[34] Moreover, in Bangladesh, the plain land Indigenous groups align with many of the characteristics outlined by Cobo, as they have long-standing connections to their ancestral land, share a common heritage, uphold unique cultural

---

30 Jose R Martinez Co, 'Study of the Problem of Discrimination Against Indigenous Populations' (UN 1983) Special Rapporteur E/CN.4/Sub.2/1986/7/Add.4.

31 S James Anaya, *Indigenous Peoples in International Law* (2nd ed, Oxford University Press 2004).

32 Roy, R. D., *The ILO Convention on Indigenous and Tribal Populations, 1957 (No. 107) and the Laws of Bangladesh: A Comparative Review*. International Labour Office, Geneva, Switzerland, 2009, pp.35-39.

33 RD Roy, 'The ILO Convention on Indigenous and Tribal Populations, 1957 (No. 107) and the Laws of Bangladesh: A Comparative Review. International Labour Office, Geneva, Switzerland, 2009' (International Labour Office 2009) 107.

34 ibid.

practices, and remain rooted in particular regions of the country. This supports the case for their recognition as Indigenous people in the context of international law and Cobo's framework.[35]

3.2 Demography of Plain Land Indigenous Peoples in Bangladesh

Indigenous Peoples living in the plain land area in Bangladesh primarily in border areas such as the northwest (Rajshahi-Dinajpur), central north (Mymensingh-Tangail), northeast (Greater Sylhet), and the south and southeast (Chittagong, Cox's Bazar, and Greater Barisal).[36] There are considerable debates regarding the number of Indigenous Peoples living in Bangladesh. For example, the 2022 Census report estimates the total number of Indigenous Peoples to be around 1.65 million, including 7,29,942 from plains only.[37] But the community leaders claim their population would be at least 5 million, as they live in different places in the country and many groups were not properly listed.[38] This is all because the Government-sponsored transmigration programs operated in CHT are also operative in the plains, particularly in North Bengal, which have caused displacement, land loss, and insecurity, prompting many Indigenous Peoples to migrate to India.[39] These demographic changes have severely impacted Indigenous communities, disrupting their socio-economic development and cultural heritage.

4. Theoretical perspectives on Indigenous governance and legal rights

Indigenous governance and legal rights are predominantly theoretical frameworks of recognition of Indigenous Peoples in terms of their autonomy, self-determination, and cultural preservation. This kind of theoretical perspective emanates from disciplines such as law, anthropology, political science, and Indigenous studies with the aim of resolving historical injustices imposed upon Indigenous Peoples and asserting their rights to land, resources, and cultural heritage.

One of the important concepts in relation to Indigenous governance has to do with self-determination. This principle, among others, is enunciated in different international human rights instruments. The UNDRIP declares that Indigenous

---

35 Co (n 31).

36 Mong Shanoo Chowdhury, Asia Indigenous Peoples Pact and Kapaeeng Foundation (Dhaka, Bangladesh) (eds), *Survival Under Threat: Human Rights Situation of Indigenous Peoples in Bangladesh* (Asia Indigenour People Pact ; Kapaeeng Foundation 2014).

37 Pinaki Roy and Mintu Deshwara, 'Ethnic Population in 2022 Census: Real Picture Not Reflected' *The Daily Star* (Dhaka, 2022).

38 ibid.

39 Chowdhury, Asia Indigenous Peoples Pact and Kapaeeng Foundation (Dhaka, Bangladesh) (n 37).

Peoples have the right to self-determination, including freely determining their political status and pursuing their economic, social, and cultural development.[40] Indigenous sovereignty has played the lead in the legal argumentative discourse so far in this regard. Indigenous sovereignty is considered an inherent right of Indigenous Peoples to self-govern according to their own laws, customs, and traditions. Indigenous sovereignty calls for legal reforms in terms of altering the relationship between the State and the Indigenous Peoples.

Another important aspect of Indigenous governance involves the recognition of customary laws or those that are unwritten, traditional rules that Indigenous communities have followed through generations in order to govern their social, political, and economic life. These laws, hinged on community values, respect for nature, and social harmony, have survived in the face of colonial attempts to supplant them with state-driven legal regimes. Indeed, McNeil posits that recognition of these laws within contemporary legal frameworks is an intrinsic part of Indigenous self-government because such recognition enables these communities to maintain their distinctive cultural identities and conduct their internal affairs in accordance with their traditions.[41]

Land rights are one of the main issues of Indigenous governance. A connection with land for Indigenous Peoples is often regarded as sacral and intrinsic to their cultural identity. Anaya notes that Indigenous Peoples' rights to their lands and resources are supported by both international human rights laws and historical precedents, recognizing that their relationship to the land is fundamental for their continued existence as distinct peoples.[42] Many Indigenous communities have been dispossessed of their lands due to colonization, state policies, and development initiatives. Land rights feature, therefore, high on the list of Indigenous claims before the law since they are about the protection of cultural integrity and autonomy. Claims of rights to land are not only material but also symbolic, representing the spiritual, cultural, and social well-being of Indigenous Peoples.[43]

Besides, Indigenous legal pluralism is concerned with the coexistence of Indigenous legal systems alongside State’s legal frameworks. This concept recognizes that Indigenous Peoples often navigate multiple legal systems namely, State law and

---

[40] The UN Declaration on the Rights of Indigenous Peoples 2007 (A/RES/61/295).

[41] Benjamin J Richardson, Shin Imai and Kent McNeil (eds), *Indigenous Peoples and the Law: Comparative and Critical Perspectives* (Hart 2009).

[42] Anaya (n 32).

[43] D Simmons, *Indigenous Land Rights: A Global Perspective* (Earthscan 2012).

their own customary laws, and advocates for mechanisms that allow these systems to function in parallel. This approach aims to enable Indigenous Peoples to govern themselves according to their traditions while also engaging with the State legal system, thereby fostering a more inclusive and holistic legal structure.[44]

Finally, there is the restorative justice approach in Indigenous legal philosophy. The approach dwells on healing, reconciliation, and restoration of harm rather than punishment. Restorative approaches in conflict resolution take center stage in Indigenous legal systems, with restoration of relations to the community and the environment being the key issues. This is contrary to punitive Western systems and was considered a more culturally relevant and effective way to address wrongs in Indigenous societies.[45]

4.1 Justification behind the Recognition of Diverse Identities in Law and Governance System

The denial of land rights to the Adibashis (Indigenous Peoples) of Bangladesh has deep historical roots and remains a pressing issue. Land dispossession among Indigenous communities in the plains appears even more pervasive than in the Chittagong Hill Tracts. Over time, successive land laws included provisions meant to protect 'tribal' land. However, these provisions were rarely enforced to benefit minorities, particularly Indigenous Peoples, leaving them vulnerable to continued land alienation.[46]

The existing legislation in Bangladesh does little to recognize or protect the rights of Indigenous Peoples, especially those in the plains. This lack of legal protection has left their socio-economic marginalization largely unaddressed, while land grabbing by influential members of the mainstream population remains rampant. Policies intended to safeguard their traditional land rights are inadequate, and these rights are frequently disregarded.[47] According to Barkat, an estimated 202,164 acres of land

---

44 D Natcher and C Hichey, 'Indigenous Legal Pluralism: A Framework for Understanding Indigenous Legal Systems' (2017) 32 Canadian Journal of Law and Society 387.

45 Carol A Hand, Judith Hankes and Toni House, 'Restorative Justice: The Indigenous Justice System' (2012) 15 Contemporary Justice Review 449 <https://doi.org/10.1080/10282580.2012.734576> accessed 28 July 2025.

46 Abul Barkat and others, *Life and Land of Adibashis: Land Dispossession and Alienation of Adibashis in the Plain Districts of Bangladesh* (Pathak Shamabesh 2009).

47 N Uddyog and A Hossain, *Land and Human Rights Situation of Indigenous Peoples of the Plain Land in Bangladesh* (Nagorik Uddyog 2023).

have been taken from plain land Indigenous groups such as the Dalu, Garo, Hajong, Khasi, Mahato, Oraon, Patro, Pahan, Rakhain, and Santal.[48]

This persistent marginalization is exacerbated by a combination of factors, including bureaucratic complexities, Indigenous Peoples' limited understanding of land ownership processes, political manipulation, majority-minority tensions, and language barriers. These challenges have significantly impacted these communities, restricting their access to land and contributing to poverty, social hardships, and political disenfranchisement. For example, in Dinajpur district, Santal people were evicted under 'social forestry' programs, leading many to migrate to India due to insecurity. Such violations of both human and land rights have been a recurring reality for plain land Indigenous Peoples.

Indigenous leaders, organizations such as the Jatiya Adivasi Forum, and civil society have consistently advocated for measures to prevent repression and protect their rights. Key demands include the establishment of a separate land commission to resolve longstanding disputes and safeguard land ownership. Despite these efforts, around 90% of Indigenous populations outside the CHT have become landless since Bangladesh's independence.[49]

5. Major findings of the Study

5.1 Customary Practices

Customary systems of governance among plain land Indigenous communities in Bangladesh demonstrate a heavy reliance on consensus-based and elder-led decision-making processes. Approximately 30% of respondents stated that decisions in their communities are made through consensus, reflecting the collective and participatory nature of their traditional governance. A more significant portion, 50%, indicated that elders or community leaders play a central role in decision-making. This reliance on elder-led decisions underscores the high regard for experience, wisdom, and authority within Indigenous cultures. In contrast, formal governance systems are predominantly bureaucratic and hierarchical, focusing on centralized decision-making processes that often overlook the participatory and inclusive traditions valued by these communities.

The divergence between customary and formal decision-making systems contributes to strained relationships with formal governance. As highlighted in the survey, 30%

---

[48] Barkat and others (n 47).
[49] Uddyog and Hossain (n 48).

of respondents described their relationship with formal governance systems as conflicted. This tension arises from the limited consultation mechanisms available to integrate Indigenous perspectives into state-led decision-making. Participatory governance models that bridge this gap could enhance trust and cooperation between the two systems, ensuring that traditional values and practices are respected while aligning with formal governance goals.

Dispute resolution in these communities similarly reflects the values of restorative justice, with 50% of respondents favoring mediation by elders. This approach prioritizes reconciliation, communal harmony, and long-term relationships, differing fundamentally from the punitive measures often employed in formal legal systems. Another 30% of respondents rely on community discussions to resolve disputes, further highlighting the collective nature of Indigenous conflict resolution. Only 15% use formal courts, underscoring the limited accessibility and cultural misalignment of state judicial mechanisms for these communities. The preference for traditional methods reveals a critical need to incorporate restorative justice principles within formal systems to create culturally appropriate legal solutions.

The survey findings indicate that a significant majority (65%) of respondents continue to adhere to customary laws to govern land rights. These laws are deeply rooted in their cultural and historical practices, reflecting the collective wisdom of the community and a sustainable approach to managing communal resources. However, 20% of respondents reported exclusive reliance on formal systems, which may indicate a shift towards modernization or a response to external pressures such as urbanization or land disputes. Additionally, 15% stated they follow a hybrid approach, balancing both customary and formal laws based on the context.

Despite the strong adherence to customary practices, a mere 10% of respondents feel that their customary laws are 'fully recognized' by the state. This lack of acknowledgment creates significant challenges, including legal ambiguities, limited enforcement of traditional rights, and marginalization of Indigenous governance structures. Furthermore, partial recognition (50%) or complete non-recognition (40%) by the state highlights a critical misalignment between Indigenous governance and formal systems. This gap undermines the efficacy of traditional governance and contributes to the erosion of Indigenous identity and authority.

Table 1: How decisions are traditionally made in your community?

Decision-Making Method	Count	Percentage (%)
By consensus	30	30%
By elders/leaders	50	50%
By voting	15	15%
Other	5	5%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

Table 2: Does your community follow customary laws for land, family, or resource matters?

Response	Count	Percentage (%)
Yes	65	65%
No	20	20%
Partially	15	15%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

Table 3: How are disputes resolved in your community?

Dispute Resolution Method	Count	Percentage (%)
Mediation by elders	50	50%
Community discussion	30	30%
Referral to formal courts	15	15%
Other	5	5%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

5.2 Formal Governance

The study results reveal that 65% of respondents are aware of government laws affecting their rights, particularly regarding land and resource governance. However, a significant 35% of respondents lack this awareness, which creates a notable gap in their ability to navigate formal governance systems effectively. This knowledge disparity is further compounded by the low education levels prevalent in these communities. Limited awareness and education hinder their capacity to assert legal claims or understand formal governance processes, leaving them vulnerable to exploitation, marginalization, and displacement.

The lack of awareness poses significant challenges, as individuals who are uninformed about the legal structures that govern their rights are less likely to effectively assert or protect those rights in the face of disputes or encroachments. The disparity in awareness can be attributed to factors such as geographical isolation, limited access to formal education, language barriers, and a lack of targeted legal outreach programs tailored to Indigenous populations. Additionally, the historical marginalization of these communities may have contributed to their exclusion from mainstream legal and political discourse.

The implications of these findings are profound. Without adequate knowledge of government laws, community members are at a higher risk of exploitation, displacement, or losing access to ancestral lands and resources. This gap also weakens their ability to engage with formal governance systems, participate in decision-making processes, and advocate for their interests effectively. To address this issue, there is an urgent need for targeted interventions, including community-centered legal education programs, accessible information dissemination in local languages, and the establishment of support networks that empower Indigenous individuals to navigate legal systems. By bridging this knowledge gap, these communities can be better equipped to protect their rights and contribute to sustainable governance practices.

Table 4: Are you aware of government laws affecting your community and land rights?

Response	Count	Percentage (%)
Yes	65	65%
No	35	35%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

Table 5: Have you faced conflicts between customary practices and formal laws regarding land or resources?

Response	Count	Percentage (%)
Yes	50	50%
No	50	50%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

Table 6: How would you describe your relationship with formal governance systems?

Relationship Type	Count	Percentage (%)
Cooperative	40	40%
Neutral	30	30%
Conflicted	30	30%
Total	100	100%

This even split reflects the nuanced interplay between Indigenous traditions and state-imposed legal frameworks, with some communities managing to align the two systems successfully, while others encounter significant challenges. The presence of conflicts underscores the lack of adequate recognition and integration of customary practices within the formal legal framework. In cases where formal laws disregard or override traditional practices, Indigenous communities are left with little recourse, exacerbating feelings of marginalization and injustice. Conversely, the absence of conflicts in some cases suggests that collaborative mechanisms or localized adaptations of governance systems may be in place, allowing these communities to navigate both systems harmoniously.

To address these issues, policymakers must prioritize creating spaces for dialogue and collaboration between traditional leaders and formal governance representatives. Legislative reforms are needed to formally recognize and protect customary practices, particularly in areas such as land tenure and resource management. Additionally, hybrid governance models that blend the strengths of both systems can offer a sustainable solution. Such models might involve joint decision-making bodies, mediation mechanisms that include traditional leaders, and dual land registration systems that honor both customary and formal claims. By fostering mutual respect and understanding, these efforts can help reduce conflicts and create a more equitable governance landscape for Indigenous communities.

5.3 Challenges for Recognition

The recognition of customary laws by the state remains a critical issue for Indigenous communities in Bangladesh. Only 10% of respondents feel that their customary laws are fully recognized, while 50% report partial recognition and 40% feel entirely unrecognized. This lack of acknowledgment underscores the systemic marginalization of Indigenous governance systems and is a significant factor contributing to the conflicted relationships (30%) with formal governance structures. The limited or absence of recognition of these laws undermines the authority of customary systems, leaving communities vulnerable to exclusion and legal uncertainties.

The partial or non-recognition of customary laws directly exacerbates challenges such as land disputes and cultural erosion. As shown in Table 8, 45% of respondents identified land disputes as the most pressing issue, arising largely from the failure of the formal system to acknowledge communal land ownership—a cornerstone of customary governance. Similarly, cultural erosion, reported by 25% of respondents, is aggravated by the lack of formal mechanisms to preserve Indigenous traditions and practices. These findings emphasize the urgent need for legislative reforms to integrate customary laws into the formal legal framework. Recognizing these laws can protect communal land rights, reduce conflicts, and support the preservation of Indigenous cultural heritage.

The challenges faced by plain land Indigenous communities reflect the broader implications of the state's failure to adequately recognize and integrate customary practices. Land disputes, cited by 45% of respondents, stand out as the most significant issue. These disputes often stem from the incompatibility between communal land ownership under customary systems and the individual ownership emphasized by formal legal frameworks. The lack of legal recognition of communal land claims leaves Indigenous communities vulnerable to encroachments, evictions, and resource exploitation.

Table 7: Do you feel that your community's customary laws are recognized by the state?

Recognition Level	Count	Percentage (%)
Fully	10	10%
Partially	50	50%
Not at all	40	40%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

Table 8: What challenges does your community face due to lack of recognition by the state?

Challenge	Count	Percentage (%)
Land disputes	45	45%
Limited resources	20	20%
Cultural erosion	25	25%
Other	10	10%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

5.4 Opportunities for Coherence

The study reveals strong support (60%) among respondents for a hybrid governance system that combines customary and formal governance mechanisms. This majority reflects a willingness within Indigenous communities to embrace a model that respects their traditions while benefiting from the protections and opportunities offered by formal systems. The hybrid approach is seen as a potential solution to the persistent conflicts and gaps between the two governance systems, especially in areas such as land management, resource allocation, and conflict resolution.

Effective implementation of hybrid governance will require collaborative efforts to ensure that it is designed and executed in a way that honors Indigenous values and addresses community-specific needs. Pilot programs that demonstrate tangible benefits, such as improved land dispute resolution or enhanced cultural preservation, can help build confidence in this approach. Moreover, involving Indigenous leaders and community members in the co-creation of hybrid governance structures can foster ownership and trust, making the system more acceptable and effective.

Table 9: Would you support a hybrid governance system combining both customary laws and formal governance systems?

Response	Count	Percentage (%)
Yes	60	60%
No	25	25%
Unsure	15	15%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

A significant 60% of respondents expressed support for a hybrid governance system that integrates customary laws with formal governance structures. This strong majority indicates a willingness among Indigenous communities to embrace a model that respects their traditions while benefiting from the protections and opportunities provided by formal systems. However, 25% opposed such a system, possibly reflecting skepticism or mistrust of state institutions based on historical injustices or concerns about the dilution of their traditions.

Another 15% were 'unsure', highlighting the need for further dialogue and education to address uncertainties and build consensus around the concept of hybrid governance. Successful implementation of such a system would require careful design, ensuring that it respects Indigenous autonomy, provides equal representation, and addresses the specific needs and aspirations of each community. Pilot programs and participatory governance models could demonstrate the viability of hybrid systems and foster trust between stakeholders.

Table 10: What should the government do to better include Indigenous perspectives in formal governance systems?

Recommendation	Count	Percentage (%)
Legal recognition of customary laws	40	40%
Representation in decision-making bodies	35	35%
Capacity building for communities & govt.	20	20%
Other	5	5%
Total	100	100%

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

5.5 *Challenges in Coherence between Customary Practices and Formal Governance*

The interaction between customary practices and formal governance systems presents a complex landscape marked by overlapping jurisdictions, contrasting philosophies, and systemic challenges. Indigenous communities often operate within a framework rooted in ancestral traditions, communal decision-making, and restorative justice, while state-led governance systems rely on hierarchical authority, bureaucratic processes, and punitive legal frameworks. The coexistence of these two systems creates significant challenges that can hinder the effective governance of Indigenous populations and the recognition of their rights. Below, we examine key aspects of this dynamic and explore potential opportunities for creating coherence between these governance models.

Table 11: Challenges in Coherence between Customary Practices and Formal Governance

Aspect	Customary Practices	Formal Governance Systems	Challenges
Authority Structure	Tribal chiefs, elders, or councils (e.g., Karbari).	State-led governance structures and judicial institutions.	Overlapping jurisdictions and lack of mutual recognition.
Decision-Making	Consensus-based and participatory.	Bureaucratic and hierarchical.	Limited consultation mechanisms for integrating Indigenous voices.
Conflict Resolution	Informal, restorative justice systems.	Punitive measures under formal legal	Lack of mechanisms to blend restorative and

		systems.	punitive approaches.
Land Ownership	Communal ownership rooted in ancestral claims.	State laws based on individual land ownership.	Frequent disputes and forced displacement.
Cultural Preservation	Embedded in rituals, languages, and traditional knowledge.	Recognized sporadically in policies.	Policies often fail to account for Indigenous cultural norms.

Source: Author's Research Report funded by the Research Center, Jagannath University, entitled "Legal Status of Plain Land Indigenous Peoples in Bangladesh: Coherence between Customary Practices and Formal Governance System.", Research Tenure 2022-2023.

6. Avenues for achieving Coherence between Customary Practices and Formal Governance Systems

Despite the numerous challenges faced by plain land Indigenous Peoples in Bangladesh, there are significant opportunities to bridge the gap between customary practices and formal governance systems. These opportunities emphasize the potential for creating a more inclusive, equitable, and sustainable governance framework that respects Indigenous traditions while aligning with national and international legal standards. The following strategies outline detailed pathways for achieving coherence.

6.1 Legislative Integration: Formal Recognition of Customary Laws

Legislative reform is a critical first step toward integrating customary practices with formal governance systems. Enacting laws that formally recognize and protect Indigenous customs, traditions, and governance systems would address the systemic exclusion and marginalization faced by these communities. For instance, recognizing communal land ownership systems, which are central to Indigenous governance, would ensure that traditional practices are given the same legitimacy as formal legal frameworks. These reforms could include:

1. **Amendments to the Constitution**: Explicit provisions recognizing the legal status of Indigenous customary laws in governance, land rights, and cultural preservation.
2. **National Indigenous Peoples Act**: A comprehensive law that establishes legal mechanisms for protecting Indigenous rights, integrating customary laws into formal systems, and ensuring enforcement.

3. **Regional Customary Law Ordinances**: Context-specific laws tailored to the needs and practices of different Indigenous groups, such as the Khasi, Santal, Oraon, and Garo communities.

*6.2 **2. Participatory Governance: Creating Collaborative Platforms***

Participatory governance emphasizes the involvement of Indigenous communities in decision-making processes at local, regional, and national levels. Establishing platforms where customary leaders and government representatives collaborate on governance issues can foster mutual trust and improve service delivery. Participatory governance enhances accountability, ensures that policies are culturally sensitive, and empowers Indigenous communities to take an active role in shaping their future. It also helps bridge the trust deficit that often exists between Indigenous Peoples and formal governance institutions. These platforms could take several forms:

- **Advisory Councils**: Indigenous advisory councils at local and national levels can provide recommendations on policies affecting Indigenous communities.
- **Joint Decision-Making Committees**: Committees comprising customary leaders and government officials can oversee resource allocation, development planning, and conflict resolution.
- **Community-Government Forums**: Regular forums where community members, leaders, and government actors can discuss issues, share insights, and propose solutions.

6.3 Capacity Building: Empowering Indigenous Leaders

Capacity-building initiatives aimed at Indigenous leaders can equip them with the skills and knowledge required to navigate formal governance systems. Training programs could include:

- **Legal Literacy Workshops**: Educating Indigenous leaders about national laws, constitutional provisions, and international human rights standards.
- **Leadership and Advocacy Training**: Building the capacity of leaders to advocate for community rights and engage in policy dialogues.
- **Conflict Resolution Skills**: Enhancing the ability of leaders to mediate disputes both within their communities and with external actors.

6.4 ***Cultural Sensitivity Training for Government Officials***:

Equally important is the training of government officials to understand and respect the cultural practices and governance systems of Indigenous communities. This can include:

- **Workshops on Indigenous Traditions**: Familiarizing officials with the cultural, social, and legal practices of Indigenous groups.
- **Incorporating Indigenous Experts**: Employing Indigenous scholars and practitioners to co-design and deliver training programs.
- **Ongoing Sensitization Programs**: Regular sessions to reinforce the importance of cultural sensitivity and inclusive governance.

6.5 *Hybrid Governance Models*

Hybrid governance models offer a practical solution to bridging the gap between customary and formal governance systems. These models integrate the strengths of both systems, allowing for tailored approaches to specific governance functions. Below are examples of how hybrid systems can be designed and implemented:

1. **Land Management:**

- **Customary Role**: Indigenous communities allocate land based on traditional practices and communal ownership.
- **Formal Role**: The state provides legal registration and enforcement mechanisms to protect land rights.
- **Proposed Hybrid Approach**: Implement dual registration systems that respect both customary claims and formal legal requirements. Customary leaders can work with land registries to document and formalize communal land ownership.

2. **Conflict Resolution:**

- **Customary Role**: Elders mediate disputes within the community using restorative justice principles.
- **Formal Role**: Judicial courts resolve disputes requiring legal enforcement or involving external parties.
- **Proposed Hybrid Approach**: Establish local courts or mediation centers where customary leaders and formal judges collaborate to resolve disputes.

This approach ensures that Indigenous values are upheld while providing access to state enforcement mechanisms when needed.

3. **Resource Allocation:**

- **Customary Role**: Communities decide on the use of natural resources based on collective priorities and traditional practices.
- **Formal Role**: State policies regulate resource distribution to ensure equity and sustainability.
- **Proposed Hybrid Approach**: Create joint resource management committees comprising customary leaders, government officials, and technical experts to plan and oversee resource use.

4. **Cultural Preservation:**

- **Customary Role**: Communities maintain traditions, languages, and rituals through everyday practices and community events.
- **Formal Role**: The state provides funding and institutional support for cultural programs.
- **Proposed Hybrid Approach**: Integrate Indigenous culture into national education curricula, media initiatives, and cultural festivals. Provide grants and scholarships for Indigenous cultural practitioners and researchers.

The opportunities for creating coherence between customary practices and formal governance systems are both numerous and achievable. Legislative integration, participatory governance, capacity building, and hybrid models represent actionable pathways to address the challenges faced by plain land Indigenous communities in Bangladesh. By leveraging these strategies, policymakers can create a governance framework that respects Indigenous traditions, promotes cultural preservation, and ensures equitable access to resources and decision-making processes. Ultimately, these efforts will contribute to a more inclusive and harmonious society, where the rights and contributions of all citizens are recognized and valued. Achieving this goal is not only a matter of justice but also an essential step toward national development and social harmony.

7. Conclusion

The plain land Indigenous Peoples of Bangladesh stand at the crossroads of tradition and modernity. While their customary practices offer valuable insights into sustainable governance and community resilience, the lack of formal recognition and integration into state systems poses significant challenges. Therefore, this study emphasized the importance of formal acknowledgment and integration of customary laws into the state's legal framework. Because, without recognition, these laws remain vulnerable to being overridden by formal systems, particularly in matters such as land disputes and resource management. Strengthening the legal status of customary laws could not only preserve the cultural identity of Indigenous communities but also enhance the coherence and functionality of governance systems. By addressing these issues through legal reforms, education, and participatory governance, Bangladesh can pave the way for a more inclusive and equitable society. Besides, Hybrid governance models, which incorporate traditional dispute resolution and decision-making processes, also offer a viable pathway to achieving this integration and ensuring that Indigenous voices are respected and valued in formal governance. Thus, by embracing the diversity and richness of its Indigenous heritage, Bangladesh can build a future that respects and celebrates the contributions of all her citizens.

Safeguarding the Submarine Cables and Pipelines under the International Legal Framework in Times of Peace: Examining the Adequacy and Effectiveness of the Existing Protection Regime

Ahmed Ehsanul Kabir[1]
Shuvra Chowdhury[2]

Abstract: The submarine infrastructure, such as pipelines and data cables, are vital in the age of digital connectivity. Submarine data cables ensure essential communication across the world, on the other hand, pipelines carry energy resources. The estimation shows that 1.4 million kilometers web of submarine cables are in existence throughout the world. Over the past few years, the incidents of damages to submarine cables and pipelines have been increased by anchor-dragging and intentional harm i.e. use of explosives. To protect the submarine pipelines and cables beyond the national jurisdiction such as exclusive economic zone (EEZ) and high seas, international cooperation is required. With a view to address this matter, the first international convention was adopted in 1884 namely, the Convention of Submarine Telegraph Cables (the Submarine Cables Convention) which is still in operation. In addition to this convention, the United Nations Convention on the Law of the Sea (UNCLOS), 1982 also enshrines many provisions protecting submarine pipelines and cables. By examining the existing legal framework, this article tries to give an overview why the present protection regime is not adequate enough to resolve the disputes concerning the submarine pipelines and cables. Moreover, this article delineates the existing provisions of international laws, investigates the gaps and provides recommendations to improve the legal framework regulating the submarine pipelines and cables.

1. Introduction

For the transmission of global communications and transportation of natural gas and crude oil, submarine pipelines and cables play a vital role and accelerate the financial activities throughout the world. Any kind of damage or disruption to submarine cables and pipelines may have far-reaching consequences which include interruption to supply chain, delay in trade, financial loss and threat to national security. Moreover, discontinuation in power supply may cause deprivation of indispensable services to the survival of civilian such as water supply and sufficient heating. However, anchor-dragging leakage or damage in submarine pipelines also

[1] Associate Professor, Department of Law, Jagannath University
[2] Assistant Professor, Department of Law, Stamford University Bangladesh

causing serious detrimental effect on the marine eco-system and environment. From several incidents of the past few years involving damage to submarine pipelines and cables, it is exemplified that the global undersea infrastructures are not fully protected. These incidents highlight the inadequacy of coastal states' authority under international law to take measures against foreign-flagged vessels that have intentionally or negligently damaged this critical submarine infrastructure. The present international legal framework suffers significant lacking to prevent the intentional or negligent damage and disruption to submarine pipelines and cables. This article begins by identifying the several incidents by which the submarine pipelines and cables were damaged during the time of peace. Then, it advances by analyzing the international legal provisions applicable for the protection of submarine pipelines and cables in areas under full national jurisdiction i.e. territorial sea and beyond the full national jurisdiction i.e. exclusive economic zone (EEZ), continental shelf (CS), high seas (HS). On the basis of the analysis, this article will find out the security gaps and explore the pathways for improving the existing international legal framework concerning the submarine pipelines and cables.

2. Incidents of damages to submarine pipelines and cables

The submarine infrastructure includes the high-speed data cables and underwater pipelines which ensure the essential internet connectivity and the energy supply throughout the world. The total length of the web of submarine cables are estimated as 1.4 million kilometers.[3] This skeleton line of global economy becomes the target of attacks and forms 'a new front line'.[4] The vulnerability of the global undersea infrastructure is evident from several incidents over the last few years involving damage to submarine pipelines and cables. These incidents further highlight the inadequacy of coastal state's authority under international law to initiate measures against foreign-flagged vessels that have internationally or negligently damaged the critical submarine infrastructure beyond the territorial sea.

2.1 Incident A: The Nord Stream 1 & 2 pipeline explosions

In the Baltic Sea on September 2022, underwater explosions caused the destruction of the sections of the Nord Stream 1 & 2 gas pipelines which established connection between Russia and Germany. Swedish and Danish investigators confirmed that the

---

[3] TeleGeogrphy, Submarine Cable Frequently Asked Questions, submarine cable FAQs <telegeography.com> accessed on

[4] Heiko Meiertons, Seabed Warfare: The Protection of Submarine Cables under International Law, Grey Zone Aggression and Sea-Blindness, Volkerrechtsblog.24.01.2025

damage was caused deliberately using explosives, not by technical failure or accident. The pipelines were a core part of Europe's energy infrastructure. Their destruction immediately reshaped European energy markets and forced governments to accelerate diversification at significant cost.[5] Three Russian naval vessels, including the tugboat *SB-123* were in the vicinity a few days prior to the explosion though Russia has denied Western accusations that it sabotaged the pipelines.[6]

2.2 *Incident B: Power and Telecom Cable Disruptions in the Baltic Sea (Finland-Estonia Cables)*

The *Estlink 2* submarine electricity cable which connected the Finland and Estonia suddenly failed on 25 December 2024 which sharply reducing cross-border power transmission. On the same day, multiple telecommunications cables in the same maritime area were damaged. Finnish authorities investigated the incident and found that a crude oil tanker the *Eagle S* bearing the Cook Islands' flag, allegedly disrupted the two fiber-optic cables between Finland and Estonia by dragging its anchor over the seabed for about 90 km. The Finnish authorities seized the vessel and sailed to an anchorage in *Porvoo*, 25 km. east side of Helsinki. Finland's National Bureau of Investigations (NBI) announced that the ship's captain and first officer have been charged with 'endangering' the safety of maritime traffic' and 'damaging infrastructure'. Key evidence suggests the vessel used suspicious navigation patterns including turning off its tracking system near the incident site.[7]

2.3 *Incident C: Coordinated Data Cable Cuts Linking Northern and Central Europe (Mid Baltic Incidents)*

Two major submarine fiber-optic cables were disrupted almost simultaneously on November 17 and 18, 2024, one connecting Germany and Finland (*C-Lion I*) the other linking Lithuania and Sweden (*BCS East-West Interlink*). These cables carry internet traffic, financial data and government communications between Northern and Central Europe. The incident was taken place in the EEZ of Sweden. On November

---

[5] Bajram Geci, Sabotage of Critical Infrastructure Is the EU's Top Security Threat in 2026, <http://medium.com/@B. Geci/sabotage-of-critical-infrastructure-is-the-eus-top-security-threat-in-2026-740if22b532d > accessed on 05 May 2026

[6] Raul (Pete) Pedrozo, Safeguarding Submarine Cables and Pipelines in Times of Peace and War, 106 Int'l L. Stud. 45 (2025) p. 2025

[7] Winston Qiu, Finland Charges Russia-Linked Ship Officers over Baltic Sea Cable Sabotage, <http://www.submarinenetworks.com/en/nv/insights/finaland-charges-russian-linked-ship-officers-over-baltic-sea-cable-sabotage > accessed 05 May 2026

15, the damage was caused by the bulk carrier of China *Yi Peng 3* sailing from *Ust-Luga*-the Russian Port and which was operating in the area where the damage occurred.[8]

2.4 Incident D: Leak in the Baltic Connector Pipeline

On 7-8 October, 2025, the Baltic-connector pipeline, which links Finland and Estonia, was shut down after a drop-in pressure and leak were discovered. Both Finland and Estonia investigated the incident, but the cause of the leak has not been determined. In August, 2024, Beijing admitted that the Hong-Kong-flagged ship, *NewNew Polar Bear*, had accidently caused the damage and in May 2025, the Captain of the ship was taken in the custody in Hong Kong.[9]

2.5 Incident E: Sweden-Latvia Cable Damage

The communication cable between Sweden and Latvia in the Baltic sea was damaged on 26 January, 2025. Swedish authorities seized the Maltese-flagged bulk vessel *Vezhen* on suspicion of gross sabotage. After investigation it becomes clear that due to bad weather, the rapture was caused by the dragging anchor of the Maltese-flagged cargo ship *Vezhen* during a severe Baltic storm. Swedish prosecutors officially closed the investigation in October, 2025 finding no evidence of sabotage or malicious intent.[10]

3. International Legal Framework on the Protection of Submarine Infrastructure

There are two treaties to be considered for the protection of the submarine cables and pipelines: the Submarine Cables Convention, 1884 and the UNCLOS, 1982. The Submarine Cable Convention is applicable to the protection of telegraph cables on the seabed of the EEZ and the HS. On the other hand, the UNCLOS is applicable to submarine pipelines and cables laid on the territorial sea (TS), EEZ, CS and HS. So, the international legal framework has been discussed below by considering the provisions applicable to submarine pipelines and cables in areas beyond and within full national jurisdiction.

