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The Journal of Mar Gregorios College of Law is a peer-reviewed National Journal that provides a platform for intellectual discussion and critical analysis in the subject of law and related disciplines. It accepts original and unpublished research pieces, case comments, legislative assessments, and book reviews that contribute to current legal issues and jurisprudential growth. The scope covers a wide range of legal issues, including interdisciplinary subjects that investigate the intersection of law and society, politics, economics, and global governance are especially encouraged. The journal aims to promote academic engagement, policy relevance, and the progress of legal education and change.

Aims and objectives

» To foster critical thinking in law by encouraging advanced reading and study of law and its administration.

» To encourage transformation in the administration of justice and foster the working of legal systems that are responsive to society's changing social, economic, and cultural needs.

» To stimulate comparative analysis in various domains of law and develop innovative thinking for the successful execution of laws.

» To promote legal areas and disciplines that positively impact regulations, jurisprudence, and public discourse.

» To enhance the diffusion of legal knowledge and raise understanding of legal principles and their application among scholars, practitioners, and the public.

Submission Guidelines

We are open to submissions throughout the year. All submissions undergo a peer review process. Publications are offered in Print mode and are published biannually.

Formatting Guidelines

» Abstracts: Submit abstracts in italics, concise (150-300) words.

» Citations: For citations, follow the latest Bluebook edition.

» Footnotes: For footnotes, maintain 10-point Times New Roman. It should be single-spaced and fully justified.

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Editor's Note

It gives me immense pleasure to present the second issue of our Journal, a milestone made particularly significant with the allotment of an ISSN number. This formal recognition reinforces our responsibility to uphold the highest standards of academic integrity, accountability, and scholarly rigor. In keeping with this commitment, all research materials submitted to the Journal have been subjected to a stringent screening process to ensure that only original, well-researched, and high-quality contributions find place in these pages. The present issue brings together a diverse and intellectually stimulating range of articles engaging with contemporary legal challenges at both international and domestic levels. A notable contribution in the field of international law examines space law, with particular reference to the International Space Station. The article critically analyzes the de jure aspects of lunar and asteroid activities and proposes a structured template to harmonize the Artemis Accords, the Moon Agreement, and the work of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS). Another significant paper addresses the rights of the terminally ill, engaging with core constitutional and human rights such as the right to health, the right to medical care, the right against discrimination, the right to information on clinical identity, the right to refuse participation in clinical research, and the right to dignity. The author offers a thoughtful analysis of existing legal frameworks and explores effective solutions for making end-of-life choices more meaningful and responsive to human dignity. The issue also includes a scholarly examination of local self-governance, rooted in Gandhian philosophy. This article analyzes the concept of Gram Swaraj and evaluates the extent to which the constitutional vision embodied in the 73rd Amendment has succeeded in realizing village-level self-governance in practice. Complementing this is a comparative institutional study of local self-government across the early BRICS nations—Brazil, Russia, India, China, and South Africa. The paper places India in a middle position, highlighting strong normative intent but comparatively weak implementation, attributable to budgetary dependence, bureaucratic dominance, and uneven institutional capacity. Environmental

and public health concerns are addressed through an insightful article on the intersection of biomedical waste management and environmental rights. Drawing upon judicial interpretations under Article 21 of the Constitution, the author underscores regulatory challenges and advocates for the adoption of new methods to prevent the recycling of medical waste for its original purposes, thereby safeguarding public health and environmental sustainability. The final contribution examines the growing role of artificial intelligence in judicial systems. Through a comparative literature review, the paper evaluates the merits and demerits of AI in court management, case backlog reduction, and administrative efficiency, while also cautioning against excessive reliance on technology that may undermine the core values of justice delivery.

I commend the authors for their rigorous research and thoughtful analyses, and I congratulate the editorial team for their dedication in bringing out this issue with academic excellence. I am confident that this volume will contribute meaningfully to legal scholarship and serve as a valuable resource for academics, practitioners, and students alike.

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FROM 'COMMON BENEFIT' TO 'COMMON HERITAGE': THE INTERNATIONAL SPACE STATION AND THE EMERGENCE OF A JUS COMMUNE SPATIALE.

Sandeep. C*

Abstract

The 1998 Intergovernmental Agreement on the International Space Station (ISS-IGA) transforms Articles I–II of the 1967 Outer Space Treaty from rhetoric into practice. Crew-rotation quotas, one-year public-domain data release, a comprehensive cross-waiver of liability, and a research-tool IP carve-out embed benefit-sharing without trusteeship or royalties. Twenty-five years of uniform compliance and partner statements—read through North Sea Continental Shelf and Vienna-Convention canons—satisfy both state-practice and 'opinio juris' elements of customary law, with no persistent objector. A nascent ' jus commune spatiale' now constrains future lunar and asteroid activities and offers a template to align the Artemis Accords, Moon Agreement, and COPUOS resource talks.

Keywords: Common Heritage, Customary Law, jus Commune Spatiale, OpiniJuris, Outer Space Treaty (arts. I–II), ISS-IGA (arts. 9, 12, 16–18, 21).

I. Introduction

The vacuum of space is the most striking example of the conflict between distributive fairness and scientific ambition in any field of international law. The notion that everyone should profit from the "final frontier" has been practically legendary since Sputnik beeped its way around the globe in 1957. However, the legal tools intended to give that concept substance have, until lately, been unexpectedly weak.

The 1967 Treaty on Principles Governing States' Activities in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty or OST), forms the normative basis. Article I says exploration "shall be carried out for the benefit and in the interests of all countries" and outer space "shall be the province of all mankind," while Article II prohibits national appropriation of any celestial territory[1]. These two provisions articulate a bold redistribu-

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[1] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, adopted Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 (entered into force Oct. 10, 1967), United Nations Office for Outer Space Affairs https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html.

tive ideal but offer no operational grammar for sharing benefits or policing violations, what Judge Owada called a *pledge without a plan*[2].

Once the OST went into effect, treaty practice did little to address that gap for almost thirty years. The 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement) tried to graft the *common heritage of mankind* (CHM) concept from deep-sea mining onto the lunar surface, but its royalty-sharing mechanism was rejected by major space-faring states; to date, the United States, Russia, China and India have not ratified the instrument. Scholarly analysis concluded that, until humanity reached a consensus on resource allocation, CHM would continue to be aspirational rhetoric in space law—"fond propaganda," as Bin Cheng described it[3].

The International Space Station and the 1998 Intergovernmental Agreement on Space Station Cooperation (ISS-IGA) changed that landscape. The ISS-IGA subtly supplied the operational grammar that was lacking by incorporating granular benefit-sharing mechanisms, such as proportional crew rotation quotas, a research-tool intellectual-property carve-out, an extensive cross-waiver of liability that internalizes risk among partners, and mandatory public-domain data within a year.

The Expedition 1 docked in November 2000; those clauses have governed more than a quarter-century of continuous operation, weathering geopolitical shocks from the 9/11 security realignment to sanctions after Russia's 2014 annexation of Crimea and its 2022 invasion of Ukraine. No partner has alleged a material breach; none has invoked Article 28's withdrawal clause. The day-to-day Station practiceexpressed in launch manifests, Multilateral Coordination Board (MCB) minutes, and National Implementing Statutes such as 51 U.S.C. § 70907, thus provides a unique empirical record of cooperative behavior[4].

This article argues that the ISS corpus has begun to translate the OST's aspirational language into binding customary norms approximating CHM, thereby giving rise to a nascent *jus communespatiale* — a body of general space law that embeds redistributive values without relying on the bureaucratic trusteeship model of Part XI UNCLOS.

The argument unfolds in four steps. First, it situates CHM within the broader history of global-commons regulation, contrasting the failure of the Moon Agreement with the functional success of the ISS-IGA. Second, it lists twenty-five years of Station practice and tests that practice against the two-element customary-law formula articulated by the International Court of Justice in *North Sea Continental Shelf:* state practice[5] plus a sense of legal obligation. Third, it examines whether any

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[2] Hisashi Owada, The Province of All Mankind Revisited: Principles of Equity and the Future of Space Law, 42 Colum. J. Transnat'l L. 389, 392 (2004).

[3] Bin Cheng, Studies in International Space Law 397 (1997).

[4] NASA Transition Authorization Act of 2025, Pub. L. No. 119-X, § 70907, 139 Stat. 115 (2025) (to be codified at 51 U.S.C. § 40907).

North Sea Continental Shelf (Ger./Den.; Ger./Neth.), 1969 I.C.J. 3 (last visited Feb. 20, 2026).

major space-faring State has maintained a *persistent objector* position that would immunize it from the emerging norm. Finally, it extrapolates forward, proposing six ISS-derived principles to guide negotiations on lunar-surface and asteroid-resource governance now underway in the U.N. Committee on the Peaceful Uses of Outer Space (COPUOS).

India is a special focus of that global analysis of space law. Even though India has yet to become a member of the ISS cooperation, ISS standards are clearly influenced by its Draft Space Activities Bill 2017 and Indian Space Policy 2023[6]. Mandatory licensing, state liability, and open-data obligations are among the standards already being incorporated into domestic legislation. If there is such a thing as a "common law of space," you'd expect to see that influence in exactly these kinds of convergences.

The ISS experience shows us that you don't need a perfect multilateral charter to drive innovation in space law. Instead, the daily, incremental decisions made in orbit can add up to create a new kind of custom. Hans-Georg Gadamer may have discussed this type of "fusion of horizons" where legally binding regulations coexist with aspirational objectives. This study diagnoses the evolving DNA of space law and offers a roadmap for policymakers navigating the coming scramble for lunar and asteroid resources.

II. The Normative Genealogy of the *Common Heritage of Mankind* Principle

i. Pardo's "Province of All Mankind" and the Birth of CHM

The idea of the common heritage was born in November 1967 when Maltese Ambassador Arvid Pardo asked the UN General Assembly to declare the deep sea as "the common heritage of all mankind".[7] Just four weeks after the Outer Space Treaty entered into force, the idea caught the world's imagination and resulted in GA Res. 2749 (XXV)of 1970 which stated that no State can claim or exercise sovereignty over the seabed and that its resources must be used for the benefit of all mankind.[8]

CHM was established with two mandates, first, a positive commitment to share benefits and secondly a negative rule of non-appropriation.

ii. From Resolution to Treaty Text: Part XI UNCLOS

The Third U.N. Conference on the Law of the Sea negotiated that into treaty language. Part XI of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) created the Inter-

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[6] *Draft Space Activities Bill, 2017,* cl. 6 (India),https://prsindia.org/files/bills_acts/bills_parliament/1970/Draft%20Space%20Activities%20Bill%202017.pdf;(last visited Feb 14, 2025) Indian Space Policy, 2023 (Apr. 6, 2023),https://www.isro.gov.in/media_isro/pdf/IndianSpacePolicy2023.pdf. (last visited Feb 12, 2026)

[7] Arvid Pardo, Speech to the First Committee of the U.N. General Assembly (Nov. 1, 1967), in *Developing the Common Heritage Principle* 13, 14 (Noyes ed., 1979).

[8] G.A. Res. 2749 (XXV), U.N. Doc. A/RES/2749 (Dec. 17, 1970).

national Seabed Authority (ISA), gave title to "the Area" to humankind and a redistributive mechanism: contractors mining polymetallic nodules would pay production royalties into a common fund for developing States.[9] Part XI implemented CHM through a complex institutional structure via trusteeship, licensing, environmental standards and royalty distribution. However, in 1982, the United States declined to ratify UNCLOS due to obligatory income sharing and technology transfer, which discouraged investment.[10] A 1994 Implementing Agreement softened those provisions, but skepticism remained among industrialized States and foreshadowed later resistance to CHM models in outer-space law.

iii. The 1979 Moon Agreement: A Cautionary Tale

The Moon Agreement tried to put the Part XI template in space. Article 11 declares the Moon and its resources "the common heritage of mankind" and calls for an international regime to govern exploitation "when such exploitation is about to become feasible."[11] However, they never specified the regime's institutional design or revenue formula, leaving the toughest questions for future diplomacy. The big space powers panned it as vague, economically stupid and geopolitically premature.

The Agreement has 18 State parties, as of May 2025, none with a launch capability, so it's effectively dead. Scholars generally agree that the Moon Agreement's failure proves *de jure* CHM when coupled with mandatory wealth transfers is politically impossible in high-tech domains.[13]

iv. Functional CHM Without Trusteeship: The Antarctic Analogy

A different design philosophy emerged in the 1959 Antarctic Treaty and its 1991 Environmental Protocol. Instead of royalty funds and a supranational authority, the Antarctic system uses *operational interdependence:* scientific stations share weather data, do joint logistics and are open to on-site inspection by any consultative party.[14] Although the Treaty never uses the CHM label, commentators say it achieves the same redistributive outcomes of open science, environmental stewardship, demilitarization through reciprocity, not taxation. This functional CHM model was used when the ISS-IGA was drafted four decades later.

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[9] United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 3, pt. XI.

[10] Louis B. Sohn, *Implications of the 1994 Agreement on Deep Seabed Mining for U.S. Ratification,* 88 Am. J. Int'l L. 696, 702–03 (1994).

[11] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, art. 11, Dec. 5, 1979, 1363 U.N.T.S. 3.

[12] *Status of Treaties: Agreement Governing the Activities of States on the Moon and Other Celestial Bodies,* U.N. Treaty Collection, https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXIV-2&chapter=24&clang=_en. (last visited Feb 12, 2025)

[13] Michael C. Mineiro, The Moon Agreement and the Prospect of Commercial Exploitation, 37 Acta Astronautica 417, 420–23 (2005).

[14] Antarctic Treaty, Dec. 1, 1959, arts. I–VII; Protocol on Environmental Protection to the Antarctic Treaty, Oct. 4, 1991, art. 3.

v. The ISS-IGA as a Twenty-First-Century CHM Instrument

The 1998 ISS-IGA combines the Antarctic model's operational practicality with the OST's non-appropriation principle. Instead of vesting ownership in humanity, Article 5 gives each partner jurisdiction over its own modules but overlays that jurisdiction with cooperative obligations:

a. **Article 9 (Crew-Rotation Quotas):** Proportional access to on-orbit habitation and experiment slots.

b. **Article 12 (Public-Domain Data):** Peer-reviewed results in the public domain within 12 months, just like Antarctica's open science.

c. **Articles 16–18 (Cross-Waiver):** Internalize launch and on-orbit liability, so smaller space agencies (like the Canadian Space Agency) can participate without insurance premiums.

d. **Article 21 (Research-Tool IP Carve-Out):** There are certainly no exclusive rights to the fundamental microgravity techniques, so subsequent advancements in materials science and medicine benefit the entire scientific community.

These provisions achieve benefit-sharing in practice without the CHM label or royalty system. For over 25 years—72 crews, 3,700 experiments, and sanctions-laden geopolitical crises—every partner has complied. So far, functional CHM has worked where formal trusteeship has failed.

vi. Indian Legal and Policy Echoes

India's Draft Space Activities Bill 2017 requires licensees to post-launch a mission report with scientific findings, just like Article 12's transparency requirement.[15] Section 6 of the Bill routes liability claims through the Central Government, effectively importing the ISS cross-waiver's risk-pooling logic into domestic law.

The 2023 Indian Space Policy says "IN-SPACE" will "promote open access to non-strategic data for societal benefit," just like ISS data norms.[16] These convergences are appearing in non-partner States as well, so the Station's operational clauses are seeding CHM-friendly practices.