---

8 Ibid

9 Ibid

10 Katherine Buchholz, Baltic Sea Cable Incidents Pile Up, <http://www.statista.com/chart/33892/damage-to-underwater-cables-and-piplelines-in-the-baltic-sea/?srsltid=AfmBOopeG5ATs9Rx2GCo.U1mDnW> accessed 05 May 2026

3.1 Protection of submarine infrastructure in areas under full national jurisdiction:

The territorial sea is under the full jurisdiction of the coastal state[11] and the marine vessels of all states, including land-locked or coastal shall have the right to exercise the innocent passage through the TS[12]unless such passage is pre-judicial to the security, peace or good order of the coastal state.[13] Moreover, the coastal states will have the right to promulgate regulations or laws to protect the pipelines and cables in the TS in consistent with the provisions of the international law and UNCLOS.[14] Art. 25 of the UNCLOS confers the authority on the coastal sate to initiate essential measures in its TS to prevent activities which are not innocent. Despite the right to suspend the passage temporarily[15], the UNCLOS is not clear about exact steps which the coastal state could take to ensure protection of the submarine infrastructure in its TS.

Besides, in case of non-compliance by warship, the coastal state may ask the vessel to leave the TS immediately[16]. If the foreign vessel in territorial sea engage in spying or cutting cables, the navy or coast-guard of the coastal state can escort the vessel out of the TS.[17] As the UNCLOS empowers the coastal state to incorporate regulations and laws for the safeguard of pipelines and submarine cables, some states have enacted laws and declared 'protected areas' for the enhancement of the safeguard of submarine pipelines and cables.[18]

3.2 Protection of submarine infrastructure in areas beyond full national jurisdiction:

The coastal state has limited sovereign rights in the EEZ and must respect the rights and freedoms of other states.[19]In the EEZ, all states including land-locked or coastal, exercise the freedoms of overflight and navigation and of the laid down of

---

11 The United Nations Convention on the Law of the Sea (UNCLOS), 1982 <http://www.un.org/depts/los/convention-agreement/texts/unclos/part7.htm> accessed 05 May 2026, art 3

12 Ibid, art 17

13 Ibid, art 19(1)

14 Ibid, art 21(1)(c)

15 Ibid, art 25(3)

16 Ibid, art 30

17 Daniel Hernandez-Benito, 'Damage to Submarine Cables and Pipelines in Times of Peace and War: The Nord Stream Sabotage' [2024] Amsterdam Law Forum, vol 16, issue 1, 12

18 For example, in New Zealand, submarine cables and pipelines are strictly protected under the Submarine Cables and Pipelines Protection Act, 1996. Anchoring, fishing, trawling, dredging in designated Cable Protection Zone (CPZs) – such as Cook Strait or the Hauraki Gulf – is illegal and carries heavy fines, gear seizure or vessel forfeiture MS 526 Submarine Cables and Pipelines Guidance – Maritime NZ, <http://www.maritimenez.govt.nz> accessed 05 May 2026

19 Daniel Hernandez-Benito (n 15)

submarine pipelines and cables and other internationally approved useful purposes of the sea related to such freedoms, i.e. those connected with the operation of aircraft, submarine and ships pipelines and cables and in compliance with the other articles of the UNCLOS.[20] The other states have obligations to give due importance to the sovereign rights and jurisdictions of the coastal state in the EEZ which was reiterated by the International Court of Justice (ICJ) in *Nicaragua v Colombia*[21]. In this case, the Colombian naval vessel was exercising control over fishing activities in the EEZ of Nicaragua.

On the CS, submarine pipelines and cables can be laid down by all sates[22]. The coastal state cannot create any impediment to the proper maintenance or laying of submarine pipelines or cables on the CS but it can take appropriate steps to explore the CS, to exploit the natural resources and the control, reduction and prevention of pollution from pipelines[23]. The laying of pipelines and submarine cables on the CS is pursuant to the assent of the coastal state.[24] At the time of laid down of submarine pipelines or cables, states must take into consideration of the existing pipelines and cables, particularly, the options of repairing existing pipelines and cables must not be hindered.[25] The coastal state has right to impose conditions for pipelines or cables entering its territory or TS, or its jurisdiction over pipelines and cables construed or used related to the exploration of its CS or resources exploitation or the operations of structures, installations and islands artificially established under its jurisdiction.[26]

All states whether land-locked or coastal can exercise the right of navigation on the HS[27] and they have freedom to lay down submarine pipelines and cables[28]. The freedom to lay down submarine pipelines and cables must be exercised by all states considering the rights and interests of other states in their enjoyment of the freedom of the HS and also duly considering the rights under the UNCLOS regarding the activities in the area.[29]

---

[20] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 58

[21] Alleged violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (*Nicaragua v Colombia)* (2022), Judgment, ICJ Rep. 266, paras 53 an 54

[22] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 79(1)

[23] Ibid, art 79(2)

[24] Ibid, art 79(3)

[25] Ibid, art 79(5)

[26] Ibid, art 79(4)

[27] Ibid, art 87(1)

[28] Ibid, art 87(1)(c)

[29] Ibid, art 87(2)

The Submarine Cables Convention, 1884 was the first international agreement to provide protection for submarine cables[30]. This convention is applicable to cables laid on the seabed of the EEZ and HS outside the TS[31]. It is an offence to injure or break a submarine cable through willful or negligent manners that result in a partial or total obstruction or interruption of telegraphic communication[32]. This rule does not available to cases where those who injure or break a cable does so with the legal object of protecting their ships or lives, after every necessary precaution have been taken to avoid so injuring or breaking the cable.[33]

When the commanding officer of a warship or vessel commissioned for this purpose reasonably believe that there is a deviation by a marine vessel under the submarine cable convention then commissioned ship can ask for and examine the papers regarding the nationality of the ship.[34] The violation of the Convention are prosecuted by the domestic courts of the flag state.[35] To facilitate criminal prosecution, the parties are required to adopt legislation implementing the penalty rules of the cable convention.[36] There is only known incident in which a foreign ship was visited by a signatory party to the Cable Convention in 1959 during the Cold War. When a US warship (*USS Roy O. Hale*) boarded a suspected soviet trawler (*Novorossiik*) due to cut in cables in the vicinity of all cable breaks. The government of the USA asked the Russia to prosecute the vessel if she found to be guilty.[37] This convention is binding upon only thirty-seven states as of today which actually made the convention applicable to limited number of member states and left many states outside the ambit of the convention. The nomenclature of the convention indicates that is applies to submarine telegraphic cables whereas most of the submarine cable are ensuring internet access now-a-days. Consequently, it can be argued that these internet cables are not covered by this Submarine Cables Convention[38].

---

30 Raul (Pete) Pedrozo (n 4)
31 The Submarine Cables Convention, 1884, art I
32 Ibid, art II
33 Ibid, art II
34 Ibid, art X
35 Ibid, art VIII
36 Ibid, art XII
37 US and USSR Exchange Notes on Damage to Submarine Cables, US Dep. of States, 40 Department of State Bulletin 555 (Apr. 20, 1959)
38 Y. Takei, 'Law and Policy for International Submarine Cables: An Asia-Pacific Perspective' Asian Journal of International Law, 2 [2012] 205 (206).

4. Enforcement and prevention measures against the vessels committed damage to submarine pipelines and cables

In response to the apprehended or actual act of detriment to submarine pipelines and cables, the states can take enforcement as well as prevention measures. Enforcement measures include the boarding, inspecting and searching the suspected vessel and when the suspicion becomes proved then arresting the vessel including the persons on board. However, it was observed by International Tribunal on the Law of the Sea (ITLOS) that the term 'enforce' includes quasi-judicial proceedings or judicial, prosecution, investigation, administrative guidance, inspection and monitoring.[39] When a marine vessel commits intentional damage to pipelines and submarine cables during navigation, then the question will arise which state will exercise jurisdiction to prosecute the vessel. In this situation, the UNCLOS refers that the jurisdiction can be applied by the port state, flag state and coastal state.

4.1 Flag State's Jurisdiction

On the HS, flag state will have exclusive jurisdiction on the ship and the ship will navigate under the flag of one state.[40] So, the flag state will have exclusive jurisdiction if the vessel commits willful damage to pipelines and submarine cables. When there is any collision or accident during navigation on the HS, the penal prosecution or disciplinary action can be initiated by the flag state or of the state of which the master or service providing person is a national.[41] It was held in the *Enrica Lexie arbitration*[42] that 'incident of navigation' includes an incident that happens relating to the maneuvering and movement of ship and which is responsible for harm or serious damage to cargo, ships or the persons on board. Willful damage to submarine pipelines and cables could be argued as incident of navigation because it causes harm or serious damage. As a result, the flag state can prosecute the ship commits the damages as authorized by art. 97(3) of the UNCLOS that detention or arrest of the ship, or investigation measure shall be initiated by the flag state.

Moreover, in technical, administrative and social matters over the ships, the flag state must exercise its control and jurisdiction.[43] In addition, art. 113 of the UNCLOS

[39] Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law, ITLOS Case No. 31, 21 May 2024, para 284

[40] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 92

[41] Ibid, art 97(1)

[42] The 'Enrica Lexie' Incident (*Italy v India)* PCA Case No. 2015-28 [21 May 2020] para 526

[43] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 94(1)

obliges states to incorporate regulations and laws essential to render that the injure or breaking by a ship bearing its flag or by a person pursuant to its jurisdiction of a submarine cable under the HS done intentionally or through negligence, in such a way as to be responsible to obstruct or interrupt telephonic communications or telegraphic and in the same way the injury or breaking of a high-voltage power cable or submarine pipelines, shall be an offence.[44] So, the enforcement measures can be taken by the flag states against the ships suspected of willful detriment to submarine pipelines and cables by exercising the exclusive jurisdiction over their own vessels.[45]

Beyond the CS on the bed of the HS, all states are given rights to lay down submarine pipelines and cables.[46] But his entitlement to lay down submarine pipelines and cables should not intervene with the freedom of navigation. It was held in *M/V Norstar*[47] that material or physical intervention in the way of navigation of foreign vessels on the HS violates the navigational freedom. The navigational freedom includes a negative and positive aspects, positive aspect ensures that on the HS navigational freedom can be exercised by all states freely and the negative aspect obliges that at the time of sailing under the flag of another sate no state can apply any authority against such vessel.[48]

As the flag has exclusive jurisdiction to try any intentional damage to pipelines and submarine cables under the UNCLOS, so, non-prosecution on the part of the flag state may amount to abuse of right. Art. 300 of the UNCLOS enshrines that state parties to UNCLOS are obliged to comply with the obligations in good faith under the convention and the freedoms, jurisdiction and rights under the convention shall be applied such a way which would not create the ground of abuse of right.[49] In both the *Baltic-connector pipelines* and *C-Lion I* submarine cable incidents, China as the flag state was unable to take appropriate measure against the *NewNew Polar Bear*, the *Yi Peng 3* and their masters and crews.

4.2 Coastal State's Jurisdiction

In the EEZ, the coastal state has the jurisdiction and right to establish structures, installations and artificial islands. In addition, the coastal state can operate marine

[44] Ibid, art 113

[45] J. Ashley Roach, Danae Azaria and Tara Davenport, Third Interim Report on Submarine Cables and Pipelines under International Law [2024] 16

[46] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 112

[47] The M/V Norstar *(Panama v Italy)* Judgment ITLOS Reports 2018-2019 p. 10 paras 218, 219

[48] The Enrica Lexie Incident *(Italy v India),* PCA Case No. 2015-28, 21 May 2020, para 526

[49] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 300

scientific research and preserve and protect the maritime environment in the EEZ.[50] At the time of exercising the sovereign rights to conserve, manage, exploit and explore, the coastal state can initiate such steps i.e. judicial proceedings, arrest, inspection, boarding in consistent with the rules and laws of the coastal state incorporated in compliance with the UNCLOS.[51] After furnishing the rational bond or security, the captured ships and their crews shall be discharged promptly.[52] In the EEZ, for breach of fishery regulations and laws, the coastal state may impose punishment which will not include imprisonment.[53] In cases of detention or arrest of foreign ships, it is the responsibility of the coastal state to inform the flag state urgently, through regular channels.[54] It was held that the Arctic Sunrise Arbitration[55] that in the EEZ, the coastal state's protection of interests and rights encompasses the prevention of environmental damages, the prevention of terrorist activities, the prevention of intervention in the sovereign rights of exploitation and exploration of non-living and living resources. In case of terrorist attack, if the coastal state reasonably believes that the ship has been engaged in a terrorist attack on a structure or installation of the coastal sate, it may initiate necessary preventive step against the ship. In order to prevent the intervention in the exercise of sovereign rights, the coastal sate can adopt appropriate actions and such actions must comply with the tests of proportionality, necessity and reasonableness. The following acts will form a penetration of coastal state's sovereign rights, such as breaches of its regulations incorporated in compliance with the convention, severe situations that can result in damage to installations and equipment, injuries to persons, adverse environmental impacts, interruptions in navigational operations.[56]

Beyond the TS, the coastal state has the jurisdiction and right to enforce and take actions proportionally taking into consideration the threatened or actual damage with a view to save the coastline, fishing interests, pollution from maritime casualty or casualties which may have detrimental consequences.[57] The hot pursuit can be exercised by the coastal state in cases of violations of regulations and laws of the coastal state in the EEZ and CS subject to the condition that there is a reason to

[50] Ibid, art 56(1)(b)
[51] Ibid, art 73(1)
[52] Ibid, art 73(2)
[53] Ibid, art 73(3)
[54] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 73(4)
[55] The Arctic Sunrise Arbitration (*The Kingdom of the Netherlands v the Russian Federation*) Awarded on the Merits, PCA Case No. 2014-02 [14 August 2015] para 36
[56] Ibid, p. 327
[57] The United Nations Convention on the Law of the Sea (UNCLOS), 1982, art 221

believe that the vessel is involved in it.[58] When the passage is not innocent, the coastal state may initiate essential actions in its TS.[59] If there is any damage to the submarine pipelines and cables which form part of the system of communication of the coastal state, consequently it will make the passage non-innocent.[60] In order to protect the pipelines and cables, the coastal state has every rights to adopt the preventive and enforcement actions against the ships involving in the breaches of regulations and laws of the passage.[61]

5. Findings and Recommendations

On the basis of the above-discussion, the following suggestions on enforcement measures can be taken to strengthen the legal framework for the protection of submarine pipelines and cables:

First, due to the multi-jurisdictional nature of submarine pipelines and cables, the inquiry of the acts of damages to submarine pipelines and cables will require the support and coordination of several states, including States laid down the submarine pipelines and cables as well as the state whose maritime zone the damage was taken place. So, cooperation on information-sharing and investigations among the state parties are required so that various maritime security threats could be detected.

Second, the existing mechanism of enforcement is heavily relied on the flag state's jurisdiction and the perpetrator's nationality. When the flag state is unwilling or unable to exercise the jurisdiction, this will lead to a jurisdictional vacuum. A hybrid-model can be constructed, prioritizing the rights and jurisdiction of the flag state and the nationality of the perpetrator. Through an interpretative protocol or an agreement, the universal jurisdiction could be introduced.

Third, there are lacunas in the relevant international law about jurisdiction, definition of offences and liability for compensation. So, priority may be given to draft a treaty stipulating that willful detriment to submarine pipelines and cables constitutes an international crime and state parties of the treaty shall incorporate the obligation to an extradite and prosecute '*aut dedere aut judicare*'. This mechanism paves the way to establish a wide network to eradicate the safe havens for perpetrators who committed the offences against the submarine pipelines and

---

[58] Ibid, art 111
[59] Ibid, art 25
[60] Ibid, art 19(2)(k)
[61] Ibid, art 21(1)(c)

cables. The definition of the offence should also be precisely enshrined and the corresponding punishments should be clarified.

Fourth, the conventional remedy model emphasizing on the responsibility of the state which is ill-suited to give reparation in full for the financial loss incurred by the state parties in case of damages in submarine cables and pipelines. So that a set of multi-facets remedy gate-ways including international arbitration, mediation, negotiation, conciliation and national judicial proceedings is necessary for the victims who have suffered damages.

Fifth, States who have laid down the submarine pipelines and cables may ensure that they have effective domestic legislation that criminalizes willful detriment to submarine pipelines and cables that happens in areas under full national jurisdiction and areas beyond full national jurisdiction.

6. Conclusion

The stability and security of submarine pipelines and cables concern the common interests of the international community because it ensures the global communications and supply of energy. In the present geo-political scenario, the traditional and hybrid threats to submarine pipelines and cables are increasing day by day. The international legal regime relating to the protection of submarine pipelines and cables are showing significant limitations and the enforcement mechanisms are insufficient which rises the risk of future threats and security challenges. In many instances, the flag-state is unwilling to prosecute the perpetrators and resultantly ships causing intentional damages to pipelines and submarine cables are left unpunished. To investigate the incident of navigation or damages to pipelines and submarine cables, cooperation among the states is essential pre-condition. In order to overcome the deficiencies in the international legal instruments, necessary amendments and incorporation of new provisions would be the best option. The state parties to the UNCLOS should enact relevant legislation to criminalize the intentional damages to the pipelines and submarine cables. However, a new convention focusing on the safeguard of submarine pipelines and cables is a timely demand.

Artificial Intelligence and Blue Economy Governance in Bangladesh: Opportunities and Challenges

Md. Mofazzal Hossain[*]

Abstract: The Blue Economy in Bangladesh focuses on sustainable development supported by strong regulatory frameworks, where Artificial Intelligence (AI) plays a crucial role. AI enhances maritime surveillance through satellite imaging and drones to combat illegal activities like fishing and trafficking. It also improves resource management, fish stock assessments, biodiversity conservation, and offshore energy exploration. Furthermore, AI-driven automation boosts efficiency in shipping and port management, while aiding environmental protection with predictive models for cyclones, sea-level rise, and marine pollution detection. This article analyses the role of Artificial Intelligence (AI) in shaping blue economy governance in Bangladesh, with particular emphasis on the legal pathways, regulatory opportunities, and institutional constraints associated with its adoption. The study seeks to examine the extent to which existing maritime, environmental, and fisheries laws can accommodate AI-enabled governance tools, to identify the regulatory opportunities AI offers for strengthening compliance and decision-making, and to assess the legal and institutional barriers that hinder its effective integration. Employing a qualitative doctrinal and policy-based methodology, the research analyses national legislation, policy frameworks, and relevant international legal instruments, including UNCLOS and environmental conventions applicable to maritime governance. The findings reveal that Bangladesh's legal framework supports AI in blue economy governance but is fragmented and lacks clarity on data governance, algorithmic accountability, evidentiary admissibility, and inter-agency coordination. Limitations in institutional capacity and the absence of AI-specific regulations hinder effective AI deployment in maritime governance as well as in blue economy. The article concludes that to enhance transparency, regulatory oversight, and sustainability, coherent legal reforms, improved institutional coordination, and clear governance standards for AI decision-making are essential.

Key Words: Blue Economy, Artificial Intelligence (AI), Prospect of AI, Challenges of AI, Regulatory Framework.

1. Introduction

Bangladesh's strategic position along the Bay of Bengal, along with the resolution of its maritime boundary disputes with Myanmar and India, has significantly increased its maritime jurisdiction, including its Exclusive Economic Zone and continental shelf. This expansion promotes the Blue Economy—which includes sectors such as

[*] Assistant Professor, Department of Law, Jagannath University, Dhaka, Bangladesh, Email: md.mofazzal@law.jnu.ac.bd; Orcid Id: 0009-0000-9384-1746

fisheries, shipping, ports, offshore energy, tourism, and marine biodiversity—as a cornerstone of national development focused on economic growth, food security, and poverty alleviation.[1] In response to this opportunity, the Government of Bangladesh has been emphasizing the sustainable and rules-based exploitation of marine resources, aiming to establish a governance framework that harmonizes economic utilization with environmental conservation.[2]

In its efforts to promote a Blue Economy, Bangladesh has implemented various policies and legislative measures.[3] Since 2015, the Government has engaged in consultations and policy discussions regarding blue economy development, prioritizing marine-based sectors in national planning such as the Seventh and Eighth Five-Year Plans, as well as the Perspective Plan 2041[4]. Key legislative advancements, notably the Territorial Waters and Maritime Zones (Amendment) Act 2021, have reinforced Bangladesh's claims to maritime zones and bolstered the legal framework for managing marine resources.[5] Nonetheless, the existing regulatory framework for the Blue Economy is characterized by fragmentation across various sector-specific laws and institutions, complicating the effective governance, monitoring, and enforcement of regulations in offshore and coastal areas.

Artificial Intelligence (AI) is increasingly viewed as a crucial governance tool in maritime sectors, with significant potential to improve regulatory oversight, compliance monitoring, and evidence-based decision-making[6]. AI systems can enhance fisheries management, maritime security, environmental protection, and climate resilience through advanced data analytics and automated monitoring.[7] However, the integration of AI into blue economy governance introduces complicated legal and institutional challenges, particularly in areas like data

1 Syeda Tanzia Sultana and Mohammad Jasim Uddin, 'Blue Economy of Bangladesh' (2020) 41(2) BIISS Journal 145, p. 145–146.
2 Ministry of Fisheries and Livestock, Blue Economy for Bangladesh (Government of the People's Republic of Bangladesh, n.d.) 1. <https://mofl.gov.bd/> accessed 7July 2025.
3 ibid
4 Government of Bangladesh, Seventh Five Year Plan (2016–2020 <https://file-dhaka.portal.gov.bd/uploads/274c5243-6c0c-4083-a26a-3aa9117d4a6d//61d/bda/0f8/61dbda0f88b74489263731.pdf> accessed 7July 2025.
5 Territorial Waters and Maritime Zones (Amendment) Act 2021 (Bangladesh).
6 Ashish Sahu and others, 'Revolutionizing Fisheries Management and Conservation: The Role of AI and GPS' in Revolutionizing Fisheries Management and Conservation: The Role of AI and GPS (International Books & Periodical Supply Service 2024) 1.
7 Subrata Sarker and others, 'From science to action: Exploring the potentials of Blue Economy for enhancing economic sustainability in Bangladesh' (2018) 157 Ocean & Coastal Management 180, 182.

governance, accountability, evidentiary reliability, and inter-agency coordination. In Bangladesh specifically, these issues are exacerbated by the lack of AI-specific legislation, limited institutional capabilities, and ambiguous regulatory frameworks that govern the application of automated decision-making technologies in public administration.[8]

This article explores the integration of Artificial Intelligence (AI) into the governance of the blue economy in Bangladesh from a legal and regulatory perspective. It aims to achieve three key objectives: first, to analyze the capacity of current maritime, environmental, and fisheries laws to facilitate AI-enabled governance; second, to uncover regulatory opportunities that AI presents for enhancing compliance, transparency, and sustainability within the Blue Economy; and third, to evaluate the legal, institutional, and technological challenges that impede effective AI adoption. Employing a doctrinal and policy-based methodology, the article assesses national legislation and regulatory instruments alongside pertinent international legal frameworks, such as the United Nations Convention on the Law of the Sea (UNCLOS). The analysis is intended to aid in the development of a cohesive legal strategy for AI-driven governance of the blue economy in Bangladesh and to suggest avenues for regulatory reform that align with sustainability and adherence to the rule of law.

2. Conceptual Understanding of Blue Economy

The Blue Economy is an emerging field that concentrates on economic activities associated with the sea, also referred to as the marine economy, coastal economy, ocean economy, and green economy in various literature. The Blue Economy is characterized by its interconnections with diverse sectors such as tourism, maritime transport, energy, and fishing. It advocates for the sustainable growth of maritime and marine industries while recognizing the essential role that seas and oceans play in promoting both sustainability and economic development.

The concept emphasizes the responsible use of marine resources, aiming to mitigate ecological risks and enhance human well-being. It encompasses a wide range of maritime-related economic activities, including those in port coastal zones and other ocean-based initiatives. With a significant socioeconomic focus, the Blue Economy is

---

8 Tanvinur Rahman Siam and others, ‘Regulating Artificial Intelligence in Bangladesh: Towards a Legal Framework for Ethical and Secure Implementation’ (Paper presented at the International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN), Rangpur, 31 July–2 August 2025

intimately tied to business and trade activities in oceanic regions, marine science, and broader economic pursuits. Ultimately, it offers substantial benefits to countries that harness marine resources, contributing to both domestic and global economic dynamics.

The term "Blue Economy" was discussed at the June 2012 Rio de Janeiro, Brazil, United Nations (UN) RIO+ 20 Conference on Sustainable Development. The greatest place to use energy is the water. Many countries are currently working to make sure that the sea is used as extensively as possible for sustainable development. Since their economy is now centered around the water and the ocean is blue, this type of economy is known as the "blue economy."[9]

There is no clear and precise definition for the term "Blue Economy." The World Wide Fund for Nature (WWF) has proposed the following blue economy principles: A marine-based economy is known as a "blue economy" if it outlines a comprehensive framework aimed at achieving social and economic benefits for both current and future generations. It emphasizes the importance of food security, poverty alleviation, livelihood improvement, and the enhancement of health and political stability. The framework is built upon the restoration and protection of marine ecosystems, recognizing their vital role in ensuring biodiversity, productivity, resilience, and the intrinsic value that underpins economic prosperity.[10]

It advocates for the adoption of clean technologies and renewable energy solutions, emphasizing the necessity of circular material flows to ensure economic and social stability within the ecological limits of our planet. Governance within this framework is characterized by inclusivity and a well-informed, precautionary approach that is adaptive to changing circumstances. Additionally, it underscores the importance of accountability and transparency in decision-making processes.

The framework promotes a holistic and cross-sectoral approach while maintaining a long-term perspective aimed at sustainability. It encourages innovative and proactive measures to foster resilience and to prepare for future challenges, ensuring that both society and the environment can thrive together. In order to be consistent with the three-dimensional sustainable development paradigm (social, environmental, and economic dimensions) that underpins the Sustainable

---

9 United Nations Conference on Sustainable Development, 'Blue Economy Concept Paper' (The Rio+20, Rio de Janeiro, Brazil 2012). <https://sustainabledevelopment.un.org/content/documents/2978BEconcept.pdf> accessed 28 September 2025

10 ibid

Development Goals, this definition is also based on the FAO (2014) definition and the World Bank and UN DESA (2017) framework for a blue economy.

In essence, the Blue Economy refers to the sustainable use of ocean and coastal resources to promote economic growth and food security while protecting marine ecosystems. It includes various maritime sectors and relies on inclusive governance that balances development with environmental conservation and equity for future generations.

3. Sectors of Blue Economy

The blue economy encompasses a variety of interconnected sectors that utilize marine and coastal resources for economic growth while promoting sustainability. Each of the sectors plays a crucial role in harnessing ocean resources sustainably, supporting economic growth, and creating employment opportunities while ensuring the conservation of marine ecosystems.[11]

Key areas include:

3.1. ***Fishing***: A traditional sector vital for food security, employment, and export earnings, encompassing marine capture fisheries, aquaculture, and seafood processing, all regulated for sustainable resource use.[12]

3.2. ***Marine Biotechnology***: An innovation-driven sector focused on developing pharmaceuticals and chemicals from marine organisms, with significant potential for value addition and scientific research aligned with biodiversity conservation.[13]

3.3. ***Marine Minerals***: This sector deals with the exploration and extraction of offshore oil and gas resources and deep-sea mining, requiring stringent regulations due to environmental concerns.[14]

---

11 Mohammad Jasim Uddin, 'Priority Sectors of Bangladesh's Blue Economy: Guiding the Future' (Bangladesh Institute of International and Strategic Studies, Bangladesh Economia July–December 2021) 72

12 United Nations Convention on the Law of the Sea (UNCLOS) 1982, ar.61.

13 National Research Council (US) Committee on the Ocean's Role in Human Health, From Monsoons to Microbes: Understanding the Ocean's Role in Human Health (National Academies Press 1999) ch 4, 'Marine-Derived Pharmaceuticals and Related Bioactive Agents', <https://www.ncbi.nlm.nih.gov/books/NBK230700/> accessed 5 September 2025.

14 Food and Agriculture Organization of the United Nations (FAO), The State of World Fisheries and Aquaculture 2024: Blue Transformation in Action *(FAO 2024)* <https://doi.org/10.4060/cd0683en> accessed 5 September 2025

3.4. ***Marine Renewable Energy***: Includes offshore wind, wave, and tidal energy production, contributing to energy security and aligned with climate change mitigation efforts, especially for coastal nations.[15]

3.5. ***Marine Manufacturing***: Encompassing shipbuilding, marine instrumentation, and aquaculture technology, this sector promotes industrial growth and employment within maritime economies.[16]

3.6. ***Shipping, Port, and Maritime Logistics***: Central to global trade, this sector includes all aspects of maritime logistics, supporting supply chains and economic integration.[17]

3.7. ***Marine Tourism and Leisure***: A significant contributor to coastal economies, it includes various recreational activities. Sustainable management is crucial to protect marine ecosystems.[18]

3.8. ***Marine Construction***: Involves engineering and construction of ports, offshore structures, and coastal defenses, vital for maritime trade and climate adaptation.[19]

3.9. ***Marine Commerce***: Provides essential services like finance, legal support, and insurance, which are fundamental for effective governance across all sectors of the blue economy.[20]

3.10. ***Marine ICT and Professional Services***: Plays a vital role in governance by enhancing efficiency, safety, and data-driven decision-making through consulting, engineering, and technological services.[21]

---

15 Ministry of Power, Energy and Mineral Resources, 'Renewable Energy Policy of Bangladesh' (June 2008) 5.

16 Organisation for Economic Co-operation and Development (OECD), The Ocean Economy in 2030 (OECD Publishing 2016) <https://doi.org/10.1787/9789264251724-en>, accessed 5 September 2025

17 Funda Yercan and Turkay Yildiz, 'International Maritime Trade and Logistics' in Maritime Logistics: A Complete Guide to Effective Shipping and Port Management (Dong-Wook Song and Photis M Panayides eds, Kogan Page 2012) 23–44 <https://doi.org/10.13140/RG.2.1.2455.7608> accessed 5 September 2025

18 Abdulkhamid Akbarov, Dilnoza Islomova, Bakhodir Khoshbakov and others, 'Integrating Aquatic Ecosystem Services into Economic Models for Sustainable Coastal Tourism Development' (2025) 5(2) International Journal of Aquatic Research and Environmental Studies, p. 839 <https://doi.org/10.70102/p0f5wp95> accessed 5 September 2025.

19 Bangladesh Delta Plan 2100 <https://oldweb.lged.gov.bd/UploadedDocument/UnitPublication/1/756/BDP%202100%20Abridged%20Version%20English.pdf> accessed 7July 2025.

20 Organisation for Economic Co-operation and Development (OECD), The Ocean Economy in 2030 (OECD Publishing 2016) <https://doi.org/10.1787/9789264251724-en> accessed 7 September 2025.

21 Bangladesh Oceanographic Research Institute (BORI), <https://bori.gov.bd/> accessed 5 July 2025.

3.11. ***Education, Training, and Research***: Critical for sustainable development, these sectors build skilled human resources and promote innovation, ensuring the long-term viability of marine economic activities.[22]

4. Emerging Blue Activities in Bangladesh

The comprehensive framework of ecosystem-based management should receive more attention in order to implement cross-cutting coordination with investment and public-private partnerships (PPT). Furthermore, the ocean economy will undoubtedly provide a solid foundation for significant profits and economic advantages for our nation if it is properly planned and managed.[23] The Key sectors of the blue economy in Bangladesh include fisheries, sea ports, shipping and port facilities, sea salt production, oil, gas, and mineral mining, marine renewable energy, and maritime education and research. These sectors collectively contribute to the sustainable utilization of marine resources, economic development, and the advancement of knowledge and technology in maritime industries, while supporting coastal livelihoods and national infrastructure.[24]

New and emerging maritime activities in Bangladesh emphasize the application of science and technology for secure and sustainable exploration of marine resources without environmental harm. Key areas of development include:

4.1. Marine Biotechnology

The ocean presents vast opportunities for marine medicinal, nutritional, and ornamental products. The marine biotechnology sector is currently valued at approximately US $2.8 billion, with projections suggesting growth to around US$ 4.6 billion by 2017. This sector holds potential for Bangladesh by introducing biochemical products and utilizing marine resources effectively.[25]

4.2. Renewable Energy

Globally, there is a shift towards renewable energy for energy security and reducing greenhouse gas emissions. In Bangladesh, renewable energy comprises less than 2%

---

22 National Adaptation Plan of Bangladesh (2023–2050), p.10

23 Rachel D Long, Anthony Charles and Robert Stephenson, 'Key Principles of Marine Ecosystem-Based Management' (2015) 57 *Marine Policy* 53.

24 Pierre Failler, M Gulam Hussain, A Al Karim and M Khurshed Alam, *Inputs for a Blue Economy Strategy in Bangladesh* (Ministry of Foreign Affairs, Government of Bangladesh and European Union Delegation 2018).

25 Mohammad Nazir Hossain, 'Unlocking the Potentials of Blue Biotechnology for Sustaining Ecological Balance of Bangladesh' (BMJ Special Issue, ISSN 2519-5972) 241.

of total energy production. However, potential sources such as tidal and wave energy, offshore wind turbines, submarine geothermal resources, and marine biomass could enhance energy security and support environmental protection efforts. These renewable avenues could significantly diversify and bolster Bangladesh's energy portfolio.

4.3. Fishery Products

Bangladesh has a unique advantage in unconventional fishery products, particularly from existing living resources such as mollusks (squids, oysters, mussels), seaweeds, marine echinoderms, and marine microalgae. These can be harnessed as new, nutritionally balanced marine food sources.

4.4. Coastal Protection/Artificial Islands/Greening Coastal Belts

Coastal protection plays a critical role beyond mere economic functioning; it is essential for enabling the use of coastal areas and supports various activities. Influencing this subsector are global warming, erosion and flooding events, and high-value economic activities. Future developments in coastal regions will largely depend on three key drivers: sea level rise and climate change, demographic trends, and economic factors.

4.5. Cruise Tourism

Cruise tourism involves travel by small cruise ships among coastal islands and tourist areas, and its growth relies heavily on developing sustainable business models, enhancing port infrastructure, and addressing security concerns. The increasing demand for customized experiences is driven by an aging population and a more educated citizenry. Additionally, the Bangladesh government plays a crucial role in the blue economy by addressing current challenges and limitations to maximize the potential for blue development.