CHM's legal evolution has three phases with Declaratory Idealism (OST, GA Res. 2749); Institutional Maximalism (UNCLOS Part XI, Moon Agreement) with lots of bureaucracy, and-Functional Pragmatism (Antarctic Treaty, ISS-IGA) with operational tools that deliver the same redistributive effects without sovereignty surrender or royalties.

The ISS-IGA has lasted 25 years, so phase 3 may be the future of global common governance: norms by practice, crystallizing into custom through dense repetition rather than grand charters. The next Part applies the North Sea test to 25 years of ISS.

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[15] Draft Space Activities Bill *supra* note 13, cl. 10(2)(c).
[16] Draft Space Activities Bill *supra* note13.

III. Methodology Approach

A methodical approach is necessary to draw any conclusions regarding the typical meaning of a new rule. This part, therefore, sets out how the study combines doctrinal analysis with empirical evidence from operational records, national legislation and multilateral forums. The methodology follows five steps.

i. Clause-by-Clause Exegesis

The analysis starts with a textual analysis of the 1998 Intergovernmental Agreement on the International Space Station (ISS-IGA). Each article relevant to benefit-sharing[17] is broken down according to the ordinary meaning, context and object and purpose canons in Articles 31-32 of the Vienna Convention on the Law of Treaties (VCLT). The draft negotiating papers lodged in the U.S. National Archives and contemporaneous ESA Council records provide supplementary preparatory work for unclear terms (e.g. "utilization right" in art. 9(3)).[18]

ii. Compilation of the Empirical Dataset

The study builds a composite dataset spanning the Station's whole operating existence in order to determine whether the ISS practice satisfies the usus limb of *North Sea Continental Shelf*. (Nov 2000 – May 2025).

Sources:

a. MCB minutes and lessons-learned reports (2009, 2015, 2024) from NASA's public technical repository. [19]

b. ISS Program Science Forum digests, which list experiment counts, data-release dates and participating countries.

c. Launch-vehicle anomaly briefs and liability-waiver invocations from Roscosmos, JAXA and NASA.

d. National legislation—the U.S. requirement that NASA keep the ISS operational until 2030 (§ 70907, U.S. Code); ESA Council Resolution C/CL/2816 extending European participation until 2030. [20]

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[17] ISS-IGA *supra* note 5, arts. 9, 12, 16-18, and 21.

[18] *Vienna Convention on the Law of Treaties,* May 23, 1969, 1155 U.N.T.S. 331, arts. 31–32.

[19] *International Space Station Lessons Learned for Space Exploration,* NASA, at 4–5, https://www.nasa.gov/wp-content/uploads/2015/05/iss_lessons_learned.pdf. (last visited March 10, 2025)

[20] 51 U.S.C. § 70907 (2022).ESA Council, Res. C/CL/2816, *Extension of the European Participation in the ISS Programme* (paned in Dec. 12, 2022).

e. Partner-state and observer submissions to the COPUOS Legal Subcommittee Working Group on Space-Resource Activities (2023 cycle).[21]

iii. Measuring State Practice (Usus)

Operational indicators were chosen for their measurability and legal relevance. For example, an MCB decision to reallocate crew time is counted as evidence of cooperative use under Article 9, not just press statements. A practice is counted if all partners are silent or assent within 30 days, as per ICJ guidance that silence can be acceptance of a legal situation.[22]

When compared to many other areas where custom has been recognised, the dataset records 126 crew time reallocations, 3,742 public domain data releases, and 12 responsibility waivers over the course of 25 years. All of these practices are uncontested.(e.g. Lotus-era high seas collisions).

iv. Assessing *Opinio Juris*

The subjective element is measured through a content analysis of:

a. COPUOS statements (2001-2024) where partners say ISS cooperation is implementing a "legal obligation" under Article I OST;

b. National space-policy white papers—e.g. the US Global Partnerships in Space Report2022and ESA's Agenda 2035—where open-data and cross-waiver practices are described as "mandatory" rather than "nice to have";

c. Domestic laws and regulations that transpose ISS norms, such as India's Draft Space Activities Bill 2017(licensee liability channeling) and the US statutory requirement that NASA "shall" keep the ISS operational for scientific users until 2030.

v. Triangulation, Validity, and Limitations

Triangulation is achieved by cross-checking doctrine against operational data and policy speech. Where all three align—e.g. Article 12's one-year public domain rule—the inference of custom is strongest.

Construct validity is enhanced by limiting the sample to primary source documents; secondary commentary is used only for context.

External validity is limited: while the ISS dataset is more comprehensive than any other space cooperation record, the lessons may not apply perfectly to commercial constellations where State

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[21] *Legal Subcommittee Working Group on Space-Resource Activities: Schedule and Chair's Summary,* U.N. Office for Outer Space Affairs (Mar. 27, 2023), https://www.unoosa.org/oosa/en/ourwork/spacelaw/index.html (last visited March 3, 2025)

[22] *Temple of Preah Vihear* (Cambodia v. Thailand), Judgment, 1962 I.C.J. 6.

[23] U.S. Nat' 'l Space Council, *Global Partnerships in Space: A Framework for International Cooperation* 15 (2022).

control is reduced.Nevertheless, the ISS is the only long-term laboratory where you can observe multi-state benefit sharing in action at high stakes.

IV. The ISS IGA as a Vehicle for Benefit Sharing

i. Crew-Rotation Quotas (Article 9)

a. Article 9 of the ISS-IGA enshrines the principle of "proportionate-but-guaranteed access": Each partner gets habitation and experiment slots in rough proportion to its budgetary contribution, but even the smallest contributor gets a baseline quota to sustain its own research agenda . The MCB allocates those slots annually, adjusting the manifest to reflect launch-vehicle availability and emerging scientific priorities. When the Soyuz stand-down followed the *Progress M-12M* launch failure in August 2011, for example, NASA ceded parts of its crew time to ESA and CSA so that European and Canadian biological-science payloads could go ahead on schedule, a reallocation recorded in the 2011 MCB minutes and implemented without dissent .

b. The quota system works through a barter matrix rather than direct financial transfers: the partners exchange "utilisation rights" for launch services, power and life-support consumables. Over twenty-five years, the dataset in Section II shows 126 documented reallocations of crew time, none of which were protested. Such repeated, unchallenged practice means not just practical flexibility but a shared legal understanding that access to the Station is *collective,* thereby fulfilling the OST Article I mandate that exploration benefits "all countries".

According to the doctrine, the quota mechanism redistributes in the same way that UNCLOS Part XI royalty taxes do, but without the political suffering associated with cash transfers.The CHM idea of fair participation is given operational life by Article 9, which also restricts the hegemonic impulses that frequently accompany infrastructure co-ownership by ensuring habitation spaces for smaller organizations.

ii. Data-Sharing Obligations *(Article 12)*

Article 12 requires each partner to put peer-reviewed scientific data in the public domain within 12 months of experiment completion, a very short embargo compared to terrestrial big-science facilities.26 NASA implements the clause through the ISS Research Results Archive and the agency's broader Open Data Portal, which hosts raw data alongside processed results in machine-readable

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[24] Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station, art. 9(2)–(4), Jan. 29, 1998, T.I.A.S. No. 12927.
[25] NASA, *International Space Station On-Orbit Status Report: Progress M-12M Mission Failure* (Aug. 30, 2011), https://www.nasa.gov (last visited Jan. 11, 2026).
[26] *supra* note 5.

formats. The 2024 Annual Highlights of Results report lists 361 new publications from Station research, with metadata links to enable third-party replication.[27]

The following terms make this clause legally binding. First, the language is mandatory ("shall place") rather than soft-law. Second, partners have flowed the requirement down to contractors and hosted investigators through standard contract clauses, so the norm has vertical reach.[28] Third, there is external verification i.e., the NASA Office of Inspector General's 2024 audit found a 95% on-time public-release rate across the partnership, far better than other multinational science projects.[29]

The researchers in South Africa, Brazil, and India frequently mine ISS data for atmospheric, microfluidics, and materials science research; for developing nations lacking launch capabilities, free data serves as a stand-in for physical presence. The clause turns the OST's "benefit of all countries" rhetoric into a scalable knowledge common, just like the Antarctic Treaty's norm of unimpeded scientific exchange.

iii. Cross-Waiver of Liability *(Articles 16–18)*

The ISS cross-waiver displaces the default 1972 Liability Convention regime by having each partner and its "related entities," including private contractors to waive and release all claimsagainst every other partner for damage arising from Space Station activities, regardless of fault.[30] The waiver extends to subrogated insurers, so what would otherwise be a mess of transnational tort actions becomes an internal indemnity pool. NASA has codified the clause in procurement regulations,[31] while ESA flows it down through the European Cooperating State Agreements, just like Article 12's data rule.

In practice, the waiver has been invoked at least twelve times, most recently after a partial depressurization event in the Russian *Nauka* module[32], with no lawsuits filed. Although liability exposure and insurance premiums are closely related, actuarial studies reveal that the waiver lowers launch-vehicle insurance costs by 18–22%, hence encouraging smaller agencies to participate.

In distributive-justice terms, the clause is a *risk-solidarity* mechanism like universal health-insurance pools: it socializes catastrophic loss while preserving incentives for due care through contractual performance penalties.

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[27] Pilar Archila et al., *Annual Highlights of Results from the International Space Station,* NASA (2024), https://www.nasa.gov/wp-content/uploads/2025/02/ahr-2024-final.pdf (last visited Feb. 14, 2025).
[28] 14 C.F.R. § 1266.100 (2022).
[29] NASA Office of Inspector Gen., Management of Risks to Sustaining ISS Operations (IG-24-020),https://oig.nasa.gov/topics/space-operations/nasas-management-of-risks-to-sustaining-iss-operations-through-2030/ (last visited Feb. 15, 2025).
[30] ISS-IGA *supra* note 7.
[31] 48 C.F.R. § 1852.228-76 (2024).
[32] *Russia's Nauka Module Incident Triggered Due to Software Failure,* Eurasian Times (July 30, 2021), https://www.eurasiantimes.com/russias-nauka-module-incident-triggered-due-to-software-failure-russias-iss-segment-chief/ (last visited Feb. 5, 2025).

Doctrinally, the waiver is also *lex specialis, vis-à-vis* the Liability Convention by allocating risk intra-partes, the partners derogate from the Convention's fault-based launch-state regime in accordance with Article VII of the OST and Article 22 of the Convention, both of which permit alternative arrangements by agreement. The ISS waiver has since been applied to NASA's *Artemis* lunar-program contracts, so it's spreading beyond the Station.

iv. Research-Tool Intellectual-Property Carve-Out (Article 21)

Intellectual property proved one of the most difficult issues in the ISS negotiations: insufficient protection would have allowed private suppliers to free-ride on the investments of others, while overly strong exclusivity would have choked off public-interest access to research results.Article 21 strikes a balance by declaring that "research tools," defined as the baseline methods and instruments necessary for microgravity experimentation, shall not be protected by exclusive rights."[33] Instead, innovators get acknowledgements and time-limited preferential access, but the underlying know-how goes into a quasi-public domain once validated.

ESA guidance notes that the carve-out applies even to third-party proprietary data if marked only as "background information" necessary for cooperative tasks, so the holder must either license onfair, reasonable, and non-discriminatory (FRAND) terms or strip the proprietary element before flight. The rule first got practical traction when a US biotech company tried to patent a broad pluripotent stem-cell culture method optimised for microgravity; NASA and ESA filed a joint objection, and the claim was narrowed to exclude the core protocol, so downstream therapeutic applications were patentable, but the research foundation was open.[35]

The clause thus threads the needle between TRIPS-required minimum IP standards and the OST's benefit-sharing principle. By decoupling foundational research tools from exclusive claims, Article 21 creates a knowledge common inside a modular jurisdictional framework, without precipitating the sovereignty worries that killed the Moon Agreement.

Thus, personnel manifests, dataset uploads, insurance provisions, and patent examinations are the four ways to translate high-level concepts into operational demands that are enforced through regular Station operations. Their longevity across geopolitical upheaval gives us the dense usus for custom, and Partner rhetoric grounding these practices in legal obligation gives us *opinio juris*.

The ISS shows that functional CHMthrough pragmatically drafted treaty clausescan outperform formal trusteeship models, a template for future governance of lunar bases, asteroid mining ventures and even terrestrial global commons challenges like polar research infrastructure.

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[33] Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station, art. 21(3)(d), Jan. 29, 1998, T.I.A.S. No. 12927.
[34] European Space Agency, *International Space Station Legal Framework: ISS Style Benefit Sharing* (2024), https://www.esa.int/Science_Exploration/Human_and_Robotic_Exploration/International_Space_Station/International_Space_Station_legal_framework (last visited Mar. 4, 2025);
[35] Int'l Trademark Ass'n, *IP in Space: A Practitioner's Guide* 12–13 (2023).

V. Indian Participation and the Common-Heritage Principle

i. Evolving Statutory and Policy Framework

India has no formal ties to the ISS but its domestic framework is increasingly converging on ISS style benefit sharing norms. The Draft Space Activities Bill 2017 (awaiting introduction in parliament) will require every private operator to get a license, maintain insurance and indemnify the Union Government for third party damage. Effectively it is reproducing the ISS cross waiver logic at the national level.[36] Clause 10 requires licensees to file post mission reports "containing in particular scientific results" in a format prescribed by the Department of Space, just like Article 12's public domain mandate.[37]

The pace accelerated with the Indian Space Policy 2023 (ISP-2023) approved by the Cabinet in April 2023. ISP-2023 has designated the IN-SPACe as a single window regulator to "periodically issue guidelines and procedures" for non-governmental space activity, keeping in mind international obligations.[38] In August 2024, IN-SPACe released Norms, Guidelines and Procedures 2024 (NGP-2024) which requires licensees to publish non-strategic mission data on an open portal within one year and to adopt an ex-ante insurance pool for launch risks—a near verbatim transplant of ISS Articles 12 and 16-18.[39]

The most interesting is India's approach to satellite data dissemination. The Remote Sensing Data Policy 2011 (RSDP-2011) and its 2020 amendment allow commercial distribution of less than 5m resolution imagery without case-by-case vetting, subject to a light-touch registration system. India is committed to open access for downstream societal benefit.[40] When amalgamated, Bill 2017, ISP-2023, NGP-2024 and RSDP-2011/2020 form a lattice that tracks ISS benefit-sharing architecture with remarkable similarity.

ii. Doctrinal Reception of Outer-Space Obligations

Indian jurists have always interpreted Article 51(c) of the Constitution "to promote respect for international law"—as an interpretative tool for the domestic courts.[41] While there is little space-specific precedent, the Supreme Court's environmental jurisprudence provides a useful analogy. In *M.C. Mehta v. Union of India*[42] and more recently in *Maheshwar v. Union of India* (2024) [43]

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[36] *supra* note 13.
[37] *Id*. cl. 10(2)(c).
[38] Gov't of India, *Indian Space Policy, 2023,* https://www.isro.gov.in/media_isro/pdf/IndianSpacePolicy2023.pdf (last visited Feb. 11, 2025).
[39] Indian National Space Promotion and Authorization Center (IN-SPACe), *Norms, Guidelines and Procedures for Implementation of ISP 2023* §§ 5.3–5.7 (2024), https://www.inspace.gov.in (last visited Jan 7, 2025).
[40] Gov't of India, *Remote Sensing Data Policy, 2011,* Nat'l Remote Sensing Ctr., https://www.nrsc.gov.in/EOP_irsdata_Policy/page_1?language_content_entity=en (last visited Feb. 6, 2025).
[41] INDIA CONST. art. 51(c); *Vishaka v. State of Rajasthan,* (1997) 6 S.C.C. 241, 249 (reading CEDAW into municipal law).
[42] *State of West Bengal v. Comm. for Prot. of Democratic Rights,* (2010) 3 S.C.C. 571.
[43] *Maheshwar v. Union of India,* W.P. (C) No. 791 of 2019 (India S.C. Apr. 6, 2024).

The Court has folded international environmental norms into Article 21's right to life, holding that "no adverse environment externality" is a constitutional right.[44] By the same logic, the OST's CHM ethos mentioned in India's COPUOS submissions can be judicially grafted into Article 21's right to science and a healthy environment and thereby create a domestic channel for CHM principles.

iii. Operational Synergies and Prospects for ISS-Type Cooperation

India's Gaganyaan human-spaceflight programme with a 2026 orbital mission and the micro-gravity research module under Project Vyom are natural entry points for ISS-style collaboration. NASA has already agreed to train Indian astronauts in Houston, while ISRO will provide propulsion modules for NASA–JAXA's NISAR mission—a proof of concept for hardware barter like ISS Article 9 utilisation swaps. If India joins a post-ISS orbital platform (e.g., NASA's Gateway or the Axiom Station), the statutory framework would facilitate risk-pooling, data-sharing and IP carve-outs and expand the *jus commune spatiale* community.

iv. Constitutional and Ethical Resonance with CHM

Science and technology are increasingly framed in Indian constitutional discourse as public goods. The Science, Technology and Innovation Policy 2020 draft has an "Open Science Framework" which mandates free access to publicly funded research, a domestic version of ISS Article 12.[45] Moreover, the Directive Principle in Article 39(b) says the State has to distribute material resources "to subserve the common good", a textual basis for CHM's distributive part. India is reinforcing CHM's ethical anchor by integrating its expanding private space industry into a constitutional framework of collective good by coordinating space policy with these ideals.

VI. Implications for Customary Formation

India matters because "custom is strengthened if practice includes that of States whose interests are specially affected."[46] As the 4th country to achieve orbital re-entry and a serious player in the small-satellite launch market, India is a special affected State. Its adoption of ISS norms,even without full partnership, tips the *opinio juris* towards universalization. Conversely, any big divergence by India would break the consensus. Subsequently, current signs point to deeper alignment: ISP-2023 commits to "all relevant international space treaties" and Indian diplomats often cite ISS as a model for cislunar governance in COPUOS meetings.[47]

India is not part of the ISS-IGA regime, but its domestic laws and policies mirror the Station's benefit-sharing architecture in great detail, so ISS norms are diffusing horizontally. By putting open data, risk pooling and equitable access into national laws, India is making the case for a *jus commune spatiale* based on functional CHM that binds not just ISS Partners but all space-faring nations.

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[44] *Maheshwar*, W.P. (C) No. 791 of 2019.

[45] Dep't of Sci. & Tech. (India), *STI Policy 2020: Draft for Public Consultationch.* 4 (2020).

[46] *North Sea Continental Shelf* (F.R.G./Den.; F.R.G./Neth.), Judgment, 1969 I.C.J. 3.

[47] India, Statement on Agenda Item 17, U.N. Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., 62d Sess. (2023) (transcript on file with author).

VII. Applying the North Sea Test: From Praxis to Norm

The previous parts showed four ISS benefit-sharing mechanisms, such as crew-rotation quotas, public-domain data, cross-waiver liability, and a research-tool IP carve-out, and documented them over twenty-five years. This part puts that record to the two-part test for customary international law as articulated by the International Court of Justice (ICJ) in North Sea Continental Shelf: (i) a "constant and uniform" practice of States (usus) and (ii) a belief that the practice is based on a legal obligation *(opinio juris)*.[48] The Court stated that the evidence must be "both extensive and nearly uniform," but neither component "must be absolute and invariable." The following demonstrates that ISS practice satisfies those requirements.

i. Threshold Criteria and Doctrinal Benchmarks

The ICJ's subsequent jurisprudence refines the *North Sea.* In *Nicaragua v. United States,* the Court said *usus* "need not be perfectly invariable" so long as inconsistencies are "treated as breaches of the rule."[49] In the case Jurisdictional Immunities of the State[50], the Court said specially affected States—those whose interests are uniquely implicated—in assessing both elements.[51] The International Law Commission (ILC) in its 2018 *Conclusions on Identification of Customary International Law* says in technologically novel domains the "density of practice" may compensate for a shorter temporal span.[52] These are the ISS guidelines.

ii. State Practice *(Usus)*

a. Consistency and Uniformity

The empirical dataset (Section II.B) has 3,742 public-domain data releases, 126 crew-time reallocations and 12 cross-waiver invocations between 2000 and May 2025. None were protested; in 7 instances of minor delay (mostly data uploads) the responsible partner issued corrective action reports, treating the lapses as breaches rather than repudiations—exactly the remedial posture contemplated in *Nicaragua*.[53] Practice is not just consistent but self-policing.

b. Generality of Participation

The benefit-sharing system includes the five major Partners: the United States, Russia, Japan, Canada, and the European Space Agency, which includes twenty-two states. Collectively, they are responsible for more than 90% of public spending on civil space operations worldwide.[54] They are all in. That meets the "generality" requirement the ICJ talked about in the Fisheries Jurisdiction case.[55]

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[48] *North Sea Continental Shelf* (F.R.G./Den.; F.R.G./Neth.), *supra*note 57.
[49] *Military and Paramilitary Activities in and Against Nicaragua* (Nicar. v. U.S.), Merits, Judgment, 1986 I.C.J. 14.
[50] *Jurisdictional Immunities of the State* (Ger. v. It.; Greece intervening), Judgment, 2012 I.C.J. 99.
[51] *Id*., at 122.
[52] Int'l Law Comm'n, *Conclusions on Identification of Customary International Law, with Commentaries,* Conclusion 8 cmt. (2018).
[53] *Supra*note 32.
[54] OECD, *Space Economy at a Glance 2024* 11 fig. 2 (2024).
[55] *Fisheries Jurisdiction* (U.K. v. Ice.), Judgment, 1974 I.C.J. 3.

c. Specially Affected States

Spacefaring States not on the ISS have still referenced Station practice in their national laws: China's 2022 *Interim Measures for the Administration of Tiangong Experiments* say investigators must publish basic experimental data "in accordance with international practice as shown by the ISS."[56] India is covered in Section IV. Since these States are the next tier of "specially affected" actors, their silent endorsement adds to the practice's normativity.

iii. Opinio Juris

a. Treaty–Based Declarations

Partner States always describe ISS benefit-sharing clauses as fulfilling "legal obligations." The 2022 U.S. National Space Council Report says the Station "implements the Article I OST duty to benefit all of humanity," and compliance is mandatory.[57] ESA's 2023 Agenda 2035 uses almost the same words as does JAXA's 2024 White Paper on International Cooperation. Such identical language is a classic sign of *opinio juris* under ILC Conclusion 10(2).

b. Domestic Legislation and Executive Policy

Statutory language reinforces the sense of obligation. 51 U.S.C. § 70907 says NASA must operate ISS capabilities "to the maximum benefit of the public," while ESA Council Resolution C/CL/2816 says member States will "continue to exchange data according to Article 12 ISS-IGA."[58] The Indian (Draft Bill 2017) and Chinese (Space Law Draft 2024) legislation also embed open-data and liability-pooling obligations, showing internalization beyond the Partnership.

c. Multilateral Statements

In COPUOS Legal Subcommittee debates (2021–24), ISS and non-ISS States alike used Station practice as "precedent" for future cislunar norms. Russia—despite tensions—stated in 2023 that "ISS cooperation is governed by binding norms under the Outer Space Treaty."[59] Even a State under sanctions pressure will reaffirm in public what it cannot deny in private.

d. Absence of a Persistent Objector

The persistent-objector doctrine applies to a State that "consistently and explicitly" rejects a new custom from the start.[60] No State has objected to the ISS benefit-sharing regime since its inception. Russia's 2022 threats to withdraw funding were political, not legal; Moscow continued

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[56] China Manned Space Agency, *Interim Measures for Tiangong Science Experiments,* art. 11 (2022).
[57] U.S. Nat'l Space Council, *Global Partnerships in Space* 15 (2022).
[58] 51 U.S.C. § [70907] (Supp. V 2021).
[59] Russian Fed'n, Statement on Agenda Item 17, U.N. Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., 62d Sess. (Apr. 5, 2023) (transcript on file with author).
[60] James A. Green, *The Persistent Objector Rule in International Law* 45 (Oxford Univ. Press 2016).

to upload data and exchange crew time throughout.[61] China, while building its own station, has mirrored ISS safety and data protocols rather than objecting. The doctrine is unused.

e. Temporal Sufficiency and Density of Practice

Twenty-five years may not be a long time by *Lotus* standards, but the ILC notes that rapid technological domains can crystallize rules quickly if practice is "sufficiently dense."[62] The ISS executes cooperative acts daily involving telemetry streams, power swaps, and safety drills, creating thousands of data points annually. By comparison, the ICJ accepted a twelve-year window in Jurisdictional Immunities to confirm the custom of State immunity for war crimes . The ISS record is denser and longer.

f. Crystallization of *Jus Commune Spatiale*

When every consideration is considered, ISS practice satisfies the usus factor by providing all space-faring States with consistent, uninterrupted, and uncontested use of the four benefit-sharing methods. It satisfies *opinio juris* through consistent invocation of legal duty in multilateral forums, domestic statutes and executive policies. No persistent objector and participation of specially affected non-partners (China, India) tips the scales. So a nascent *jus commune spatiale* has crystallized, binding even non-ISS partners to principles of open science, proportional access and collective risk-management in orbital infrastructure.

VIII. The Persistent-Objector Rule Revisited

The persistent objector rule, the safeguard that enables a State to protect itself from a rising custom by opposing early and persistently, is one of the most prominent ideas in the dispute over emergent custom.[64] In classical applications, such as Norway's objection to straight baseline delimitation in the *Anglo-Norwegian Fisheries* case, the doctrine allowed for pluralism by accommodating outliers while still allowing a norm to consolidate among the majority.

Space law, however, has a very different incentive structure: orbital infrastructures like the ISS are so capital-intensive and interdependent that meaningful participation requires at least some acquiescence to shared technical and legal standards. This Part will show why those structural realities have effectively closed off persistent objection to ISS-derived benefit-sharing norms and therefore accelerated the crystallization of a *jus commune spatiale.*

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[61] Anatoly Zak, *Russia's Rogozin Threatens to Quit ISS—Again,* SpaceNews (Aug. 3, 2022), https://spacenews.com/russias-rogozin-threatens-to-quit-iss-again/. (last visited Jan. 8, 2026).
[62] Int'l Law Comm'n, *Conclusions on Identification of Customary International Law, with Commentaries,* Conclusion 8 cmt. 9 (2018), https://legal.un.org/ilc/texts/instruments/english/draft_articles/1_13_2018.pdf.
[63] *supra* note 62.
[64] Lassa Oppenheim, *International Law 29* (Hersch Lauterpacht ed., 8th ed. 1955).

i. Structural Constraints on Objection

a. **High Entry Costs and Functional Interdependence:** The life support, docking, and launch systems are part of a stack that uses the same protocols. States must adhere to these criteria in order to take part in human spaceflight or simply to be in proximate orbits. Persistent objection would exclude you from data streams, docking opportunities and emergency support, making dissent too costly to be political or economically viable.

b. **Rapid Feedback Loop of Practice:** Unlike maritime norms that evolve through episodic events, ISS practice is daily: telemetry handovers, power trading, station keeping, experiment uploads. An objection must be continuous to be "persistent". Any gap can be seen as acquiescence, especially under ICJ dicta that States can manifest acceptance through "tacit consent inferred from conduct"[65].

c. **Network Effects on Safety Protocols.:** Collision avoidance and debris mitigation rely on full data transparency; one non-cooperative node spoils all. So non-participation has an externality cost that imposes reputational and diplomatic costs on the objector, and further discourages open defiance.

ii. Empirical Review of Alleged Objections

a. **Russia (2022–23):** In response to Western sanctions, Roscosmos officials threatened to suspend ISS cooperation, but Moscow continued to:

   » honor cross-waiver clauses during the Nauka module depressurization (2023);

   » participate in weekly MCB teleconferences; and

   » upload experiment data to the ESA-hosted HELIOS database within the twelve-month window.

The legality of Articles 9, 12, and 16–18 was not disputed in any diplomatic communication. Further denying the existence of the benefit-sharing norm, the Russian complaint was presented as reprisal for "illegitimate economic measures."[66] So this is at most a threatened *violation,* not a basis for persistent objection.

b. **China (2011–present):** Beijing has its own Tiangong station outside of the ISS framework, but Chinese regulations mirror the open-data rule and the China Manned Space Agency cited ISS as a "reference" for its 2022 *Interim Measures.*[67] There are no public or diplomatic statements rejecting ISS norms; in fact, China's Chang'e-based sample-return

[65] *Id*.
[66] Roscosmos, *Press Release No. 18 PR/2023: On Future Cooperation on ISS* (Mar. 19, 2023).
[67] *supra* note 68.

missions voluntarily put lunar basalts into open repositories, just like ISS data policy. Instead of protesting, China is thus silently endorsing the emerging custom.

c. **Private Actors:** The ISS cross-waiver clauses in the contracts of companies such as Axiom Space and Blue Origin have led non-State actors to believe that these standards are the norm for orbital infrastructure. This makes it a legal duty, if not a social expectation.) It makes it a legal duty, if not a social expectation.

d. Doctrinal Elasticity: "Qualified Objector" Versus "Persistent Objector"

James Green's book distinguishes a qualified objector who objects to part or part of a norm but not a true persistent objector, who objects to the whole norm.[68] Russia and China's selective deviations (e.g. bilateral crew-exchange pricing disputes) are qualified; they target ancillary issues, not the core benefit-sharing principles themselves. Under prevailing scholarship, a qualified objection doesn't have the same immunizing effect as persistence, so the norm's universality remains intact.

iii. Reassessing the Doctrine in a Networked Commons

The very idea of persistent objection assumes that abstention is possible. Where collective action problems make participation necessary, like orbital safety, States may find it impossible to sustain principled dissent without incurring self-harm. This structural "lock-in" reduces the time window for objection, allowing customs to harden faster than in diffuse areas like high seas fisheries.

Moreover, *ex ante* opt-out would put all actors at physical risk; custom's purpose in this context is to coordinate technical standards that can't be fragmented. The ILC's 2018 Conclusions suggest as much, noting that "practical necessity" may limit the scope for persistent objection in areas that require universal participation.[69]

iv. Normative Implications

a. Accelerated Custom Formation.

The network interdependence accelerates the establishment of "custom by coercion," as one commentator puts it, by raising the cost of structured dissent. The ISS case provides a template for other areas where technical interoperability is key (e.g. cyber norms, climate data sharing).

b. Erosion of Unilateral Opt-Out.

The persistent objector doctrine may be less relevant in tightly coupled global commons. As legal scholars revisit old doctrines to fit new technological landscapes, ISS practice could be a precursor to a *qualified participation* model where States negotiate carve outs rather than total rejection.

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[68] James A. Green, *The Persistent Objector Rule in International Law, supr*a note72.
[69] Int'l Law Comm'n *supra* note 64.

c. Strengthening Jus Cogens Arguments?

A few jurists argue that CHM elements could eventually become *jus cogens.* While this article doesn't go that far, the shrinking of objection space gives more weight to the argument that certain benefit-sharing norms are becoming *jus cogens* especially if linked to broader human rights [e.g. access to scientific benefits under Article 15 of the International Covenant on Economic, Social and Cultural Rights (ICESCR)].