5. The Concept of AI in Blue Economy:

AI has gained significant momentum in recent years, driven by advancements in machine learning (ML) and deep learning (DL). These technologies have led to advancements such as face recognition and Go games. ML and DL algorithms, often known as self-learning algorithms, have the ability to recognize data patterns, in contrast to previous methods.[26] The term AI was first defined in 1955 by John McCarthy, one of the pioneers in this field, noting that 'the goal of AI is to develop machines that behave as though they were intelligent'.[27] In this definition the term intelligent is a vague word because every computer has large memory that can save a long text, known as intelligent performance of a computer which is a part of AI system. This dilemma is solved sophisticatedly by the following definition by Elaine Rich,[28] observing that 'Artificial Intelligence is the study of how to make computers do things at which, at the moment, people are better.'[29] Rich concisely characterizes what AI researchers have been doing for the last 50 years, although that alone does not solve the underlying problem surrounding the conceptualization of AI, as reflected in a number of different AI definitions, including the following reported by Kok (et al.):

"AI is an area of study in the field of computer science, concerned with the development of computers able to engage in human-like thought processes such as learning, reasoning, and self-correction."

AI concept is that machines can be improved to assume some capabilities normally thought to be like human intelligence such as learning, adapting, self-correction, etc. AI is an extension of human intelligence through the use of computers, as in times past physical power was extended through the use of mechanical tools. In a restricted sense, AI is the study of techniques to use computers more effectively by improved programming techniques.[30]

Finally, artificial intelligence is a technology that enables machines to mimic complex human abilities. The High-Level Expert Group on Artificial Intelligence (AI HLEG) of the European Commission defines AI as systems that display intelligent behavior

---

26 Joost N Kok, Egbert JW Boers, Walter A Kosters, Peter van der Putten and Mannes Poel, 'Artificial Intelligence: Definition, Trends, Techniques and Cases' in Encyclopedia of Life Support Systems (EOLSS), vol 1 (EOLSS Publishers 2002) 1095–1107 <https://www.eolss.net/Sample-Chapters/C15/E6-44.pdf> accessed 20 October 2025.

27 ibid

28 Elaine Rich, 'Artificial Intelligence and the Humanities' (1985) 19(2) Computers and the Humanities 117–122. <http://www.jstor.org/stable/30204398> accessed 20 October 2025

29 ibid

30 Joost N. Kok, Egbert J. W. Boers, Walter A. Kosters, Peter van der Putten and Mannes Poel , Artificial Intelligence: Definition, Trends, Techniques and Cases, Encyclopedia of Life Support Systems (EOLSS) <https://www.eolss.net/Sample-Chapters/C15/E6-44.pdf> accessed on 5 July 2025

by analyzing their environment and taking actions with some degree of autonomy to achieve specific goals.'[31]

Artificial Intelligence (AI) is playing a crucial role in the blue economy, a sector that encompasses various maritime sectors such as fisheries, shipping, and tourism. AI technologies, like machine learning and predictive analytics, enable the collection, analysis, and interpretation of vast amounts of maritime data, enhancing decision-making in areas like fish stock management, pollution monitoring, maritime logistics, and offshore energy exploration.[32] AI can predict environmental changes, optimize shipping routes, detect illegal fishing activities, and assess the ecological impact of marine projects, promoting sustainability and economic benefits. It also strengthens regulatory compliance by enabling real-time monitoring and intelligent enforcement, reducing human error and increasing efficiency. By integrating AI, Bangladesh can achieve a more resilient, innovative, and data-driven maritime sector, positioning it as a forward-looking player in the blue economy.[33]

6. Legal Framework of the Blue Economy in Bangladesh

The legal framework governing the blue economy in Bangladesh is an evolving mosaic of constitutional mandates, national laws, policies, and international commitments that collectively regulate the sustainable use of marine and coastal resources. While Bangladesh does not yet have a single, consolidated *Blue Economy Act*, its regulatory structure is grounded in maritime, environmental, fisheries, and coastal management laws, complemented by strategic policy documents and institutional arrangements aimed at ensuring ocean governance and sustainable development.

---

[31] Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on Artificial Intelligence for Europe, Brussels, l< https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=56341> accessed 25 October 2025

[32] Sonia Mukherjee, Gopal Wamane and Vishwajeet Pundkar, 'Role of Artificial Intelligence in the Study of the Blue Economy and Marine Ecosystem: Use of AI in Preservation of Marine Ecosystem', Developing Smart Sustainability with Artificial Intelligence (IGI Global 2025).

[33] Hoang Phuong Nguyen, Cao Thao Uyen Nguyen, Thi Men Tran and Quoc Hai Dang, 'Artificial Intelligence and Machine Learning for Green Shipping: Navigating towards Sustainable Maritime Practices' (2024) 8(1) *JOIV* International Journal on Informatics Visualization, p.1

6.1. Significant Acts:

6.1.1. The Constitution of the People's Republic of Bangladesh

The Constitution provides the overarching legal foundation for blue economy governance. Article 18A constitutionally obliges the State to protect and improve the environment, which extends to oceans, coastal zones, and marine biodiversity. Article 25 further encourages international cooperation, indirectly supporting modern concepts of sustainable ocean management, maritime cooperation, and global ocean governance, all of which are essential for the development of a sustainable blue economy.

6.1.2. The Territorial Waters and Maritime Zones Act, 1974

This act was amended in 2021, serves as the fundamental statute delineating the maritime jurisdiction of Bangladesh. The Act defines critical zones including the territorial sea, contiguous zone, exclusive economic zone (EEZ), and continental shelf, thus establishing a legal framework for the management of marine resources and the advancement of blue economy initiatives. It confers sovereign rights upon the State, empowering it to explore, exploit, conserve, and manage various marine resources such as fisheries, aquaculture, offshore energy, and seabed minerals.[34] Furthermore, the Act enables the government to create and implement regulations specific to different sectors, designate conservation zones, and apply environmental protections to safeguard marine ecosystems. The recent amendments also enhance the enforcement capabilities of key agencies, including the navy, coast guard, fisheries, and customs authorities, to combat illegal, unreported, and unregulated (IUU) fishing and marine pollution. Additionally, the revisions strengthen measures related to ship registration, nationality, and flag state control, thereby ensuring accountability and lawful conduct in maritime operations within the EEZ.[35]

6.1.3. The Marine Fisheries Act, 2020

It establishes a comprehensive legal framework for the sustainable management of marine fisheries in Bangladesh, in accordance with the United Nations Convention on the Law of the Sea (UNCLOS). It delineates Bangladesh's marine fisheries waters, including the territorial sea, contiguous zone, and Exclusive Economic Zone (EEZ), and allows for the designation of Marine Fishing Areas and seasonal fishing bans to

---

34 Muhammad Farhad Hosen, 'Bangladesh: The Territorial Waters and Maritime Zones (Amendment) Act of 2021' (2023) 8(1) Asia-Pacific Journal of Ocean Law and Policy, p.165 <https://doi.org/10.1163/24519391-08010010> accessed 5 July 2025.

35 ibid

conserve ecosystems and ensure the sustainability of resources.[36] The Act enforces stringent measures against Illegal, Unreported, and Unregulated (IUU) fishing through fines and penalties, regulates fishing licenses to prevent overexploitation, and restricts their transfer to promote equitable use. Additionally, it supports mariculture and sea farming to boost aquaculture development, provides for the establishment of Marine Protected Areas and fish sanctuaries, and grants authorities the power to conduct inspections and enforcements. Furthermore, the Act encourages marine research and mandates data sharing, fostering evidence-based policy and planning for a blue economy.[37]

6.1.4. The Bangladesh Environment Conservation Act of 1995

The act is a key legal framework for environmental protection that significantly supports blue economy governance. The Act enables the declaration of Ecologically Critical Areas aimed at preserving sensitive marine habitats, such as mangroves and coral reefs. Furthermore, it mandates Environmental Impact Assessments (EIAs) for development projects in coastal and offshore zones. Regulatory authorities are given the power to establish pollution control standards for coastal industries and marine operations, including the enforcement of penalties for violations.[38] By adopting a precautionary and sustainable development strategy, the Act plays an integral role in safeguarding crucial ecosystems like the Sundarbans, essential for fisheries, biodiversity, and coastal resilience. Nonetheless, challenges persist in areas such as offshore jurisdiction, quality of EIAs, monitoring efforts, and the integration of climate considerations.[39]

6.1.5. The Bangladesh Biodiversity Act, 2017

The act indirectly provides the conservation and sustainable use of marine and coastal biodiversity, aligning with the Convention on Biological Diversity. It broadly defines biodiversity to encompass marine organisms and ecosystems, sets regulations for the collection, transfer, and utilization of biological resources that require government approval, and establishes biodiversity committees to supervise

---

36 Abdullah Al Arif and Md Saiful Karim, 'Marine Fisheries Act 2020 of Bangladesh: A Missed Opportunity for Sustainability and Collaborative Governance' (2022) 37(2), The International Journal of Marine and Coastal Law, p.1 <https://doi.org/10.1163/15718085-bja10075> accessed 8 July 2025

37 ibid, p.7

38 A K M Mahmudul Haque and Imran Hossain, 'Environmental Governance in Bangladesh: A Comprehensive Analysis of Environmental Laws and Policies' in *Bangladesh: Environment, Society and Politics* (Samajpath and Dyu Publication 2024) p.5

39 ibid

conservation initiatives. The Act emphasizes equitable benefit-sharing from the use of marine biological resources and imposes penalties for violations, thereby directly connecting biodiversity protection to the development of a sustainable blue economy.[40]

6.1.6. The Ports Act, 1908

It regulates port administration and vessel movements, impacting maritime trade and the blue economy. It empowers the government in areas like safety[41] and pollution control, and supports sustainable operations through financial and regulatory measures[42]. However, the Act faces limitations, including insufficient environmental provisions, weak oversight of private operators, and a lack of digital governance, hindering its effectiveness in meeting modern blue economy demands.

6.1.7. The Bangladesh Shipping Corporation Act, 2017

This act establishes the Bangladesh Shipping Corporation[43] as a corporate entity to enhance national maritime capacity through the acquisition and management of ships. With government majority ownership, it enables strategic oversight of maritime assets and promotes domestic shipbuilding and infrastructure development, limiting reliance on foreign services.[44] However, it identifies shortcomings in environmental safeguards, technological advancements, and regulatory integration, which hinder sustainability and innovation in the maritime sector.

6.1.8. The Bangladesh Energy Regulatory Commission Act, 2003

Establishing a regulatory framework for the electricity is the vital contribution of this act, gas, and energy sectors, which can be applied to offshore and marine renewable energy projects. It provides licensing authority,[45] tariff-setting powers[46], and oversight mechanisms that support public interest and promote adaptability to emerging blue economy energy initiatives.

---

[40] Imtiaz Ahmed Sajal, 'How far the Biological Diversity Act 2017 complies with international obligations?' *The Daily Star* (19 November 2019) <https://online.thedailystar.net/law-our-rights/news/how-far-the-biological-diversity-act-2017-complies-international-obligations-1829140> accessed 8 July 2025.

[41] *The Ports Act 1908* (Act No V of 1908) (Bangladesh), s.6

[42] *The Ports Act 1908* (Act No V of 1908) (Bangladesh), s.43

[43] *The Bangladesh Shipping Corporation Act*, 2017, s.3

[44] ibid, s.4

[45] The *Bangladesh Energy Regulatory Commission Act*, 2003, s.27-29

[46] ibid, s.34-36

6.1.9. The Disaster Management Act, 2012

The Disaster Management Act addresses disaster risk reduction, preparedness, response, and recovery, particularly in maritime and coastal sectors. It includes broad definitions of vessels and climate change[47], integrating marine assets into disaster management. The Act enables the government to designate disaster-prone areas[48], manage marine operations during emergencies, promote private sector involvement[49], and provide relief to affected coastal communities, thus protecting livelihoods and marine economies.

6.1.10. The Bangladesh Merchant Shipping Ordinance, 1983

It is granted the state rights over marine areas for exploring and exploiting resources, mandates licensing for various maritime activities[50], and empowers the government to regulate sustainable resource use, thereby strengthening Bangladesh's blue economy framework.

6.2. Significant Plan and Policy Frameworks

In addition to legislation, several plan and policy instruments guide blue economy development follows:

6.2.1. The Blue Economy Cell (BEC)

The Blue Economy Cell (BEC), formed in 2017 under the Ministry of Energy, Mineral Resources and Rural Development, is instrumental in devising policies, planning strategies, and coordinating Bangladesh's blue economy efforts.[51] This entity aligns maritime sectors such as fisheries, aquaculture, and tourism with sustainability goals, while fostering coordination among disparate sectoral mandates through inter-ministerial collaboration.[52] The BEC is responsible for marine and coastal data mapping to aid evidence-based decisions, facilitates stakeholder engagement via dialogue and capacity-building initiatives, oversees sustainable marine technology pilot projects, and ensures effective monitoring and accountability. Additionally, it

---

47 *The Disaster Management Act, 2012, s.2*

48 ibid, s.19-21

49 ibid, *s.14*

50 *The Bangladesh Merchant Shipping Ordinance, 1983, s.43-55*

51 'Potential sectors under blue economy identified, but remain untapped: Activities remain confined to holding occasional meetings only' *Dhaka Tribune* (18 September 2023) https://www.dhakatribune.com/business/325865/potential-sectors-under-blue-economy-identified accessed 8 July 2025

52 ibid

represents Bangladesh in global forums to secure funding, facilitate technical cooperation, and develop partnerships for the advancement of the blue economy.

6.2.2. The Bangladesh Oceanographic Research Institute (BORI)

It is the only national marine science research facility in Bangladesh, situated in Cox's Bazar and operating under the Ministry of Science and Technology.[53] BORI plays a significant role in the country's blue economy, especially after the establishment of maritime boundaries with Myanmar and India, thereby expanding its collaborative efforts with both national and international entities for data sharing and research infrastructure development. The institution is involved in conducting baseline surveys and long-term monitoring to promote sustainable fisheries management and environmental protection, as well as exploring marine mineral resources within the nation's Exclusive Economic Zone.[54] Furthermore, BORI focuses on capacity building through the development of infrastructure and training personnel in marine science and technology.

6.2.3. The Seventh Five-Year Plan (2016–2020)

This plan introduced the blue economy into Bangladesh's national development framework. It focused on the sustainable utilization of marine resources such as fisheries, shipping, and tourism. The plan aimed to achieve several objectives: fostering economic growth, alleviating poverty, enhancing maritime security, safeguarding marine ecosystems, and strengthening institutional capabilities for effective ocean governance.[55]

6.2.4. The Eighth Five-Year Plan (2020–2025

Building on prior foundations, the Eighth Five-Year Plan (2020–2025) prioritizes the blue economy as a key development sector. It emphasizes sustainable fisheries, maritime trade, and coastal and marine tourism, while integrating environmental sustainability. The plan highlights the importance of long-term management and viability of marine and coastal resources.

---

53 Bangladesh Oceanographic Research Institute, 'About BORI' <https://bori.gov.bd/> accessed 8 July 2025.

54 *Bangladesh Oceanographic Research Institute Act, 2015* (Act No 49 of 2015) (Bangladesh).

55 General Economics Division, Planning Commission, Government of the People's Republic of Bangladesh, *Seventh Five Year Plan FY2016–FY2020: Accelerating Growth, Empowering Citizens* (Government of the People's Republic of Bangladesh 2015) https://www.unicef.org/bangladesh/sites/unicef.org.bangladesh/files/2018-10/7th_FYP_18_02_2016.pdf accessed 8 July 2025.

6.2.5. The Perspective Plan 2041

The Perspective Plan 2041 aims to transform Bangladesh into a developed nation by the year 2041, with the blue economy identified as a core component of sustainable growth. The plan emphasizes the growth of marine-based industries, the advancement of renewable ocean energy, the safeguarding of marine biodiversity, collaborative management of shared marine resources, and the tackling of transboundary marine and environmental issues.[56]

6.2.6. Delta Plan 2100

A long-term strategy framework for managing the nation's deltaic region in light of climate change is offered by the Bangladesh Delta Plan 2100. By emphasizing the sustainable use of marine resources, boosting coastal resilience, encouraging marine research and innovation, and bolstering institutional coordination and governance for successful implementation, it incorporates blue economy ideas into coastal and marine development.[57]

6.2.7. The National Adaptation Plan (2022)

NAP places strong emphasis on enhancing the climate resilience of marine and coastal ecosystems. It promotes sustainable fisheries management, protection of coastal habitats, and the integration of ecosystem-based adaptation approaches into national development planning, while encouraging community-based adaptation and capacity building in vulnerable coastal areas.[58]

6.2.8. The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009

BCCSAP acknowledges the significance of protecting coastal and marine ecosystems for maintaining biodiversity and fisheries. In order to protect important blue economy sectors, it promotes the sustainable use of coastal and marine resources for economic growth and places a strong emphasis on adaptation strategies to deal with sea level rise and saline intrusion.[59]

---

[56] General Economics Division (GED), Bangladesh Planning Commission, *Making Vision 2041 a Reality: Perspective Plan of Bangladesh 2021–2041* (Government of the People's Republic of Bangladesh, March 2020) ch 15.

[57] Bangladesh Planning Commission, *Bangladesh Delta Plan 2100: Bangladesh in the 21st Century* (General Economics Division, Planning Commission, Government of the People's Republic of Bangladesh 2018).

[58] Ministry of Environment, Forest and Climate Change, *National Adaptation Plan of Bangladesh (2023–2050)* (Government of the People's Republic of Bangladesh 2022) 88–94.

[59] ibid, 18–33.

6.2.9. The National Adaptation Plan of Bangladesh (2023–2050)

NAP (2023-2050) has been regulated directly and indirectly to accumulate and enhance the long mission and vision regarding blue economy governance with a focus on climate-resilient management of marine and coastal fisheries. It places emphasis on the protection and restoration of key ecosystems, including mangroves, wetlands, and coastal biodiversity, while implementing adaptation measures to address the challenges posed by sea-level rise, salinity intrusion, and coastal flooding. These initiatives are designed to boost the overall resilience of Bangladesh's blue economy.[60]

6.2.10. The Environment Conservation Rules 1997

This rules reinforce environmental protection by designating coastal and marine areas as Ecologically Critical Areas, imposing restrictions on harmful activities, and establishing standards for water quality and vessel-related pollution, thereby safeguarding marine and coastal ecosystems essential for sustainable blue economy development.[61]

7. Prospects of AI in Blue Economy Regulatory Framework

AI-enabled prospect can address the health of the Blue Economy as follows:

7.1. Marine ecosystem monitoring.

7.1.1. Advancing Real-Time Environmental Surveillance

AI's most immediate prospect lies in enhancing real-time surveillance of the marine environment. It emphasizes the potential of satellite imagery integrated with machine-learning algorithms to enhance real-time monitoring of the marine environment. This combination allows for the rapid detection and classification of marine changes, including oil spills, sediment plumes, algal blooms, coral bleaching, and shoreline erosion, with unprecedented speed and determination.[62]

With the legal framework established by the Environment Conservation Act 1995 and the Territorial Waters and Maritime Zones Act 1974, institutions like the

60 Ministry of Environment, Forest and Climate Change, *National Adaptation Plan of Bangladesh (2023–2050)* (Government of the People's Republic of Bangladesh 2022) 88–98.

61 *The Environment Conservation Rules* 1997, rr 3–7, schs 1 and 12.

62 Lin Y, Chen H and Zhao X, 'Artificial Intelligence for Marine Environmental Monitoring and Pollution Detection' (2025) 17 *Sustainability* 4795 <https://www.mdpi.com/2071-1050/17/11/4795> accessed on 16 July 2025.

Department of Environment (DoE) and the Bangladesh Navy can leverage these advancements for continuous monitoring rather than relying on infrequent manual inspections. When used to classify images, convolutional neural networks (CNNs) exhibit a high degree of accuracy in detecting patterns of marine pollution.[63] This capability can significantly enhance enforcement efforts as dictated by section 6A of the Environment Conservation Act, which stresses the prevention of pollution in ecologically sensitive areas.

By incorporating AI-generated insights into regulatory frameworks, Bangladesh aims to transition towards a proactive, evidence-based approach to marine pollution governance, ultimately improving environmental protection and management in its marine territories.

7.1.2. AI-Enabled Species and Habitat Monitoring

AI is poised to enhance species recognition and habitat assessment in Bangladesh's coastal and offshore zones, where biodiversity, including hilsa, sea turtles, and dolphins, faces threats from habitat degradation and illegal activities. Utilizing acoustic sensors and computer vision, AI can identify species presence, estimate their abundance, and map migration patterns. AI-powered remote sensing enables comprehensive biodiversity assessments, supporting sustainable resource management that exceeds human observational capacity.[64] The Bangladesh Biodiversity Act, 2017, the Territorial Waters and Maritime Zones Act, 1974 (as amended in 2021), and commitments under the Convention on Biological Diversity (CBD) and UNCLOS are just a few examples of the national and international legal instruments that these capabilities directly support. Artificial intelligence (AI)-powered ecological monitoring can help enforce environmental laws, encourage adherence to sustainable fishing limits, and make it easier to gather the scientific data needed for marine spatial planning. Furthermore, integrating AI systems into the legal framework is consistent with the Draft National Maritime Policy (2020) and the National Oceanographic Research Institute Act, 2019 of Bangladesh, both of which place a strong emphasis on data-driven governance. The long-term goal is to create a legally integrated digital monitoring platform that integrates satellite imagery, autonomous underwater vehicles, and AI analytics for evidence-based

---

63 ibid

64 Islam M S and Bhuiyan M R, 'Role of Artificial Intelligence in the Study of the Blue Economy and Marine Ecosystem' in S A Rahman (ed), *Emerging Technologies and Sustainable Blue Economy* (IGI Global 2024) <https://www.igi-global.com/chapter/role-of-artificial-intelligence-in-the-study-of-the-blue-economy-and-marine-ecosystem/367616> accessed on 16 July 2025.

marine conservation, ensuring accountability, transparency, and sustainability in Bangladesh's emerging blue economy governance structure.[65]

7.1.3. Strengthening Marine Fisheries Governance

Bangladesh's Blue Economy vision requires strengthening marine fisheries governance to ensure sustainable management of marine resources. The existing legal framework, including the Marine Fisheries Act 2020, Territorial Waters and Maritime Zones Act, 1974, and the Bangladesh Fisheries Development Corporation Act, 1973, provides a foundation for regulatory oversight. Integrating modern governance tools like digital licensing systems, vessel monitoring technologies, and AI-based catch reporting can improve compliance and transparency. The National Maritime Policy and the Perspective Plan 2041 emphasize institutional coordination and sustainable exploitation of marine resources, aligning with UNCLOS and the FAO Code of Conduct for Responsible Fisheries. AI-enabled governance mechanisms can revolutionize fisheries monitoring, detect overfishing, identify illegal activities, and predict stock fluctuations. Legally, updating regulatory provisions to incorporate digital evidence standards, data-sharing protocols, and inter-agency collaboration is necessary. A strengthened governance framework promotes participatory management and equitable benefit-sharing from marine resources.[66]

The Marine Fisheries Act 2020 in Bangladesh aims to strengthen marine fisheries governance by integrating artificial intelligence into fisheries management. AI can detect and deter illegal, unreported, and unregulated (IUU) fishing, with machine-learning algorithms identifying activities with over 90% accuracy.[67] The Act allows the Department of Fisheries to enforce spatial closures and catch limitations, while AI analytics automate compliance assessments and provide digital evidence.

7.1.4. Predictive Analytics for Climate and Ecosystem Resilience

AI-driven predictive analytics present significant opportunities for enhancing marine governance, particularly in Bangladesh, where marine ecosystems face climate-induced challenges like sea-level rise and cyclones. Machine learning models can accurately forecast events such as coral bleaching and fish stock collapses before

---

65 ibid,

66 Khan T R and Hossain M A, 'AI-Enabled Marine Conservation and Ocean Governance' (2024) *ResearchGate Preprint* <https://www.researchgate.net/publication/392012023_AI-Enabled_Marine_Conservation_and_Ocean_Governance> accessed on 5 July 2025.

67 ibid

they become visible. Research has been conducted to illustrate this capability by training climate models on historical oceanographic data, allowing for precise predictions of temperature anomalies and marine heatwaves.[68] These models could support adaptive legal frameworks, influencing policies like the Bangladesh Climate Change Strategy and Action Plan 2009 and amendments to the Environment Conservation Rules 1997. Integrating AI predictions into environmental impact assessments (EIAs) and coastal zoning can help manage marine development activities, including ports and aquaculture, by maintaining operations within scientifically defined risk parameters. Furthermore, AI-powered early-warning systems could enhance the Disaster Management Act 2012, assisting the Ministry of Disaster Management and Relief in issuing alerts to coastal communities and decreasing their ecological and human vulnerabilities.

7.1.5. Integrating AI with International Environmental Obligations

Integrating AI with International Environmental Obligations highlights Bangladesh's legal commitments under various international agreements, including UNCLOS, CBD, and MARPOL, which necessitate systematic marine environmental monitoring and reporting. The use of AI is posited as an effective solution for generating, validating, and disseminating essential data, allowing the Department of Environment to provide regular assessments to international bodies and improve compliance transparency, thereby facilitating access to global climate funding.[69] Moreover, AI's capabilities promote interoperability with regional initiatives like the Bay of Bengal Large Marine Ecosystem Project, aiding Bangladesh in fulfilling its responsibilities under Article 197 of UNCLOS by fostering cooperation among neighboring states for marine environment protection.

7.1.6. Enabling Data-Driven Legal Enforcement

AI-generated data can be transformed legal enforcement in environmental litigation. By leveraging data from sensors, drones, and satellites, AI can authenticate environmental damage patterns, identify responsible parties, and assess harm. This aligns with section 7 of the Environment Court Act 2010, which allows courts to utilize technical evidence in environmental cases. Additionally, AI enhances alternative dispute resolution by accurately measuring restoration costs and

---

68 Lin Y, Chen H and Zhao X, 'Artificial Intelligence for Marine Environmental Monitoring and Pollution Detection' (2025) 17 *Sustainability* 4795 <https://www.mdpi.com/2071-1050/17/11/4795> accessed on 5 July 2025.

69 UNESCO, *Ocean Literacy for a Sustainable Future* (UNESCO 2023) <https://unesdoc.unesco.org/ark:/48223/pf0000379196> accessed 10 September 2025.

damages, potentially establishing judicial precedents that improve the predictability and reliability of marine environmental law enforcement over time.[70]

7.1.7. Enhancing Institutional Efficiency and Policy Coherence

AI can enhance institutional efficiency in marine management by streamlining coordination among various agencies like the Department of Environment, the Department of Fisheries, and the Forest Department, which currently face delays due to overlapping mandates. AI-driven dashboards and knowledge graphs can amalgamate diverse datasets, including pollution metrics, fisheries statistics, and satellite imagery, into cohesive decision-making platforms. This approach aligns with the government's "Digital Bangladesh Vision 2041" and supports a cohesive marine governance structure that complies with the National Oceanographic Research Institute Act 2018. Ultimately, this initiative would fortify evidence-based policy-making and enable real-time monitoring of Sustainable Development Goal 14 indicators.[71]

7.1.8. Supporting Sustainable Blue-Economy Development

The overarching prospect of AI in marine ecosystem monitoring is the promotion of a sustainable blue economy. By providing continuous, reliable, and fine-grained environmental data, AI ensures that economic activities—shipping, offshore energy, tourism, aquaculture—are aligned with ecological thresholds. Integrating AI insights into environmental licensing and strategic environmental assessment (SEA) frameworks can balance exploitation with conservation. AI can underpin a "circular blue economy" by optimising resource use, reducing waste, and modelling ecosystem service values.[2] For Bangladesh, this approach could translate into enhanced foreign investment confidence, stronger governance credibility, and measurable progress toward SDG 14.2 and 14.5 (sustainable management and conservation of marine ecosystems and protected areas).[72]

---

[70] Mohammad Abdul Hannan, 'Effectiveness and Challenges of the Environmental Courts in Bangladesh: A Critical Analysis on the Existing Laws' (2023) 4(1) BAUET Journal.

[71] World Bank, *Building Back a Greener Bangladesh: Country Environmental Analysis* (World Bank 2023) <https://documents1.worldbank.org/curated/en/099032624044525190/pdf/P1759081e3a5d909a18d3f17f5402e40eba.pdf > accessed 16 September 2025.

[72] Islam M S and Bhuiyan M R, 'Role of Artificial Intelligence in the Study of the Blue Economy and Marine Ecosystem' in S A Rahman (ed), *Emerging Technologies and Sustainable Blue Economy* (IGI Global 2024) <https://www.igi-global.com/chapter/role-of-artificial-intelligence-in-the-study-of-the-blue-economy-and-marine-ecosystem/367616> accessed on 5 July 2025.

7.2. Ocean Precision and Climate

7.2.1. Enhancing Ocean Precision through Data Integration

AI-driven ocean precision modelling utilizes diverse datasets, including satellite imagery and oceanographic data, to create integrated analytical systems. Through machine learning algorithms, real-time ocean data on temperature, salinity, currents, and chlorophyll can be processed to develop dynamic ocean condition maps, aiding in fisheries management, pollution detection, and marine navigation.[73] In the context of Bangladesh, this technology aligns with the Territorial Waters and Maritime Zones Act 1974 and the Marine Fisheries Act 2020, which empower the government to manage and conserve marine resources.[74] AI-enhanced precision models can play a crucial role in identifying marine protected areas, optimizing aquaculture and shipping routes, and ensuring compliance with UNCLOS Article 192, which mandates marine environmental protection.[75] Additionally, the integration of such modelling into the Bangladesh Oceanographic Research Institute Act 2018 could enhance the Institute's capacity to forecast ocean condition changes and inform maritime planning, disaster preparedness, and ecosystem resilience initiatives.

7.2.2. in Climate Modelling for Marine Risk Forecasting

AI has become essential in improving the accuracy of climate models for marine and coastal changes. Traditional numerical models operate on linear assumptions and fixed datasets, while AI-based models, particularly deep learning neural networks, can identify nonlinear relationships among atmospheric, oceanic, and human factors. AI-generated hybrid models can enhance sea surface temperature and extreme weather forecast accuracy by over 20%.[76]For Bangladesh, this improved predictive capability aids in the implementation of legal frameworks like the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009 and the National Adaptation Plan 2023–2050. AI can inform legal responses to climate issues such as coastal erosion, salinity intrusion, and fish stock migration, which are covered by the Environment Conservation Act 1995 and the Disaster Management Act 2012. Additionally, AI-driven predictive analytics may support anticipatory

---

[73] Matthias Schlüter and others (eds), Artificial Intelligence and Data Science in the Blue Economy *Artificial Intelligence and Data Science in the Blue Economy* (Springer 2023) ch 4

[74] *Marine Fisheries Act* 2020 ss 4–7.

[75] *Territorial Waters and Maritime Zones Act* 1974 ss 3–8

[76] Taher Rajaee, Salar Khani and Masoud Ravansalar, 'Artificial intelligence-based single and hybrid models for prediction of water quality in rivers: A review' (2020) 200, Chemometrics and Intelligent Laboratory Systems. accessed 8 July 2025

environmental impact assessments (EIAs) mandated under the Environment Conservation Rules 1997, integrating climate foresight into compliance processes.[77] Overall, AI-enabled climate models could strengthen Bangladesh's commitments under the Paris Agreement, fostering transparent, data-driven adaptation strategies while quantifying the ocean's responses to climate change for improved mitigation and adaptation reporting as outlined in Article 13 of the Agreement.

7.2.3. Supporting Evidence-Based Blue Economy Governance

Bangladesh's blue economy framework aims for sustainable ocean resource use and ecological balance. AI-assisted precision and climate modeling aid in assessing environmental limits, predicting resource availability, and optimizing marine activities.[78] This approach establishes a scientific base for blue carbon credit systems. By incorporating AI models into the National Ocean Policy (Draft), Bangladesh could promote data-driven decision-making and establish legal foundations for adaptive management. Additionally, integrating predictive AI into licensing frameworks for offshore energy, shipping, and fisheries, as outlined in the Marine Fisheries Act 2020 and Bangladesh Petroleum Act 1974, allows for preemptive evaluations of environmental and climatic risks prior to commercial operations. This legal integration aligns with the precautionary principle, which is increasingly acknowledged in international environmental law and pertinent to Bangladesh's marine governance system.

[77] Artificial intelligence-based single and hybrid models for prediction of water quality in rivers: A review, Chemometrics and Intelligent Laboratory Systems 200 (2020) 103978 <https://doi.org/10.1016/j.chemolab.2020.103978> accessed on 5 September 2025.

[78] Shamima Nasrin and others, 'Blue Economy: Prospect and Development of Marine Resources in Bangladesh' (2018) 10(1) Bangladesh Journal of Fisheries 1.

7.2.4. Advancing Climate Resilience and Legal Accountability

AI-enhanced ocean precision and climate modelling enhances climate resilience through high-resolution forecasts of cyclones, storm surges, and sea-level anomalies[79]. This predictive data aids the Ministry of Disaster Management and Relief in implementing early warning systems and ensures compliance with the Disaster Management Act 2012. Integrating AI-generated data into environmental assessments may strengthen the enforcement of environmental rights under Article 18A of the Bangladesh Constitution, which protects natural resources and biodiversity.

7.2.5. Regional and International Implications

The use of AI in ocean precision and climate modeling presents significant advantages for Bangladesh, especially through participation in initiatives like the Bay of Bengal Large Marine Ecosystem (BOBLME) project. AI can streamline data collection and analysis across various jurisdictions, creating transboundary ocean datasets that align with UNCLOS Articles 197 and 200, which focus on regional cooperation and information sharing.[80] Additionally, the datasets generated by AI can bolster[81] Bangladesh's credibility in international climate finance, enhancing its transparency and accountability in reporting on adaptation and mitigation efforts, thus attracting funding for sustainable blue economy initiatives outlined in the 2021–2030 Blue Economy Development Workplan.

7.3. Blue Food

The integration of Artificial Intelligence (AI) into Bangladesh's blue food sector has the potential to significantly transform its blue economy, particularly regarding marine resource governance frameworks. It addresses challenges like inadequate surveillance and unregulated fishing, which threaten the livelihoods of about 2.5 million people dependent on the marine resources in the country's Exclusive

---

79 Mahesh Naik and others, 'AI-Driven Climate Modelling and Forecasting: Enhancing Environmental Resilience Through Predictive Analytics' (2025) 11(18s), International Journal of Environmental Sciences, p. 1762 <https://doi.org/10.64252/0hqedz44> accessed on 5July 2025.

80 *United Nations Convention on the Law of the Sea* (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3, arts 197 and 200.

81 Mahesh Naik and others, 'AI-Driven Climate Modelling and Forecasting: Enhancing Environmental Resilience Through Predictive Analytics' (2025) 11(18s) International Journal of Environmental Sciences 1762–1768, accessed 6 July 2025.

Economic Zone.[82] Blue food, derived from aquatic ecosystems, is vital for the country's food security, employment, and exports. AI can optimize resource management, enhance traceability, and support evidence-based policymaking in line with environmental and fisheries legislation.[83]

AI technologies are advantageous for fisheries resource assessment and sustainable harvest management, utilizing machine learning, satellite imaging, and predictive analytics to monitor fish stocks, detect illegal fishing, and forecast breeding cycles.[84] The Marine Fisheries Act 2020 emphasizes conservation, and AI can assist in enforcement by providing real-time surveillance data to the Department of Fisheries, aligning practices with national laws and international obligations like UNCLOS and the FAO Code of Conduct.[85]

Additionally, AI can enhance traceability and certification systems in the blue food market, strengthening market credibility and sustainability compliance. AI-driven blockchain and data analytics can verify the origin and processing of marine products, ensuring compliance with safety standards outlined in the Bangladesh Food Safety Act 2013[86] and the Bangladesh Standards and Testing Institution Act 2018[87]. This digital traceability boosts consumer confidence and enhances access to export markets where sustainable seafood standards are increasingly demanded.

AI plays a crucial role in enhancing aquaculture efficiency and environmental management in Bangladesh's coastal blue economy through smart technologies such as AI-based feeding systems and water quality monitoring. These innovations align with the Environment Conservation Act 1995 and the National Adaptation Plan (2022–2050), aiming for ecologically sustainable aquaculture while reducing

---

82 Gianpaolo Coro and others, 'Open Science and Artificial Intelligence Supporting Blue Growth' (ResearchGate, 2021) <https://www.researchgate.net/publication/348348102_Open_science_and_artificial_intelligence_supporting_blue_growth> accessed 9 October 2025.

83 Mdpi, 'Artificial Intelligence Applications for Sustainable Blue Economy and Marine Ecosystem Management' (MDPI, 2024) <https://www.mdpi.com/2071-1050/17/11/4795> accessed 10 October 2025.

84 IGI Global, 'Role of Artificial Intelligence in the Study of the Blue Economy and Marine Ecosystem' (IGI Global, 2024) <https://www.igi-global.com/chapter/role-of-artificial-intelligence-in-the-study-of-the-blue-economy-and-marine-ecosystem/367616 > accessed 10 October 2025

85 *Marine Fisheries Act 2020* (Bangladesh), s.31-36

86 *Bangladesh Food Safety Act 2013*, s.13

87 *Bangladesh Standards and Testing Institution Act* 2018. s.24

pollution and habitat loss.[88] AI-enabled data systems assist policymakers by integrating diverse datasets for informed marine spatial planning and simulating fisheries policies, supporting the National Blue Economy Development Framework (2018). Additionally, AI enhances climate resilience by anticipating fish migration changes under environmental shifts, in line with the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) and global commitments like the Paris Agreement. However, effective implementation necessitates policy reforms and legal updates to address digital governance, data ethics, and inter-agency coordination among relevant bodies for secure and efficient AI application in marine governance.[89]

7.4. Blue Energy

Bangladesh's application of Artificial Intelligence (AI) in blue energy development presents a significant opportunity to enhance its sustainable maritime economy. Blue energy, which includes tidal, wave, offshore wind, and ocean thermal energy, aligns with national goals of energy diversification and environmental sustainability.[90] AI can optimize marine renewable resource exploration through predictive analytics and remote sensing, identifying ideal sites and facilitating compliance with environmental regulations. Additionally, AI improves operational safety and maintenance in offshore energy management, enhancing efficiency and reducing costs while aiding compliance with relevant energy regulations.[91] This integration supports Bangladesh's transition to climate-resilient energy systems as outlined in its National Adaptation Plan. AI applications offer significant potential in environmental monitoring and regulatory enforcement for blue energy development in Bangladesh. Through AI-driven image recognition and data analytics, the environmental impacts of offshore installations can be evaluated, supporting

---

[88] Pradip Kumar Bhowmick and others, 'Role of Artificial Intelligence (AI) in Transforming Smart Aquaculture' (2025), The Agriculture Magazine, v.5(5) <https://doi.org/10.13140/RG.2.2.24784.43525> accessed 9 July 2025.

[89] Khan TR and Hossain MA, 'AI-Enabled Marine Conservation and Ocean Governance' (2024) <https://www.researchgate.net/publication/392012023_AI-Enabled_Marine_Conservation_and_Ocean_Governance>accessed 10 October 2025.

[90] IGI Global, 'Role of Artificial Intelligence in the Study of the Blue Economy and Marine Ecosystem' (IGI Global, 2024) <https://www.igi-global.com/chapter/role-of-artificial-intelligence-in-the-study-of-the-blue-economy-and-marine-ecosystem/367616> accessed 10 October 2025.

[91] Zareen Hossain, Souradipto Bandhopadhyay and Ritam Rajak, 'AI-Enabled Marine Conservation and Ocean Governance' (ResearchGate, May 2025) <https://www.researchgate.net/publication/392012023_AI-Enabled_Marine_Conservation_and_Ocean_Governance> accessed 17 August 2025.

compliance with the Environment Conservation Rules 1997 and the Bangladesh Climate Change Strategy and Action Plan (BCCSAP 2022–2050). AI aids regulatory agencies like the Department of Environment and the Bangladesh Oceanographic Research Institute in aligning blue energy initiatives with sustainable development goals. Additionally, AI informs policy formulation and decision-making by analyzing diverse datasets, allowing for a balanced approach to energy generation and marine conservation, as outlined in the National Blue Economy Development Framework 2018. AI also enhances investment planning and risk management through machine learning models, fostering transparency and investment security. However, maximizing AI's benefits requires legal updates and inter-agency collaboration, including the establishment of frameworks and guidelines pertinent to AI in the marine energy sector.[92]

7.5. Blue Transport.

The emergence of Artificial Intelligence (AI) presents transformative opportunities for Bangladesh's blue transport sector, which includes maritime logistics, shipping, port operations, and inland waterways. As the country aims to become a maritime hub in the Bay of Bengal, integrating AI can enhance efficiency, safety, environmental compliance, and policy coordination within evolving legal frameworks. [93]AI can significantly improve operational efficiency by using machine learning algorithms and predictive analytics to optimize shipping routes based on ocean currents, weather conditions, and port traffic data[94]. This not only reduces fuel consumption and emissions but also aligns with the Bangladesh Merchant Shipping Ordinance 1983 and the Draft Marchant Shipping Act 2025, which promote environmentally sustainable maritime operations. AI-assisted scheduling systems can improve cargo handling and berth allocation at major ports like Chittagong, Mongla, and Payra, thereby supporting their strategic digitalization agendas.

In terms of safety, AI can enhance monitoring and early warning systems, enabling real-time data analytics and AI-enabled sensors on ships to detect equipment

---

[92] Obinna Barnabas Onyenahazi and Bernard Owusu Antwi, 'The Role of Artificial Intelligence in Investment Decision-Making: Opportunities and Risks for Financial Institutions' (October 2024) International Journal of Research Publication and Reviews 5(10), p.70–85

[93] Ahamedul Karim Chowdhury, 'Why Bangladesh Needs Real-Time Waterway Monitoring' *The Daily Star* (21 March 2026) < https://www.thedailystar.net/> accessed 9 July 2025

[94] ibid.

malfunctions, navigation errors, or collision risks. [95] This proactive oversight aligns with safety obligations set forth in the Bangladesh Inland Shipping Ordinance 1976 and the Port Act1908. Integrating AI into the Bangladesh Marine Academy's training framework can improve seafarers' decision-making skills and reinforce a culture of safety compliance. AI also plays a critical role in environmental governance within the blue transport sector. With AI-driven satellite imaging and automated reporting, illegal discharges, oil spills, and ship emissions can be identified more effectively. These technologies support the Environment Conservation Act 1995 and the Ship Breaking and Hazardous Waste Management Rules 2010 by facilitating real-time analysis of environmental data for regulatory bodies like the Department of Environment (DoE) and Bangladesh Inland Water Transport Authority (BIWTA). This ensures better enforcement of both national and international marine pollution control laws, including obligations under the MARPOL Convention.[96] Bangladesh robustly need to regulate as soon as possible the Marine Pollution Prevention Act, aims to prevent, reduce, and control marine pollution, under the Marine Environment Law, ensuring overall marine environment protection.[97]

AI integration in digital port management and smart infrastructure can enhance productivity and reduce congestion through automated systems, aligning with Bangladesh's Delta Plan 2100 and National Blue Economy Development Framework 2018. AI in customs helps transparency and reduces corruption, in line with the Customs Act 2014 and ICT Policy 2018. Additionally, AI supports maritime security via collaboration with naval forces to detect illegal activities, reinforcing the Territorial Waters and Maritime Zones Act 1974 and UNCLOS 1982. Furthermore, AI-driven data analysis aids sustainable maritime transport strategy, aligning with Sustainable Development Goals (SDG 9 and 14) and the Bangladesh Climate Change Strategy (2022–2050).[98] However, modernization of legal frameworks is necessary to

---

95 Mdpi, 'Artificial Intelligence Applications for Sustainable Blue Economy and Marine Ecosystem Management' (MDPI, 2024) <https://www.mdpi.com/2071-1050/17/11/4795> accessed 10 October 2025.

96 IGI Global, 'Role of Artificial Intelligence in the Study of the Blue Economy and Marine Ecosystem' (IGI Global, 2024) <https://www.igi-global.com/chapter/role-of-artificial-intelligence-in-the-study-of-the-blue-economy-and-marine-ecosystem/367616> accessed 10 October 2025.

97 Md Fahmedul Islam Dewan, 'Introducing the Marine Pollution Prevention Act' *Dhaka Tribune* (15 February 2023) <https://www.dhakatribune.com/opinion/op-ed/305003/introducing-the-marine-pollution-prevention-act> accessed 7 October 2025.

98 Ministryof Environment, Forest and Climate Change, *National Adaptation Plan of Bangladesh (2023–2050)* (Government of the People's Republic of Bangladesh 2022) <https://climate-laws.org/document/national-adaptation-plan-of-bangladesh-2023-2050_ecfc> accessed 9 July 2025.

recognize AI systems in maritime regulations and ensure effective governance through revised laws and coordination among key agencies for safety and competitiveness.[99]

8. Challenges of Deploying AI in the Blue Economy within Bangladesh's Legal Framework

8.1. Absence of a Comprehensive AI Legal Framework

Bangladesh currently does not have a dedicated statute for artificial intelligence (AI) that governs algorithmic governance, data stewardship, and automated decision-making concerning public welfare. This absence leads to regulatory uncertainty regarding the acceptable applications of AI in areas such as maritime monitoring, the legal implications of algorithmic decisions, and the responsibilities for ensuring transparency and auditability. Furthermore, the lack of specific AI legislation hinders regulators from establishing fundamental standards for algorithmic fairness, liability, and oversight, particularly in relation to blue-economy initiatives.[100]

8.2. Data Governance, Privacy and Ownership Problems

AI systems for marine monitoring depend on large, heterogeneous datasets (satellite imagery, AIS and VMS vessel tracks, acoustic recordings, sensor networks, citizen-science inputs). Bangladesh has limited statutory clarity on data ownership, cross-agency sharing, third-party commercial access, and privacy safeguards for coastal communities that may be incidentally captured in imagery or acoustic data. Unclear rules about who may collect, store, aggregate and monetise such data create legal risks and chill data sharing, thereby undermining the data-intensive models that AI requires.[101]

---

99 Muhammad Bilawal Khaskheli, Shumin Wang, Xin Zhang, Imran Haider Shamsi, Chenghuan Shen, Sanober Rasheed, Zakir Ibrahim and Dost Muhammad Baloch, 'Technology Advancement and International Law in Marine Policy, Challenges, Solutions and Future Prospective' (2023) 10 *Frontiers in Marine Science, p.1*

100 Lexi Aida, 'Why Bangladesh Needs an AI Law' (The Legal Wire, 24 June 2024) <https://thelegalwire.ai/why-bangladesh-needs-an-ai-law/?utm_source=chatgpt.com> accessed 7 October 2025.

101 Tasmiah Tahsin Mayeesha, Farzana Islam and Nova Ahmed, 'AI4Bangladesh: AI Ethics for Bangladesh - Challenges, Risks, Principles, and Suggestions' in *Proceedings of the 13th International Conference on Information & Communication Technologies and Development (ICTD '24)* (Association for Computing Machinery 2025) 260–272 <https://doi.org/10.1145/3700794.3700820> accessed 9 July 2025.

8.3. Evidentiary Admissibility and Forensic Integrity of AI Outputs

For AI-derived outputs to be used effectively in regulatory enforcement or prosecution concerning issues like pollution, illegal, unreported, and unregulated (IUU) fishing, and safety violations in Bangladesh, it is essential for courts to recognize them as reliable evidence. Currently, the country's evidentiary rules surrounding digital data are insufficiently developed, leading to ongoing concerns regarding the chain of custody, algorithmic explainability, error rates, and the admissibility of inferences generated automatically by AI. The lack of clear procedural guidelines and judicial direction creates a risk that enforcement agencies may encounter situations where AI-derived evidence could be excluded or successfully contested in court. This situation undermines deterrence and diminishes the overall effectiveness of enforcement efforts.[102]

8.4. Institutional Fragmentation and Overlapping Mandates

Marine governance in Bangladesh involves multiple ministries and agencies, including the Department of Environment (DoE), Department of Fisheries, Department of Shipping, Bangladesh Oceanographic Research Institute (BORI), Navy/Coast Guard, and Bangladesh Inland Water Transport Authority (BIWTA). This fragmentation creates challenges in defining responsibilities for utilizing and responding to AI outputs, resulting in operational stalemates and legal disputes due to unclear agency ownership of sensor networks, authorization for surveillance, and enforcement of AI-detected violations. To effectively implement AI, there is a need for clear statutory mandates and formal mechanisms for inter-agency data sharing and governance.[103]

8.5. Capacity, Technical Standardisation and Validation Gaps

AI models must be trained, validated and continuously audited against locally relevant ground truth. Bangladesh faces shortages of domain experts (data scientists, marine scientists and legal technologists) and lacks standardised protocols and

---

[102] Tania Sheikh, Sumaya Afroj, Farah Iqbal, 'Admissibility of Digital Evidence in Court: In Light of Changes in Bangladesh Evidence Law' (2024), International Journal of Research and Scientific Innovation <https://rsisinternational.org/journals/ijrsi/articles/admissibility-of-digital-evidence-in-court-in-light-of-changes-in-bangladesh-evidence-law/?utm_source=chatgpt.com> accessed 8 October 2025.

[103] Pawan G Patil, John Virdin, Charles S Colgan, M G Hussain, Pierre Failler and Tibor Vegh, *Toward a Blue Economy: A Pathway for Sustainable Growth in Bangladesh* (World Bank Report No 126654, World Bank 2018) <https://doi.org/10.1596/30014> accessed 9 July 2025

accredited laboratories for validating model performance. The absence of national technical standards for sensor calibration, algorithmic benchmarking, and reporting undermines the credibility of AI outputs in regulatory and judicial contexts.[104]

8.6. Accountability, Liability and the "Black-Box" Problem

Many modern AI systems (deep neural nets) are opaque by design, making it difficult to explain how a particular enforcement flag was generated. This "black-box" characteristic raises issues of administrative accountability: who is legally responsible if an AI system produces a false positive that harms a fisher's livelihood, or a false negative that allows pollution to continue? Current laws do not clearly allocate liability between system operators, data providers, technology vendors, and state agencies—creating legal uncertainty that can discourage deployment or produce unfair outcomes.[105]

8.7. Socio-economic, Equity and Human Rights Concerns

Automated surveillance and enforcement can disproportionately impact marginal coastal communities reliant on informal fishing, limiting their ability to contest algorithmic findings. Without proper statutory safeguards, AI-driven governance may worsen social and economic disparities, leading to constitutional and human rights concerns regarding fair procedures, livelihood protection, and participation in decision-making. Legal frameworks should integrate technological advancements with procedural protections and methods for community engagement.[106]

8.8. Cross-jurisdictional and International Legal Complexities

Marine systems are transboundary; AI-detected harms (pollution plumes, drifting debris, migratory-stock shifts) may originate outside Bangladesh's jurisdiction. Legal questions arise about the use of AI to attribute harm to foreign vessels or actors and to cooperate with neighbouring states on evidence sharing. Regional harmonisation

---

[104] Wing, K. (2024). 'Advancing artificial intelligence in fisheries requires novel collaborations to share data and methods, encourage new and diverse entrants to the field, and develop inclusive governance structures', ICES Journal of Marine Science, 81(10), p.1912–1919.

[105] T T Mayeesha, 'AI Ethics for Bangladesh: Challenges, Risks, Principles, and Future Directions' (2024) 13th International Conference on Information and Communication Technologies and Development (ICTD) 260–272

[106] Faijul Islam, 'Legal and Socioeconomic Implications of Coastal Peoples' Maritime Rights in Bangladesh: Towards a Sustainable Blue Economy' (2025) 3(1), International Journal of Legal Studies and Social Sciences, p. 633

of data standards and legal protocols is necessary to support cross-border AI surveillance and to comply with UNCLOS obligations for regional cooperation.[107]

8.9. Cybersecurity, Data Integrity and Resilience Risks

AI systems and sensor networks introduce new cyber-attack surfaces. Compromised data streams (spoofed AIS, tampered sensors) can generate false intelligence or blind regulators—yet current legal protections and incident-response frameworks for critical marine sensor infrastructure are weak. Robust legal rules on cybersecurity obligations, mandatory breach reporting, and technical resilience standards are necessary to ensure trust in AI systems.[108]

8.10. Financing, Infrastructure and Sustainability of AI Projects

Sustaining AI systems requires reliable funding for sensor maintenance, data storage, skilled personnel and periodic re-training of models. Fragmented budgets and donor-driven pilots risk creating 'one-off' systems that cannot be legally or operationally sustained. The law can help by establishing funding mechanisms, public-private partnership rules, and procurement standards that require open, auditable AI systems and long-term maintenance plans.[109]

9. Findings

Significant laws such as the Territorial Waters and Maritime Zones Act, 1974 (and Amendment 2021), the Marine Fisheries Act (2020), the Bangladesh Biodiversity Act (2017), Ports Act (1908), Shipping Corporation Act (2017), Energy Regulatory Commission Act (2003), and Disaster Management Act (2012) establish important foundations for the blue economy, but they are fragmented across sectors, causing overlaps, gaps, and poor integration for offshore and marine activities. Institutional support exists through agencies like the Bangladesh Shipping Corporation, port authorities, Bangladesh Oceanographic Research Institute (BORI), Blue Economy Cell (BEC) and Bangladesh Energy Regulatory Commission; however, these

---

107 Zhang, Shijun, Wu, Qian, Butt, Muhammad Murad Zaib, Lv, Yan-Ming, & Wang, Yan-E. (2024). 'International Legal Framework for Joint Governance of Oceans and Fisheries: Challenges and Prospects in Governing Large Marine Ecosystems (LMEs) under Sustainable Development Goal 14', Sustainability, 16(6), 2566.

108 T T Mayeesha, 'AI Ethics for Bangladesh: Challenges, Risks, Principles, and Future Directions' (2024) 13th International Conference on Information and Communication Technologies and Development (ICTD) 260–272

109 Md. Atiqul Islam Mondal, 'Unlocking the Potential of the Blue Economy in Bangladesh' (2025) 2(1) Journal of Aquatic Research and Sustainability 1–3.

institutions face capacity constraints, limited technological adoption, and insufficient coordination. Environmental considerations are often underrepresented in legislation, as many laws prioritize economic factors over environmental protection, climate adaptation, and ecosystem management. The Disaster Management Act acknowledges maritime issues but tends to favor reactive rather than proactive strategies for risk reduction, especially concerning offshore areas. Emerging sectors such as marine biotechnology, renewable energy, and maritime research remain inadequately regulated and supported, with modernization and investment incentives hampered by antiquated laws focused on specific sectors.

10. Recommendations:

10.1. Develop an Integrated Blue Economy Legal Framework:

Harmonize existing maritime, environmental, and fisheries laws to eliminate overlaps and ensure clear jurisdiction in offshore zones. Establish a comprehensive *Blue Economy Act* that incorporates AI governance, sustainability principles, and cross-sectoral coordination.

10.2. Establish a Dedicated National Authority for Blue Economy and AI Integration:

Create a centralized institution or strengthen the *Blue Economy Cell (BEC)* to coordinate AI-driven policy, data management, and maritime governance, ensuring collaboration among ministries, agencies, and private stakeholders.

10.3. Enhance Technological Infrastructure and Data Systems:

Invest in marine data networks, AI-enabled surveillance systems, and real-time monitoring tools for fisheries, pollution control, and maritime navigation, while developing national standards for data sharing, transparency, and cybersecurity.

10.4. Strengthen Human Resource and Institutional Capacity:

Introduce specialized training programs in marine data science, AI governance, and ocean law. Build capacity within maritime and environmental agencies to operate and regulate AI systems effectively.

10.5. Incorporate Environmental and Climate Resilience Measures:

Embed ecosystem-based management, marine spatial planning, and climate forecasting within all AI-assisted maritime projects to ensure sustainability and disaster preparedness in coastal and offshore zones.

10.6. Promote Public–Private Partnerships and Innovation:

The initiative promotes collaboration among government, academia, and private sectors to develop AI tools for marine research, renewable energy, and sustainable aquaculture, fostering innovation and responsible investment.

10.7. Ensure Ethical and Inclusive AI Governance:

Implement policies for data privacy, algorithmic bias, and accountability, and involve coastal communities in AI-based decision-making processes for social inclusion, transparency, and equitable benefit-sharing.

10.8. Foster Regional and International Cooperation:

Enhance collaboration with Bay of Bengal countries for data exchange, joint AI research, and coordinated responses to transboundary marine challenges in line with UNCLOS obligations.

11. Conclusion

Bangladesh's blue economy faces both enormous prospects and formidable obstacles as it incorporates artificial intelligence (AI) into its regulatory framework. On the one hand, artificial intelligence (AI) has the potential to revolutionize marine governance by improving resource management, monitoring environmental sustainability, and bolstering adherence to international standards. AI can greatly enhance the management of ports, offshore energy, fisheries, shipping, and marine biodiversity by facilitating predictive analytics, real-time data monitoring, and intelligent decision-making. This will support sustainable economic growth. The adoption of AI in the blue economy faces challenges such as limited technical infrastructure, skilled human resources, regulatory gaps, and concerns about data security, privacy, and ethical considerations. Aligning AI implementation with Bangladesh's legal frameworks and international maritime obligations requires careful policy design and institutional coordination. The full potential of AI in advancing the blue economy may be unrealized without robust governance mechanisms and capacity-building initiatives. A strategic approach balancing technological advancement with regulatory oversight, ethical standards, and stakeholder engagement is needed. By addressing these challenges, Bangladesh can harness AI to safeguard marine resources and position itself as a regional leader in sustainable blue economy governance.

Determining Minimum Age of Criminal Responsibility (MACR) by the Children Court in Bangladesh: An Appraisal

Shuvra Chowdhury*

Abstract: At present, special treatment for children is well-entrenched all over the world. Bangladesh has obligation to protect the children under both national and international laws. The idea behind the juvenile justice is that children must be dealt with special care. This article has dealt with both the legal and regulatory frameworks relating to the determination of age of the children by the Children Court in Bangladesh. Under the legal framework, the provisions of the Children Act (CA), 2013 have been explained. In pre-trial level of the juvenile justice system, the age of a child and minimum age of criminal responsibility (MACR) have been determined. The CA, 2013 delineates who is a child and the MACR. The basic feature of the Children Act is that it has established a separate court for the children with detailed trial procedure where the relevant date for assessing the age of a child shall be the date of committing of the offence. The main aim of the statute is therefore, not to put the child in the punitive and retributive system rather to place them in the restorative format where they will have the opportunity to be rehabilitated and re-integrated in the society. This article identifies the judicial process of determining the age of the children and assesses the landmark decisions of the apex court of Bangladesh regarding the MACR and age determination of the children. In addition, recommendation have been given to improve the age assessment process of the children who are in conflict with law.

Key words: Minimum age of criminal responsibility (MACR), age determination process, children court, relevant date, children in conflict with law.

1. Introduction

The administration of juvenile justice system in Bangladesh has been governed by the Children Act (CA), 2013. After the enactment of the CA, 2013 up to eighteen years of age all are treated as children. Up to nine years of age, there shall be no criminal responsibility but from nine to twelve years there is limited criminal responsibility. So, from nine to eighteen years of age a child who has violated the law shall be brought before the children court. In many instances, it has been shown that children are considered as adult and tried with adult in the ordinary court without transferring the case to the Children Court. Before the enactment of the CA, 2013, a good number of cases were decided by the apex Court of Bangladesh on the issue of pertinent date for

* Assistant Professor, Department of Law, Stamford University Bangladesh, Barrister at Law (Lincoln's Inn, UK), PGDiBPT (University of Northumbria at Newcastle, UK), LLB (Honours) (University of London, UK), LLM, LLB (Honours) (University of Dhaka)

the evaluation of the age of a child. But this issue has been settled by sec. 20 of the CA, 2013 that the relevant date for assessing the age of a child shall be the date of committing of the offence. Unfortunately, many children courts are not aware of the recent legal development. In a number of cases, the Supreme Court of Bangladesh held that the age of the child is relevant at the date of committing the offence not at the date of charge framing. In addition, for the purpose of determining the age of the child, the children court earlier considered the size, facial appearance and height of the child which actually created incoherence in assessing the child's age. The law provides to assess the disputed age of the child on the basis of the birth certificate but the children courts are erroneously giving emphasis on the appearance of the child. Therefore, this article identifies the judicial process of determining the age of the children and assesses the landmark decisions of the apex court of Bangladesh regarding the MACR and age determination of the children.

2. Definition of Child

The term 'child' has been defined under section 2(17) of the CA, 2013 as all persons who have not reached to the age of nineteen years must be treated as children. A child in conflict with law is a person who has violated the law or found as guilty after the trial[1] and a child in contact with law includes a child who becomes the victim of an offence or becomes the witness of any offence.[2]

3. Minimum Age of Criminal Responsibility (MACR)

Sec. 82 of the Penal Code 1860 excludes children under the age of nine years from the criminal liability[3] and section 83 provides the child will have limited criminal liability above nine years and below the age of twelve years. Thus, a child who has not attained the age of nine years will not have any criminal responsibility. The chief aim of the statute is therefore, not to put the child in the punitive and retributive system rather to place them in the restorative format where they will have the opportunity to be rehabilitated and re-integrated in the society.

1 The Children Act 2013, s 2(3)
2 ibid, s 2(4)
3 The age of criminal responsibility was raised from the earlier age of 7 to 9 in 2004 by Act XXIV of 2004.

4. Relevant date for the determination of the age of a child

When the court will determine the age of a child, the pertinent date shall be the date of the committing of the offence irrespective of the provision of any laws, policies, rules and the decisions of the courts.[4]

4.1 Presumption and determination of age of the child by the Children Court

When the allegation has been brought against a child, it becomes apparent to the court that he/she is not a child, in that circumstance, the court may initiate an investigation for the purpose of evaluating the age of the child.[5] After completion of inquiry, the court shall keep the record of the outcomes and pronounce the child's age.[6] For the purpose of evaluating the age of the child, the children court will call for the registers, documentary evidence, information from persons or institutions. Moreover, the court will have the right to call a person or officer to adduce any document for proving the child's age. If the children court declares a person as a child, subsequently it can be disproved by adducing undoubted documentary evidence with adequate justification.[7]

4.2 The debate on the date of committing the offence versus the date of charge framing

The decided cases of the Supreme Court have shown a debate on the issue to identify the pertinent date for the evaluation of the age of a child. In some cases, the apex court has taken the view that the date of committing the offence shall be considered as the pertinent date for the determination of the age of a child. On the other hand, some cases uphold that the date of charge framing will be considered as pertinent date for the assessment of the age of a child. It has to be noted here that all these cases were decided before the adoption of the Children Act, 2013.

Muhammad Imman Ali, J. in *Mehedi Hasan @ Modern vs State (Criminal)* observed that the occasion on which the age of the child is relevant; whether it should be taken into consideration at the time of committing the offence or at the time of charge framing and opined that this aspect has been wrongly interpreted by the Appellate Division in a series of cases where it has been held that the relevant time to consider the age is as on the date of framing the charge not the date of committing the offence. In support of his opinion, he has referred to the cases of *State vs. Md. Roushan Mondal*

---

4 The Children Act 2013, s 20
5 ibid, s 21(1)
6 ibid, s 21(2)
7 ibid, s 21(3)

@ Hashem[8],*State vs. Secretary, Ministry of Home Affairs, Bangladesh Secretariat, Dhaka*[9], *State vs. Secretary, Ministry of Home Affairs, Bangladesh Secretariat, Dhaka and others*[10]. He also relied upon the cases of *Protap Singh vs. State of Jharkhand and another*[11],*Jitendra Singh @ Babloo Singh and another vs. State of U.P.*[12], *Gopinath vs. State of W.B*[13].

Whether the age of the offender should be taken into consideration at the time of committing the offences or at the time of charge framing was examined by Justice Imman Ali. He referred the decision of *State vs Md. Roshal Mondal @ Hashem*[14] where it has been held that the pertinent date to determine the age of the child would be the date of committing the offence since it is necessary to ascertain that the offender understood the outcome of his actions and had the necessary *mens rea* on that occasion. This is evident from section 83 of the Penal Code, which clearly makes it a requirement for the Court has to be convinced that the accused had the mental capacity of understanding the consequence of his actions on that occasion meaning on the date of committing the offence. Justice Ali also mentioned to the case of *Protap Singh vs. State of Jharkhand,*[15] in this regard. In *Solaman vs State (Criminal)*[16], the High Court Division (HCD) identified that the date of committing the offence will be considered by the trial court for the assessment of the age of the child. The HCD has referred the cases regarding this issue as decided previously by the HCD as well as the Appellate division in *Saiful Islam Jitu (Md) vs State (Criminal)*[17]. The HCD observed:

> "Though HCD in the cases of *Md. Shamim vs State*,[18] and *Monir Hossain vs State*,[19] held that the trial by the Court in respect of an accused who was below 16 years at the time of committing offence is without jurisdiction; but the AD in the cases of *Abdul Monem Chowdhury @ Monem vs State*,[20] and *Mona alias Zillur Rahman vs State*,[21] has not approved the above view of the HCD."

---

8 *State vs. Md. Roushan Mondal @ Hashem*59 DLR 72
9 *State vs. Secretary, Ministry of Home Affairs, Bangladesh Secretariat, Dhaka*16 MLR 254
10 *State vs. Secretary, Ministry of Home Affairs, Bangladesh Secretariat, Dhaka and others*19 BLT 376
11 *Protap Singh vs. State of Jharkhand and another*[2005] (3) SCC 551
12 *Jitendra Singh @ Babloo Singh and another vs. State of U.P.*[2010] 13 SCC 523
13 *Gopinath vs. State of W.B*1984 Supp SCC 228
14 *State vs Md. Roshal Mondal @ Hashem*59 DLR 72
15 *Protap Singh vs. State of Jharkhand*[2005] (3) SCC 551
16 *Solaman vs State (Criminal)*[2006] 58 DLR 429
17 *Saiful Islam Jitu (Md) vs State (Criminal)*[2013] 65 DLR 234
18 *Md. Shamim vs State*19 BLD 542
19 *Monir Hossain vs State*53 DLR 411
20 *Abdul Monem Chowdhury @ Monem vs State*47 DLR (AD) 96

In support of the statement that the pertinent date for evaluating the age of a child is not the date of the charge framing but the date of committing the offence, two decisions of the Supreme Court of India can be mentioned, such as the case of *Portal Singh vs State of Jharkhand*,[22] has decided that the pertinent date is the commission of the offence not the date when he/she has been produced before the court. Same view has been taken in the Case of *Umesh Singh vs State of Bihar*[23].It was directed by the HCD in *Aslam Ali vs State*[24], to the Session Judge of the Women and Children Tribunal, Meherpur to conduct the necessary inquiry about the age of the child and if it found that the accused is a child then the case must be transferred to the children court. In *Rokib vs State*,[25] it was noted one of the main differences between the CA, 1974 and the CA, 2013 relates to the age of the person. Under the CA, 1974, a juvenile means who is below the age of sixteen years. In the CA, 2013 the age limit is 18 years. A person above sixteen years in terms of act, 1974, on the date of framing charge, was not a juvenile. In the present case, it appears from the record that the petitioner was minor at the time of committing the offence as per his admit card of *Dhakhil* examination, Birth Certificate, and National ID card which have been produced by the accused in the trial court. It is seen that the accused was born on 11.10.1991 and offence was committed on 30.08.2002. In fact, he was ten years ten month at the relevant time. The HCD has observed that the juvenile against whom the allegation of offence has been brought and who has not attained the age of eighteen years on the date of committing such offence must come within the ambit of the CA, 2013.

4.3 Risk of Assessing Age on the basis of Appearance

It was considered by the Appellate Division (AD) of the SC in *Mehedi Hasan @ Modern vs State (Criminal)*[26] that whether the HCD was justified in affirming the finding of the learned Sessions Judge that from the size, the facial appearance and the height, the appellants appeared to him major and were above 18 years of age. To decide the point, the AD has referred the definition of child as given in sec. 2 sub-sec. (f) the Children Act (CA), 1974. The AD then considered sec. 66 of the Act as pertinent.

---

21 *Mona alias Zillur Rahman vs State*23 BLD (AD) 187

22 *Portal Singh vs State of Jharkhand*[2005] 3 SCC 551

23 *Umesh Singh vs State of Bihar*[2000] 6 Supreme Court Cases, 89

24 *Aslam Ali vs State*[2004] Criminal Appeal 1326

25 *Rokib vs State*[2017] Criminal Miscellaneous Case No. 37799

26 *Mehedi Hasan @ Modern vs State (Criminal)*[2014] 66 DLR (AD) 111

After reading sec. 66 of the CA, 1974, the AD identified that the meaning of the term 'appear' is very important as used in sec. 66 sub-sec. 1 but the term has not been defined in the definition clause under sec. 2 of the CA, 1974. So, the court has relied on the definition of the term as given in different dictionaries. Though the dictionary meaning is not the authoritative exponents of the meaning of the word used in an Act of Parliament but referring to the rules of the courts of law[27] that words to be considered in their normal sense, the court consulted with the dictionary meaning of the term 'appear'. As per the Chambers Dictionary, 10th edition "appear" means "to become visible" to present oneself formally before an authority, court, etc; to act as the legal representative or counsel for another; to come into view, to come before the public; to perform (on stage or on film); to be published; to be manifest; to seem.