In short, the structural and empirical landscape of orbital cooperation leaves no room for a textbook objector to ISS-derived benefit-sharing norms. Interdependence, rapid practice accumulation and reputational penalties make sustained dissent impossible. The doctrine is theoretically intact, but in outer space is an empty set—further evidence that a *jus commune spatiale* embedding functional CHM principles now binds the community of space-faring States.

IX. Draft Guiding Principles for Lunar–Resource Governance

Drawing on twenty-five years of ISS praxis, this Part distils six principles that could underpin a multilateral framework for the extraction and use of lunar resources. Where relevant, draft treaty clauses are italicized to show operational language.

The principles are designed to fit with existing soft-law instruments, most notably the Artemis Accords (2020) and the evolving workplan of the COPUOS Working Group on Space-Resource Activities, and preserve functional common-heritage logic.

i. Open Data with Time-Limited Exclusivity

Draft Clause 1. "Scientific data derived from in-situ resource utilisation (ISRU) activities shall be deposited in a public repository no later than twelve (12) months after acquisition. Commercially sensitive data may enjoy an exclusivity period not exceeding thirty-six (36) months."

Rationale. Article 11 of the OST mandates benefit to "all countries"; ISS Article 12 operationalizes that duty through a one-year public-domain rule. The same window may be too brief for high-risk commercial ISRU, hence a capped three-year exclusivity resembles the Artemis Accords Section 4 "Scientific Data" pledge yet supplies clearer metrics.[70]

ii. Tiered Cross-Waiver & Insurance Pool

Draft Clause 2. "Each Party shall waive and release all claims against any other Party and its Related Entities for damage arising out of ISRU activities, save for wilful misconduct. Parties shall contribute to a multilateral insurance pool proportional to their gross mass launched."

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[70] Artemis Accords: Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes § 4 (Oct. 13, 2020).

Rationale. NASA has already transplanted the ISS cross-waiver into non-station partnerships through 14 C.F.R. § 1266.104, demonstrating portability.[71] A lunar variant should preserve risk solidarity while scaling contributions to launch mass (a proxy for risk exposure).

iii. Rotating Stewardship Council

Draft Clause 3. "A Stewardship Council comprising all Parties shall adopt decisions by consensus and rotate its chair annually in alphabetical order of State name."

Rationale. The ISS Multilateral Coordination Board prevented hegemonic capture by using consensus, but its chair defaulted to NASA. A rotational model answers Global South critiques that the Artemis Accords embed U.S. leadership.[72]

iv. Baseline Access Quotas for Emerging Space Nations

Draft Clause 4. "Each operational architecture shall reserve not less than five (5) percent of annual surface-operation slots for Parties whose average space budget over the preceding five years was below 1 percent of the aggregate budget of all Parties."

Rationale. Article 9 ISS quotas shield smaller contributors; a percentage-based floor achieves the same distributive outcome on the Moon, aligning with ESA's Space Resources Strategy pledge to "ensure broad participation."[73]

v. Environmental Precaution & Heritage Sites

Draft Clause 5. "Prior to ISRU activities, Parties shall complete an Environmental Impact Assessment (EIA) conforming to thresholds set by the Stewardship Council. Operations within one hundred meters of a historical landing site shall require unanimous Council approval."

Rationale. The Artemis Accords (Sect. 9) exhort protection of "heritage sites," while the Antarctic Protocol mandates EIAs. Combining both imports proven environmental safeguards into cis-lunar space.[74]

vi. Dispute-Resolution Ladder with Final Arbitration

Draft Clause 6. "Disputes shall proceed through: (a) consultation; (b) mediation by the Stewardship Council Chair; (c) ad hoc arbitration under PCA Optional Rules for Space-Related Disputes, with awards enforceable under the 1958 New York Convention."

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[71] NASA, *Space Act Agreement Standard Clausesch.* 3, https://www.nasa.gov/partnerships/saag-standard-clauses-ch3/ (last visited May 6, 2025).

[72] Francesca Ferraro, *The Artemis Accords: Evolution or Revolution in International Space Law?,* 70 Int'l & Comp. L.Q. 619 (2021).

[73] European Space Agency, *ESA Space Resources Strategy,* ESA/LEGAL/SR/2019/1 (May 2019), https://www.esa.int/About_Us/Law_at_ESA/ESA_Space_Resources_Strategy. (last visited Feb 12, 2025

[74] *Protocol on Environmental Protection to the Antarctic Treaty,* art. 3, Oct. 4, 1991, 30 I.L.M. 1455.

Rationale. The ISS features optional arbitration but no enforcement hook; tying lunar arbitration to the New York Convention supplies a recognition mechanism familiar to commercial actors, thereby lowering perceived enforcement risk.

a. Integration with Existing Fora

The COPUOS Working Group on Space-Resource Activities is asking for State views on a "building-blocks" approach.[76] Each principle above maps onto a workplan topic—Transparency (P1), Liability (P2), Institutional Arrangements (P3), Benefit-Sharing (P4), Environmental Protection (P5), and Dispute Settlement (P6)—and could therefore be tabled as a consolidated proposal. Nothing in the draft clauses conflicts with the Moon Agreement; indeed, Clause 5 implements Article 11(5)-(7)'s call for an environmental regime.[77]

b. Anticipated Objections

i. *Royalty Scepticism.* Countries investing in private will resist baseline access quotas (P4). But ISS data shows barter and in-kind contributions substitute for cash transfers, preserving commercial incentives while spreading the benefits.

ii. *Security Concerns.* Rotating chairmanship (P3) will worry big investors about continuity. Solution: embed professional secretariat positions for technical continuity like the ISA's Secretariat.

iii. *Enforcement Anxiety.* Arbitration sceptics will note that New York Convention enforcement relies on domestic courts. But satellite operator experience with commercial arbitration (e.g., SES v/s. Intelsat) shows the industry is comfortable with this model.

The six concepts that convert practical CHM into a lunar setting by repurposing ISS-tested methods include open data, risk pooling, and rotational governance, without resorting to the politically divisive terminology of revenue royalties or community resource ownership. They provide a pragmatic bridge between the non-binding Artemis Accords, the skeletal Moon Agreement and ongoing COPUOS deliberations, a ready-made legal kit for the next phase of human space activity.

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[75] Permanent Ct. Arb., *Optional Rules for Arbitration of Disputes Relating to Outer Space Activities,* art. 34 (Dec. 6, 2011), https://pca-cpa.org/en/documents/pca-optional-rules-for-arbitration-of-disputes-relating-to-outer-space-activities/.

[76] U.N. Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Working Grp. on Legal Aspects of Space Resource Activities, *Chair's Summary of the First Reading of the Draft Set of Principles,* at 12–15, U.N. Doc. A/AC.105/C.2/L.321 (Mar. 27, 2023), https://undocs.org/A/AC.105/C.2/L.321.

[77] *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies,* art. 11(5)–(7), Dec. 5, 1979, 1363 U.N.T.S. 3.

X. Conclusion

The International Space Station was a geopolitical gamble, an audacious attempt to bind former Cold War enemies into an orbital condominium. The context of addition to keeping the lights on in low Earth orbit, twenty five years later, adhering to the ISS-IGA's benefit-sharing provisions has created a jus commune spatiale, which gives reality to the Outer Space Treaty's nebulous pledge of exploration "for the benefit and in the interests of all countries."[78]

The four operational pillars of proportional crew access, mandatory public-domain data, pooled liability and an open science intellectual-property carve-out, have survived terrorist attacks, financial crises and even land wars in Europe. They have provided the consistent practice and legal conviction that the ICJ recognises as the two engines of custom.

Initially, this functional vision of the common heritage of mankind avoids the political baggage that sank the Moon Agreement's royalty-sharing regime. Instead of trustee bureaucracies and redistribution funds, the ISS model uses reciprocity, transparency and risk solidarity to diffuse benefits horizontally.[79]

India's statutory convergence and China's regulatory emulation show how ISS norms radiate outwards, binding even non-partners to the gravitational pull of technical interdependence and diplomatic expectation.[80] In this networked commons, the classic persistent-objector escape hatch is effectively closed; dissent means self-exile from critical infrastructure and the scientific prestige that comes with it.

The transition of humankind from low Earth orbit to permanent lunar surface operations and asteroid mining presents a dilemma for policymakers. They can do bilateral deals that entrench asymmetry, or they can take ISS-tested clauses and make them multilateral and open science, collective risk management and equity. The six Guiding Principles proposed in Part VII chart a middle path: one that combines ISS praxis with the Artemis Accords' incentives and the Moon Agreement's ethical compass without resurrecting the sovereignty and royalty debates that have stalled progress for 40 years.

Future research should explore two frontiers. First, empirical socio-legal studies can track how private actors internalise ISS-derived norms into contract templates and insurance underwriting and thereby extend jus commune spatiale beyond State practice. Second, comparative constitutional analysis, especially of Global South space powers like Nigeria, Brazil and South Africa, can show how domestic legal systems translate CHM into tangible socio-economic benefits, close the loop that starts with Article I of the Outer Space Treaty and ends with "the benefit of all countries."[81]

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[78] *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies,* art. I, opened for signature Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205.
[79] *supra* note 23.
[80] *Indian Space Policy, 2023* § 5.2 (Apr. 6, 2023); *supra*note 68.
[81] *supra* note72.

If the 20th century's maritime order was born in the fire of UNCLOS negotiations, the 21st century's space order may well be fathered by the hum of life support fans on a football field sized laboratory orbiting the Earth every 90 minutes.

The ISS has shown that when law is embedded in nuts and bolts engineering and daily operational scripts lofty principles become living norms. The challenge and opportunity for lunar governance is to do that alchemy before the next big space rush buries the fragile idea of outer space as the common heritage of humanity.[82]

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[82] *supr*a note77.

EMPOWERING END-OF-LIFE CHOICES: A MEDICO-LEGAL PERSPECTIVE

Dr. Rini M. V.*

Abstract

Terminally ill persons are persons suffering from great pain. They are physically and mentally very weak, so the chances of abuse of their rights are high. The state has the obligation to protect the rights of the seriously ill. The state functions as a societally committed entity, where every citizen is guaranteed a minimum standard of living and equal opportunities. The state's involvement extends to all areas of human life. The social state stands for the welfare of its citizens as its primary objective. The state has the duty to protect the health needs, ensure access to health services, organize and ensure availability, affordability, and quality of drugs, advanced medical treatment, palliative care facilities, review the causes of illness, and prescribe regulations for the protection of heath of the population. Both the medical and legal fields come under the common title of state. They together have the responsibility of protecting the rights of the terminally ill in making end-of-life choices. This article analyzes the duty of law medicine to protect the rights of the terminally ill and traces the reasons for the violation of the rights of the terminally ill,and provides an effective solution to make end-of-life choices more effective.

Keywords: Terminally ill, Rights, Duty of Law and Medicine Reasons for violation of Rights-Solutions.

I. Introduction

Terminal illness is a medical term that gained prominence in the 20th century to refer to a progressive and severe disease that is ultimately incurable.There are many types of terminal illness, such as idiopathic pulmonary fibrosis[1], lung cancer, leukaemia[2], pancreatic cancer,[3] and liver can-

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[1] *Pulmonary fibrosis* is a disease that affects the lungs. Over time, the air sacs gradually fill with fibrotic tissue, which becomes increasingly dense. This thickening of the tissue hinders the efficient transfer of oxygen into the bloodstream. Mayo Clinic, *Pulmonary Fibrosis,* https://www.mayoclinic.org/diseases-conditions/pulmonary-fibrosis/symptoms-causes/syc-20353690. (last visited Apr 25, 2025).

[2] Leukaemia is a form of blood cancer, infecting the blood cells. *Blood Cancer UK, Leukaemia,* https://bloodcancer.org.uk/understanding-blood-cancer/leukaemia/;MedlinePlus,Leukaemia,https://medlineplus.gov/ency/article/001299.htm . (last visited Jan 26,2026)

[3] Pancreatic cancer is a disease that develops when malignant cells form within the pancreas. The pancreas is an organ responsible for producing enzymes that help digest food. When a tumor forms in the pancreas, it can block the release of these digestive enzymes, leading to difficulty in breaking down food. As a result, the individual may experience significant weight loss and, ultimately, death due to malnutrition.Mayo Clinic, Pancreatic Cancer, https://www.mayoclinic.org/diseases-conditions/pancreatic-cancer/symptoms-causes/syc-20355421;
Nat'l Cancer Inst., Pancreatic Cancer, https://www.cancer.gov/types/pancreatic. (last visited Dec 2,2025)

cer (which includes Hepatitis B[4]). A person who has such an illness is referred to as terminally ill. Terminally ill are entitled to right to life which includes right to health,right to medical care[5], right against discrimination[6], right to information on clinical identity[7], right to refuse to be subject of clinical research[8], right to dignity[9], right to privacy[10], right to receive medical information[11], right not to receive medical information[12], right to informed consent, right to appoint representatives[13], right to make advance directive, right to receive treatment[14], right not to receive treatment[15], right against inhuman and degradation treatment[16], right to confidentiality[17], right to leave the hospital,

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[4] Hepatitis B is a disease that impairs liver function by causing lasting damage to the liver. Over time, this damage can become irreversible and may ultimately lead to death. Ctrs. for Disease Control & Prevention, Hepatitis B;
Mayo Clinic, Hepatitis B, https://www.mayoclinic.org/diseases-conditions/hepatitis-b/symptoms-causes/syc-20366802. (last visited Jan 26, 2025).

[5] The right to medical care refers to the entitlement to access healthcare services. It ensures that patients receive basic medical treatment and that emergency care is provided in urgent situations. This right is protected under Article IX of the American Declaration on the Rights and Duties of Man. American Declaration of the Rights and Duties of Man art. IX, O.A.S. Res. XXX (1948).

[6] This right provides that there should not be any discrimination between patients in the implementation of various patient rights. Article 6 of the Law of Patients'Rights in Georgia and Section 31 of the Promulgation of a Set of Standards on Medical Conduct and Patients' Rights 1992 of Uruguay recognize this right.Law of Patients' Rights art. 6 (Ga.); Promulgation of a Set of Standards on Medical Conduct and Patients' Rights § 31 (Uru. 1992).

[7] A patient is entitled to be informed of the identity and position of every person treating him. Patients' Rights Act, S.6 (Israel 1996); *Promulgation of a Set of Patients' Rights,* S.34 (Uruguay 1992).

[8] The patient has the right to refuse to be subjected to clinical research and to refuse any care or examination, the basic purpose of which is education or instructional and not therapeutic or diagnostic. Rights and Obligations of Patients and Users of the Basque Health Service ch. 3, § 1(g) (Spain).

[9] The term dignity means self-respect.Universal Declaration of Human Rights art. 1, G.A. Res. 217 (III), U.N. Doc. A/810, at 71 (Dec. 10, 1948); American Declaration of the Rights and Duties of Man art. XI, O.A.S. Res. XXX (1948).

[10] The term privacy means keep to oneself.Universal Declaration of Human Rights art. 12, G.A. Res. 217 (III), U.N. Doc. A/810, at 71 (Dec. 10, 1948); European Charter of Patients' Rights art. 6 (2002).

[11] Health information that includes the availability of health services and how best to use such services should be provided to the patient, and such information shall be in a language understood by the patient. Universal Declaration of Human Rights art. 12, G.A. Res. 217 (III), U.N. Doc. A/810, at 71 (Dec. 10, 1948);
European Charter of Patients' Rights art. 6 (2002).

[12] If the patient does not want to be informed of his disease, the information need not be provided to him.Law of Patients' Rights art. 20 (Ga.).

[13] Patients have the right to appoint representatives to make consent for the patient if the patient later becomes incompetent. Law of Patients' Rights art. 24(4) (Ga.); Convention for the Protection of Human Rights and Dignity of the Human Being concerning the Application of Biology and Medicine art. 6, Apr. 4, 1997, E.T.S. No. 164.

[14] This right provides that basic medical care or treatmentis to be provided to patients. Further emergency care is to be provided in emergencies.American Declaration of the Rights and Duties of Man art. IX, O.A.S. Res. XXX (1948).

[15] The patient has the right to refuse treatment. A patient may not be treated or provided with any other health or nursing care against his will. If the possibility exists, the patient must be offeredother treatment or other health care services. Law on the Rights of Patients and Compensation of the Damage to Their Health art. 8 (Lith.);
Rights and Obligations of Patients Act § 20 (Ice.).

[16] This right is guaranteed under International Documents like Article 5 of the UDHR. Further the Article 68 of the Constitution of the Republic of Iceland recognizes this right. So, a patient, especially a terminally ill patient, cannot be subjected to inhumanor degrading treatment. Universal Declaration of Human Rights art. 5, G.A. Res. 217 (III), U.N. Doc. A/810, at 71 (Dec. 10, 1948); Const. of Ice. art. 68 (1944).

[17] Healthcare provider shall keep confidential the information about the patient both within the period of his/her life as

right to palliative care[18], and the right to dignified death[19]. Both medicine and law have an important role in protecting these rights. It is the medical field that determines what and how the treatment is to be provided to the terminally ill, and it is the legal field that provides guidelines to be followed by them in treatment so that the rights of the terminally ill are not affected. This article, through the discussion of the need to confer rights to the terminally ill provides a medico-legal analysis of the rights of the terminally ill. Before discussing the rights of the terminally ill, it is necessary to define terminally ill.

II. Terminally Ill- Definition

The word terminal is defined as forming the end or extremity of something[20]. It is something that limits or terminates something[21]. Illness is defined as a lack of health or the presence of disease[22]. Terminal illness means an illness from which recovery is not expected[23]. Terminally ill refers to individuals who have an incurable or irreversible illness in its final stage, which is expected to lead to death within a short time.Terminally ill persons are persons suffering from great pain. They are physically and mentally very weak, so the chances of abuse of their rights are high. In the past, defence of the country and maintenance of law and order were the only legitimate functions of the state. The state followed the policy of laissez-faire. The 'law and order' state had only a negative role to perform. Thus, the state was a police state. Today the state has not confined its scope to the traditional and minimum functions of defence and administration of justice. Now the state is a welfare state. The welfare state is a society in which an assured minimum standard of living and opportunity become

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well as after the patient's death. In the United Kingdom,the Central Council of Nursing and Midwifery Code of Practice 1992 explicitly mentions that a registered nurse, midwife, or health visitor must protect all confidential information concerning the patient.The duty to maintain confidentiality is imposed on doctors through the guidance issued by the General Medical Council. In the United States of America,the Health InsurancePortability and Accountability Act of 1996, along with rules to implement the Standards of Electronic Transactions 2001,essentially serve as a baseline for the protection of patients' rights. Finland has passed the personal data law expressly providing for the confidentiality of health information.Cent. Council of Nursing & Midwifery, Code of Practice (U.K. 1992); Gen. Med. Council, Good Medical Practice(U.K. 2013);
Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, 110 Stat. 1936;
Standards for Electronic Transactions, 45 C.F.R. pts. 160–164 (2001); Personal Data Act (Finland 1999).

[18] Palliative care is defined as the study and management of persons with progressive, advanced disease for which the prognosis is limited and the focus is on quality of life. Instead of providing treatment at the end stage of life, palliative care focuses on the care of the patients. Patients' Charter of Rights § 2 (S. Afr.); Rights of Patients and Compensation for the Damage Done to Their Health Act art. 3(6) (Lith.).

[19] Section 2(6) of Termination of Life on Request and Assisted Suicide (Review Procedure Act) of Netherlands, Belgian Act on Euthanasia recognizes this right. This legislation permits terminally ill patients who could make an informed decision to request the physician to assist them in dying a dignified death. Termination of Life on Request and Assisted Suicide (Review Procedures) Act § 2(6) (Neth. 2002); Belgian Act on Euthanasia art. 3 (Belg. 2002).

[20] Webster's Encyclopedic Unabridged Dictionary of the English Language 1465 (Gramercy Publ'ns 1994).

[21] Black's Law Dictionary 1319 (5th ed. 1979).

[22] *International Encyclopedia of Ethics* 503 (1st ed. S. Chand & Co. Ltd. 2003).

[23] Wash. Rev. Code § 70.245.010(13) (2024).

the possession of every citizen. The activities of the state extended to all aspects of human life.[24] The welfare state stands for the welfare of its citizens, with welfare as its primary objective. Maintenance and improvement of health, protection of the weak, are indispensable functions of a welfare state. The state has the duty to protect the health needs, ensure access to health services, organize and ensure availability, affordability, and quality of drugs, advanced medical treatment, palliative care facilities, review the causes of illness, and prescribe regulations for the protection of heath of the population. Thus, both the medical field and the legal field come under the common title of the state.

So,the medico-legal analysis of the rights of the terminally ill is actually the analysis of the role of the state in protecting the rights of the terminally ill.The state can protect the rights of the terminally ill only if it can identify the reasons that cause the violation of the rights of the terminally ill.

III. Reasons for the violation of the rights of the terminally ill

The reasons for the violation of the rights are

a. Lacunae in the laws and their proper enforcement

b. Defective pain management

c. Violation of privacy and dignity

d. Financial,social, and emotional problems.

a. The Lacunae in the Legislation (See Diagram 1)

The law has failed to provide a precise definition of the term terminally ill.It has failed to determine the exact criteria to determine who will come under the definition of terminally ill. Before removing the patient from the ventilator, it is mandatory to confirm that the patient is dead. But the law does not give a precise definition of death. If the law is not clear, how will it be possible to determine whether a patient is dead or not? The problem is aggravated when there is a mismatch between the legal definition of death and medical practice. Medical technology with its potential to redefine the boundaries of life, has forced a radical reconsideration of what is meant by death. Traditionally, death was classified as cardiac death. However, this definition became inadequate with the advancement of medical technology, particularly artificial ventilation, which made it possible to prolong biological life. Today, brain cell death is legally and medically recognised. Nevertheless, the debate has not ended, as arguments continue to be advanced in favour of extending the definition of death to include cognitive or upper brain death. Such a classification would permit persons in a persistent vegetative state to be regarded as dead.[25]

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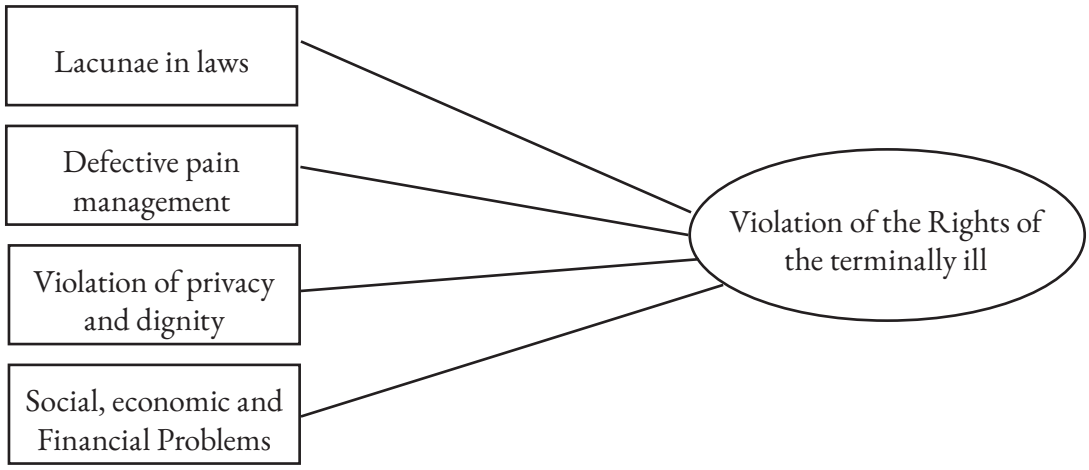
[24] René Seerden& Frits Stroink, *Administrative Law of the European Union, Its Member States, and the United States: A Comparative Analysis 6* (2002).

[25] Martha C. Nussbaum, *The Quality of Life 102 (2002); Editorial, What Shape to Euthanasia After Bland? Historical, Contemporary, and Futuristic Paradigms,* 125 L.Q. Rev.142–72 (2009).

IV. Diagram 1

Reasons for the violation of the rights of the terminally ill



*Source *MARTHA. C. NURSBAN, THE QUALITY OF LIFE Oxford University Publication 102(2002).*

The question raised in favour of such classification is that when life comes to an end, is there any need to prolong the dying process? But another relevant question can be raised against this argument: if the definition of death is extended, then will it not be against the rights of the terminally ill to life? Further, there is no precise definition in law as to when a person becomes persistently vegetative, law has to clarify this. In England, the waiting period prescribed for determining a person as persistently vegetative is 3 months[26] and in America[27] it is one month. Law has to clearly describe the waiting period that is to be observed before a vegetative person is diagnosed as persistently vegetative.

In the last stages of disease, the terminally ill faces difficult end stage decision making. The health care decision making is a process of shared decision making between patient, surrogate in the case of an in competent patient and the physician.[28] The physician brings in his or her training, knowledge and expertise to bear for the diagnosis of the patient's condition, the estimation of the patient's prognosis with different alternative treatments, including the alternative of no treatment, and a recommendation regarding treatment and the patient accepts or refuses treatment. The doctor must not withhold any information from the patient unless the patient refuses to have such information or it will affect their health. The doctrine of informed consent requires that treatment

[26] Withdrawal of Life-Support from Patients in a Persistent Vegetative State, Inst. of Med. Ethics Working Party on the Ethics of Prolonging Life & Assisting Death, 337 *Lancet* 96, 97 para. 4 (1991).
[27] Recommendations for Use of Uniform Nomenclature Pertinent to Patients with Severe Alterations in Consciousness, 76 *Archives Phys. Med. & Rehabilitation* 620, 622 (1995).
[28] Martha C. Nussbaum, *The Quality of Life* OU Publishing102 (2002).

not be given to a competent patient without that patient's consent.In the case of an incompetent patient, two principles are used for the guidance of those who decide about the treatment of the patient. They are the substituted judgment principle and the best interest principle. The substituted judgment principle requires the surrogate to decide as the patient would have decided if competent. The best interest principle requires the surrogate to make the decision that best serves the patient's wishes or interests. The application of the principle of best interest suffers from infirmity.In the case of terminally ill patients who are in persistently vegetative state (hereinafter referred to as PVS)if one argues that PVS patients have no interest then surely "best" becomes superfluous as "no pool" from which the "best" can be drawn[29]. Moreover, it is not possible to find out how "best" will notcontain a comparative evaluation, that is weighing, of some sort.

Similar difficulty arises when,based on substituted judgment, a decision is taken on behalf of a patient. The surrogate has to assess how the conditions of the patient's life affect the value of that life to the patient. It is difficult to accurately predict the value of life of the patient as it varies from patient to patient. Further the decision made by the surrogate may be biased. It may be made with the object of inheriting property, claiming insurance, or getting rid of the treatment expenses of the patient, so there is the need of clear legislative guidance regarding withdrawal of treatment in terminally ill patients. The law has to precisely define the circumstances under which a person can make a decision to refuse treatment. Further law has to clearly state the procedure to be followed for initiating or withdrawing treatment when the patient is unable to give informed consent to it. This lacuna in the law affects the rights of the terminally ill. 'Terminally ill state' is a criterion that permits a patient to make a decision to refuse treatment. But if there is no proper definition as to who all are terminally ill, then it would be a violation of their right to refuse treatment. Lack of clarity as to the definition of death forces the terminally ill to cling to artificial life-sustaining machines even when they have voluntarily stopped breathing. Tubes are inserted into his body to provide artificial nutrition.

The person who is unable to resist this invasive treatment is forced to endure it. The patients may have opened wound which are often foul-smelling, they may have blocked intestines because of advanced cancer growth in them, they may not be able to eat or drink anything because of a blocked food pipe, or they may be partially paralyzed because of a brain tumor. A question that may have to be faced in a lot of such situations is,how long should one continue the provision of health needs in these situations? Or to put it more squarely, should we hold back the provision of health care to these patients[30]. Nature itself makes an investment when life is created, and that investment increases in a linear way as the life continues. Prolonging the life of a patient who is riddled with disease or no longer conscious does nothing to help to realize the nature's investment in human life, the nature's purpose is not served "when plastics and chemistry keep a heart beating in a lifeless, mindless body, a

[29] Andrea J. Fenwick, Applying Best Interests to Persistent Vegetative State—A Principled Distortion, 24 J. *Med. Ethics* 86–92, 89 (1998).
[30] R. K. Nayak, *Global Health Law* ILI Publishing 108 (1997).

heart that nature on its own,would have stilled"[31]. There are Historical, Contemporary and Futuristic Paradigms[32] that justify euthanasia in terminally ill patients. In traditional paradigm it is pointed out that the most important argument against euthanasia is the doctrine of sanctity of life[33].

The basic argument in favour of the sanctity of life is that life is inviolable, that is, life is never to be attacked. To determine whether the inviolability of life is affected, two points have to be considered motive and intention of the person who 'attacks' life. In genuine cases of euthanasia, death is merely the means to an end and not an end in itself, so there is no intention to kill. It is a justificatory rather than an excusatory reason for killing because the motivation is based upon the duties owed to patients, as opposed to killing. Such withdrawal is permitted on the ground that such treatment is futile, burdensome, and affects the quality of life. So,the sanctity of life is not against genuine euthanasia. In the status quo paradigm, it is pointed out that what is punishable in the present scenario is the act of the physician in killing the patient, while the omission is not punishable in the third and last paradigm, that is, the futuristic paradigm. It is pointed out that in contemporary societies, a competent patient's refusal of life-prolonging medical treatment must be respected, and the right to self-determination overrides the argument based on the sanctity of life. What is to be ascertained is that the patient is suffering from terminal illness, there is no scope of recovery, and his quality of life is affected.If such a competent patient requests euthanasia, then his autonomy is to be respected. So, there is a need to recognize the right to refuse treatment and the right to die of the terminally ill patient. While enforcing the legislation, it must be ensured that there is proper implementation of these laws.Another reason that affects the rights of the terminally ill is defective pain management.

b. Defective Pain Management and Access to Drugs to Control Pain

Excessive pain is one of the problems that are faced by the terminally ill. Pain is an unpleasant sensory and emotional experience associated with tissue damage[34]. Inadequate pain control may cause rage, sadness, and hopelessness[35]. The defective management of terminally ill patients may be due to the lack of knowledge of the physician of modern pain therapy, the unwanted fear of the physicians of narcotic addiction, and the potential ill effects of therapy. Further, the patient, due to his illness, may not be in a position to clearly explain to the doctors what pain he is experiencing. In order to prevent such a situation, the doctors are to regularly visit the patient and analyse the pain. But due to the busy schedule, they are unable to do so, and effective pain valuation is affected. Apart

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[31] Ronald Dworkin, *Life's Dominion: An Argument About Abortion, Euthanasia, and Individual Freedom* 215 (1993).
[32] Editorial, What Shape to Euthanasia After Bland? Historical, Contemporary, and Futuristic Paradigms, 125 *L.Q. Rev.* 142–72 (2009).
[33] The sanctity of life principle is usually grounded in the notion of human dignity. It provides that the intrinsic, equal, and inalienable worth of the human person is said to be deserving of the highest reverence and respect. Ronald R. Dworkin, *Life's Dominion: An Argument About Abortion, Euthanasia, and Individual Freedom* 215 (1993).
[34] Robert G. Twycross, *Introducing Palliative Care 65* (2003).
[35] Philip R. Muskin, The Request to Die? Role for a Psychodynamic Perspective on Physician-Assisted Suicide, 279 *JAMA* 325, 323–328 (1998).

from this, the lack of financing for appropriate terminal care also affects pain management. The patients may be poor, and they may not opt for expensive treatments, or they may opt for treatments that are covered by their insurance policies. Another reason for ineffective pain management is that the doctors are afraid that if some pain relief treatment or palliative care is given instead of the futile treatment, then the relatives of the patient will file of litigations in court and they continue the futile and painful treatment. Apart from this, the availability of pain relief drugs like morphine is very limited due to government policies regulating the supply of these drugs, and this also contributes to defective pain management. All these factors affect effective pain management.