The court also referred the golden rule of construction that all statutes are to be construed according to the plain, literal and grammatical meaning of the words and when words in a statute are transparent that they should be construed according to their tenor and meaning for that reflects the intent and purpose of a legislation; the court to construe a provision of a statute according to the simple meaning of the language used by the legislature as the language so supplied best declares the intention of the legislature and recourse to any other principle of interpretation is unnecessary. The Court further observed that the provisions of a statute cannot be interpreted in such a way that renders any part thereof meaningless or redundant. More so, interpretation of a statute cannot be such that negates the power given to a Court by the legislature and giving such interpretation, amounting to questioning the wisdom of the legislature. There is another cardinal principle of construction that the legislature never uses any word unnecessary or without any meaning or purpose and no word in a statute should be treated as surplus or redundant and a construction which would render any part of the language of a statute without any effect will normally be rejected.

The language applied in sub-sec. 1 of sec. 66 is very plain, simple, clear and unambiguous. Keeping in view the meaning in the dictionary of the term "appear" and from a reading of the words and it has been appeared that he is a child used in sub-sec. (1) of sec. 66, it prima facie appears to the AD that the legislature has given a plenary jurisdiction or power to the Court to take a first-hand decision by way of presumption of opinion as to the age of a person, whether he has been alleged to commit the offence or not, whenever is taken in the court other than for delivering evidence whether he is a child and then to make an inquiry in that respect as

[27] *R v. Peters*, [1886] 16 Q BD 636 (Coleridge L)

mandated in the section itself. Reading the sub-section in its entirety, it also appears to the AD that to take recourse to the process of investigation as to the age of the person so brought before a court and must record the finding mentioning the age, it is a pre-condition that the Court must first form the opinion that the person so brought before the court is a child.

The CA of 1974 is a special law and various benefits have been given in the Act to a child offender which are not available to an adult offender, so to give those benefits to a child offender, the Court before whom a person is brought, must presume opinion first as to his/her age and if it appears to it that he/she is a child and then on inquiry as mandated in section 66(1) if it is determined that he is really under the age of 16, then and then only he/she would be given the benefits of the act. There is a good logic behind such scheme by the legislature. The reason is that there may be divergent types of cases which may come before a Court. There may be cases when admittedly in the FIR or in the petition of complaint as the case may be or in the charge-sheet and may be in a confessional statement made by such person, the age has uniformly been written or mentioned under 16, i.e. may be 14 years, 15 years or just under 16 years and such mentioning of age is not disputed by the prosecution or the private party concerned, then no presumption of a first-hand idea as to whether the person is a child or not would be needed or called for.

There may be cases when the age of the person so brought is mentioned in the above mentioned documents as 16 or any other approximate age (but not under 16) or even above, there may be cases where no age is mentioned and the person so brought claims to be a child by filing documents, but the prosecution or the state or the private party concerned opposes the claim of the person to be a child claiming that he/she is adult, i.e. above 16 or high. There may be cases where the age of a person is exaggeratedly mentioned by the complaining party or the law enforcing agencies to show him adult, but in fact, he is under the age of 16, yet there may be a case where only in one document, such as, the confessional statement made by a person under section 164 of the CrPC, the Court first has to form a first-hand idea that the person so brought is a child and, then and then, only it would be obligatory upon it to make an investigation as to the age of the person in the manner as stated in sec. 66(1) of the Act, 1974 and keep the finding recorded mentioning the age of the child.

The AD concluded by saying that a children Court shall be under an obligation to make an investigation as to the age of a child who has taken before the court whether charged with an offence or not, otherwise than for giving evidence as mandated in sec. 66(1) of the Act, 1974, if it appears to it (here the Sessions Judge) that the person so brought is a child. Same view has been taken by this Division in the cases of *Bimal Das vs. The State,*[28] and *Abdul Munem Chowdhury @ Momen vs. The State*[29].

4.4 Assessing Age of a Child by Judges

Justice Imman Ali has observed that the Judges are not experts in assessing age and has also discarded the idea of evaluating the age on physical outlook and in support of his view, he has relied upon the cases of *Mahomed Syedol Ariffin bin Mahomed Ariff vs. Yeah Oai Gark,*[30]*Hasina Begum vs. State,*[31] and *Prafullah Kamal Bhattacharya vs. Ministry of Home Affairs, Government of Bangladesh*[32]. Indeed doctors, some of whom during the course of their studies gain knowledge in age assessment have been denied the status of being experts in age assessment in a Privy Council decision.

In view of Justice Imman Ali, to exclude supporting documentary evidence because the Judge came to the conclusion that the accused has a physical appearance of being over 18 years is abandoning logic altogether. The personal opinion of a Judge cannot override documentary evidence. It is one thing to say that the documentary evidence is not acceptable because it has not been proved in accordance with the Evidence Act or that it has been proved to be false by expert or other evidence, and yet another to say that the document must be false because the Judge was of the firm view that the age of the accused was not as claimed. If the documents had been legally proved to be false or forged then that could lend support to the judge’s view that the claimed age is false, but not vice versa. If the certificates relating to age were produced and exhibited without any objection, in which case there was no reason why they should be doubted, particularly since they are official documents issued by the appropriate authority and would have probative value under section 114 of the Evidence act unless and until they are proved to be false or forged. In all fairness, if the Judge had doubts he himself could have taken steps for verifying the veracity of the documents in question.

These days with the improvement of nutrition many boys aged about 14-15 years spot a moustache and beard. Conversely there are some men who never show growth of any beard. To say that a person who has a moustache and beard is ipso

---

28 *Bimal Das vs. The State*14 BLD (AD) 218

29 *Abdul Munem Chowdhury @ Momen vs. The State*47 DLR (AD) 96

30 *Mahomed Syedol Ariffin bin Mahomed Ariff vs. Yeah Oai Gark*[1916] AIR Privy Council 242

31 *Hasina Begum vs. State*1 BLC 315

32 *Prafullah Kamal Bhattacharya vs. Ministry of Home Affairs, Government of Bangladesh*28 DLR, 123

facto adult would be an arbitrary exercise of non-existent power and unjust denial of legal rights enshrined in statutes. Justice Imman Ali concluded that it is dangerous to state the age of an accused based only on visual assessment.

4.5 Consequences of failure to raise the age issue at the inception of trial

In *Mehedi Hasan @ Modern vs State (Criminal),* another issue addressed by the HCD was with regard to failure of the accused to agitate the aspect of age and hence jurisdiction of the Court at the earliest stage. In this regard, from the verdict of the trial Court in the present case, it appears that opinion was noted about the age at the time of framing charge. Then palpably, it appears that age was an issue at the inception of the trial. Moreover, litigants depend largely on the vagaries and acumen of their counsel. The failure of counsel to take steps in any case should not necessarily take away the rights of the accused which is enshrined in law. There are some examples where the HCD has remanded the case to evaluate the age of the child.[33] The case decided by the apex Court of India in the case of *Gopinath Ghosh* exemplifies how the failure to claim to be a minor at the earliest stage does not deprive the accused from exerting his right even before the apex Court. The essence of the decision is that if the right existed at that time then the right subsists no matter at what stage it is claimed.

4.6 Value of Medical Reports for the Assessment of Age

For the purpose of age assessment, the medical reports of the paediatricians are relevant and can be taken into consideration.[34] But the Royal College of Paediatrics and Child Health (2007) identifies that the age assessment is not an accurate science and there is a possibility that error may happen to estimate the perfect age.[35] Even psychological stress, deprivation, malnutrition may have some impact on the physical appearance. The necessity of dental or wrist bone X-ray to assess the age of the claimant has been questioned on the ground that conducting such medical investigation would not have any therapeutic value. In addition, the methods applied in dental measures are not reliable and raised some significant doubt about

---

[33] *Monir Hossain (Md.) @ Monir Hossain vs. The State*, 53 DLR 411

[34] A v London Borough of Croydon and SSHD, WK v SSHD and Kent County Council, 2009 EWHC 939 (Admin)

[35] Sheona York and Richard Warren, 'Dilemma and Conflicts in the Legal System', in Sue Clayton and Anna Gupta (eds), *Unaccompanied Young Migrants: Identity, Care and Justice*, (Policy Press 2019) 43

the efficacy of such test to determine the exact age.[36] Even the council of Europe's Children Rights Division raised voice about the inaccuracies of age assessment and the use of medical procedure for this purpose.[37]When assessing age by the assessor on the basis of dental X-ray reports[38] great care must be taken to give relative weights to such reports.[39]

4.7 Use of Radiological Imaging for Assessment of Age

The use of radiological imaging in age assessment of the children is not complied with internal norms followed by the forensic science community. Moreover, this system is not sufficiently safeguarding the best interest of children and also give rise to a communicative error.[40]Recent medical research indicates that the radiological methods for assessing age are not useful. It has been recommended by the scientific group for Forensic Anthropology in their guidance on age assessment that radiological methods are considered unacceptable and should be avoided at the time of assessing age.[41] As the forensic medicine standards of skeletal and development of tooth of European or western populations are different than the non-western group of peoples, such standard would not have much relevance.[42] The leading German medical journal also argued in 2014 that the use of radiological methods such as MRI, CT scan caused on identifiable level of radiation exposure without any corresponding justification on ground of medical necessity.[43] Further, the 117 Annual Assembly of German Medical Association identifies that the radiological methods are obsolete for assessing age and must not be used for this purpose.[44] It has been established by medical and traumatology research that stress has important

---

[36] The Upper Tribunal in *R (on the application of AS) by his litigation friend Franceso Jeff) v Kent County Council* [2017] UKUT 446 IAC

[37] Age Assessment, Council of Europe member states' policies, procedures and practices respectful of children's rights in the context of migrants, (September 2017)

[38] ZM and SK v the London Borough of Croydon [2016] UKUT 559 IAC

[39] AS v Kent County Council [2017] UKUT 446

[40] Gregor Noll, 'Junk Science? Four Arguments against the Radiological Age Assessment of Unaccompanied Minors Seeking Asylum' (2016) International Journal of Refugee Law, 28(2)

[41] Scientific Working Group for Forensic Anthropology, 'Age Estimation', Rev 1, 2013, <http://swganth.starlogic.com/age% 20 Rev1. Pdf> accessed 3 Sep 2024

[42] Grego Noll (n 193) 241

[43] T Nowotny, W Eisenberg and K Mohnike, 'Sitting Alter-Stritttige Altersdiagonsitik, (2014) Deutsches frtzteblatt, 18 786

[44] General Medical Association, Alterfeststellung bie FI Chtlingen Entschliesssung 117, Deutscher f rztetag, D, sseldorf, 27-30 (May 2014) http://www.bundesaerztekammer.de/dwonloadds/117 DAET Bescluss protokoll 20140613.pdf accessed 20 August 2024

role in the psychological development and maturation of an individual.[45] In addition, post-traumatic stress disorder also causes early psychological aging.[46] So, without considering the impact of ethnicity, socio-economic status and stress on the development of the children, the inference on age on the basis of radiological imaging may lead to inaccurate result. The Royal College of Paediatrics and Child Health has updated their position about the use of radiation for assessment of age and concluded that it is unethical to expose anyone to radiation for non-clinical purposes. Moreover, they observed that paeditricians should not be involved in the age assessment process because scientific research reveals that pubertal and bone age assessment are not reliable indicators of age.[47]

5. Recommendations

In Bangladesh, it has been shown that children are considered as adults and tried with adults in the ordinary court without sending the case to the Children Court. For the purpose of determining the age of the child, the trial court earlier considered the size, facial appearance and height of the child which actually created incoherence in assessing the age of the child. The law provides to assess the age of the child on the basis of the birth certificate but the trial courts are erroneously giving emphasis on the appearance of the child. At the time of arresting the children who have violated the law, the police officers are not complying with the provisions of the CA, 2013. On the basis of the above discussion, the following recommendations can be made about the minimum age of criminal responsibility and the age determination process of a child by the Children Court:

5.1 Threshold of the minimum age of criminal responsibility must be increased.

The current threshold of the age of criminal responsibility is too low, compared to evolving global standards and practices by other nations. It is recommended that the MACR must be further heightened to fourteen, and that the age of understanding for realising the criminality be increased to sixteen from the present age of twelve (the present age of *doli incapax*).

---

[45] P Pervanidou and G Chrousos, 'Metabolic Consequences of Stress during Childhood and Adolescence' (2012) Metabolism Clinical Experimental 61

[46] Z Solomon and Avi Ohry, 'The Toll of War Captivity: Vulnerability, Resilience, and Premature Aging', in Erin Martz (eds.), *Trauma Rehabilitation After War and Conflict*, (Springer 2010) 361

[47] Royal College of Paediatrics and Child Health (RCPCH), *RCPCH updates position statement on age assessment,* (2022, RCPCH) <http://www.rcpch.ac.uk/news-events/news/rcphch-updated-position-statement--age-assessment> accessed 20 August 2024

5.2 The new definition of Children must be disseminated properly.

Under the CA, 1974 below sixteen years of age was treated as child but after the enactment of the CA, 2013 now all persons up to eighteen years of age must be considered as children. This change has taken place in compliance with the UNCRC (United Nations Convention on the Rights of the Child, 1989). It is the responsibility of the government and all agencies to disseminate this information to the public in general.

5.3 Statutory Provision to be followed at the time of determining the age of a Child.

Now, it has been settled law that the pertinent date for evaluating the age of a child shall be the date of committing of the offence irrespective of the provision of any law or case law. Earlier, in number of cases decided by the apex Court of Bangladesh have shown a debate to identify the relevant date for the evaluation of the age of the child. In some cases, the apex court has taken the view that the date of committing the offence must be the pertinent date for the assessment of the age of a child. On the other hand, some cases uphold that the date of charge framing will be considered as pertinent date for the evaluation of the age of a child. So, it becomes the responsibility of all the Children Courts to follow this law accurately that the pertinent date for assessing the age of child shall be the date of committing of the offence. In addition, the Children Court must be under an obligation to make an inquiry as to the age of a person who is brought before it whether charged with an offence or not, other than for giving evidence, if it appears to it that the person so brought is a child.

5.4 Age assessment of the child on the basis of appearance must be avoided.

These days with the improvement of nutrition many boys aged about 14-15 years spot a moustache and beard. Conversely there are some men who never show growth of any beard. To say that a person who has a moustache and beard is ipso facto adult would be an arbitrary exercise of non-existent power and unjust denial of legal rights enshrined in the statutes. It is dangerous to state the age of an accused based only on visual assessment. So, it has been recommended that at the time of primary determination of age by the police officer, he has to verify the age on the basis of birth registration certificate or when such certificate is not available, the birth date given during school admission or the school certificate will be considered.

5.5 Use of radiological imaging to assess the age of the children should be avoided

The use of radiation for assessment of age is unethical because it has no clinical purpose and paeditricians should not be involved in the age assessment process because scientific research reveals that pubertal and bone age assessment are not reliable markers of age. The impact of ethnicity, socio-economic status and stress on the development of the children must be taken into consideration. When assessing age on the basis of the medical reports, great care must be taken to give the relative weights to such reports.

6. Conclusion

It can be said that the real improvement of the juvenile justice system relies on the effective implementation of the CA, 2013 and decisions of the Apex court. The children court is the key component of the juvenile justice system. But, in reality children courts are not playing their roles at the age determination process of a child. This is not only a question of quality but also a systematic issue. Due to the confusion about the age determination of the children, the courts are sometimes sending children to jail, ignoring the provisions of the CA, 2013 and the UNCRC. The jails are accepting children because they have no authority to challenge the court order. Moreover, lawyers and judges are not fully familiar with the importance of the age determination process and the minimum age of criminal responsibility. The decisions of different children courts clearly indicate that there is a lack of realising the aims of the CA, 2013 about the age determination process.The appellate courts in most cases have promoted the care and safeguard of the children in compliance with the CA, 2013 and the UNCRC to attain a child-focused juvenile justice system in Bangladesh. Children are the neglected groups of our society and they must be treated by the stakeholders of the juvenile justice system with care and sympathy. Separate trial, separate court and separate safe home for children will help them to rehabilitate into society and they will not bear the trauma relating to the formal justice process. The age determination process must be conducted before the children court in a uniform manner. Finally, the best interest of the children must be considered as the pole star in the administration of juvenile justice system in Bangladesh.

From Tearing Pages to Shaping Minds: Introspecting the Accessibility of Right to Education for *Hijra* Community in Bangladesh

Evnat Bhuiyan*

Abstract: Social stigmatisation and prejudicial mindset are two of the most valiant hindrances of educational accessibility of Hijra or Kinnor, a significantly marginalised community of Bangladesh. Access to education of Bangladeshi Hijras has got very low academic attention so far. The paper aims to picturize stagnant realities of Hijra and pinpoint the existing gaps in establishing right to education of Bangladeshi Hijras ensuring inclusivity into mainstream education. I have examined the surface of social disintegration and ground loopholes for educational inaccessibility for Bangladeshi Hijras. In order to factualise the constitutional limitations and national legislative shortfalls, I have resorted to the Indian, Nepalese and Pakistani socio-legal aspects and constitutional jurisprudence showcasing an analysis of their constitutional viewpoint on right to education, non-discrimination, equality, and identity. I have found that, there is not only an absence of a distinct Right to Education Act in Bangladesh but at the same time no statute at all on Hijra protection too. I have dichotomized that the absence of core issues such as- the legal recognition by specified statute for educational accessibility and sexual harassment protection, concrete governmental statistics of Hijra population, inclusivity in national curriculum, separate educational institution or mainstreaming in existing curricula including the university education, are the root causes for inaccessibility to education for Hijra. I strongly recommend legislating Bangladesh Hijra (Protection of Rights) Act for legally addressing violence against Hijra (VAH). Hijra Welfare and Rehabilitation Act and Gender Equality Act is crucial for Hijra normalisation. A statutory autonomous body Bangladesh Hijra Welfare Board should be set up for introducing Hijra admission quota, specialised schools, inclusion in national education and gender policy and sexual harassment policy in educational institutions. National Hijra census, suo moto rule by court, gender recognition certificate and nationwide awareness campaign etc. are inevitable.

Keywords: Violence against Hijra (VAH), educational accessibility, gender sensitivity, inclusivity, discrimination, constitutional rights.

1. Research Statement

Third gender, Hermaphrodite, intersex person or eunuch, known as Kinnar, Kothi, Aravani, Jogta in India, Khawajasiras in Pakistan, Hijra in Bangladesh is a term used to refer to anyone whose sexual orientation does not correspond with their biological

* Lecturer of Law, School of Social Sciences, Humanities and Languages, Bangladesh Open University, Gazipur-1705. Corresponding email: evnat.jnu.csgj@gmail.com.

hormonal sex. People who exhibit cross-gender behavioral traits, cross-dressing, typically display signs of gender nonconformity or gender fluidity by the age of five, which supports theories that is ingrained in pervasive developmental disorders that cannot be resolved by therapy, medication, refusal, reinforcement, disapproval, bribing, complaining, or any other means.[1] People who are assigned as male at birth but develop a feminine gender are known as "hijras" in South Asia.[2] They are the most demeaned, neglected, mostly mocked, grossly tortured, indiscriminately used in illegal business, widely deprived from basic rights as a human being, in fact, sometimes societal attitudes to them becomes so brutal which signifies that they are not considered to be in a position that they deserve to be alive as normal people. One of the prevalent and common factors for Hijra community that creates barrier in accessing education is the public intolerance and mass uncompassionated, unkind attitude including non-acceptance perspective of the society.[3][4] Undignified identity names, confused pronouns, lack of restroom facilities and identity dilemma are biggest barricades in the pathway of normalizing Hijra education.[5] Hijras faces unthinkable range of social toxicity[6], mockery behaviour, body shaming, harassment in the schools which leads them ultimately to easy shortcuts like sex trade or begging.[7] For any minority community, education is the lamp of hope, a sword to stir superstition, removing marginalised identity, discovering potential and contributing to national welfare.

---

1 Anitha Chettiar, 'Problems Faced by Hijras (Male to Female Transgenders) in Mumbai with Reference to Their Health and Harassment by the Police' (2015) 5 International Journal of Social Science and Humanity 752.

2 Human Rights Watch, '"I Want to Live with My Head Held High:" Abuses in Bangladesh's Legal Recognition of Hijras' (2016) DECEMBER 2016 ISBN: 978-1-6231-34341 <https://www.hrw.org/sites/default/ files/report_pdf/bangladesh1216_web.pdf> accessed 11 March 2024.

3 Md Akramul Islam, 'Right To Education of The Third Gender of Bangladesh: An Overview' (2016) 21 IOSR Journal of Humanities and Social Science 29.

4 Sadik Hasan Shuvo, 'Life of Hijra in Bangladesh: Challenges to Accept in Mainstream' (2018) 5 International Journal of Natural and Social Sciences 60 <www.ijnss.org>.

5 Pallav Das, 'Higher Education of Transgenders in India: Opportunities and Challenges' (2019) 2 International Journal of Research in Engineering, Science and Management 371.

6 Noshin Tasneem Hridi, '"Shiri": Transgender Development Academy' (Brac University 2019) <https://dspace.bracu.ac.bd/xmlui/bitstream/handle/10361/10265/13108024_ARC.pdf?sequence =1&isAllowed=n#:~:text=Beside of government many NGOs,by NGO from bank also.&text=In many develop country NGOs,dedicatively which Bangladesh need badly.>.

7 M Gnana Kamali and others, 'Educational Challenges Of Transgender' (2021) 12 Turkish Journal of Computer and Mathematics Education (TURCOMAT) 7004.

The level of sorrows and sufferings of Hijra community is shockingly insurmountable in several ways and sectors in the world including Bangladesh.[8] At such phase where survival of life becomes a challenge, right to education seems to be a day dream for Hijra community. Hence, educational accessibility is the only magic wand that can augment visible and sustainable progress in the existing miserable condition of Hijras. Accessibility to education is one of the fundamental elements among the *4A principles* of the General Comment No. 13 of ICESCR that is- Availability, Accessibility, Acceptability, Adaptability.[9]General Comment no 3 and 11 also depicts the inevitability of right to education. Education has also been firmly echoed in Para 50 of the preliminary report to the Commission on Human Rights by the Special Rapporteur on the right to education [10] Educational accessibility has its constitutional position in almost every country around the world. In Bangladesh Constitution Article 27 emphasizes equality before law while putting education as one of the fundamental principles of State policy which means ensuring education for all is the constitutional mandate for Bangladesh government. It is incumbent upon Government to ensure education for its citizen without prejudice to caste, creed, sex, gender, religion, race or any other national or social identity.

2. Background and Rationale of the Research

Education is one of the inconceivably exclusive human rights recognised internationally without which human existence becomes extremely fragile and vulnerable in the 21st century. But Hijras in Bangladesh have no participation in either conventional or separate education in an alarming level.[11] Previously Hijras were given the equality in right to property and inheritance but the gender-specific

---

8 Human Rights Watch (n 2).

9 UN Economic and Social Council, 'CESCR General Comment No 13: The Right to Education (Art. 13)' (1999) E/C.12/1999/10, UN Committee on Economic, Social and Cultural Rights (CESCR), 8 December 1999 <https://www.refworld.org/legal/general/cescr/1999/en/37937> accessed 10 March 2024.

10 Katarina Tomasevski, 'Preliminary Report of the Special Rapporteur on the Right to Education, Katarina Tomasevski, Submitted in Accordance with Commission on Human Rights Resolution 1998/33' (*COMMISSION ON HUMAN RIGHTS Fifty-fifth session Item 10 of the provisional agenda*, 1999) 1 <https://digitallibrary.un.org/record/1487535#record-files-collapse-header>.

11 Md Ashraful Goni and Mehnaz Hoque, 'Communication as an Obstacle for Education: An Analysis on Participation of Hijras in Mainstream Education System of Bangladesh' (2020) 20 Global Journal of Human-Social Science 33.

nature of property laws as mentioned in the personal laws like the Muslim and Hindu law, makes it problematic to find a lawful solution.[12]

This makes it more evident how crucial it is to reconstruct and revise the existing laws to ensure inclusivity of Hijra and the inevitability to implement educational accessibility for Hijra community.[13] It is the education that can reduce the exclusion of Hijra from all other aspect of constitutional rights including right to property.[14] But this scenario leads us to ask a pertinent question- what is the recurrent socio-economic condition of Hijras in Bangladesh? In Bangladesh, Hijra community gets no recognition of social, cultural, sexuality diversity or gender [15]and matrimonial needs and attributes.[16] The fate of Hijra begins from the day when their sexual identity is discovered by their families or got publicized anyhow. The most unfortunate thing Hijra face is that parents left them, humiliate them. Schools often create stigmatization, psychological trauma for hijra children development.[17] Sexual harassment and physical abuse is found to be the primal factor for trans children to leave education at an early stage.[18] Hijra enrolled children are bullied, hatred and torture by their own teachers, classmates and local residents.[19] Another reason is the abandonment by their own family members due to their physical traits of Hijra. It is observed that stigmatized minorities face substantial extra limitations in public

---

12 Maheen Khan, 'Bangladesh: Radical Change Needed to Ensure Justice for Hijra Communities' (*Climate and Development Knowledge Network (CDKN)*, 16 November 2020) <https://cdkn.org/story/feature-bangladesh-radical-change-needed-to-ensure-justice-for-hijra-communities> accessed 13 March 2024.

13 Latha Sardar and Aarti Tyagi, 'The Role of Law in Promoting Transgender Inclusion : A Study Focused on Karnataka' (2025) 11 International Journal of Environemntal Sciences 709.

14 Kabiraj Behera, 'Education Is an Essential Tool for Survivality : An Empirical Study of Transgender in Kandhamal District of Odisha' (2024) 4 Society and Culture Development in India 275.

15 Sharful Islam Khan and others, 'Living on the Extreme Margin: Social Exclusion of the Transgender Population (Hijra) in Bangladesh' (2009) 27 Journal of Health, Population and Nutrition 441.

16 Md Al-Mamun and others, 'Discrimination and Social Exclusion of Third-Gender Population (Hijra) in Bangladesh: A Brief Review' (2022) 8 Heliyon e10840 <https://doi.org/10.1016/j.heliyon.2022.e10840>.

17 Shamayeta Bhattacharya, Debarchana Ghosh and Bandana Purkayastha, '"Transgender Persons (Protection of Rights) Act" of India: An Analysis of Substantive Access to Rights of a Transgender Community' (2022) 14 Journal of Human Rights Practice 676.

18 Dipika Jain and others, 'Education Equity for Transgender and Gender-Diverse Persons in India : Insights Into Implementation Hurdles Education' (2025) 32 Michigan Journal of Gender and Law.

19 Shalini Yadava, 'REASONS OF EXCLUSION OF TRANSGENDER / KINNAR OR HIJRA IN EDUCATION : SELECT CASE STUDIES FROM DELHI' (2021) 7 International Education and Research Journal 7.

spaces.[20] One of the studies in 2024 found that, torture, abandonment, mistreatment, violence done by own family member and relatives is the core factor for Hijra educational inaccessibility.[21] This caused financial barrier to access educational materials, uniform and other expenses to go to schools. Hijras also face extreme public harassment from society, classmates, and even from their education instructors too. Parents consider Hijras as product of birth defect, they see them as person of unconventional and socially unacceptable gender identity.

A 2023 survey of Bangladesh Bureau of Statistics on functional literacy rate discloses that 62.92 percent people among the communities of the genders masculine, feminine, and Hijra aged 7 years and above have basic functional literacy.[22] Bangladesh Education Statistics Report 2023 includes only heterogenous male and female student and teachers ratio but no third gender has been included.[23] A 2019 study conducted on 346 Hijra aged 15 years old based on economic, educational, political, employment, health and civil right categories shows that Hijras face highest violation of economic (73.3%) and educational (59.3%) rights.[24] According to 2015 BBS report, among 11 City Corporations and other urban areas, the literacy rate of Hijra population is the highest in Rajshahi City Corporation (around 65%). The literacy rate in Hijra community is 60% in Comilla, 32% Khulna and Gazipur, 30% in Barishal and Chittagong, 22% in Rangpur and Narayanganj, 29% in Dhaka North, 20% in Sylhet and 12% in Dhaka South.[25] From 2013 government declaration, 2014 proud parade to 2015 Hijra recruitment disaster indicates to the flimsy condition of Hijra education and the attitude of constant questioning of Hijras educational, life

---

20 Audrielle Jno Glenn, 'THE RELIGIOUS EXPERIENCES OF TRANSGENDER YOUTH: GENDER AND RELIGIOUS RECONCILIATION' (Washington State University 2012).

21 Abul Kalam and M Abdullah Al Mamun, 'The Right to Education and Attitudes toward Hijras in Bangladesh : Assessing Educational Support to Achieve Sustainable Communities' (2024) 1 Quality Education for All 2976.

22 BSS, 'BBS: Functional Literacy Rate (7+above Years) in Bangladesh 62.92%' (*Dhaka Tribune*, 17 July 2023) <https://www.dhakatribune.com/bangladesh/education/319301/bbs-functional-literacy-rate-7-above-years-in>.

23 Ministry of Education Bangladesh Bureau of Educational Information and Statistics (BANBEIS), 'Bangladesh Education Statistics 2023, BANBEIS Publication No 515' (2024) <https://banbeis.portal.gov.bd/sites/default/files/files/banbeis.portal.gov.bd/npfblock//Bangladesh Education Statistics 2023 %281%29.pdf> accessed 11 September 2025.

24 ASM Amanullah and others, 'Human Rights Violations and Associated Factors of the Hijras in Bangladesh—A Cross-Sectional Study' (2022) 17 PLoS ONE 1 <http://dx.doi.org/10.1371/journal.pone.0269375>.

25 Arup Barua and Shehreen Ataur Khan, 'Addressing Violence against Transgender People in Bangladesh: A Call for Policy Intervention' (2023) 7 Frontiers in Sociology 2.

skill and even physical capability.[26] A 2014 statistic surveyed that 4.10% Hijra people survive with any form of disability.[27] This puts a major barrier for Hijras in accessing education.

3. Relevance of the Research

The 2024 debate of Sharifa story in elementary textbook indicates to the vehement stigma for Hijra education in Bangladesh.[28] If we study the very essence of the World Declaration On Education For All, the right to education of a child has been recognised as the minimum basics for the proper development of a child.[29] The Geneva Declaration of the Rights of the Child of 1924[30] and the United Nations Convention on the Rights of the Child of 1989[31] equally reinforces the need of active participation in education for all child and lessening learning discrimination. Article 2(2) of the International Covenant on Economic, Social and Cultural Rights (ICESCR), 1966 insistently denotes the State obligation to incorporate and materialize the rights under ICESCR including right to education without bias discrimination entirely based on birth, sex and sexual identity.[32] The 1948 Universal Declaration of Human Rights (UDHR) underscores that,

---

26 Adnan Hossain, 'The Paradox of Recognition: Hijra, Third Gender and Sexual Rights in Bangladesh' (2017) 19 Culture, Health and Sexuality 1418 <http://doi.org/10.1080/13691058.2017.1317831>.

27 Bangladesh Bureau of Statistics, 'Census of Slum Areas and Floating Population (2014)' (2014) May 2015, Bangladesh Bureau of Statistics, Statistics and Informatics Division, Ministry of Planning, Government of the People's Republic of Bangladesh <https://dataspace.princeton.edu/handle/88435/dsp01wm117r42q> accessed 13 March 2024.

28 Atiqul Kabir Tuhin, 'Controversies over Sharifa's Story' (*The Financial Express*, 28 January 2024) <https://today.thefinancialexpress.com.bd/editorial/controversies-over-sharifas-story-1706364430> accessed 24 November 2025.

29 UNESCO, 'World Declaration on Education for All, Jomtien, Thailand' (1990) 134 EX/29, UNESCO. Executive Board, 134th session, 1990, Article I, <https://bice.org/app/uploads/2014/10/unesco_world_declaration_on_education_for_all_jomtien_thailand.pdf> accessed 10 March 2024.

30 Leauge of Nations, 'Geneva Declaration of the Rights of the Child' (1924) <https://cpd.org.rs/wp-content/uploads/2017/11/01_-_Declaration_of_Geneva_1924.pdf> accessed 16 November 2025.

31 United Nation, 'Convention on the Rights of the Child 20 November 1989', vol 44 (1989) GA Res 44/25, annex, 44 UN GAOR Supp (No 49), at 167, UN Doc A/44/49 (1989), <https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_44_25.pdf> accessed 31 December 2023.Article 29(1).

32 United Nations General Assembly, 'International Covenant on Economic, Social and Cultural Rights Adopted and Opened for Signature, Ratification and Accession by General Assembly Resolution 2200A (XXI) of 16 December 1966' (1966) UNTS vol. 993, No. 14531, p. 3 <https://ohchr.org/sites/default/files/cescr.pdf> accessed 16 January 2025.

"*Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.*" [33]

The 1948 Universal Declaration of Human Rights (UDHR) is the torchbearer of humanity for the effective realisation of protected rights for humans [34] hence, express provision on 'Right to education' reiterated in Article 26 (1) and (2) is yet another strong evidence after ICESCR. UDHR signifies free compulsory education for all in elementary and fundamental phases, general availability of technical and professional education and merit based accessible higher education.

Countries like India, Nepal, Pakistan are somehow making progressive changes in their states and statutes to ensure adaptability and inclusivity of Hijra people in mainstream education.

Despite Bangladesh being a signatory State of the World Declaration on Education for All [35], it did not fruitfully undertake any National Action Plan for third gender[36].

4. Objectives of the study

The paper aspires to explore an overview about access to education for the Hijra community in South Asia with special emphasis on Bangladesh. This study examines the landscape of challenges and reformative initiative endorsed or undertaken for hijra education in these countries and compare it with that of Bangladesh. The paper also intends to highlight the need of generating a receptive

---

33 UN General Assembly, 'Universal Declaration of Human Rights' (1948) Adopted and proclaimed by General Assembly resolution 217 A (III) of 10 December 1948 On <https://www.refworld.org/legal/resolution/unga/1948/en/11563> accessed 10 March 2025.

34 Antônio Augusto Cançado Trindade, 'UNIVERSAL DECLARATION OF HUMAN RIGHTS', *United Nations Audiovisual Library of International Law UNIVERSAL* (United Nations Audiovisual Library of International Law 2008) 3 <https://legal.un.org/avl/pdf/ha/udhr/udhr_e.pdf> accessed 10 March 2025.

35 UNESCO, 'World Declaration on Education for All, Jomtien, Thailand' (1990) 134 EX/29, UNESCO. Executive Board, 134th session, 1990 <https://bice.org/app/uploads/2014/10/unesco_world_declaration_on_education_for_all_jomtien_thailand.pdf> accessed 10 March 2025.

36 Bangladesh National Commission for UNESCO, 'Report On EIU Situation in Bangladesh' (2013) <https://www.unesco.org/education/edurights/media/resources/file/Bangladesh.pdf> accessed 20 November 2025.

atmosphere to implement, promote and safeguard Hijras' fundamental right to education as a citizen in Bangladesh.[37]

Research Question

A. How the pragmatic barriers for educational accessibility of Hijra is unresolved in Bangladesh?

B. What constitutional, legislative and judicial aspects Bangladesh should adapt from other South Asian nations on Hijra's right to education?

Research Methodology

The paper is a descriptive qualitative study with critically comparative constitutional approach. The paper showcases an analysis of three countries to get a more lucid observation on Bangladeshi setbacks of reflecting constitutional provision for fulfilling Hijras' right to education. Based on 30 parameters, the study showcases the statutory and judicial aspect as primary analysis. All the data presented in Point 06. is gathered from customized questionary queries through Goggle Gemini search engine and further crosschecked from multiple sources. The paper presents the secondary analysis by critically assessing hijra status in constitutional prism of the countries.

National statutes and case laws are used as primary sources. Relevant secondary materials reflecting the objective and research question are analysed and incorporated by desk research. I searched Google Scholar, Science Direct and Scopus for existing literature using the following keywords- hijras' educational right, transgender legal rights, schools for Hijra, Hijra discrimination, transsexual identity, trans recognition. Among the total 105 documents downloaded, 48 published documents are thoroughly reviewed, analyzed, cross checked with research objectives and finally incorporated.

Literature review

The academic aspect of Hijra has largely been focused on their gender rights and freedom from torture. Hijras’ right to education has got nominal academic attention so far. Some scholars portrayed the educational deprivation and denial attitude of right to education for Hijra people in Bangladesh. Literatures focusing on right to

---

[37] The author has used Hijra for optimum reluctance to Bangladesh hermaphrodite community. However, Transgender, Kinnar or Hijra, these terms have been applied synonymously in academic writings, hence, it will be used interchangeably in relevant places of the paper as the discussion necessitates.

education in Bangladesh are significantly less than other countries of South Asia. Unfortunately, Bangladesh has the few academic works that are solely based on the scenario of non-recognition and non-inclusion of Hijra community's right to education in formal or informal sector.

The most recent conclusive qualitative studies solely on Bangladeshi Hijras educational inclusivity was conducted by Abul Kalam and others which depicts vital blockades for Hijra education. The research shows that, Hijras face acute familial, social, economic violence in young age or as soon as their sexual identity is exposed or discovered by their family.[38] However, the authors did not present any legal analysis at all rather focused on social and behavioural factors as barriers for Hijra education. But without legal recognition by legislation, Hijras will never be able to cope up discrimination and get remedy or legal protection. Legal recognition works as a powerful tonic for social acceptance. This study largely ignored the legislative inadvertence for Hijra people in Bangladesh. Without a proper statute for the marginalised, no country can implement the policies and initiatives with positive results.

Barua and Khan 2023, ponders primarily over the violence towards Hijra in Bangladesh and have recommended a national policy for protection of rights for the Hijra in Bangladesh.[39] However, the article does not pose any specific attention to the specific right to education of Hijra.

Amanullah et al. 2022 presents a cross-sectional study where physical, sexual, verbal and other violences towards Hijra community has been addressed and picturized broadly. They think the violence and discrimination towards Hijra creates impediments for Hijra community to cope up with the socio-economic realities and legal boundaries of Bangladesh, thus consequently, leading them to harsher truth of social stigmatisation and marginalisation.[40] These tortures and deprivation is a good factor indicating the deprivation from right to education for Hijra people in Bangladesh.

Kamali et al. 2021, signifies the educational discrimination in Bangladesh context and offered some of the prominent reasons of absence of mainstreaming the Hijra community education such as being called by discourteous names, no bathroom

[38] Kalam and Mamun (n 21).
[39] Barua and Khan (n 25).
[40] Amanullah and others (n 24).

amenities for Hijra children leading them to acute discomfort and mental havoc.[41] However, the study does not focus on the judicial aspect.

Goni and Hoque 2020 inspects that although Hijra faces backlash in general education for reasons like sexual orientation, societal harassment, lack of alternative education system or basic education rights and facilities, they still aspires to achieve education and think that a separate education mechanism and specialized structure may help them to have places in mainstream education but the biggest change have to be enhanced by including the tales of Hijra identity with their struggle stories into the textbooks of elementary education.[42]

Chandra S 2017 suggested that State should arrange trainings for new recruits and senior teachers in subject based syllabus or restructuring the entire curriculum through inserting chapters on ancient history, evolution, way of living life, norms, traditions, sociocultural struggles, inherent physical features, psychological pain and organ aspects, attempt to survive by begging or sex work, traditional and cultural role in locality, laws and welfare policies.[43] The sheer focus on their right to education and its legal implications are largely ignored in most of the Bangladeshi literature and studies. To be more specific, no existing literature approaches the issue in comparative constitutional lens for right to education of Hijra of Bangladesh. Therefore, this paper is centralized to explore the loopholes and undiscovered evils that greatly hinder the access to education for Hijra in Bangladesh with a comparative constitutional perspective by analysing the South Asian scenario in this aspect.

Obstacles of Access to Education for Hijra in Bangladesh

Hijras are first recognised by a parliamentary declaration in 2013 by the Ministry of Social Welfare[44] with official declaration in 22 January 2014.[45] Since then no national survey on exact Hijra population, inclusion in national census, research on Hijra children or on Hijra literacy rate is conducted, which creates a big lapse in terms of identifying the fact-based data and scientific ratio of discrimination between Hijra

---

41 Kamali and others (n 7).

42 Goni and Hoque (n 11).

43 Satish Chandra, 'Transgender Children'S Education and Their Reengagement in Society' (2017) II International Journal of Educational Research Studies 875.

44 Nawaz Farhin Antara, 'Meet Chaity – the First Transgender Employee at Bangladesh National Human Rights Commission' (*The Dhaka Tribune*, 16 September 2018) <https://www.dhakatribune.com/bangladesh/bangladesh-others/155711/meet-chaity---the-first-transgender-employee-at> accessed 22 December 2024.

45 Extraordinary Gazzette of 2014, Kormoshuchi-1 Shakhabs (Kormo-1Shakha/Hijra-15/2013-40) 2014.

and the socially recognised heterogenous people. The socio-economic and educational status for Hijra in Bangladesh is deteriorating due to some undeniable ground facts. There is no official government statistics about size of Hijra population, no authentic data about Hijra children left Bangladesh forever due to social exclusion and hatred, no focused scientific research conducted solely on Hijras, no statistics on school admission, drop outs due to Hijra identity, and finally, minimum record or research of targeted violence, structural and criminal violence towards Hijra community.[46] No conclusive data-based research (as to the knowledge of the author) has been conducted from government on educational accessibility rate of Hijra community as Hijra population remains unfigured and undetermined. A 2013 study indicates some 9,000 Hijras acquired nominal recognition as Third gender or Other gender.[47]Back in 2016, a parliament statement reveals number of Hijras is 10,000 in Bangladesh.[48] Some sources estimated Hijra population in the range of 10,000 to 500,000 in Bangladesh.[49] Recently the Election Commission has announced its voter list for 13th National Parliamentary election where the number of registered voters as heteronormative male, female and third gender is declared where Hijra voter is 1234.[50] It is an indicator how less the number of voters in comparison to the Hijra population of 500000. Such low number points out the significant educational deprivation of Hijra. Absence of specific data and conducting official statistics is one of the biggest hurdles for Hijra education. For example, the Annual Primary School Statistics (APSS) 2024 report publishes yearly school enrollment count of binary gender but does not include data of hijra children.[51]

---

46 Barua and Khan (n 25).

47 Sunjida Islam, 'A Theoretical Analysis of the Principles of Natural Justice : Bangladesh Perspective' (2019) III International Journal of Research and Innovation in Social Science (IJRISS) 43.

48 Bdnews Parliament correspondent, 'Number of Third Gender People in Bangladesh Is around 10,000' (*bdnews.com*, 28 February 2016) <https://bdnews24.com/bangladesh/number-of-third-gender-people-in-bangladesh-is-around-10000> accessed 13 March 2024.

49 Tahmima Anam, 'Transgender Rights, Bangladesh Style' (*The New York Times Op-Ed*, 2 July 2015) <https://www.nytimes.com/2015/07/03/opinion/tahmima-anam-transgender-rights-bangladesh-labannya-hijra.html> accessed 13 March 2024.

50 The Daily Star, 'EC Publishes Final Voter List with around 12.77 Crore Voters' (*Star Online Report*, 18 November 2025) <https://www.thedailystar.net/news/bangladesh/elections/news/ec-publishes-final-voter-list-around-1277-crore-voters-4037836> accessed 18 November 2025.

51 Ministry of Primary and Mass Education, 'Annual Primary School Statistics (APSS) 2024' (2025) <https://dpe.portal.gov.bd/sites/default/files/files/dpe.portal.gov.bd/publications/a4ec0dbe_7524_4fd8_95cd_9e0970b8fa81/The Annual Primary School Statistics (APSS) 2024 (Divisional Version)_Final.pdf> accessed 27 November 2025.

Primary Analysis: Administrative, Legislative and Judicial Dichotomy

S	Parameters	India	Nepal	Pakistan	Bangladesh
1.	Official recognition	2014	2007	2009	2013 and 2014
2.	Statutory Identity recognition and protection of rights	Transgender Persons (Protection of Rights) Act 2019	Na	Transgender Persons (Protection of Rights) Act, 2018	Na
3.	Landmark Supreme Court Judgement on Hijra recognition and rights	Jane Kaushik v. Union of India (2025) and NALSA v. Union of India (2014)	Sunil Babu Pant v. Nepal Government (2007)	Dr. Muhammad Aslam Khaki v. S.S.P. Rawalpindi (2012)	Na
4.	Relevant SC judgment on minimum Hijra inclusion (partially on Hijra aspect)	Navtaj Singh Johar vs. Union of India (2018); Suresh Koushal vs Naz Foundation (2013); Jackuline Mary v. Supt. of Police (2014)	Dilu Buduja v. Nepal, NKP 2070 (2013 AD); Rukshana Kapali vs Nepal (2024)	Na	Ohidul Islam and others v. Bangladesh and others (2024) [1% Quota for Hijra]
5.	Gender Equality Act	Na	Gender Equality Act of 2063 (2006 AD)	Na	Na
6.	Gender Recognition certificate (GRC)	Yes (TG Certificate of Identity issued by District Magistrate)	Yes (Self Identification or certificate from Election commission)	Yes (ID Issued by National Database and Registration Authority (NADRA)	Na
7.	Right to Education (RTE) Act	Right of Children to Free and Compulsory Education Act, 2009	Na	Right to Free and Compulsory Education Act, 2012	Na
8.	Other Relevant Statutes on primary/secondary education	Na	Compulsory and Free Education Act, 2075 (2018 AD); Higher Secondary Education Act, 2046 (1989 AD) Education Act, 1971	Na	Primary Education (Compulsory) Act of 1990; Intermediate and Secondary Education Ordinance, 1961
9.	Exclusive Hijra Education Quota	Na	Na	Na	Na
10.	Reservation in mainstream education	25% in school and college [Disadvantage]	Na	3% Quota for public and private schools	Na
11.	Inclusivity in National Educational scheme	Yes	Yes	Yes	Yes
12.	Explicit National School Curriculum Inclusion	Yes	Na	Na	A story "Sharifa" was included in Grade 7 history and social

					science textbook in 2023 but got huge backlash
13.	Gender Sensitive Washroom in campus or public washrooms	Over 20 IIT University including IIT New Delhi, also E-Toilets	Gender Inclusive public toilet in Nepalgunj in 2012	Na	Na
14.	Sensitizing teachers and campus stuff	Yes	Na	Yes	Yes
15.	First Specialised School	Sahaj International School in the southern state of Kerala with 10 students in 2017	Na	Trans-only Madrasa in Islamabad in 2020; Gender guardian School, Lahore in 2018	Dawatul Quran Third Sex Madrasa (Islamic School) in Kamrangirchar, Dhaka with 40 students in 2020
16.	First State-run Institute with accommodation, education and training	Gender Park, Kerala in 2016	Na	Tahaffuz Darsgah by Government of Punjab in 2020	Na
17.	Open and Distance Learning (ODL)	Indira Gandhi National Open University; Dr. B.R. Ambedkar Open University; and Tamil Nadu Open University	Nepal Open University; Open and Distance Education Center (ODEC) at Tribhuvan University	Virtual University of Pakistan and the Allama Iqbal Open University	Bangladesh Open University, Gazipur (SSC program)
18.	Open Schooling	National Institute of Open Schooling (NIOS)	Na	International Pakistan Open School	Na
19.	Exclusive Government Scholarship, Stipend, incentives	Scholarship From Class 9 up to post graduation; Kerala's Varnam scheme for Trans; Monthly Home allowance from class 6 in Rajasthan	Na	Ehsaas Undergraduate Scholarship Program (EUSP) 2021 of Rs. 6000 monthly stipends and Lahore Education Authority Stipend of Rs. 10000	Na [few available in private sectors]
20.	Teachers Training	NISHTHA by Samagra Shiksha Program and The National Council of Educational Research and Training (NCERT)	Na	Na	Na
21.	Financial support scheme for education	SMILE (Support for Marginalized Individuals for Livelihood and Enterprise)	School Sector Development Plan (SSDP) (2016-2023)	Benazir Kafalat Program Stipend of Rs. 7000 every 3 months by Ministry of Poverty	Monthly 600taka stipend to Hijra aged 50 years old or more by Ministry of

				Alleviation and Social Safety	Social Welfare
22.	Hijra Literacy Rate (HLR) compared to national literacy rate (NLR)	HLR= 46.6% (2011) NLR=80.9% (2023 National Sample Survey Office)	HLR= Not recorded NLR= 76.2% (2021 National population and Housing Census)	HLR=40.15% (2023 Housing census) NLR= 60.65%	HLR=53.65% (2022 Population and Housing census) NLR=77.9% (2024 Bangladesh Economic Survey)
23.	Access to University	Indira Gandhi National Open University: 814 students (2019-2024); Savitribai Phule Pune University: 41 students in 2023	Na	Na	Dhaka University has Hijra quota in 2022-2023 session for biological hijra; Prime Asia university offer tuition fee waiver
24.	First PhD/candidate	Dr. Manabi Bandopadhyay	Na	Saro Imran (University of Westminster)	Na
25.	Job Quota	Only Karnataka:1% in public jobs	Na	2% Job Quota in public jobs	1% Job Quota in public sector jobs
26.	First Civil Service Officer/Other Professionals	Dr. Manabi Bandopadhyay (College Principal) Joyita Mondal (Judge)	Na	Sarah Gill (Doctor) Aisha Mughal (Academic) Nisha Rao (Lawyer)	Oalid Islam (Diplomat), 1st Foreign cadre in the world
27.	Education Rules and Policy	National Policy on education 1986; National Education Policy 2020	Education Rules, 2002; National Framework for Education 2030 and the National Standards for Basic and Secondary Education (NSBSE)	Education Policy 1992; National Education Policy 2009; Transgender Education Policy in Sindh	National Education Policy 2010 (No specific mention of Hijra)
28.	Gender Inclusion Rules and Policy	Yes, by 2019 TPPR Act and Transgender Persons (Protection of Rights) Rules, 2020	Yes, by Gender Equality and Social Inclusion (GESI)	Yes, by 2018 TPPR Act	Gender Mainstreaming in Education manual by Ministry of Women and children
29.	Anti Bullying Policy for educational institutions	Na	Na	Prevention of Electronic Crimes Act (PECA) 2016 for cyberbullying	Policy for the Prevention of Bullying and Ragging in Educational Institutions, 2023

30.	'O' Gender Marker for the Option "Other" in official document (passport, National ID, voter registration etc.)	ID: 2014 Passport:2005, first official issue: Sadhana Misra in 2017 Ballot form: 2009	NID: 2013 Passport: 2015, first official issue: Monica Shahi in 2015 Voter: 2009	NID: 2011 Passport: 2009, first official issue: Farzana Riaz in 2017 Voter:2009	NID:2014 Passport:2013, no name officially at record, Voter:2019

Figure 1: The Subcontinental Landscape of Hijra recognition, rights and education (Prepared by the Author)

The figure shows that there is not a single apex court judgement on Hijra or solely addressing the Hijra rights or recognition in Bangladesh. The general recognition of Hijra in Bangladesh derived only from a State policy decision rather than a particular court judgment. It is evident from the above discussion that Bangladesh is acutely lagging behind both in terms of Hijra's legislative and judicial viewpoint. Without legal recognition via statutory provisions, the identity crisis will be prolonged resulting ultimate failure to ensure constitutional rights including right to education and to change the status quo of the Hijras.[52] Although Bangladesh Bank Guideline for every bank to include Hijra in account opening application forms and small loans[53], Government rehabilitation project worth 7,217,000 taka to 7 districts in 2012-2013 that allocated stipend to 135 Hijra students and training to 350 Hijras and a project of more than 4 crore for 14 districts in 2013-2014 through which 1071 Hijra received old age allowance, stipend, training and 10 Hijras an amount of BDT 10000 each as rehabilitation grant.[54] A total 2903 Hijra were provided livelihood and education allowance with training in 2015 are some the notable steps taken.[55]

Sonali Bank Ltd. and Janata Bank Ltd. have reportedly introduced ‘third gender’ option in their account application forms.[56] However, these steps are insufficient to uproot the deeply embedded Hijra hatred on education and curriculum inclusion in Bangladesh. A statute can bring a change.

52 Sardar and Tyagi (n 13).

53 Directorate General of Health Services and, Health Service Division and Ministry of Health and Family Welfare, ‘Guideline on Standard Operating Procedures for Sexual and Reproductive Health Services for the Third Gender Population’ (2019).

54 Lubna Jebin and Umme Farhana, ‘The Rights of Hijra in Bangladesh: An Overview’ (2015) 3 Journal of Nazrul University 1 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3028057> accessed 25 April 2024.

55 ibid.

56 Directorate General of Health Services and, Health Service Division and Ministry of Health and Family Welfare (n 53).

5. Secondary Analysis: Constitutional Aspect of Access to Education in South Asia

5.1. Indian Perspective

Article 21A of the Indian Constitution stipulates that children between the ages of 6 and 14 get an education for free and obligatory. Article 21A becomes enforceable by the Right of Children to Free and Compulsory Education Act, 2009 (RTE Act). It describes the duties of families and the governing bodies in guaranteeing children's education. Free public and state-funded education is guaranteed by the Act. In addition to outlawing capitation payments and entrance selection processes, it sets standards for facility maintenance, instruction quality, and pupil-teacher ratios. Even though each state has a different approach to implementing the RTE Act, the government is still working to improve educational resources and facilities, despite persistent issues with access and quality. Because the right to education has been maintained by the Indian Supreme Court as a fundamental right, highlighting its significance for both individual growth and society advancement.

This Right to Education Act of 2009 separately recognises the Transgender children and allows their right to education by Trans inclusion into the ambit disadvantaged or marginalised category of the Act. Further it allots 25% reservation in admission into school, college and universities.[57] The Supreme Court of India dropped a groundbreaking judgment further solidifying the third gender rights in *Jane Kaushik v Union of India 2025* judgement by granting redress to an unmarried woman who had been unlawfully rusticated of her profession. It brought constitutional morality to the doorstep of every workplace in India. The court determined that Jane Kaushik's constitutional rights under Articles 14, 15, 16, and 21, as well as the provisions of the Transgender Persons (Protection of Rights) Act, 2019, were infringed when she was fired from her job by two privately owned schools in Uttar Pradesh and Gujarat on the grounds that she is a transwoman.[58]

5.2. Nepalese Perspective

Nepal is the first ever South Asian nation guaranteeing constitutional rights on the basis of Sexual Orientation and Gender Identity. Constitution of Nepal, 2015 in its Article 12 is on Right to Citizenship mentioned the term gender identity instead of

---

[57] Das (n 5).

[58] J.B. Pardiwala and R Mahadevan JJ, 'Jane Kaushik v Union of India WRIT PETITION (CIVIL) NO. 1405 OF 2023' (2025) <https://lawbeat.in/pdf_upload/jane-kaushik-vs-union-of-india-2086687.pdf>.

gender. The Right to Equality enshrined in Article 18 of the Nepalese constitution is significant in third gender legal recognition. Apart from the equality clause in Article 18(1), the non-discrimination clause in Article 18(2) denotes that Nepal will not discriminate citizens based on sex, physical condition or disability. The Article 18(3) empowers Nepal to enact any special laws for "Protection, empowerment or advancement" of different category or class of people where the clause includes marginalised groups as among other categories and expressively recognised sexual minorities as one of the criteria. It means Nepal has constitutionally and specifically empowered its legislature to enact any statute for third gender. Article 31(3) exclusively provides free higher education to 'physically impaired' and the 'financially poor' section of citizen while 31(5) declares any Nepali citizen will get basic secondary education. The legal foundation for putting this right into practice is provided by the Compulsory and Free Education Act, 2075 (2018), which guarantees access to free and mandatory basic education. The Act provides every citizen a right to a high-quality education and guarantees that no one is subjected to discrimination in the educational system. Additionally, it requires free basic education (grades 1–8) and free secondary education (grades 9–12).

5.3. *Pakistani Perspective*

Article 25-A of the Constitution of Pakistan, added in 2010, guarantees the right to free and compulsory education for all children of the age of five to sixteen. Pakistan has a right to education act, most notably the Right to Free and Compulsory Education Act, 2012, which provides free and compulsory education for children aged five to sixteen in the Islamabad Capital Territory. This was enacted after the 2010 Eighteenth Amendment to the Constitution established the right to education as a fundamental right through Article 25-A.

5.4. *Bangladesh Perspective*

Article 15(a) of the Constitution denotes the State obligation of progressive realisation of the right to education as basic human needs. Thus, it is the persuasive responsibility of State to ensure Hijra education at least in the primmest level through gradual development.

Article 28(1) of the Constitution of Bangladesh clearly ascribed with emphatic interpretation that the State shall in no way resort to discrimination based on sex but transgender Hijras fall victim by born due to their sexual orientation. Article 28(3) expressively points out the unrestricted access to education for every citizen emphasizing that no one will face any bar in terms of accessing right to education or any conditional admission to any educational institution or discrimination based on sexual identity. Article 28(4) further illustrates the power of government to legislate special provision in order to enhance the upliftment of any backward class of society. The transgender community falls within the category of backward section deserving special treatment due to long term exploitation and social rebuke for their physical structure different from normal human being.

The right to have mainstream education with ordinary people is still termed as utopian dream here. Article 29(2) of the constitution equalize every citizen in terms of getting opportunity to participate and general eligibility of applying for and upon qualifying assessments, entering into any public service employment irrespective of sexual identity. It means considering transgender person ineligible based on sexual identity will be a clear violation of the Bangladesh Constitution. But the reality seems to be not in reflection of the constitutional essence when it comes to access to right for transgender community including right to education, employment and other constitutional legal rights.

The court concluded in *S.A. Sabur v. Returning Officer 41 DLR (1989) AD 30* that the equality provision under Article 27 does not provide complete equality, necessitating that everyone be treated equally under the law. It implies that the doctrine of classification applies to transgender people's equal treatment. Thus, the right to equality guarantees everyone's right to dignity, including Hijra, as well as their equal protection under Article 31 of the constitution.

The High Court Division's ruling in *Society for the Enforcement of Human Rights (BSEHR) and Others v. Government of Bangladesh and Others 53 DLR (2001) 1* attracts an extensive interpretation of availing constitutional rights. Court determined in the case that sex workers were entitled to equal protection of the law under article 31 and to the protection of life and personal liberty under article 32. Hence, the sex workers had the right to work, and the state was legally obligated to uphold that right. Article 25 of the Bangladesh Constitution creates obligation upon Bangladesh to legislate, implement and ensure the aims, agendas and spirit of all the international conventions and treaties that she ratified.

Result Analysis

Sl.	Achievement	Loopholes	Solution	Special Recommendation
1.	Official recognition by parliamentary declaration and government approval	No inclusion in government census	Conducting a proper Hijra exclusive census	Denoting Underrepresented Group in national budget
		No statute or Act on protection of rights and recognition	Legislating Bangladesh Hijra (Protection of Rights) Act in fulfillment of the constitutional provisions	Hijra Rehabilitation Act for ending all discrimination and violence in every sector of citizen life
		No distinct statute on Right to education	Promulgating an Act on Right to free and compulsory education with further policies on antidiscrimination	Hijra Welfare Act for establishing National Hijra Welfare Board and Hijra Kallyan Samiti for eliminating violence against Hijra (VAH)
		No statute/ policy on gender equality and antidiscrimination		
		No judicial decision/intervention on Hijra as social issue, no Hijra exclusive human rights petition	Suo Moto rule/intervention treating VAH as public wrong or fundamental rights violation	Initiating Writ petition on Hijra rights violation seeking Court direction for Hijra rehabilitation
2.	Financial scheme of monthly 600taka stipend by Ministry of Social Welfare	No scholarship or stipend solely for education except the livelihood allowance	Establishing government stipend exclusive to Hijra education	Increasing government financial incentives for rehabilitation, livelihood, education, national budget
3.	Kept 1% Job quota remained in government jobs and education accessibility	Reduced quota percentage from previous percent	Restituting the previous quota percentage for all educational institutions	Creating scope for Hijra recruitment in public and private jobs of all sectors and accelerating income opportunity for Hijra
4.	Dhaka University has quota in 2022-2023 session for biological hijra; Prime Asia university offer tuition fee waiver	No admission quota in schools, colleges and university except one public and one private university	Introducing mandatory admission quota named Tritiyo Lingo (Third Gender) quota for Hijra students in every academic and fiscal year	Bestowing reservation power to autonomous institutions for introducing education quota
				Inclusion of the "O" (Other) mark in the admission forms under Male or female gender binary options
5.	Added "O" (other) gender category issuing NID, Passport, Voter list and registration	No Gender Recognition Certificate (GRC) for hijra	Special certificate issued from all Public Offices	GR certificate or certificate mentioning "TG" issued specially for Hijra for job apply, passport, NID or other public purpose documents
6.	Policy for the Prevention of	No gender sensitivity scheme or	Separate sensitivity program arranged by	Formulating sexual harassment directives or

	Bullying and Ragging in Educational Institutions, 2023	sensitization program for teachers, stuffs and students	academic authority as part of gender tolerance projects	laws of own institutions headed by Institutional Head with a committee of competent members
7.	Gender Mainstreaming in Education manual by government	No curriculum inclusion or specialised syllabus	Inclusion of gender and health chapter in books	Introducing Hijra life stories, struggles and gender neutrality in textbooks by NCTB in elementary education and Counselling for Hijra family
		Gender Sensitive restrooms in institutions	Building adequate number of separate restrooms	
8.	First Gender Exclusive Madrasa for Hijra with free Islamic teaching	No separate specialised formal education structure with mainstream curriculum	Hijra inclusion in mainstream preschool to high school and up to college and university	Building specialised schools having formal education
				Increasing vocational training and income generating activities
9.	Distant education through Open and Distance Learning (ODL) Method solely offered by Bangladesh Open University	No government schools or institute for face-to-face education	Launching Open Schooling step for cost friendly quality education for Hijra and adopting ODL approach in higher education	Establishing a National Academy of Education for underrepresented marginalised community
		Only one university having ODL method		Deep psychosocial cleansing of Hijra hatred through funded projects and researches and academic studies
10.	Few persons like First Hijra foreign cadre, news anchor etc. have marked global attention	Socio-cultural, socio-legal and psychosocial trauma and rebuke	Hijra normalisation right based campaign and Increasing cultural and social positivity through teachers and educators	Promoting Hijra success, struggle stories and awareness via Press
				Broadcasting advertisement powered by Ministry of education, Ministry of Family and Welfare

Figure 2: Roadmap for achieving Right to Education for Hijra (Prepared by Author)

6. Discussion

The administrative, legislative and judicial inadvertence for Hijra education in Bangladesh is the core factor of Hijra community's life long legal, sociocultural and socioeconomic sufferings. The absence of right to education is precarious not only to the child per se but also to the entire human race, as lack of education blocks rationality, ethics and ability to think, produce, earn and contribute to the community as well as deepen ignorance which give birth to crime and consequently leading the society to an anarchic environment affecting human rights of people at large. The prime reason Hijra people engaged with derogatory works like begging or sex work is because they are not allowed to have any form of formal, informal or special elementary education. Hijra children faces the disparity and rejection right from the moment they born in a society and family due to their unconventional physical attribute and being nonnormative. Educational deprivation turns Hijra into an uncultured group. No legislative step is made to highlight this. It is pertinent to investigate the spectrum of institutional arrangements, interactional patterns, and constructed educational ecosystems that serve as obstacles to obtaining legal rights. The lack of proper knowledge making it difficult for minors to distinguish and receive hijra non-binary sexualities and gender identities.

The first and foremost step towards Hijra right to education would be ensuring by promulgating laws for Hijra rights protection and mainstreaming educational programs at all levels with gradual progress. For implementation of this strategy, we require some full-fledged statute for legal recognition of Hijra education. The widest possible range of opportunities should be offered by adult education, encompassing not only special education or enrollment in regular adult learning programs but also instruction in life skills, self-consciousness and management, and fundamental skills for all ages. This can surely normalize their existence and build compassion within and acceptance from society about their right to receive education as a citizen. In order to create a multicultural safe welcoming environment at educational institutions, educators would play a critical role in putting equitable legislation into practice and translating the processes of constitutional protection to pragmatic access and enforcement of rights.

7. Conclusion

Hijras are experiencing discriminatory treatment in social security and legal protection for decades. With the stiffed pain of insufficient and/or effective undertakings from government, Hijras embrace this eternal unchangeable backwardness due to no access to education. The essentiality of educating the transgender section of a society is of many folds both in view of economic and social perspective. Education can remove the drawbacks of a community by enabling them to earn their livelihood, contributing in the society by active participation resulting a national and economic growth in the overall development of a nation. Hijra education can play vital role in reducing unemployment problem, turning trans people into human resource through employment, decreasing crime rates, controlling illegal business conducted through them, increasing national, intellectual and economic growth. Lack of legislative or judicial recognition, insufficient endeavour from government to relocate them and inadvertence to their socio-economic legal rights has become a glaring symptom for marginalisation of Hijra community in Bangladesh. Henceforth, right to education for Hijra people seems to have little to no light of hope though ardent undertakings to formal recognition and execution of government and non-governmental plans can bring a wind of change in their fate in greater degree. Collaborative efforts from legislative, administrative, judicial, social, educational, commercial, NGO and other institutions can sow the seeds of new horizon for Hijra community by enabling them for access to education.

A Comparative Analysis of the Legal and Institutional Framework of Forensic Evidence in Bangladesh, India and Sri Lanka

Hamida Sultana*

Abstract: The efficient use of forensic evidence is constantly considered an integral component of contemporary criminal justice. Despite its crucial role in as the criminal justice system, the legal and institutional framework governing forensic evidence in Bangladesh remains underdeveloped, fragmented, and inadequate, particularly compared with regional counterparts such as India and Sri Lanka. This article critically examines the legal and institutional framework related to forensic evidence in Bangladesh through a comparative assessment of corresponding frameworks in two South Asian countries: India and Sri Lanka. The purpose of this article is to critically evaluate the strengths and limitations of the legal and institutional framework of forensic evidence in Bangladesh, to identify the best practices regarding forensic evidence adopted by these countries, and to examine how these practices can be integrated into the forensic evidence system of Bangladesh to reinforce its legal and institutional framework. This study employs a doctrinal and comparative legal analysis, drawing upon legislation, judicial decisions, Law Commission reports, and academic literature to assess forensic evidence regimes. The findings of this article suggest that, although Bangladesh has made progress by incorporating DNA evidence, digital evidence, and other medico-legal procedures, it still lags behind India and Sri Lanka in areas such as procedural implications, statutory clarity, institutional capacity, and judicial training. This article contends that Bangladesh may greatly improve the reliability, integrity, and judicial value of forensic evidence by adopting effective reform blueprints from its regional counterparts, including decentralization of forensic infrastructure, implementation of standardized procedures, implementation of multidisciplinary training programs, and modification of statutory laws.

1. Introduction

Over the last few decades, forensic science has evolved into a vital component of the modern criminal justice system, considerably improving the accuracy of the criminal investigation system as well as contributing to the impartial administration of justice.[1] Scientific evidence ranging from digital forensics and fingerprint analysis to

---

* Lecturer, Department of Law and Land Administration, Faculty of Law, Jagannath University, Dhaka.

[1] Akbarova Dildora Abduvaliyevna, 'The Role of Forensic medicine in modern justice systems' (2015) 5(8) International Journal of Medical Sciences, 161 <https://www.academicpublishers.org/journals/index.php/ijms/article/view/6238> accessed 15 August, 2025

DNA profiling and toxicology plays an increasingly influential role in judicial decision-making worldwide. Nevertheless, the efficient use of such evidence depends not only on technical accessibility but also on a strong institutional and legal framework that regulates its gathering, admissibility, and interpretation. In developing countries like Bangladesh, the integration of forensic methodologies into the legal system continues to face substantial challenges due to their limited infrastructure and resources, inadequate legal and regulatory frameworks, and weak institutional cooperation. The legal system of Bangladesh remains anchored in the colonial era, which does not adequately address the admissibility and use of modern forensic evidence. As a result, the legal system often fails to leverage forensic evidence effectively in safeguarding against miscarriage of justice. The emerging literature on forensic practice in Bangladesh tends to emphasize internal limitations with insufficient exploration of regional approaches that could inform effective solutions. India and Sri Lanka were chosen as appropriate comparators due to their shared common law heritage, yet they possess advanced legal and institutional frameworks for the regulation of forensic evidence. There is a dearth of comparative analyses that effectively contextualize these developments in ways that could shape forensic evidence-based legal reforms. Focusing on the regulation of forensic evidence, this article investigates and contrasts the legal and institutional structures of Bangladesh, India, and Sri Lanka. This study reviews how forensic evidence is admitted and applied in each country, examines institutional capacity, and studies judicial responsiveness to scientific evidence. This study aims to provide tailored guidance for improving the use of forensic evidence in legal procedures in Bangladesh. This study employs a qualitative comparative analysis based on existing statutes, institutional reports, judicial decisions, and academic literature on forensic evidence in Bangladesh and other South Asian countries. The sources of the data include government publications, legal databases, court rulings, official websites, and relevant scholarly articles.