Defective pain management due to the unawareness of the doctor of the modern pain relief method affects the rights of the terminally ill to advanced medical treatments, the right to alternative medical treatment, and the right to medical information. Further, the defective pain management affects the right against inhumane treatment. By failing to provide pain relief, the patient is forced to suffer the indignity of being hooked on machines, unable even to take a breath painlessly. Another reason for defective pain management is the limited access to pain relief drugs, which are essential for reducing the pain in the terminally ill. This will affect the right of the terminally ill to receive pain relief treatment. The state has to ensure that the regulation of drugs does not affect the availability of pain relief drugs.

c. Violation of the privacy and dignity of the patient

To a person, the diagnosis of his terminal illness is something that alters his life completely. He is suddenly sent to the seclusion of a hospital and is secluded from the rest of society. There, he has to endure treatments to preserve his life. While providing such treatments, there is a possibility that there is an intrusion into the privacy and dignity of the patient. The patient has to uncover his body for treatment purposes. Protection of privacy requires that it should be done only before the persons who are required to provide such treatment. But this is often violated. The dress is changed by the staff in the hospital who may even be of the opposite sex. The patient is made to wear the transparent gown, and he is brought to the treatment room in wheel chair or stretcher in front of the public. Chemotherapy may have disfigured the patient, and it would be very embarrassing to the patient to be so exhibited in public. Inside the treatment room itself, there would be a number of patients waiting for treatment. There, the patient is forced to undress himself before the other patients, and treatment is provided to him.Apart from this, the treating doctor would be accompanied by many student doctors who look at the patient as objects of study. Further, the drugs whose effectiveness has not previously tested in humans are tested on terminally ill patients who have not consented to it. This is similar to considering them as guinea pigs; this would be a gross violation of the right to informed consent and the right to privacy of the terminally ill. After the medical tests are conducted by the doctor's entry of the results of such tests are entered in the medical records. These records are to be kept confidential; otherwise, there would be a violation of the confidentiality of medical information of the patient[36].

[36] M. S. Benjamin, Medical Confidentiality: Decisions and the Law, 1 *Melb. U. L. Rev.* 121 (2008).

To protect the right to privacy, dignity, and confidentiality of terminally ill patients, it must be ensured that treatment is provided to the patient in a closed room and that the patient is taken to the room not in front of the public, and the body of the patient is exposed only to those required to provide treatment. Further, the medical confidentiality of the records of the terminally ill is to be preserved. It must be ensured that the terminally ill are not used as guinea pigs for testing new drugs. The state has to ensure that the right to privacy and dignity is protected. Another aspect that affects the rights of the terminally ill is financial, emotional, and social problems.

d. Financial, Emotional, and Social Problems

When a patient is affected with terminal illness, he has to suffer from financial, emotional, and social problems. He may have been the breadwinner of the family.His illness might have financially shattered the lives of all the family members. The family might have been doomed topoverty; children may have stopped going to school. The hospital expenses of the patient, travelling expenses for treatment, and medicines would be unbearable for the family.The terminally ill feel themselves to be a burden to the family, and they feel it is better to die. Even in financially sound families, terminally ill faces emotional crises. In nuclear families, there is nobody to look after the terminally ill, and so they are left alone at home or are admitted to care homes where they die a lonely death. This also causes emotional stress in the terminally ill. Thus, once a patient is declared to be terminally ill,they are secluded from society. He is left to be alone with his disease, with nobody to care for him. While considering the issue of the rights of the terminally ill rights other matters should be noted. Strong family systems and the authoritative position of the doctor are the governing forces of medical decision-making.

Factors such as illiteracy, poverty, and limited awareness of patients' entitlements contribute to the violation of rights in making decisions by the terminally ill. In this context, the patient's role is often restricted. Since healthcare costs are typically covered by the family, the family holds a key role in making decisions. Because of the moral, financial, and emotional support provided by the family, patients frequently give up their decision-making rights, allowing the family or doctor to take the lead. Physicians are often seen as divine agents and are granted ultimate authority in decision-making. As a result, doctors tend to make decisions independently. Even when patients are involved, doctors recognize the importance of the family's role, with some viewing patients and families as a single unit. This dynamic significantly undermines the patient's autonomy and compels them to accept decisions made by others. These are the various problems that are endured by the critically ill. To provide the solution to these problems, there is a need to confer rights to the terminally ill and enforce these rights.

In India, the law relating to the terminally ill is very scarce and is limited to guidelines in judicial decisions[37] draft bills[38]. There is a need for legal recognition of the rights of the terminally ill to make end-of-lifechoices.

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[37] *Aruna Ramachandra Shanbaug v. Union of India,* W.P. (C) No. 115 of 2009 (India); *Common Cause v. Union of India,* (2018) 6 S.C.C. 1 (India), as modified by *Common Cause v. Union of India* (2023).

[38] Draft Bill on Passive Euthanasia, Union Gov't of India (2024); Kerala Terminally Ill Patients (Medical Treatment and Protection of Practitioners and Patients) Bill; Palliative Care Policy, Kerala (2019).

V. Conclusion

Thus, it could be concluded that the lacunae in the law, defective pain management, violation of the privacy and dignity of the terminally ill, medical, social, and financial constraints justify the conferring of rights to the terminally ill. Both Law and Medicine should work side by side to protect the entitlements of the End-stage patient.The medical field has to mandatorily check that the dignity, privacy, and autonomy are protected throughout the treatment. It should ensure that the doctors are aware of the modern pain therapy methods, and adequate training has to be provided to them. The law has to provide guidelines to the medical profession as to how the legal protection of patients with life-limiting illnesses could be implemented. The law and medical fields should discuss together and develop a definite uniform criterion to determine death.They have to develop a universal waiting period that has to be adopted in declaring a vegetative patient persistently vegetative. Further,the state has to adopt policies that ensure the accessibility of hospital facilities, drugs, advance medical treatments to the terminally ill. The state has further to ensure that there is proper enforcement of these policies.

VI. Suggestions for the Proper Enforcementof Rights ofthe Terminally Ill

i. Clear legislative guidelines are to be laid down on the rights of the terminally ill. Such guidelines should clearly state the definition of terminally ill, the criteria for determining terminal illness, the rights of the terminally ill, and the authorities that are to be approached for the enforcement of these rights. Further legislation relating to PVS, Selective treatment of newborns, and Brain death is to be enacted, and this legislation should contain accurate criteria for determining PVS and brain death. Further, in case of determination of the treatment decisions of incompetent patients, the legislation should ensure that there are clear criteria laid down for determining the best interest of the patient.

ii. Studies are to be conducted for the development of modern techniques like learning procedure mediated by nonverbal community, bispectrality index, diffusion tensor imaging, MR spectroscopy, and functional MRI for the more precise diagnosis of PVS.

iii. The decision taken by the patient to stop the treatment, which is excessively burdensome and without any benefit to the patient, is to be respected. In India, there should be legalization of the right of the patient to deny taking of treatment that he does not want,and clear criteria have to be laid down as to when such refusal is permissible.

iv. Doctors are to be provided special training in modern pain relief methods, diagnosis of terminal diseases, and brain death. Such training should be made part of the curriculum of medical students, and further refresher courses are to be conducted for doctors and medical staff.

v. Awareness relating to modern techniques relating to diagnosis and treatment of terminal illness and palliative care is to be provided to the public through awareness programs, seminars, and camps conducted through local authorities, GramaShrees, and local health

workers. Further basic information on these matters is to be disseminated through branches of the Indian Medical Association and through the press, radio, and television.

vi. Governments should apply knowledge of palliative care thoughtfully by developing clear, evidence-based policies, training healthcare professionals, ensuring the availability of essential medications, and conducting systematic assessments of palliative care needs before implementing services at the local, regional, or national level.

vii. The government has to allot in the budget money specifically for the care of the terminally ill. Financial help has to be provided for the poor patients for treatment through the Panchayats and Grama Sabhas.

viii. Government, NGO's, and health workers are to work in coordination in identifying the terminally ill patients in rural areas and providing them with adequate treatment and care.

ix. The government has to improve the transportation facilities in rural areas by improving roads, providing ambulance facilities with the apparatus needed for terminal care, and traininghealth workers in them.

x. The government has to ensure that there are home care facilities for the terminally ill in rural areas.

xi. The government has to ensure that hospitals with the needed apparatus and staff are present within the reachable distance of all terminally ill, both urban and rural.

xii. The government has to improve the literacy rate in the rural areas so that awareness programs on palliative care facilities.

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FROM GANDHIAN IDEALS TO GRASSROOTS GOVERNANCE: EVALUATING THE ROLE OF PANCHAYATI RAJ INSTITUTIONS IN ACHIEVING GRAM SWARAJ IN INDIA

Navdeep Singh*

Abstract

One of the most significant aspects of the philosophy of Mahatma Gandhi is the concept of Gram Swaraj, which involves the extension of self-governance to the grassroots level. Mahatma Gandhi envisioned the realization of an ideal "enlightened anarchy," which incorporates empowering rural communities by establishing a system of representative and decentralized democracy wherein every citizen can consciously shape the nation's future. This vision was reflected in the Constitution of India, particularly through Article 40, which embodies these ideals by bestowing both a moral and legal obligation upon the State to establish such a decentralized governance model. In line with the noble values enshrined in the Constitution, the 73rd Amendment Act was enacted, institutionalizing the system of Panchayati Raj and thereby taking a significant step towards fulfilling the dreams of the Mahatma. This research paper aims to analyze the Gandhian philosophy of Gram Swaraj and the concept of village-level self-governance. Furthermore, it seeks to analyze the extent to which the system established under the 73rd Amendment has succeeded in realizing these ideals. By relying on quantitative and qualitative secondary sources, the paper will explore the practical implications of these ideals in the context of contemporary India, particularly focusing on how the concept of Gram Swaraj inspired the empowerment of rural self-governance institutions in India. It intends to offer a unique perspective by evaluating the degree to which various aspects of 'Gandhian Democracy' have been achieved, paving the path toward Gandhi's vision of the ideal State.

Keywords: Decentralization, Gandhi, Gram Swaraj, Panchayati Raj, 73rd Amendment Act.

I. Introduction

Mahatma Gandhi, often revered as the father of the Indian Nation, had a profound impact on the inception of the idea of a common identity in the consciousness of the masses that reside on this vast stretch of the sub-continent, where diversity is a key feature. His ideas led people from different backgrounds to rise and unite for a common cause, i.e., to achieve independence from the mighty British Empire through a mass non-violent struggle. Satyagraha, which is a core aspect of Gandhian thought, played an indispensable role in the attainment of independence in 1947[1].

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[1] Ritu Johari, *Mahatma Gandhi – Father of the Nation, Gandhi Ashram Sevagram* (Oct. 2, 2002), https://www.gandhiashramsevagram.org/essay-on-gandhi/mahatma-gandhi-father-of-the-nation.php.

Mahatma Gandhi, however,had a very unique and unconventional conception of freedom. According to him, the soul of the Indian nation resides in villages.[2] Mahatma Gandhi believed that the mere attainment of self-government from the British Empire did not mean true freedom. Freedom will come when it reaches the poorest village in this country, where a common man will be free to shape his own life by living with fearlessness and dignity. The Gandhian Concept of Real Freedom frees people from any kind of government, where people are free to shape their destiny. To achieve the objectives of the utopian vision, Mahatma Gandhi wanted effective dissemination of power to the grassroots so that liberty reaches every corner of society[3]. This idea of Mahatma Gandhi, which focuses on the holistic development of society through the creation of self-reliant villages, is what is called *Gram Swaraj*[4].

Despite this, Gandhi's vision did not immediately translate into lived reality when India attained Independence. Though India got freedom from the British, the real freedom,as per Mahatma's understanding, was continuously deferred. The idea of *Gram Swaraj* initially gotits place in India's Constitution as a Directive Principle of State Policy (DPSP), assigning the state the responsibility to create and develop panchayats as units of self-governance[5]. Though it was remarkable, DPSP, being a non-enforceable part of the constitution, failed to persuade the government initially-,and it remained under cold storage for a substantial period of time.However, a ray of light appeared when acting in accordance with these noble ideals enshrined in the Constitution of India, the 73rd Amendment Act of 1992 was adopted, establishing Panchayati Raj, which initiated a new era of rural governance in India[6]. Therefore, the ideas and vision of the Mahatma became the basis of rural self-government institutions in India.

II. From Utopia and Scepticism to Embracing the Ideals: 73rd Culmination of a Historical Process

The 73rd Amendment Act of 1992 can rightly be called the culmination of a historical process. The Gandhian vision was praised and criticized and was subjected to various perspectives, which provoked reactions ranging from scepticism and hostility to complete dedication to the idea that shaped and influenced the idea of *Gram Swaraj.*

The idea of *Gram Swaraj* faced one of the most significant challenges from Dr. B. R. Ambedkar, the Chairman of India's Constituent Assembly. He saw such rural republics being a bane of India's public life. He traced the failure of India to cultivate a nationalist spirit in the existence of such

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[2] Satvika Mahapatra, *The Soul of India Lives in Its Villages,* Medium (Oct. 4, 2021), https://satvikamahapatra.medium.com/the-soul-of-india-lives-in-its-villages-37a2a5858190. (last visited Jan. 17, 2026).

[3] Devi Prasad, *Gandhi's Concept of Freedom,* Satyagraha Found.(Mar. 14, 2015), https://www.satyagrahafoundation.org/gandhis-concept-of-freedom/. (last visited Mar. 17, 2025).

[4] B.K. Kakati, *Gram Swaraj: Its Relevance in Present Context,* MKGandhi.org (Jan. 29, 2026),https://www.mkgandhi.org/articles/gram-swaraj-its-relevance-in-present-context.php. (last visited Feb. 30, 2026).

[5] India Const. art. 40.

[6] The Constitution (Seventy-Third Amendment) Act, 1992, India Code.

republics, due to which the feeling of local patriotism prevailed[7]. He saw villages as being repressive and reflective of an underdeveloped India. He was hostile towards villages since he viewed these institutions as sustaining and perpetuating the caste system, making them incapable of self-governance. By departing from the idealism of Mahatma Gandhi and viewing Gram Panchayats through the lens of practical realities of Indian society, Dr. Ambedkar described villages as *"a sink of localism, a nest of ignorance, and a den of communalism"*[8]. Being cesspools of communism and prejudice, he perceived a threat to the human rights of the oppressed classes if such power were given to dominant groups who have perpetuated such inequalities for ages[9]. It is in sharp contrast with what Mahatma Gandhi's thought, i.e., effective dissemination of power to the grassroots will bring freedom; however, Dr Ambedkar's views stand in opposition to what Mahatma envisioned since the idea of *Gram Swaraj* seemed to him to be detrimental to the liberty, especially of those individuals who belong to lower and oppressed castes.