2. Role of Forensic Evidence in the Administration of Justice

The Latin word 'forensic', from which the word forensic is derived, refers to a forum where senators of Rome and other participants discussed public matters and made legal decisions. It refers to the idea of finding truths and the interpretation of facts relating to criminal activities and other disputes.[2] Forensic evidence means scientific

---

[2] K S Narayan Reddy and O P Murty, *The Essentials of Forensic Medicine & Toxicology* (34th edn, The Health Science Publisher 2017) 1

information obtained from investigating the objects or materials used in a crime.[3] It encompasses physical evidence such as weapons, clothing, fingerprints, footwear impressions;[4] biological evidence collected from humans and animals, such as blood, saliva, semen, hair, tissue, DNA;[5] trace evidence such as fibers, chips, paint, glass shards.[6] Pattern evidence, including footprints, tire tracks, tool marks, etc. Digital forensics, such as email, phone records, and computer files, etc. Forensic pathology, which identifies the cause and manner of death, forensic toxicology that detects toxic substance, drugs and harmful chemical in the human body, Forensic DNA analysis, Forensic ballistics examines weapons, bullets, and gunshot residues, matches biological evidence to suspects and connects it to crime scene, forensic odontology identifies victims and analyzes bite marks by dental data, forensic anthropology examines skeletal remains to identify individuals and their cause of death.[7] Every piece of forensic evidence provides a distinct perspective that helps to reconstruct the crime scene, identify suspects, validate, and contest witness testimony. Forensic evidence plays a pivotal role throughout the criminal justice system at each procedural stage. Forensic methodologies contribute to investigation by establishing evidentiary links between suspects, crime scenes, and victims. In prosecution, scientifically credible evidence can substantiate prosecutorial claims and improve the chances of convictions. Alternatively, forensic evidence may support the defense by undermining the prosecution's claim or revealing false allegations. In court proceedings, forensic scientists often provide expert testimony who interpreter technical findings and enables the court to understand the relevance and implications of the evidence presented. Therefore, forensic science is essential for upholding the integrity and fairness of criminal justice.

[3] Cambridge Dictionary, <https://dictionary.cambridge.org/dictionary/english/forensic-evidence> accessed 13 August, 2025

[4] National Institute of Justice, Crime Scene and DNA Basics for Forensic Analysts, <https://nij.ojp.gov/nij-hosted-online-training-courses/crime-scene-and-dna-basics-forensic-analysts/evidence-crime-scene/types-evidence?> accessed 17 August, 2025

[5] Ibid

[6] National Institute of justice, Firearms examiner training, <https://nij.ojp.gov/nij-hosted-online-training-courses/firearms-examiner-training/module-06/types-evidence> accessed 28 August, 2025

[7] Zahurul Islam, 'Strengthening Forensic Science in Bangladesh's Criminal Justice System: Challenges, Opportunities, and Strategies for Improvement' (2025) International Journal of Research and Innovation in Social Science 21 <https://rsisinternational.org/journals/ijriss/articles/strengthening-forensic-science-in-bangladeshs-criminal-justice-system-challenges-opportunities-and-strategies-for-improvement/> accessed 29 August, 2025

3. Legal Framework of the Forensic Evidence in Bangladesh

In Bangladesh, the legal framework for forensic evidence is primarily grounded in the Evidence Act of 1872. Forensic evidence is often used in conjunction with provisions of the Penal Code, 1860, and the Code of Criminal Procedure, 1898, which outline the procedures for investigation and the prosecution of offences. The judiciary plays a critical role in interpreting the outdated laws in the light of new scientific methods, often setting important precedents in the use of forensic science in legal proceedings.

3.1 The Evidence Act, 1872

The Evidence Act, 1872, a statute from the colonial era that was not initially intended to address the complexity of contemporary forensic science and technology breakthroughs, continues to serve as the cornerstone of the forensic evidence system of Bangladesh. Although the amendment of 2022 to the Evidence Act made significant progress by acknowledging the admissibility of digital evidence[8], the Act still lacks a comprehensive provision for the security, integrity, and preservation of digital evidence.[9] It also lacks provisions relating to the admissibility of other forensic evidence in conformity with global standards such as chain of custody and integrity, and no protection against evidence obtained by torture, coercion, or illegal surveillance. Section 45 focuses on the opinion of an expert on several issues about foreign law, science, art, handwriting, or finger impressions that provide the foundational basis for the admissibility of forensic evidence[10], but it is not comprehensive enough to fully govern forensic evidence in today's context, such as DNA profiling, chemical analysis, and other cutting-edge scientific methods.

3.2 The Deoxyribonucleic Acid (DNA) Act, 2014

In response to the need for comprehensive rules for the admissibility of DNA-based evidence in line with evolving technology, the DNA Act, 2014, was enacted to oversee DNA profiling in both civil and criminal matters. The Act contains provisions for the establishment of DNA laboratories[11], an advisory council,[12] a technical board,[13] and a

---

8 The Evidence (Amendment) Act, 2022

9 Tania Sheikh, Sumaya Afroj, Farah Iqbal, 'Admissibility of Digital Evidence in Court: In Light of Changes in Bangladesh Evidence Law' (2024) International Journal of Research and Scientific Innovation 1617 <https://rsisinternational.org/journals/ijrsi/articles/admissibility-of-digital-evidence-in-court-in-light-of-changes-in-bangladesh-evidence-law/> accessed 2 August, 2025

10 The Evidence Act, 1872, s. 45

11 The DNA Act, 2014, s. 14

DNA laboratory management department[14] to oversee forensic DNA activities. Furthermore, it provides for the establishment of a national DNA database comprising an index for crime scenes, convicted offenders, and missing persons.[15] It also affirms the evidentiary value of DNA profiling by stating that a DNA profile may be admissible as evidence in courts.[16] Despite offering guidelines for the admissibility of DNA profiles, the effectiveness of the Act is hindered in practice by some unresolved issues, including the scarcity of DNA laboratories, an ambiguous procedure for DNA collection, unclear standards for their preservation and use in court, centralized services, and inadequately qualified officials.[17]

3.3 The Code of Criminal Procedure, 1898, and the Penal Code, 1860

The Code of Criminal Procedure, 1898, has a chapter on special rules of evidence from section 509 to section 512 containing rules regarding deposition of medical witnesses, post-mortem reports, chemical examiner and serologist, etc. The testimony of a civil surgeon or medical expert taken by a magistrate in the presence of an accused may be legally considered at any stage of the criminal trial.[18] If deemed necessary, such a witness may be summoned and examined by the court during judicial proceedings.[19] A post-mortem report is admissible in evidence even if the medical officer who prepared the report is unable to testify due to death, incapacity, or absence from Bangladesh.[20] Reports prepared by forensic experts, such as chemical examiners, serologists, handwriting experts, firearm experts, etc., may be admissible in evidence without the oral testimony of that expert.[21] Moreover, the officer in charge of a police station is vested with the duty to conduct an investigation and submit a report in cases of unnatural or suspicious deaths, including murder, suicide, or accidents.[22] In circumstances where the cause of death remains uncertain, and the deceased has been buried, a magistrate may direct that the body be disinterred and examined.[23] The Penal Code, 1860, does not explicitly

12 Ibid, s. 16
13 Ibid, s. 19
14 Ibid, s. 20
15 Ibid, s. 24
16 Ibid, s. 37
17 Md Anwar Hossain, 'The critical need for forensic evidence in Bangladesh' *The Daily Sun* (Dhaka, September 18, 2025)
18 The Code of Criminal Procedure,1898, s.509
19 Ibid, s. 509(2)
20 Ibid, s. 509A
21 Ibid, s. 510
22 The Code of Criminal Procedure,1898, s. 174
23 Ibid, s. 176(2)

address forensic evidence, as these technologies emerged long after its enactment. However, certain provisions, including sections 201, 204, and 193, indirectly address the offences relating to tampering, destruction, and fabrication of forensic evidence.

3.4 The Cyber Security Ordinance, 2025

The Cyber Security Ordinance, 2025, is structured not only to define cyber offences but also to provide the legal foundation for the collection and management of digital evidence in cybercrimes. The Ordinance states that one or more digital forensic laboratories shall be established under the control and supervision of the National Cyber Security Agency.[24] It also authorizes the Agency to recognize existing government forensic laboratories that meet prescribed standards as digital forensic laboratories under this Ordinance. It provides that the agency shall ensure quality control of every digital forensic lab according to standards prescribed by rules.[25] In addition to these provisions, the ordinance authorizes the government to formulate rules related to the establishment of digital forensic laboratories, including detailed guidelines on forensic data collection, interception, and preservation.[26]

3.4 Other Special Laws

Apart from the general procedural law, Bangladesh has several special laws that govern forensic evidence in specific circumstances: The Narcotics Control Act, 2018, outlines a specific procedure for the forensic examination of seized drugs with scientific verification. Though the Arms Act, 1878, and the Explosive Substance Act, 1908, provide the basis for forensic examination of weapons and explosives, these laws are too outdated to comply with modern technology.

3.5 Judicial Precedents

In Bangladesh, while forensic evidence like DNA and digital evidence is gaining prominence in courtrooms, the legal framework remains firm on procedural correctness. For example, in the *Abrar Fahad murder case*,[27] forensic evidence played a crucial role in corroborating the eyewitness statement with the CCTV footage and confirmed the fatal injury leading to death in the post-mortem report. Forensic evidence also played a significant role in the *Rifat Sharif murder case*[28] by confirming

---

[24] The Cyber Security Ordinance, 2025 s. 10

[25] Ibid s. 11

[26] Ibid s. 49

[27] *State vs. Mehedi Hasan Rasel & others* [2022] 1 SC

[28] *Ayesha Siddiqa Minni v. State* [2019] Case no. 47253/2019

the cause of death caused by the sharp weapon wounds. Footage from surveillance cameras showed the assault, and mobile and social media records linked the accused in this case. In a recent case, the High Court ruled that a DNA report cannot be admitted as evidence without cross-examination of the expert in court.[29] Furthermore, in *BLAST & Ors. V. The Ministry of Health and Family Welfare & Ors*, the High Court Division laid down 18 guidelines for the case relating to sexual assault and rape, notably requiring the chemical or DNA tests and submission of a sample to forensic labs within 48 hours of the alleged offence.[30]

4. Institutional Framework of Forensic Evidence in Bangladesh

The institutional framework for forensic evidence management in Bangladesh involves multiple actors within three main domains: the law enforcement agency, the medico-legal service, and the judiciary. At the national policy level, two principal ministries are in charge of overseeing forensic regulation. The Ministry of Home Affairs governs the forensic evidence service, regulated by the Police, including the Criminal Investigation Department and forensic laboratories.[31] The Ministry of Health and Family Welfare oversees medico-legal functions such as post-mortems, biological sample collection, and injury assessment performed by government medical personnel.[32]

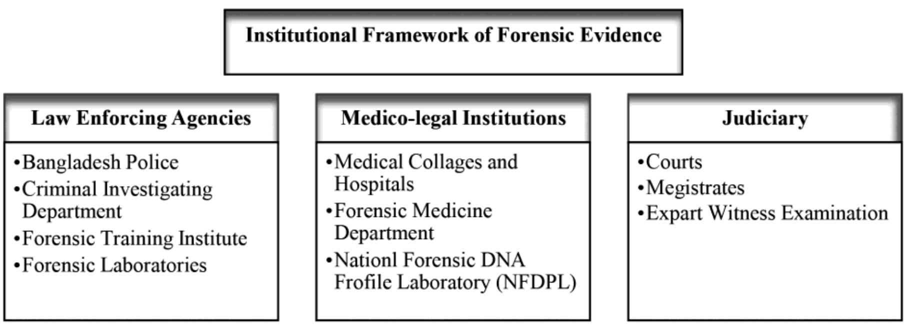

Figure 1: Institutional Framework of Forensic Evidence in Bangladesh

[29] Muhammad Yeasin, 'Doc preparing DNA test report must testify in court: HC' *The Daily Observer* (Dhaka, 7 October, 2024) <https://www.observerbd.com/news/493797?> accessed 10 September, 2025

[30] *Bangladesh Legal Aid Services and Trust & Ors. V. The Ministry of Health and Family Welfare & Ors.* [2013] HCD 10663

[31] Dhaka Tribune, 'Rummana Foisal Nafiu, CID's DNA laboratory now operating as DNA Bank' (Dhaka, June 10, 2020) <https://www.dhakatribune.com/amp/bangladesh/212393/cid-s-dna-laboratory-now-operating-as-dna-bank> accessed 10 September, 2025

[32] KGM Rahman, MK Osman and S Mahmud, 'Forensic Medicine: Bangladesh Perspective' (2010) 19(1) Journal of Dhaka Medical Collage 61

4.1 Law Enforcing Agencies and Government Oversight

In the structure of forensic evidence in Bangladesh, the Bangladesh Police, the Rapid Action Battalion, and the Criminal Investigation Department (CID) serve as primary stakeholders in the collection, analysis, and presentation of forensic evidence. The primary role of law enforcement is to secure and preserve the crime scene so that evidence cannot be contaminated or lost.[33] It includes perimeter control, access prevention, and accurate scene documentation. But in practice, crime-scene management is hindered by limited training, equipment shortages, and a lack of specialized personnel. This frequently compromises evidence integrity, which adversely influences forensic analysis and the decisions of courts. The next step after preserving the crime scene is gathering physical, biological, and digital evidence in accordance with procedural rules. However, the lack of uniform protocol and guidelines for the chain of custody often causes procedural errors, including poor documentation, which raises concern regarding tampering and the admissibility of forensic evidence.[34] Effective forensic investigation requires strong links between law enforcement agencies and forensic labs. The CID, as the main investigative and forensic division of Bangladesh Police, includes the fingerprint bureau, digital forensic unit for cybercrime evidence and device analysis, and document examination labs.[35] However, most of these forensic services are Dhaka-based, leaving rural jurisdictions underserved and creating delays due to a lack of regional laboratories. The effectiveness of the forensic division largely depends on technical expertise and strict adherence to procedural standards. However, forensic evidence often goes underutilized due to insufficient forensic knowledge among police and investigators.[36] Although the functions of these agencies and labs fall under several ministries, there is a lack of a unified forensic framework to coordinate procedures, enforce consistent standards, and ensure regulatory alignment nationwide.[37]

---

[33] National Institute of Justice, 'Crime Scene and DNA Basics for Forensic Analysts' https://nij.ojp.gov/nij-hosted-online-training-courses/crime-scene-and-dna-basics-forensic-analysts/evidence-crime-scene/preservation-evidence?> accessed 3 September, 2025

[34] Edicts & Statutes, 'Understanding the Chain of Custody in Evidence Practices' (August 24, 2024) <https://edictsandstatutes.com/chain-of-custody-in-evidence/> accessed 3 September, 2025

[35] Bangladesh Police, 'Criminal Investigation Department (CID)' <https://www.police.gov.bd/index.php/en/units_ criminal_investigation_department_%28cid%29> accessed 5 September, 2025

[36] The Business Standard, 'Bangladesh's poor application of forensic science in criminal justice. Apathy or legal ambiguity?' <https://www.tbsnews.net/thoughts/bangladeshs-poor-application-forensic-science-criminal-justice-apathy-or-legal-ambiguity?> accessed 5 September, 2025

[37] Md. Anwar Hossain, 'The critical need for forensic infrastructure in Bangladesh' *The Daily Star* (Dhaka, September 28, 2025) <https://www.thedailystar.net/opinion/views/news/the-critical-need-forensic-infrastructure-bangladesh-3989001?> accessed 7 September, 2025

4.2 Medico-Legal Infrastructure

The medico-legal infrastructure mainly includes the department of forensic medicine in medical colleges and specialized forensic laboratories administered under the Ministry of Health. Almost every Government Medical College in Bangladesh has a forensic and toxicology department. These units are responsible for conducting medico-legal autopsies, determining the cause of death, analyzing cases of injury and poisoning, and producing medical reports. These departments work in direct coordination with law enforcement agencies by receiving cases involving deaths and physical assaults. They prepare expert reports that serve as crucial evidence in court proceedings according to the law. Another important component of the infrastructure of forensic evidence is the National Forensic DNA Profiling Laboratory (NPDPL), established under the Ministry of Women and Children Affairs, serving as the first and central unit for DNA analysis in Bangladesh. It plays a crucial role in the investigation of rape, murder, and paternity cases. By 2024, it had played a pivotal role in over 9,400 cases and examined over 30,000 samples.[38] Despite the presence of these departments and labs, significant gaps are visible, such as limited training of medical officers, absence of standardized procedures, shortage of modern equipment, and minimal collaboration between medical practitioners and legal professionals.

4.3 Judiciary

The Judiciary in Bangladesh plays a vital role in determining the validity and admissibility of forensic evidence in both criminal and civil cases. Courts hold the ultimate power to decide the trustworthiness of forensic evidence. So, the judges need to meticulously assess the chain of custody, the procedure of collecting that evidence, and the scientific validity of the forensic findings. Despite their important role, judges in Bangladesh face challenges in evaluating technical forensic evidence due to insufficient specialized training in forensic science, insufficient forensic laboratories[39], scarcity of advanced technology, and periodic challenges to consistency and objectivity among investigative authorities.

---

[38] MSPVAW, 'About NFDPL' (Ministry of Women and Children Affairs) <https://mspvaw.gov.bd/contain/23> accessed 7 September, 2025

[39] Edicts & Statutes (n 35)

5. Legal and Institutional Infrastructure of Other South Asian Countries

5.1 India

India has undertaken considerable legal and institutional advancement in modernizing its forensic system. The nation has experienced substantial changes through policy reform, infrastructure development, and judicial activism. Though their application differs, states presently endorse contemporary forensic methods, including DNA profiling, digital forensics, ballistics, and chemical analysis.

5.1.1 Legal Framework

The forensic evidence mechanism in India is regulated by several laws, judicial precedents, and regulatory guidelines. The principal legal instruments relating to forensic evidence consist of:

a. The Bharatiya Sakshya Adhiniyam, 2023

The Indian Evidence Act, 1872, has been replaced by the Bharatiya Sakshya Adhiniyam (BSA), 2023, to compile and establish broader guidelines and principles regarding electronic and digital records to ensure a fair trial. The new law updates the definition of documents to encompass electronic communications, server logs, mobile data, digital recording, etc. By allowing electronic records to be admissible upon authentication, the law significantly reduces the previous obstacles to judicial proceedings.[40] The legal framework now explicitly permits the admissibility of digital footprints, metadata, and other technical data. According to BSA, an expert testimony certificate is required for the admissibility of forensic evidence, such as digital evidence or electronic evidence,[41] which provides a structured way to verify authenticity.

b. The Bhartiya Nagarik Suraksha Sanhati, 2023

As part of comprehensive criminal justice reforms, India has replaced the Code of Criminal Procedure, 1973, with the Bharatiya Nagarik Suraksha Sanhita, 2023. By incorporating extensive provisions on forensic sample collection, forensic reports, forensic and medical examinations, and expert opinion, the Act significantly strengthens the scientific basis of criminal investigations and trials. It requires that, in offences punishable with imprisonment of 7 years or more, a forensic expert must be called to the crime scene to collect forensic evidence, and the process of collection

40 The Bharatiya Sakshya Adhiniyam, 2023, s. 61
41 Ibid, s. 63

must be documented through videography or other electronic means.[42] It also allows a Magistrate of the first class to order the collection of specimens such as fingerprints, handwriting, finger impressions, and voice samples from any person if necessary for an investigation, even if that person is not arrested.[43] This provision expands the scope for broader forensic sample gathering. Another provision made the reports prepared by any scientific expert admissible as evidence in the course of any proceeding, including investigation and trial.[44] The Act further encompasses provisions mandating the medical examination of both accused persons[45] and victims of sexual offences[46]. By codifying these forensic and medical procedures, the Bhartiya Nagarik Suraksha Sanhati, 2023, strengthens scientific evidence collection and reduces overreliance on testimonial evidence-based criminal justice system.[47]

c. DNA Technology (Use and Application) Regulation Bill, 2019

Although not yet enacted, this Bill aims to establish a comprehensive regulatory framework for the use of DNA technology in criminal and civil matters. It proposes: the creation of a National DNA Data Bank, Standards for the collection, storage, and use of DNA data, and oversight through a DNA Regulatory Board.[48] Once enacted, it will fill key legislative gaps regarding DNA profiling, privacy safeguards, and procedural guidelines for DNA-based evidence.

d. Other Laws

The Information Technology Act, 2000, has provisions for the admissibility of digital evidence and cyber forensics.[49] Sections 65A and 65B of the Indian Evidence Act, introduced via amendment in 2000, lay down rules for the admissibility of electronic records, requiring certification for electronic data to be treated as evidence.[50] Some provisions of general laws specifically address toxicology standards,[51] such as the

---

42 The Bharatiya Nagarik Suraksha Sanhati, 2023, s. 176(3)
43 Ibid, s. 349
44 Ibid, s. 329
45 Ibid, s. 51
46 Ibid, s. 184
47 Samridhi Mittal, 'Role of Forensic Evidence under BNSS 2023: Enhancing Credibility in Criminal Investigation' (2025) 8(3) International Journal of Law Management and Humanities 547
48 DNA Technology (Use and Application) Regulation Bill, 2019.
49 The Information Technology Act, 2000, s 4,5,7,79A,80
50 The Indian Evidence Act 1872, s 65A–65B
51 Gaurav Chandra and Dr. Ranjana Sharma, 'Admissibility of Forensic Evidence in Investigations: A Comparative Study between India, UK & USA' (2023) 5(9) Journal of Legal Studies and Research 154.

Indian Penal Code, which imposes a penalty for negligent acts concerning a toxic drug.[52] The Sale of Poison Act, 1919, restricts the importation of prescription poison without a license.[53]

5.1.2 Institutional Framework

India's forensic capacity is supported by a multi-tiered institutional structure that includes both central and state-level facilities, as well as academic and training institutions. India has seven Central Forensic Science Laboratories (CFSLs) under the Directorate of Forensic Science Services (DFSS), Ministry of Home Affairs. These labs provide expert services in fields such as DNA and serology, Ballistics, questioned documents, Digital forensics, and toxicology.[54] The CFSLs serve the central government and courts across jurisdictions. Besides, each Indian state has its own State FSL, which caters to regional law enforcement and courts. However, the quality and capacity of SFSLs vary considerably, with better-equipped facilities in states like Gujarat, Maharashtra, and Tamil Nadu, and resource constraints in others. The National Forensic Sciences University (NFSU) is the first academic institution dedicated exclusively to forensic education, research, and training. It offers Degree programs in forensic science, cyber security, DNA analysis, Training for police, prosecutors, and the judiciary, and research in forensic technology. NFSU has emerged as a cornerstone in professionalizing forensic services in India. Recently, the Indian Cabinet approved the 'National Forensic Infrastructure Enhancement Scheme (NFIES)' of Rs. 2254.43 crore in 2024. It covers the establishment of campuses of the National Forensic Science University, the establishment of central forensic science Laboratories in the country, and the enhancement of the existing infrastructure of the Delhi campus of the NFSU.[55] Several Indian states have introduced mobile forensic vans equipped to collect and process evidence at crime scenes, reducing contamination risks. Additionally, under the Police Modernization Scheme, state forces are being equipped with tools and training for first responders to handle forensic materials effectively.[56]

---

52 The Indian Penal Code, 1860, s 284

53 The Sale of Poison Act, 1919, s 3

54 Directorate of Forensic Science Services, Ministry of Home Affairs

55 PMINDIA, 'Cabinet approves Central Sector Scheme "National Forensic Infrastructure Enhancement Scheme' (*N.F.l.E.S.)* June 19, 2024 <https://www.pmindia.gov.in/en/news_updates/cabinet-approves-central-sector-scheme-national-forensic-infrastructure-enhancement-scheme-n-f-l-e-s/> accessed 3 September, 2025

56 Ministry of Home Affairs, Police Modernisation Scheme Reports.

5.1.3 Judicial Interpretation and Use of Forensic Evidence in India

In India, the judiciary has progressively incorporated forensic and electronic evidence to reinforce the evidentiary standard in its criminal justice system. In the *Anvar P.V. v. P.K. Basher* case[57], to support the allegation of corrupt practice, the appellant relied on CDs with audio content including songs and speech. However, these electronic records were not certified in accordance with section 65B of the Evidence Act. The court affirmed that the certificate under section 65B is a prerequisite for the admissibility of electronic records. This ruling affirms the evidentiary standards for electronic records by upholding authenticity and integrity. In another critical case, *Selvi v. State of Karnataka*,[58] the Supreme Court assessed the constitutional validity and admissibility of narco-analysis, polygraph, and brain-mapping techniques in criminal investigation. The court observed that conducting such tests on accused persons without their consent violates Article 20(3), which guarantees the right against self-incrimination. The ruling emphasized that the application of forensic science must remain within the constitutional boundaries. One of the most significant criminal cases in Indian legal history regarding the role of forensic evidence is *Mukesh & Anr. V. State of NCT of Delhi*, widely known as *the Nirbhaya case*.[59] The horrific gang rape and murder of a 23-year-old medical student triggered a wave of public protest across India. Forensic evidence, such as medical and post-mortem reports, DNA analysis, and CCTV footage, played a crucial role in establishing the prosecution's case. In affirming the death sentence to the accused, the Supreme Court emphasized that the integration of medical, forensic, and eyewitness testimony created a compelling evidentiary matrix that left no scope for uncertainty. Highlighting the gravity of the case, the court underscored the reliability and professionalism of the forensic reports aligned with the eyewitness and dying declaration, justifying the death penalty under the 'rarest of rare' case. This verdict marked a turning point in Indian criminal law, setting a strong example in sentencing for brutal crimes, relying on forensic science. In the case of *State of Haryana v. Bhagirath & Others*,[60] the Supreme Court upheld the conviction of the accused on the basis of forensic and medical evidence that effectively supported eyewitness testimony in a homicide case. Collectively, these decisions reflect the increasing acceptance of forensic science in India, balanced by a firm insistence on procedural fairness, statutory observance, and constitutional guarantee.

---

[57] *Anvar P. V. v. P. K. Basheer & Ors.* [2014] 10 SCC 473

[58] *Selvi v. State of Karnataka* [2010] 7 SCC 263

[59] *Mukesh & Anr. V. State of NCT of Delhi* [2017] 6 SCC 1

[60] *State of Haryana v. Bhagirath & Others* [1999] 5 SCC 96

5.2 Sri Lanka

Unlike the pure influence of common law, Sri Lanka draws on its colonial legacy while fostering close ties between public health and justice to manage forensic evidence. Despite undertaking less extensive legal reform than India, Sri Lanka has established a relatively well-structured framework for the collection, analysis, and admissibility of forensic evidence, particularly in medico-legal cases involving autopsy, sexual violence, and death in custody.

5.2.1 Legal Framework

The legal regulation of forensic evidence in Sri Lanka is primarily rooted in the Evidence Ordinance of 1895, with additional guidance provided by the Evidence (Special Provisions) Act No. 14 of 1995, which addresses electronic and computer-generated evidence. Although the legislation predates modern developments in forensic science, the legal system has made notable progress in accepting methods such as DNA testing, fingerprint evidence, ballistics, and digital investigations.

a. Evidence Ordinance, 1895

Sri Lanka's Evidence Ordinance, derived from the British colonial model and largely modelled on the Indian Evidence Act 1872, forms the legal basis for the admissibility of expert evidence. Section 45 permits expert testimony in matters requiring specialized knowledge, including science, medicine, and handwriting.[61] The scope of this provision has been interpreted by courts to cover forensic disciplines such as toxicology, pathology, and fingerprint analysis. While Sri Lanka's Evidence Ordinance (No. 14 of 1895) lacks detailed procedural rules specific to newer forensic technologies, the country has enacted the Evidence (Special Provisions) Act No. 14 of 1995, which provides explicitly for the admissibility of audio-visual recordings and statements produced by computers, subject to conditions such as proper operation of the device, accurate inputs, and capability of reproduction. Further, the Electronic Transactions Act, 2006, complements existing legislation by addressing electronic communication and data. Thus, some statutory safeguards do exist, though practice, capacity, and detail may lag behind those in India or Bangladesh.

b. The Consolidated Code of Criminal Procedure, 2024

Sri Lanka enacted its first Code of Criminal Procedure in 1979, which has been comprehensively updated till 2024 to reflect contemporary legal and procedural

[61] The Evidence Ordinance, 1895 (Sri Lanka), s 45.

standards. It provides provisions for medical examination of a suspect by a government medical officer[62] and medical examination of a child offender between the ages of 12 and 14 years.[63] Under this code, police officers are permitted to collect fingerprints, hair, blood, and other specimens from suspects with their consent, and if the consent is withheld, the officers may apply to the magistrate for authorization.[64] It also contains the provisions for the magistrates and authorized inquirers to require medical officers or practitioners to conduct post-mortem examinations and report on the cause of death, and to order disinterment if required.[65] The code also allows reports from the government analysts and other specified experts to be admitted as evidence without calling them as witnesses, subject to proof of identity of the relevant matters[66] and records of identification parades conducted by magistrates or justices of the Peace to be admitted as evidence without requiring their testimony.[67] It further provides for reports of any witness, attested before a Justice of the Peace, concerning the custody or disposal of items used in an offence, or submitted to a public officer for examination, analysis, or verification of a plan, survey, or sketch, to be admitted as evidence without calling the witness.[68] These provisions ensure that the forensic evidence is properly collected, safeguarded, and presented before the court, even when witnesses or experts cannot appear in person.

c. Penal Code and Special Laws

The Penal Code of Sri Lanka was originally adopted in 1883 and later amended through the Penal Code (Amendment) Acts of 1993 and 2006. Although it does not directly regulate forensic evidence, the amendments related to sexual violence and custodial torture have increased reliance on forensic medicine. Additionally, laws like the Judicature Act, Torture Act, and Evidence (Special Provisions) Act play indirect roles in shaping the use of expert reports, particularly in cases of custodial abuse, deaths in detention, and gender-based violence. Notably, Sri Lanka does not yet have a standalone DNA law akin to Bangladesh's DNA Act 2014 or India's pending DNA Bill. DNA evidence is used in courts but governed through practice

---

62 The Code of Criminal Procedure, 2024 (Consolidated), s. 122
63 Ibid, s. 122A
64 Ibid, s. 123
65 Ibid, s. 373
66 The Code of Criminal Procedure, 2024 (Consolidated) s. 414
67 Ibid, s. 414(2)
68 Ibid, s. 414(3),(4)

directions and institutional protocols rather than a codified statute.[69] The Computer Crimes Act, 2007, establishes the legal basis for investigating cybercrimes and ensures the admissibility of digital forensic evidence in cases involving hacking, data breaches, and online offences. Complementing this, the Electronic Transactions Act, 2006, legitimizes electronic records and signatures, reinforcing the role of digital evidence in legal proceedings.

5.2.2 Institutional Framework

Sri Lanka's forensic system is centrally coordinated, with strong integration between forensic medicine, the judiciary, and state forensic agencies. While its capacity is more limited than India's, its structural alignment contributes to reliability in certain forensic processes.

a. Government Analyst's Department (GAD)

The Government Analyst's Department, under the Ministry of Justice, is the central forensic authority. It handles various domains, such as DNA analysis, narcotics testing, ballistics and firearms, toxicology, and examination of documents.[70] The GAD is responsible for conducting forensic examinations upon request from police and courts and for submitting expert reports. It also provides testimony in court when necessary. Despite some resource constraints, such as delayed report submission, insufficient workforce, lack of regional branches, and lack of advanced analytical equipment,[71] the department has developed credibility and consistency in its operations over the decades.

b. Medico-Legal Services and the Ministry of Health

A unique feature of Sri Lanka's forensic system is its integration with the Ministry of Health, which oversees medico-legal services through Medico-Legal Units (MLUs) in government hospitals and Judicial Medical Officers (JMOs) who perform autopsies, injury assessments, and medical evaluations in criminal cases.[72] JMOs are medical doctors trained in forensic medicine and are part of the state health system. Their reports are frequently used in Homicide and suspicious death investigations, rape

---

[69] Centre for Policy Alternatives, *Legal Reform and Forensic Evidence in Sri Lanka* (CPA 2019).

[70] Government Analyst's Department, Ministry of Justice, Sri Lanka

[71] Human Rights Commission of Sri Lanka (HRCSL), *Annual Report on Torture Documentation*, 2022. <https://www.hrcsl.lk/wp-content/uploads/2020/01/Annual-Report-2022> accessed 30 August, 2025

[72] Ministry of Health, Guidelines on Medico-Legal Services (2020).

and sexual violence cases, torture allegations, and human rights violations.[73] This medico-legal integration is central to Sri Lanka's forensic process and contributes to higher evidentiary value for medical-legal reports in judicial proceedings.

c. Role of Law Enforcement and Judiciary

The Sri Lanka Police Department refers cases to the GAD and medical examiners, collects physical evidence, and maintains a chain of custody. The police Criminal Investigation Division (CID) plays a role in more complex cases.[74] The judiciary, though not heavily specialized in forensic science, has established reliance on expert testimony and medico-legal evidence. Courts generally accept reports from the GAD and JMOs unless credibly challenged. While judicial training in forensic science is limited, judges are generally familiar with the standard formats and terminology used in medico-legal reports.[75]

5.2.3 Judicial Precedents on Forensic Evidence in Sri Lanka

In Sri Lanka, several judicial precedents highlighted the significance of forensic evidence. The Ratanpura High Court convicted the murderer, Neil Lakhman, of a death sentence based only on DNA evidence.[76] The accused committed double murder at Kotakethana, Ratanpura in 2012 and set the house on fire to the house to destroy all the evidence. Furthermore, DNA evidence was successfully used in the Seya *Sadewmi murder case* to exonerate an innocent suspect who was wrongfully taken into custody and to indict the guilty defendant by the Negombo High Court.[77] In another case, DNA evidence collected from vomiting and fingerprints on a vehicle and a bottle were used to establish identity and the presence of an accused at the scene.[78] It has been observed in the *Royal Park Murder case* that forensic evidence helped demonstrate DNA evidence, shifting the classification of offenses (from culpable homicide to murder) and strengthening the prosecution's case.[79] Each of these cases underscores the growing importance of forensic evidence (especially

---

73 International Commission of Jurists (ICJ), *Sri Lanka: Strengthening Forensic Services for Justice*, 2021.

74 Sarathchandra Kodikara and Michael Pollanen, 'Legal and Forensic Medicine: Sri Lankan Perspective' Springer Nature, 2013 p Kodikara, S., Pollanen, M. (2013). Legal and Forensic Medicine: A Sri Lankan Perspective. In: Beran, R. (eds) Legal and Forensic Medicine. Springer, Berlin, Heidelberg. <https://doi.org/10.1007/978-3-642-32338-6_149> accessed 2 September, 2025

75 Commonwealth Magistrates and Judges Association (CMJA), *Judicial Education Report: Sri Lanka*, 2020.

76 *Kotakethana Murder case* [2012]

77 *Attorney General v Saman Jayalath* [2015] HC 344

78 *The Attorney-General v. Potta Naufer & Others* [2007] 2 S.L.R 144.

79 *Don Shamantha Jude Anthony Jayamaha v. Attorney General* [2012] Sri Lanka Court of Appeal 236.

DNA profiling and fingerprint/vehicle trace evidence) in the Sri Lankan criminal justice system. They show how such evidence helps establish identity, connect suspects to crime scenes or multiple offences, and enhance the reliability of prosecutions beyond purely circumstantial or witness-based evidence.

6. Comparative Analysis of Forensic Infrastructures

To illustrate the forensic landscape in South Asia, the following table outlines a comparative snapshot of legal, institutional, and procedural aspects of forensic evidence of Bangladesh, India, and Sri-Lanka.

Aspects	Bangladesh	India	Sri Lanka
Statutory Law	The Evidence Act, 1872(amended in 2022) The Code of Criminal Procedure, 1898 The DNA Act, 2014	The Bharatiya Shakshiya Adhiniyam, 2023 The Bhartiya Nagarik Suraksha Sanhita, 2023 The DNA Technology (Use and Application Bill), 2019	The Evidence Ordinance, 1895 The Evidence (Special Provisions) Act, 1995 Code of Criminal Procedure of Sri Lanka
Laws relating to DNA	The DNA Act, 2014	The DNA Technology (Use and Application Bill, 2019	No Specific Statute
Institutional Infrastructure	The Criminal Investigation Department (CID)	Central Forensic Science Laboratories (CFSLs) State Forensic Science Laboratories (SFSLs) National Forensic Sciences University (NFSU)	Government Analyst's Department (GAD) The College of Forensic Pathology Medico-legal Society
Judicial Capacity	Reliance on Police Report No scope for standard training on forensic law	The National Judicial Academy provides scientific training	Reliance on the analyst's report No Structured Curriculum for Judicial Training

Table 1: Comparative analysis of legal and institutional structure of forensic evidence among Bangladesh, India, and Sri-Lanka

Each of the three nations retains core elements of its legal system from its colonial period. While India has implemented notable reforms to accommodate digital and other forensic laws, Bangladesh and Sri-Lanka remain more reliant on traditional structures. In many aspects, the legal and institutional structure of India and Sri-Lanka is way more flourished that of Bangladesh.

Forensic laboratories in Bangladesh are mainly operated under the Police Department, which creates a perception of bias. Due to police interference, some bad practices have been seen in some cases, such as during the July Mass Uprising of 2024, when the police compelled the doctor who had performed the autopsy of Abu Syed, the first martyr of the movement, to change the autopsy report five times.[80] Moreover, it has been alleged that the then Directorate General of Force Intelligence (DGFI) tampered with the evidence relating to the forced disappearance of over fifteen years.[81] Another tragic incident that deeply pains our hearts is the *Tonu Murder case*[82], which remains unsolved. It has been alleged that the Detective Branch of Police manipulated the DNA and post-mortem reports in association with the forensic committee.[83] On the other hand, India has multiple central and state forensic science laboratories with a semi-autonomous structure separated from direct police control. Sri-Lanka has institutions like Genetic Molecular Diagnostics and the Government Analyst's Department, which operate with greater professional autonomy compared to Bangladesh. There are no comprehensive forensic laws in Bangladesh; on the other hand, India has updated its Evidence Act, supplemented by replacing it with the Bharatiya Sakshya Adhiniyam, 2023, along with several amendments in the Code of Criminal Procedure. The Evidence Ordinances of Sri-Lanka are similarly old, but the judiciary has issued progressive rulings on the admissibility of forensic evidence in various judgements. Forensic services are highly centralized in Dhaka; as a result, delays are common due to a lack of regional labs.

---

80 Stuff Correspondent, 'Abu Sayed Murder: Cops forced doctor to alter autopsy report five times' *The Daily Star* (Dhaka, August 25, 2025) <https://www.thedailystar.net/news/bangladesh/crime-justice/news/abu-sayed-murder-cops-forced-doctor-alter-autopsy-report-five-times-3969596> accessed 10 September, 2025

81 TBS report, 'Enforced disappearances: Joint Interrogation Cell evidence destroyed, says inquiry commission' *The Business Standard* (Dhaka, January 22, 2025) <https://www.tbsnews.net /bangladesh/crime/joint-interrogation-cell-destroyed-evidence-even-after-5-august-reform-commission> accessed 11 September, 2025

82 *State v. Md. Mizanur Rahman & Ors.* [2016] 64 MBL 1

83 Khalid Bin Nazrul, 'Tonu murder: 9 years without closure' *The Daily Star* (Dhaka, 20 March 2025) <https://www.thedailystar.net/news/bangladesh/news/tonu-murder-9-years-without-closure-3852191?> accessed 11 September 2025

Online Desk, 'Tonu murder evidence might have been tampered' *Prothom Alo Enhlish* (Dhaka, 31 March 31, 2016) <https://en.prothomalo.com/bangladesh/%E2%80%98Tonu-murder-evidence-might-have-been-tampered%E2%80%99?> accessed 11 September, 2025

On the other hand, India has several central and state forensic labs along with specialized forensic units. Though Sri-Lanka has a smaller scale than India but still has more functional and decentralized forensic institutes. Bangladesh lacks a strong body of case law shaping forensic admissibility and interpretation. There are a few cases that put emphasis on the admissibility of forensic evidence in Bangladesh, but in India and Sri Lanka, there are several landmark judgements like the *Nirbhaya* case[84], the *Selvi v. Karnataka* case[85], and the *Royal Park murder case*, where forensic science decisively influenced the outcome of the judgement. In Bangladesh, there is limited scope for forensic training of the actors who are directly involved in forensic sample collection, storage, and analysis. On the other hand, in India and Sri Lanka, there are separate institutions like the National Forensic Sciences University (Delhi) and the College of Forensic Pathology, respectively, which offer various programs on forensic science. Besides, India has the National Judicial Academy, which provides scientific training on forensic evidence. It is evident from the comparison that Bangladesh lags in the practical and judicial application of forensic evidence compared to India and Sri-Lanka. Addressing deficiencies in forensic technology, providing specialized training, and adequate legal reforms are crucial for aligning Bangladesh's system with regional best practices.

6. Recommendations

There are specific measures that Bangladesh may adopt to enhance its legal and institutional infrastructure of Forensic Evidence:

Firstly, as previously mentioned above, the forensic labs in Bangladesh are under the supervision of the police department, which creates risks of partiality and conflicts of interest. At this point, the parliament of Bangladesh should enact legislation to create an independent national forensic authority like CFSL in India and GAD in Sri Lanka.

Secondly, there is an urgent necessity for clear legislation to regulate the development and operation of the national DNA database. Essential concerns, including data collection protocols, consent requirements, privacy safeguards, access control, data security, and policy regarding data retention and deletion, remain unaddressed in the current legal mechanism. The lack of explicit legal protection raises concerns about possible abuse and encroachment on civil freedoms.

---

84 *Mukesh & Anr.* (n 61)
85 *State of Haryana (n 62)*

Thirdly, Judges and lawyers often lack a scientific background; as a result, they rely blindly on expert opinion, which sometimes leads to wrongful decision-making. To overcome this, proper and adequate training should be arranged on forensic science for the Police, judges, lawyers, and prosecutors.

Fourthly, the legal framework should be reformed by amending the current Evidence Act with explicit forensic evidence guidelines. The reform must incorporate clear provisions and standard guidelines for admissibility, collection, preservation, and interpretation of forensic evidence to promote uniformity in legal proceedings. To enhance evidentiary reliability, a separate procedural code should be introduced for handling other forensic evidence, including digital forensics, toxicology, ballistics, and fingerprint analysis.

Fifthly, Regional and international cooperation should be established between Bangladesh and its neighboring countries as they share borders and common issues like drug trafficking, terrorism, and cybercrime. Bilateral MOUs can be negotiated with them on forensic cooperation.

Sixthly, by setting up regional forensic labs, Bangladesh can decentralize forensic services and improve forensic efficiency, which would reduce delays and speed up evidence processing. Adopting India's multi-tiered forensic system, Bangladesh can significantly improve its forensic accessibility and operational efficiency.

Seventhly, as cybercrime is a rising concern, Bangladesh should replicate India's Digital Forensic Laboratories under the Cyber Crime Coordination Center and establish a Digital Forensic Unit in every division.

Eighthly, to strengthen the scientific foundation of the justice mechanism, Bangladesh should consider establishing forensic science universities or introducing specialized programs on forensic evidence within existing universities. This initiative may follow the model of the National Forensic Science University in India.

7. Conclusion

Across South Asia, the role of forensic evidence in administering justice is increasingly prominent. The analysis reveals that, though Bangladesh has taken important steps toward incorporating forensic science into its laws, notable gaps continue to exist in its infrastructure, technology, and judicial capacity. While India and Sri-Lanka have made major institutional advancements in forensic services and judicial training, Bangladesh continues to struggle with institutional barriers that hinder the proper use of forensic evidence in legal proceedings. As the ultimate authority on the admissibility of evidence, the Judiciary in Bangladesh plays a vital role in safeguarding the integrity of legal proceedings. However, without specialized training and existing operational gaps in forensic institutions, the evidentiary value of forensic findings in court can be seriously undermined. To strengthen the forensic capacity of Bangladesh, legal reform must be paired with focused investment in forensic laboratories and technical capabilities. To reinforce a transparent, effective, and evidence-based criminal justice system, Bangladesh can adopt an integrated model inspired by the best practices of its neighboring countries. The continual forensic science demands a responsive legal system, ensuring that scientific truth enhances the integrity of justice, not to undermine its fairness.

Right to Inheritance of Widow under Muslim Law: Legal Framework and Practice

Nurunnahar Mazumder*
Sarmin Akter**
Mahmuda Amir Eva***

Abstract: Within the framework of Muslim Law, there are legal rights of inheritance provided to widows. However, the reality of widows' rights is rather limited because of the socio-cultural aspects and discrimination. Widowhood is a phenomenon that leads to the loss of identity and financial stability, stigmatization and marginalization, as well as the possibility of remarrying or the impossibility of doing so. Although there is considerable variation among cases, there are numerous examples of exclusion and impoverishment of women. This study seeks to examine the condition of widows with a focus on inheritance rights, highlighting the gap between formal legal provisions and actual practices. By situating widowhood within a broader socio-cultural and legal context, the study aims to provide a deeper understanding of the challenges faced by widows and their position within society.

1. Introduction

Marriage is a fundamental social institution that plays a crucial role in shaping individual identity, social relationships, and community structures. It not only establishes emotional and economic bonds between partners but also connects individuals to wider social networks and responsibilities.[1] However, the dissolution of marriage through the death of a spouse creates profound disruptions, particularly for women. In this regard widowhood represents a significant life transition marked by emotional loss, social dislocation, and economic uncertainty.

The experience of widowhood is often accompanied by a deep sense of desolation because it involves the loss of a life partner and the transformation of everyday roles and identities. A widow is no longer able to perform the roles traditionally associated with marriage, such as companion, confidante, or co-manager of the household. These changes can have far-reaching consequences for her lifestyle, self-perception, and position within the family and society. In many cases, widowhood

---

* Professor, PhD, Department of Law, Jagannath University, Dhaka, Bangladesh
** Lecturer, Department of Law, Jagannath University, Dhaka, Bangladesh
*** Lecturer, Department of Law, Jagannath University, Dhaka, Bangladesh

1 Radhika Kapur, 'Understanding the Institution of Marriage', [2023] 2(4) Indian Journal of Mass Communication and Journalism 23

leads to a redefinition of social identity that is often characterized by vulnerability and marginalization.

Widows are frequently perceived as elderly and dependent individuals who require care and support. However, this perception does not accurately reflect contemporary realities. Across the world, including in Bangladesh, a significant number of widows are young, and some are even children. Factors such as early marriage, poverty, and high mortality rates contribute to this phenomenon. Despite this diversity, widows often face similar challenges, including social stigma, exclusion, and restrictions on their personal choices. In many societies, remarriage is discouraged or even prohibited, and widows who attempt to remarry may encounter criticism, discrimination, or even threats of violence.

The condition of widows is further shaped by systemic inequalities embedded in legal, religious, and customary frameworks. Although legal systems, particularly under Muslim law, recognize widows' rights to inheritance and property, these rights are often constrained in practice. Barriers related to inheritance, land ownership, and land use, as well as social norms governing marriage and family relations, contribute to the marginalization of widows. In Bangladesh, the issue of widowhood remains underexplored, particularly in terms of the intersection between legal rights and social realities.[2] As a result, many women experience deprivation and economic insecurity following the death of their husbands.

2. Conceptual Framework

2.1. Understanding Widowhood

Widowhood is a transition stage from one marital status to another state after the death of husband.[3]

Widows in our society frequently seen to be oppressed as well as marginalized; they face different barriers from legal religious customary, including barriers of inheritance land ownership and land use even rule concerning marriage.[4]

---

2 Avik Ranjan Bhowmik, Md. Kamal Hossain, Nadia Chowdury and Md. Shahidul Islam, 'Analysis of the Socio-Economic and Psychological Status of the Widow: A Study on Jhenidah District' [2020] 20(5) Global Journal of Human-Social Science: 10

3 Dr. B. Subaphradha and Dr. S Subramanian, 'Widowhood in Ambai's Kitchen in the Corner', [2022] 11(9) International Journal of Humanities and Social Science Invention 63

4 Avik Ranjan Bhowmik n (2)

Widowhood affects women differently across cultures, depending on how much their social roles change, ranging from extreme practices like suttee to less disruptive ones like remarriage within the same group, while some societies isolate widows through special customs and roles. Most societies incorporate widows into the extended family in some fashion although status may be lost.[5] The roles for widows are most restricted in patriarchal societies that institutionalize extensive rights of men over women.[6] In modern societies, widows often have more freedom because extended families are less influential and women are more independent. However, this freedom can also lead to isolation. Many widows face financial difficulties and struggle to find a new role after losing their identity as a wife. Since there are fewer clear social expectations or support systems for widows, they may feel lost both emotionally and socially.[7]

Widowhood often has negative effects, especially for older people. Widowed individuals may face higher risks of poor health, loneliness, and emotional stress as they adjust to life without a spouse, who was an important part of their identity and support system.[8] However, its impact should not be overstated. Some widows, particularly from lower socio-economic backgrounds, may have had fewer satisfying marriages and therefore feel less loss. In some cases, widowhood can even bring relief, especially after unhappy relationships or long illnesses. It may also offer independence, allowing widows more control over their time and daily life. Although many eventually adjust, the process can take time and may involve grief, financial challenges, and learning new roles.

Socially, widowhood can disrupt a person's life and relationships. Family members, especially children, often provide emotional and financial support, but many widows prefer to live independently. This independence can sometimes lead to isolation, as social activities may decrease and friendships may weaken.[9] Widowhood can also make individuals feel out of place in a society centered around couples. The level of disruption varies depending on age, gender, and older widows may adjust more easily, while younger widows may find the change more difficult. In a word, they are the most deprived people in every aspect of society.[10]

---

5 Helena Znaniecki Lopata, *Widowhood in an American City* (Schenkman Publishing 1973) 18
6 Ibid 15
7 Dr. B. Subaphradha n (3)
8 Ibid 61
9 Avik Ranjan Bhowmik n (2)
10 Ibid 10

2.2. *Right to Inheritance of Widow Under Muslim Law: A Legal Framework*

Muslim women are entitled to inherit property as Qur'anic heirs, occupying distinct and significant positions within the framework of Muslim law of inheritance. Among these categories, certain female relatives namely wives (widows), daughters, and mothers are accorded what may be described as fixed and inalienable rights of inheritance. These rights are explicitly prescribed and quantified in the Qur'an, and as such, they are not subject to exclusion by other competing heirs, thereby safeguarding a minimum level of economic security for these classes of female heirs.[11]

In particular, the Qur'anic provisions stipulate that a widow's share in her deceased husband's estate is contingent upon the existence of lineal descendants. Where the deceased leaves no children or grandchildren, the widow is entitled to one-fourth (1/4) of the estate.[12] Conversely, where there are surviving descendants, her share is reduced to one-eighth (1/8).[13] This differentiation reflects a broader principle within Muslim law of inheritance, whereby the presence of closer heirs with stronger claims such as children affects the quantum, but not the existence, of the widow's entitlement. Notably, these prescribed shares have been uniformly recognized across both Sunni and Shia schools of jurisprudence, underscoring their foundational and non-derogable character.[14]

Furthermore, in situations where the deceased husband is survived by multiple wives, the allocated fractional share (whether one-fourth or one-eighth, depending on the presence of descendants) is not multiplied but rather collectively assigned to the widows, who then divide it equally among themselves. This ensures equitable distribution among co-wives while maintaining the integrity of the prescribed Qur'anic fraction.

Importantly, once the widow has received her allotted share, she acquires full proprietary rights[15] over that portion of the estate. Such autonomy underscores the recognition of women as independent legal and economic actors within Islamic law,

---

11 Mary F. Radford, 'Inheritance Rights of Women under Jewish and Islamic Law', 23 B. C. INT'L & COMP. L. REV. 135 [2000] 166

12 The Qur'an Surah An-Nisa (4: 12) Translation retrieved from <https://quran.com/4/12> accessed on 19 May 2026

13 Ibid

14 Mahomed Ullah S. Jung, *The Muslim Law of Inheritance*, 31 ALLAHABAD L.J. 9 (1933)

15 The Qur'an Surah An-Nisa (4: 32)

challenging common misconceptions regarding their position in matters of property and inheritance.

3. Review of Literature

There has been only one study on widows in Bangladesh, conducted by Professor Ishrat Shamim and Khaleda Salauddin. However, this study focuses only on rural areas. There are also a few studies on female-headed households and detailed case studies about such women, but these do not consider that most female-headed households are actually led by widows. Because research on widows is very limited, it is difficult to understand their real situation in Bangladeshi society.

Prof. Ishrat Shamim and Khaleda Salauddin (1995)[16] has described socio-economic status of widows in rural Bangladesh. The status of widows in society is that discrimination, oppression and marginalization.[17] The lower status of widows in our culture reflects their lower status of women through their life cycle. Widows face legal, religious, customary and traditional constraints including barriers to inheritance, land ownership and land use, rule concerning remarriage and degrading and harmful mourning rites.[18]

Cain (1981)[19] highlighted the effect of widowhood on the economic status of women in one village in Bangladesh and three villages in India. He pressed on widows who became widows at an early stage in their life cycle, or without any male offspring. He has taken land as a criterion of economic mobility. In comparison with India, he mentioned that in the Bangladesh village widow suffered greater loss of land, he also concluded that all women widowed under unfavorable circumstances were vulnerable to economic decline.[20]

Harrison (1993)[21] found that in a traditional society where mortality rates was high, like Bangladesh, many women were died premature widows. Unable to work outside the home, and with little hope of remarriage, widowed women were in an extremely distressed economic situation. Then her only economic security is offspring particularly son. He therefore contended that surveys in Bangladesh had

---

16 Ishrat Shamim and Khaleda Salahuddin, *Widows in Rural Bangladesh: Issues and Concerns* (Centre for Women and Children Studies 1995)

17 Ibid

18 Ibid

19 Mead Cain, 'Risk and Insurance: Perspectives on Fertility and Agrarian Change in India and Bangladesh' (1981) 7(3) Population and Development Review 435, 442–449

20 Ibid

21 Paul Harrison, *Inside the Third World: The Anatomy of Poverty* (Penguin Books 1993)

shown that women's ideal family size was significantly larger than that of men.[22] He believed that their low socio-economic status must be significantly improved; otherwise, they would continue to rely on having more children as their only way to gain status and security.[23]

4. Materials and Method

4.1 Selection of the Study Area

For the greater interest of the study the district of Chandpur was purposively selected and the Hajigonj thana is the particular study area. On grounds of prior field work, access and familiarity of the researchers, Nishantapur was the first selected village. On the other hand, to get information from widows from urban areas, Agargaon slum was selected for lower class widows while Dhanmondi and Green Road area were selected for middle- and upper-class widows. The area has been selected considering the following factors:

(i) Location of area;
(ii) Considerable number of respondents;
(iii) Known person;
(iv) Easy way of communication.
(v) Easy access/permission to approach the widows living in the houses.

4.2. Data Collection

Data of this research have been collected through interview schedule, case study with the Bangla version interviewing each and every respondent by the researchers in person. In these schedules both close ended and open-ended questions were used. The interview schedules have been developed very carefully and pretested.

4.3. Limitations of the Study

Doing research on this topic is not an easy task because of time constraint lack of technical knowledge and sufficient experience on the issue of widowhood. As a result, it is expected that some sort of errors will remain. The specific limitations of this study are as follows: -

- Respondents were not intended to give answer of some touchy questions.

---

[22] Ibid
[23] Ibid

- The Respondents who were victimized by their husband' relation did not easily answer the question for the fear of further torture.
- The researchers had to face a lot of problem to get permission for entrance into the house of middle-upper class.
- Since in rural area, as we were known to respondent, they feel shy to answer.
- In Agargaon slum we faced problem to collect my data by local muscle man.
- Moreover, time schedule for such an important and pioneering work was short.

Future research on this field should be designed in considering the above-mentioned limitation, especially providing sufficient resources and taking more time in hand so that one can overcome the problems which are found on this study.

5. Data Analysis and Findings

5.1 Descriptive Analysis

The total number of widows in three study area are 167. In rural area widows are 58, in slums area the number of widows is 58 and 51 of middle and upper class.

Table 1: Demographic character of total participants by present age of widows

Age	Rural (Lower and middle class)		Urban				Total	
			Lower Class		Middle and Upper Class			
	n	%	n	%	n	%	n	%
15-20	1	1.7	4	6.9	0	0	5	3.0
21-40	23	39.7	21	36.2	18	35.3	62	37.1
41-60	25	43.1	24	41.4	21	41.2	70	41.9
61-80	9	15.5	7	12.1	11	21.6	27	16.2
80 & above	0	0	2	3.4	1	2.0	3	1.8
Total	58	100	58	100	51	100	16	100

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The table indicates that in three study area majority of the respondent belongs to age group 41-60 and the percentages are 43.1,41.4 and 41.2 respectively. The next highest concentration is in the age group of 21-40.

Table 2: Demographic character of total participants by age at widowhood

Age	Rural (Lower and middle class)		Urban				Total	
			Lower Class		Middle & Upper Class			
	n	%	n	%	n	%	n	%
15-20	5	8.6	8	13.8	0	0	13	7.8
21-40	40	69.0	33	56.9	28	54.9	101	60.5
41-60	11	19..	15	25.9	20	39.2	46	27.5
61 and above	7	3.4	2	3.4	3	5.9	7	4.2
Total	58	100	58	100	51	100	16	100
Mean	34.78		35.00		41.71		36.97	

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The table below shows the distribution of the respondent by age at widowhood. The concentration of widows at the age of widowhood is highest in rural, slum and among middle-upper class to the age group 21-40 and the percentages are 69,56.9 and 54.9 respectively.

5.2. Statistical Report of Reality regarding Right to Inheritance of Widows

5.2.1. Acceptance Rate of Getting Husbands' Property in Rural and Urban Areas

Table 3: Respondent by Acceptance of Husband Property

	Rural (Lower and middle class)		Urban				Total	
			Lower Class		Middle & Upper Class			
	n	%	n	%	n	%	n	%
Yes	14	24.1	38	65.5	43	84.3	95	56.9
No	44	75.9	20	34.5	8	15.7	72	43.1
Total	58	100	58	100	51	100	167	100

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The findings of Table 2 reveal a clear rural–urban and class-based disparity in widows' acceptance of their husband's property in Bangladesh. A large majority (75.9%) of rural lower-class widows did not accept such property, reflecting strong socio-cultural barriers and limited legal awareness. In contrast, acceptance is much higher among urban widows, with 65.5% in lower-class areas and 84.3% among middle- and upper-class groups. Overall, while more than half (56.9%) of respondents accepted their husband's property, a significant portion (43.1%) still did not, indicating ongoing challenges in realizing inheritance rights, especially in rural contexts.

5.2.2. *Distribution and Reporting of Landed Property Inherited from Husband among Rural and Urban Widows*

Table 4: Respondent by Landed Property Inherited from Husband

Landed Property (In Kata)	Rural (Lower and middle class)		Urban				Total	
			Lower Class		Middle & Upper Class			
	n	%	n	%	N	%	n	%
No Response	21	36.2	43	74.1	17	33.3	81	48.5
1-50	6	10.3	14	24.1	34	66.7	54	32.3
51-100	11	19.0	1	1.7	0	0	12	7.2
101-500	16	27.6	0	0	0	0	16	9.6
501-1000	3	5.2	0	0	0	0	o	1.8
1 000 & above	1	1.7	0	0	0	0	1	.6
Total	58	100	58	100	51	100	167	100

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The findings show differences in both land ownership and willingness to share information. Many respondents, especially in rural areas (74.1%), did not give any information about land, which may mean they are unsure or unwilling to say. Among those who answered, rural widows generally have more land, often between 101–500 katha. In contrast, urban widows mostly have small amounts of land (1–50 katha). Overall, the results show inequality in land ownership and a lack of clear information from many respondents.

5.2.3. Types of Property Inherited from Husband

The table mentioned below presents information about the distribution of types of property inherited from husband. In rural area majority (51.7) is concentrated to land and 8.6 percent has taken money. In slum area 72.4 percent had no property and 22.4 percent confess that they had taken land as inherited property. Among middle-upper class in urban area 47.1 percent belongs to house and 7.8 percent concentrating to business proprietorship.

Table 5: Response by Types of property Inherited from Husband

Types of Property	Rural (Lower and middle class)		Urban				Total	
			Lower Class		Middle & Upper Class			
	n	%	n	%	n	%	n	%
Land	30	51.7	13	22.4	9	17.6	52	31.1
House	7	12.1	1	1.7	24	47.1	32	19.2
Money	5	8.6	0	0	4	7.8	9	5.4
Proprietorship of Business	0	0	1	1.7	4	7.8	5	3.0
Movable property	0	0	1	1.7	2	3.9	3	1.8
No property	16	27.6	42	72.4	8	15.7	66	39.5
Total	58	100	58	100	51	100	167	100

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The findings show clear differences in the types of property inherited by widows in rural and urban areas. In rural areas, most widows (51.7%) received land, while a smaller number (8.6%) received money, and some (27.6%) received no property at all. In urban slum areas, the majority (72.4%) did not receive any property, though 22.4% inherited land. Among middle- and upper-class urban widows, the situation is different. Most (47.1%) inherited a house, and some (7.8%) received business ownership or money. Overall, the results show that rural widows mainly inherit land, urban poor widows often receive nothing, and wealthier urban widows are more likely to inherit valuable assets like houses or businesses.

5.2.4. Authority on Property Before Husbands' Death

Table 6: Respondent by Authority on Property before Husbands' Death

Authority on Property	Rural (Lower and middle class)		Urban				Total	
			Lower Class		Middle & Upper Class			
	n	%	n	%	n	%	n	%
Self	0	0	3	5.2	9	17.6	12	7.2
Husband	22	37.9	43	47.1	34	86.7	99	59.3
Father-in-law	5	8.6	0	0	0	0	5	3.0
Brother-in-law	1	1.7	0	0	0	0	1	.6
Others	30	51.7	12	20.7	8	15.7	50	29.9
Total	58	100	58	100	51	100	167	100

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The findings represent that most women did not have control over property before their husband's death. In rural areas, no woman had authority over property. In urban areas, only 5.2% in slum areas and 17.6% among middle- and upper-class groups had control over property. In most cases, the husband controlled the property, especially among middle- and upper-class families (86.7%). In rural areas, some property was controlled by in-laws or others. Overall, the results show that women had very little power over property before becoming widows, especially in rural areas.

5.2.5. Authority on Property After Husbands' Death

Table 7: Respondent by Authority on Property after Husband's Death

	Rural (Lower and middle class)	Urban		Total
		Lower Class	Middle & Upper	

					Class			
	n	%	n	%	n	%	n	%
Self	12	20.7	34	58.6	38	74.5	84	50.3
Offspring	2	3.4	11	19.0	5	9.8	18	10.8
Father-in-law-	3	5.2	0	0	0	0	3	1.8
Second Wife	1	1.7	0	0	0	0	1	.6
Others	4	6.9	0	0	1	2.0	5	3.0
No Property	36	62.1	13	22.4	7	13.7	56	33.5
Total	58	100	58	100	51	100	167	100

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The table 7 shows the authority over property after the husband's death. In rural areas, most widows (62.1%) had no property, while only 20.7% gained ownership. Among urban lower-class widows, 58.6% obtained ownership, and in the urban middle- and upper-class group, 74.5% of respondents acquired property.

5.3. Reasons of not Getting Husbands' Property

Table 8: Respondent of not Getting Husband's Property

Reason	Rural (Lower and middle class)		Urban				Total	
			Lower Class		Middle & Upper Class			
	n	%	n	%	n	%	n	%
No Comments	13	22.4	39	67.2	43	84.3	95	56.9
Land erosion	4	6.9	0	0	0	0	4	2.4
Already sold	6	10.3	0	0	0	0	6	3.6
Driven away from husband's house	6	10.3	7	12.1	2	3.9	15	9.0
Step son	2	3.4	2	3.4	1	2.0	5	3.0
Second wife	1	1.7	0	0	0	0	1	.6
Cheated	2	3.4	0	0	0	0	2	1.2
Eviction	0	0	0	0	1	2.0	1	.6
No Property	24	41.4	9	15.5	0	0	33	19.8
Others	0	0	1	1.7	4	7.8	5	3.0
Total	58	100	58	100	51	100	167	100

Source: Authors' research project titled *'Widowhood and Society: A Comparative Study of Rural and Urban Widows to Unveil the Socio-cultural and Religious Realities in Bangladesh'* funded by Jagannath University Research Center, 2023.

The findings show that many widows did not receive their husband's property, with reasons varying by location. In rural areas, the main barriers were lack of property (41.4%), being driven away from the husband's house (10.3%), property already sold (10.3%), and land erosion (6.9%). This data reflects clear social, familial, and environmental challenges. In urban areas, fewer widows cited specific reasons, though some reported eviction or issues with stepchildren, while the majority especially among middle- and upper-class groups (84.3%) chose not to comment, possibly due to social sensitivity or privacy. Overall, the data highlights that rural widows face tangible obstacles to inheritance, while urban widows are more likely to remain silent, showing the influence of both material conditions and socio-cultural factors.

6. Discussion and Policy Implications

It is generally known that in Bangladesh, the number of widows is becoming increasingly acute because of the high mortality and immatured death of male household heads. The study aimed at finding out the widows' right at inheritance as there have hardly been studied on the issues in Bangladesh, especially comparing the rural and urban situation. The status of widows is neglected, because widows are believed to be older women and thus unproductive. But there are a large number of immature (young) widows who are more exploited by men and their in-laws.[24]

In the study areas the status of widows was discriminatory as their property rights are concerned especially inheritance laws. The findings on inheritance show a large gap between Islamic law and what actually happens in practice. Under Islamic inheritance rules, widows are entitled to a fixed share. Usually they get one-eighth if there are children and one-fourth if there are none. However, the data shows that many widows, especially in rural areas (75.9%), did not receive any property from their husbands. This indicates that, despite clear legal rights, widows often do not get their Quranic share, reflecting weak enforcement and limited awareness of these rights.

The type and distribution of inherited property also show inconsistencies with Islamic law. While some widows inherited land or houses, many particularly urban

[24] Helena Znaniecki Lopata n (5)

lower-class widows (72.4%) reported having no property. A high number of respondents (48.5%) did not answer questions about land, suggesting insecurity, lack of documentation, or reluctance to disclose ownership. Islamic law guarantees women not only a share but also independent ownership and control over inherited property. Yet, even when property is inherited, women's control and security over it remain uncertain.

The reasons widows gave for not receiving property being driven out of the house, disputes with stepchildren, or the presence of a second wife. These reflect social practices that go against Islamic principles. In Islam, inheritance shares are obligatory and cannot be overridden by family or custom. Overall, the findings show that while Islamic law protects widows' rights, these rules are often ignored in practice. Stronger legal awareness, better enforcement, and social change are needed to ensure widows can actually claim their inheritance.

Government and non-government organizations, should have considered widows as their foremost priority. But these organizations totally ignored them as target group. Besides government, if NGOs take step to help widows, they will be benefited. It was proposed by widows that they need GO and NGO support. When they were asked what steps should be taken for enhancing their status, they proposed that priorities should be accorded to providing opportunities for obtaining land rights according to inheritance, income earning, education for children, skill training, special loan which would make them ultimately self- reliant.

Cultural perceptions continue to play a significant role in shaping the experiences of widows.[25] Social stigma, traditional expectations, and family pressures often act as barriers to the realization of rights. These challenges cannot be addressed solely through legislation; they require long-term efforts in education, awareness, and community engagement. Changing mindsets is essential to ensure that widows are treated with dignity and are able to exercise their rights without fear or discrimination.

Institutional mechanisms must also be strengthened to support widows effectively. Accessible legal remedies, efficient administrative processes, and supportive governance structures are necessary to bridge the gap between law and practice. At the same time, increasing awareness about inheritance rights can empower women to claim what is legally theirs. Collaboration between government institutions and

[25] Avik Ranjan Bhowmik n (2)

civil society organizations can play a crucial role in creating an enabling environment.

7. Conclusion

Widowhood in Bangladesh reflects a deeply rooted social condition shaped by the interaction of legal norms, cultural practices, and gender relations. While Muslim law provides a clear and structured framework for inheritance, recognizing widows as rightful heirs with defined shares, the broader significance of widowhood extends beyond legal entitlement. It reveals how social realities often diverge from formal principles.

The condition of widows illustrates the fragility of women's social and economic positioning within a system where identity and security are closely tied to marital status. The transition from being a wife to a widow is not only a personal loss but also a shift in social identity, often accompanied by uncertainty and marginalization. This transformation highlights the extent to which women's roles are constructed within familial and societal frameworks that may not adequately accommodate their independence.

Widowhood also brings into focus the broader dynamics of gender inequality. The limited autonomy experienced by many women during marriage can persist after the death of a spouse, shaping their ability to navigate social and economic spaces. In this sense, widowhood becomes an extension of existing inequalities rather than a separate condition. It underscores how structural factors continue to define women's access to resources, recognition, and participation within society.

The issue also highlights the broader gap between normative frameworks and lived realities. Legal provisions, particularly those grounded in religious principles, establish a foundation for rights and recognition. However, the existence of such frameworks does not automatically translate into their realization in practice. This gap illustrates the complexity of ensuring justice in contexts where law, culture, and social relations intersect.

Widowhood is not merely an individual experience but a reflection of wider social structures and inequalities. It embodies the tensions between rights and realities, identity and status, and law and practice. Understanding widowhood within this broader context is essential to grasp its significance as a social phenomenon in Bangladesh.