India's Constituent Assembly reflected a very positive attitude towards Mahatma's idea of *Gram Swaraj.* Mr. T Prakasam took a positive outlook towards the village panchayats by asserting that such a system would allow us to attain sufficiency, end any kind of famine, and ultimately establish peace in the country. Whereas, Shri. L Krishnaswami Bharti emphasized the necessity of political and economic decentralization for India to function as a democracy and invoked the Gandhi's wishes[10].

Though the idea of *Grama Swaraj* had widespread support from the Indian National Congress (INC), its preoccupation with organizing nationwide movements for attaining self-rule overshadowed the issue of local self-governance. Therefore, no one had a concrete blueprint, but only a divergent set of ideas. Therefore, when the Constitution of India was being drafted, the issue of Panchayati Raj was put into abeyance since it was placed in the Constitution's non-justiciable part as a DPSP under Article 40. For almost 40 years after India attained swaraj from the British, the idea of Gram Swaraj languished with no national or state-level legislative enactment to give effect to the idea[11]. One development during this period was the report of the Balwant Rao Committee which recommended a three-tier system of local self-governing bodies entrusted with adequate powers for self-governance[12].

The dreams of Mahatma Gandhi and the mandate of India's Constitution were realized through the 73rd Amendment Act, 1992 which bestowed constitutional recognition to these insti-

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[7] *Dr. B.R. Ambedkar on Village Panchayats*, Indian Liberals (Apr. 12, 2023). https://indianliberals.in/content/dr-br-ambedkar-on-village-panchayats/ (last visited Feb. 17, 2026).

[8] Aqib Yousuf Rather, *The Opinion of Dr. B.R. Ambedkar on Village Panchayats,* 1 J. Image Processing & Intelligent Remote Sensing 11 (Oct.–Nov. 2021).

[9] Swaminathan S. Anklesaria Aiyar, A*mbedkar vs. Gandhi: The Risks of Village Empowerment, Times of India* (Feb. 9, 2014), https://timesofindia.indiatimes.com/blogs/Swaminomics/ambedkar-vs-gandhi-the-risks-of-village-empowerment/. (last visited Mar. 17, 2025).

[10] S. Pal, *India's Constitution: Origins and Evolution* (21st ed. 2025).

[11] D.A. Chaudhari, *Panchayati Raj System in India: Issues and Challenges* 3–4 (7th ed. 2019).

tutions. The amendment sought to establish a 3-tier Panchayati Raj system and provided for disseminating such powers which are necessary for ensuring that these institutions adequately function as the self-governing institutions. The vision of the Mahatma Gandhi was translated into reality by creating a system of representation that does not exist in any other part of the world[13].

III. The Implementation of Gram Swaraj in India

By creating a system of local self-governance in India, the 73rd Amendment Act has stood the test of time for almost 33 years and has succeeded in partially realizing Mahatma Gandhi's ideal of Gram Swaraj. This realization is partial because Mahatma Gandhi's vision extends beyond the establishment of institutional frameworks. Such institutions are to be treated as a means, not an end, to achieve certain objectives that will pave the way towards achieving Mahatma Gandhi's ideal state, enlightened anarchy- a state of self-rule where one can govern himself without being a hindrance in the path of other people to exercise their right of self-governance. Gandhi acknowledges that ideals cannot be realized in life in their entirety, and practice, a state cannot be done away with. Gandhi invokes David Henry Thoreau to show the practical implications of his ideals by highlighting that the best government is one that rules the least[14]. The village self-government institutions are meant to act as a means to achieve and realize Gandhi's ideals within practical limitations.

Since its inception, the system of Panchayati Raj institutions established under the 73rd Amendment Act has strived in working to achieve the India of Gandhi's dream. This analysis examines the extent to which the Panchayati Raj system has succeeded in realizing the ideals of Gram Swaraj—an ideal vision of a nation where every village functions as a self-governing unit to ensure a dignified life for all[15].

IV. Political Decentralization

Mahatma Gandhi saw centralization as being antagonistic to the essence of the society, which is predominantly non-violent. In order to reduce conflict and reinforce stability with the aim of evolving India on non-violent lines, he saw decentralization as a prerequisite and essential term. He romanticized the whole philosophy of decentralization, where Panchayati Raj serves as a basis of such a polity. In such a system, an individual is bestowed maximum liberty of thought and expression as well as maximum participation in decision-making and implementation processes. His decentralization limits the power of the centralized state, where people's institutions run parallel to it. Gandhi sought to establish self-governing institutions and stood with the idea of Gram Ganaraj[16].

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[12] S.L. Goel & S. Rajneesh, *Panchayati Raj in India: Theory and Practice* 1–16 (2d ed. 2020).
[13] M.K. Gandhi, The State of Enlightened Anarchy, *Young India,* July 2, 1931, at 162, https://www.mkgandhi.org/voiceoftruth/anarchy.php.
[14] *Id.*
[15] *Genesis,* Gram Swaraj India, https://gramswarajindia.org/about-us/genesis(last visited Jan. 13, 2026).

In practice, Gandhian decentralization aims to give citizens a higher say in the formulation and implementation of decisions. In a decentralized structure where citizens themselves are involved in decision-making or through their representatives elected from local territorial jurisdictions, the people are better informed about the decisions being taken in their interest and meet the needs of a diverse society[17].

In line with what Gandhi envisioned, the 73rd Amendment established a third tier in the federal structure of the country, creating little republics. It has deepened the roots of democracy in the nation[18].

As of 2020, there were 2,55,536 Gram panchayats, 6829 taluka panchayats and 659 district panchayats[19]. In total, 31,87,320 people are bearing panchayat offices all around the nation.[20] It reflectsthe high public participation which Gandhi dreamt of. One of the significant aspects of the Gandhian vision was to address the governance issues at the local level. Though not perfect, the 73rd Amendment Actin India significantly promotes democratic decentralization where people are empowered and public participation is fostered at grassroots levels[21] .

These local governance institutions have become indispensable for the state and central government for the implementation of their policies. In Jal Jeevan Mission, which is a flagship scheme of the Indian Government aiming to give everyone access to tap water acknowledges the crucial role to be played by these local self-governance institutions in adequately implementing the scheme[22]. The Gram Panchayats have been bestowed with important duties under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) that ensures employment for 100 days. The Gram Panchayats are primarily responsible for identifying the work that needs to be done as per local needs and executing such work. Further, allotment of work under the scheme is also a prerogative bestowed upon the panchayats[23]. Panchayati Raj institutions have become the helping hands of the state and union government which is reflected by the fact that only 99 percent of the revenue of these institutions comes from the government[24].

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[16] S. Malik, *Decentralized Governance in India: Myth and Reality* 16–23 (2004).

[17] Dr. S. Indira & M. Balaji, *Gandhian Political Decentralization: A Contribution to Democratic Development,* MKGandhi.org, https://www.mkgandhi.org/articles/politics1.php. (last visited Mar. 9, 2025).

[18] N. Sahoo, *Decentralisation@25: Glass Half Full Yet?, Observer Research Foundation* (May 5, 2018), https://www.orfonline.org/expert-speak/decentralisation25-glass-half-full-yet. (last visited Jan. 17, 2026).

[19] *Section 9: Panchayati Raj, in Rural Development Statistics 2019–20,* Nat'l Inst. of Rural Dev. & Panchayati Raj, https://www.nirdpr.org.in/nird_docs/RDS/RDS2019-20/data/sec-9.pdf. (last visited Jan. 17, 2026).

[20] *Representation in Panchayats,* Ministry of Panchayati Raj, Gov't of India (Sept. 23, 2020, 2:42 PM), https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1658145.

[21] S. Sonkar & A. *Ojha, Empowering Rural Communities: The Impact of the 73rd Constitutional Amendment on Panchayats in India,* 25(1) *Austl. J. Asian L.* 107–122 (Sept. 23, 2024).

[22] *Gram Panchayat Development Plan Guidelines,* Ministry of Panchayati Raj, Gov't of India, No. W-11012/4/2022-JJM-III (July 31, 2023), https://gpdp.nic.in/downloadFile.html?id=446.

[23] *MGNREGA:* Frequently Asked Questions, Ministry of Rural Development, Gov't of India (n.d.), https://nregaplus.nic.in/Circular_Archive/archive/nrega_doc_FAQs.pdf. (last visited Mar. 17, 2025).

[24] V. Radhakrishnan, *Panchayats in India Earn Only One Per Cent of Their Revenue Through Taxes: Data, The Hindu* (Feb. 15, 2024), https://www.thehindu.com/data/panchayats-in-india-earn-only-one-per-cent-of-their-revenue-through-taxes-data/article67822403.ece.

Gandhi's decentralization was the complete devolution of power, which is reflected in his saying that "*The centre of power now is in New Delhi, or Calcutta, in Bombay, or in the big cities. I would have it distributed among the seven hundred thousand villages of India*"[25]. Though Panchayati Raj institutions have not been able to achieve the amount of autonomy that Mahatma Gandhi wanted, yet, the 73rd Amendment Act can be regarded as a fair step towards achieving Gandhi's India where "everyone is his own ruler".[26]

V. Economic Decentralization and Welfare

Gandhi's decentralization is multi-faceted and is not restricted to the devolution of political power. Gandhian idea of Gram Swaraj was to create a complete republic that is *"independent of its neighbours for its own vital wants, and yet interdependent for many others in which dependence is a necessity"*[27]. The Gandhian concept of economic swaraj was to shape a cooperative village society that is self-sufficient. In doing so, Gandhi wanted the villages to have their food and clothes, a clean supply of water, and modern facilities like theatres, schools, public halls, playgrounds, etc. maintained by the village community and its government[28].

Along with self-sufficiency, decentralization of means of production is an important aspect of Gandhian Economics. Gandhi was a stringent critique of industrialization and mechanization[29]. He saw industrialization as being antagonistic to the interests of villages since it led to exploitation. However, he did not oppose the machinery as a whole, but he opposed such machinery which displaced the labour. By decentralizing the means of production, he thought that the multifaceted problems of the country including migration, poverty, unemployment, etc. could be solved. Therefore, he wanted to develop the village cottage industry which would secure raw materials locally and aid the agriculture sector in the village[30]. The Gandhian idea of Rural cottage industries was reinforced in Constitution of India through Article 43, which directs the state to strive for development of such industry[31].

Also, an important aspect of *Gram Swaraj* is the concept of Swadeshi, which is intrinsically connected with India's Freedom struggle. The concept lays its emphasis on the principle that the village must produce things that are foremost meant for consumption by the members of the village community itself. It is a sustainable approach since it prevents dependence on external forces which will facilitate prosperity[32].

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[25] *supra* note 22.
[26] *supra* note 25.
[27] M.K. Gandhi, *My Idea of Village Swaraj,* MKGandhi.org (May 20, 2025), https://www.mkgandhi.org/panchayat_raj/village_swaraj.php. (last visited Jan 21, 2026).
[28] *Gandhi's Views on an Ideal Village,* Gandhi Manibhavan, https://www.gandhi-manibhavan.org/gandhian-philosophy/philosophy-village-idealvillage.html.(last visited Mar. 6, 2025).
[29] N. Prasad, Gandhian Concept of Decentralization, M.K. Gandhi Inst., https://www.mkgandhi.org/articles/concept.php (last visited Jan. 12, 2026).
[30] S. Maind, Economic *Ideas of Mahatma Gandhi—Issues & Challenges,* MKGandhi.org, https://www.mkgandhi.org/articles/economic-ideas-of-mahatma-gandhi.php.(last visited Feb. 14, 2025).
[31] India Const. art. 43.
[32] *supra* note 31.

These Panchayati Raj Institutions established in India primarily receive funding from three main sources: Local body grants which are determined by the Central Finance Commission; funds for the execution of central sector programs; and funds released by the state government in response to recommendations from the state finance commission[33]. The following are the funds released by the Central Finance Commission from 2015-16 to 2025-26 to these institutions:

Fourteenth Finance Commission			Fifteenth Finance Commission		
Financial Year	**Funds Allocated (In Crores)**	**Funds Released (In Crores)**	**Financial Year**	**Funds Allocated (In Crores)**	**Funds Released (In Crores)**
2015-16	21624.46	21510.46	2020-21	60750.00	52461.65
2016-17	33870.52	33218.21	2021-22	44901.00	22327.90
2017-18	39040.97	36295.90	2022-23	46513.00	
2018-19	45069.16	39762.32	2023-24	47018.00	
2019-20	60687.13	52461.65	2024-25	49800.00	

Table 1: *Funds allocated and released on the recommendation of 14th and 15th Finance Commissions to states for rural self-government bodies:*

The table provides a comparative perspective on funds allocated and released by the 14th and 15th Finance Commissions from 2015-16 to 2024-25. It highlights that the central grants serve as a major source of revenue for these Panchayati Raj institutions. Mahatma Gandhi wanted these Panchayati Raj institutions to be self-reliant, but their apparent dependence on higher tiers of governments reflects a different picture[34].

One of the most important aspects of Gandhian vision was to make these panchayats free from any kind of dependence upon higher tiers of government. Therefore, Constitution of India encapsulates this idea under article 243-H which empowers these institutions to generate their own source of revenue (OSR) as well as receive grant-in-aid from the union government as well as the government of their respective states. It can make the panchayats self-reliant fulfilling the true objective of Gram Swaraj[35]. However, the practical implementation of the constitutional mandate remains bleak

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[33] *Chapter V:Financial Resources of Panchayati Raj Institutions, Comptroller & Auditor Gen. of India,* https://cag.gov.in/uploads/download_audit_report/2024/Chapter-V-Financial-resources-of-Panchayati-Raj-Institutions-066b3635Amendement%20Act%201e096.05439586.pdf. (last visited Feb. 15, 2026).

[34] *Gram Panchayat's Own Sources of Revenue*, Press Info. Bureau, Gov't of India (Dec. 7, 2021, 3:56 PM), https://pib.gov.in/PressReleasePage.aspx?PRID=1778846.

[35] S. Rout, *Making Panchayats Self-Reliant: Case Study of Own Source Revenue (OSR) Generation in Velpur Gram Panchayat, Nizamabad District, Telangana,* Nat'l Inst. of Rural Dev. & Panchayati Raj https://nirdpr.org.in/nird_docs/casestudies/uoh/uoh1n.pdf. (last visited Feb. 15, 2026).

since between 2017 to 2022 only Rs. 5,118.98 crore was raised by panchayats as OSR[36].

In the course of making these panchayats self-sufficient, they have been empowered to make a Gram Panchayat Development Plan which is a roadmap of social justice and economic growth in their respective villages. The process of such planning is highly participatory, fulfilling the true objectives of Gandhi's Swaraj. Such plans majorly focus on areas like education focusing infrastructure and development of schools, health by development and maintenance of primary health centres, road development, building development, and women and child development allowing the panchayats to act as per local needs which is a core aspect of Gandhian Philosophy[37].

Though the PR in India is very far from achieving Gandhi's ideal state, isolated success stories of such a system highlight the efficacy of PR institutions in securing the welfare of the people in accordance with what Gandhi envisioned. We have examples from all over the country that the empowerment of village panchayats has led to successful outcomes. Masulpani Gram Panchayat in Uttar Pradesh through community participation succeeded in making the water deficit village water sufficient which led to a great increase in the living standards of people as well as the development of agriculture[38]. Another example is the award-winning panchayat of Balagad in Himachal Pradesh who through local economic sufficiency changed the lives of the people. The village panchayat transformed the agriculture sector which depended upon rain and often faced dry spells by constructing water storage through MGNREGA projects. Other initiatives that brought prosperity to the lives of people include various initiatives to promote cleanliness, construction of the public hall, and provisions of proper drainage for wastewater management[39]. However, these are a few instances of how the 73rd Amendment Act has brought a positive change in people's lives. Many stories like these, echo in every part of the country.

However, there is a long way to go to achieve the vision of the father of the nation. However, the achievements made in a journey of 33 years have led to positive outcomes in the direction of People's welfare.

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[36] *Own-Source Revenue of Panchayats Remains at Rs 59 Per Capita in 2017–22, Bus. Standard* (Mar. 2019), https://www.business-standard.com/finance/news/own-source-revenue-of-panchayats-remains-at-rs-59-per-capita-in-2017-22-124111600476_1.html.

[37] *A Draft Note on Gram Panchayat Development Planning Process: A Case Study of Amendment Act se Gram Panchayat,* Indian Inst. of Tech. Bombay (Mar.20,2025,6:30PM), https://www.ctara.iitb.ac.in/en/system/files/A%20draft%20note%20on%20GPDP%20planning%20.pdf.

[38] *Gram Panchayats: Success Story in Water Conservation and Livelihood Transformation, Champions of Change,* https://abp.championsofchange.gov.in/content/2171gram-panchayats-success-story-in-water-conservation-and-livelihood-transformation. (last visited Jan. 17, 2026).

[39] Dr. Ramna Thakur, *A Report on Community Development Through Panchayati Raj Institutions (PRIs) in Himachal Pradesh: A Study of Balagad Panchayat,* Nat'l Inst. of Rural Dev. & Panchayati Raj (Feb. 2018), https://nirdpr.org.in/nird_docs/casestudies/iitmandi/iitmandi1.pdf. (last visited Feb. 17, 2026).

VI. Upliftment of Women

Mahatma Gandhi said that *"the cause of Swaraj swept all taboos and old customs before it"*. He was a strong advocate for women's political participation, and the crucial position that women played in India's liberation movement reflects the efficacy of his vision . Gandhi believed that gender equality is a fundamental right and declared *"I will boycott the legislative assembly that does not have an adequate share of women members"*[41].

In Gandhi's ideal village, women enjoyed high status and it fostered huge equal respect for them at par with men[42]. His constructive program aimed to bring a revolution for mankind and reflected his vision about what an independent India should achieve and wanted to emancipate women[43]. Gandhi believed that the law and customs which are responsible for the suppression of women is purely a product of man's ideas and that women have no role in shaping it. According to him, cooperation must be the foundation of societal norms, and women should have the autonomy to determine their paths. He urged the congressmen to ensure that women could perform their roles on an equal basis with men. He advocated for a significant change in the legal and traditional standing of women in rural panchayats[44].

Therefore, Mahatma Gandhi was dissatisfied with the lower status given to women in society and wanted to foster a truly democratic framework where women could shape their lives. He wanted to change the inferior status ascribed by the society to women which has fundamental implications on *Gram Swaraj.*

The 73rd Amendment Act advanced the cause of fostering the empowerment of women by providing for at least one-third of seats to be specially earmarked for women in PR institutions including the post of chairman[45]. In addition to this, 21 States and 2 Union territories provide 50 percent of seats in these institutions to be reserved for women[46]. As per the survey by the Reserve Bank of India, women form 45.6 percent of the total elected PR representatives[47]. The significance of achieving such a degree of representation by women can be understood by drawing a comparison

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[40] Rathi, *Gandhi and Women Empowerment,* MKGandhi.org, https://www.mkgandhi.org/articles/women_empowerment.php.(last visited Jan. 17, 2026).
[41] Dharmaraya, *Political Reservation for Women in Panchayat Raj System,* 6 J. Pol. Sci. & Governance 322–26 (2024), https://www.journalofpoliticalscience.com/uploads/archives/6-2-54-403.pdf.
[42] *supra* note 5.
[43] *Constructive Programme,* Gandhi Smriti & Darshan Samiti, http://www.gandhismriti.gov.in/programmes/constructive-programme. (last visited Feb. 17, 2026).
[44] M.K. Gandhi.org, *Constructive Programme: Its Meaning and Place* (Navajivan Publ'g House, 1941), https://www.jmu.edu/gandhicenter/_files/gandhiana-constprog.pdf.
[45] *supra* note 7.
[46] *Participation of Women in Panchayats,* Press Info. Bureau, Gov't of India (Feb. 6, 2024, 6:36 PM),https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2003196.
[47] *Finances of Panchayati Raj Institutions,* Reserve Bank of India (Jan. 24, 2024), https://rbi.org.in/Scripts/PublicationsView.aspx?id=22403. (last visited Mar. 17, 2026).

with the percentage of women elected in Lok Sabha over the years and a state-wise comparison between women representatives in these institutions and legislative assemblies of their respective states. The following presents the comparison of data:

Year	Percentage of Women
1951	5%
1957	5%
1962	6%
1967	6%
1971	5%
1977	4%
1980	5%
1984	8%
1989	6%
1991	7%
1996	7%
1998	8%
1999	9%
2004	8%
2009	11%
2014	12%
2019	14.4%
2024	13.6%

Table 2: *Percentage of Women elected to Lok Sabha since 1951:* The table shows the deplorable state of representation of women in India's Lok Sabha since 1951. It reflects that, despite being in the 21st century, traditional patriarchal structures are still restricting the participation of women in politics. It is a touchstone to comparatively analyse the significance of the 73rd Amendment Act[48].

[48] *Women's Reservation Bill: History of Women's Representation in Parliament Over the Years,* NDTV (Sept. 19, 2023, 6:27 PM), https://www.ndtv.com/india-news/women-reservation-bill-history-of-women-representation-in-parliament-over-the-years-4404097. (last visited Jan 29, 2026)

State	Percent of Women Representatives in PR institutions	Percent of Women in State Legislative Assembly
Assam	54.6	5%
Bihar	52.0	12%
Chhattisgarh	54.8	18%
Goa	36.7	8%
Gujarat	50.0	8%
Haryana	42.1	10%
Himachal Pradesh	50.1	1%
Jharkhand	51.6	12%
Karnataka	50.1	4%
Kerala	52.4	9%
Madhya Pradesh	50.0	9%
Maharashtra	53.5	8%
Manipur	50.7	8%
Odisha	52.7	12%
Punjab	41.8	11%
Rajasthan	51.3	14%
Sikkim	50.3	9%
Tamil Nadu	53.0	5%
Telangana	50.3	5%
Tripura	45.2	13%
Uttar Pradesh	33.3	12%
Uttarakhand	56.0	13%
West Bengal	51.4	14%

Table 3: *State-wise comparison of the number of elected women members in PR institutions and State legislative assemblies:* The table provides a contemporary perspective on the representation of women in respective state legislative assemblies and PR institutions. Representation of women in the state assembly reinforces the same pattern, a deplorable state of female participation in politics. But

on a comparative pedestal, it stands as a testament tothe success of the 73rd amendment in realising what it sought to achieve. In all of these states, women are well represented in these institutions[49].

The representation that women have been able to secure in Lok Sabha and State Legislative Assemblies is not positive and is reflective of the deep-rooted patriarchal structure inherent in India's society. In contrast with this, the ensured representation of women in PR Institutions is a hallmark that the 73rd Amendment Act has partially if not entirely succeeded in enforcing Gandhi's ideas that women must be empowered to shape their own destinies and to occupy representative positions.

As per the RBI, it is not only significant from the perspective of fairness, but it has a positive impact on areas like health, child welfare, and education . Such stories echo from different corners of the country where women have been brought significant changes through their effective leadership. A study by the diptote of Rural Development and Panchayati Raj (NIRDPR) presents the case of Mamata Devi who was elected as a Pradhan of Soukani-Da-Kot Panchayat in Dharamshala District of Himachal Pradesh. When she was first elected as a Pradhan, there was a poor state of sanitation, and alcoholism, and unemployment was prevalent in the village. Through her effective leadership and the help of the community and government agencies, she changed the face of her village, driving her panchayat toward becoming a model panchayat[51]. Another remarkable example is Guljan, a Pradhan of Gagwana village Panchayat of Rajasthan who understood the value of education as a catalyst for the upliftment of women from the burden of traditions that the Mahatma also sought to do. With her efforts, she ensured 100 percent school enrolment and transformed the landscape of education in the village. She has formed 25 self-help groups and is focusing on the skill development of villagers to facilitate their economic development[52].

Therefore, *Gram Swaraj* which forms an important basis of Mahatma's ideal aims to foster a conductive societal structure for women where they are empowered, and through such empowerment, they empower others as well. The 73rd Amendment Act has succeeded in providing fair representation to women and such women are working in every corner of the nation, empowering and empowering others. However, social structures, despite constitutional mandate, restrict such empowerment of women. However gradual social change accompanied by political representation will ensure that change prevails in the direction of women's upliftment.

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[49] *Women in Parliament and State Assemblies,* PRS India, https://prsindia.org/parliamenttrack/vital-stats/women-in-parliament-and-state-assemblies (last visited Mar. 17, 2026).

[50] *supra*note 48.

[51] N Paul, *A Case Study on Women Leadership in Panchayati Raj Institutions (PRI) at the Gram Panchayat Level*, NIRDPR (n.d.), https://nirdpr.org.in/nird_docs/casestudies/cord/cord1.pdf (last visited Mar. 17, 2026).

[52] R Asnani, *Meet the Woman Sarpanch Transforming Rajasthan Village, The New Indian Express* (Jan. 14, 2024, 9:08 AM), https://www.newindianexpress.com/thesundaystandard/2024/Jan/14/meet-the-woman-sarpanch-transforming-rajasthan-village-2650761.html.

VII. Environment & Sustainable Development

S.D, as defined by the United Nations, means the *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs."* It is a comprehensive idea that prioritizes social and economic advancement while taking environmental concerns into account[53]. Though sustainable development is a modern concept; it has reflections in Mahatma's ideas of Swaraj.

At the time of Mahatma, the issue of environmental destruction that we are currently confronting was unheard of, but his concern about the environment led the Historian Ramchandra Guha to describe him as an 'early environmentalist'. The reason why Mahatma Gandhi criticized industrialization and technology was due to its exploitation of resources and nature for self-interest. He believed that modern civilization saw the environment as man's property destroying his unity with the environment as well as long-established communities. Due to his immense concern for nature, he propagated the message to minimize the wants to minimize consumption to reduce the burden on the environment. Gandhi saw the disappearance of villages being a consequence of urbanization which he saw as a cause of environmental degradation and therefore, he propagated the message of *"going back to villages"*[54]. He advised people that by going back to villages, they must engage themselves in labor-sensitive cottage industries and handicrafts so as to keep the environment clean and healthy[55].

Gandhian philosophy preached Sustainable Development before it was a concept. He declared that *"true economics stands for social justice; it promotes the good of all equally, including the weakest, and is indispensable for decent life"*[56]. Gandhi's views conform to the UN's 17 S.D goals which address multifaceted problems faced in the world including poverty, environment degradation, climate change to ensure a sustainable future for all[57].

The Constitution of India bestows upon these Panchayati Raj institutions the duty of reducing poverty, promoting rural development, and safeguarding the environment. Given the close connection of these institutions with the grassroots, they are in the best position to mitigate the environmental problems the nation and mankind is facing[58].

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[53] *Transforming Our World: The 2030 Agenda for Sustainable Development,* United Nations, https://www.un.org/sustainabledevelopment/development-agenda/ (last visited Feb. 4, 2025).
[54] A S Sasikala, *Environmental Thoughts of Gandhi for a Green Future,* MKGandhi.org, https://www.mkgandhi.org/articles/green_future.php (last visited Feb. 3, 2026).
[55] Jayanta KumarDas, *Gandhi and the Environment,* Odisha Rev., Vol. 9 (Sept. 2021), https://magazines.odisha.gov.in/orissareview/2021/Sept-Oct/engpdf/9-11.pdf.
[56] *Id.*
[57] *ISO and the Sustainable Development Goals,* International Organization for Standardization, https://www.iso.org/sdg (last visited Jan. 1, 2025).
[58] Dr. Kshithij Urs, Panchayats: *The Key to Promoting Climate Action,* IBBN, https://ibbn.org.in/news-related-posts/panchayats-the-key-to-promoting-climate-action/ (last visited Jan. 13, 2026).

One such environmental concern the nation is facing is the decline of water resources, which research shows, is the result of the decline of community water management tradition which Mahatma foreseen a century ago. Therefore, water conservation requires a region-specific and community-centred approach[59]. Masupani Gram Panchayat is a model panchayat who through community involvement and mega-watershed projects made successful attempts to conserve water resources[60]. Joomki gram panchayat in Rajasthan had dried up water levels a decade ago. But, through water conservation which started in 2010 through effective mobilization of the community and through the use of scarce means, the panchayat has attained self-sufficiency in water management and is growing crops to attain financial stability[61].

Further, village panchayats have played an important role in biodiversity conservation and waste management. Through the active participation of the community, Kolayad Gram Panchayat in Kerala is involved in the safe disposal of plastic water and afforestation programs. In Udarama Gram Panchayat, the community is actively involved in the protection of 208 hectares of protected jungle from logging and poaching[62].

Therefore, as the Mahatma envisioned, Villages are the most effective mechanisms for the protection of Mother Nature. PR institutions are playing an active role in the protection of the environment and natural resources and therefore, promote development in a sustainable manner.

VIII. Social Justice & Empowerment

Mahatma Gandhi wanted to remove any suppression of one community by the other. Therefore, he viewed untouchability as a blot on humanity and viewed everyone equally. He wanted to fight untouchability[63]. Therefore, he wrote in Young India, *"Swaraj is a meaningless term if we desire to keep a fifth of India under perpetual subjection, and deliberately deny to them the fruits of national culture. We are seeking the aid of God in this great purifying movement, but we deny to the most deserving among his creatures the rights of humanity"*[64]. As a result, he saw the removal of untouchability and caste-based oppression as a fundamental step in attaining his ideal society.

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[59] N.Tiwari, Centrality of Panchayati Raj in Water Conservation and Management,7(3) J. Soil & Water Conservation41–48(2008),http://re.indiaenvironmentportal.org.in/files/Centrality%20of%20panchayati%20raj.pdf (last visited Mar. 17, 2025).

[60] *supra* note 39.

[61] *Water Conservation Efforts by Jhalawar Village a Role Model, The Times of India* (Sep. 1, 2020, 3:46 PM), https://timesofindia.indiatimes.com/city/jaipur/water-conservation-efforts-by-jhalawar-village-a-role-model/articleshow/77860666.cms. (last visited Mar. 17, 2026)

[62] *Empowering Communities: A Case Study of Sustainable Forest Conservation and Livelihood Enhancement,* SEWAK,https://www.sewakodisha.org/resources/case_study/empowering-communities-a-case-study-of-sustainable-forest-conservation-and-livelihood-enhancement/ (last visited Jan. 13, 2025).

[63] Dr. Chiman Lal, *Social Swaraj: A Gandhian Perspective, Purva Mimamsa N.S.A.,* Vol. 10 132 (2019), https://pm.sdcollegeambala.ac.in/wp-content/uploads/2021/07/Vol10-18.pdf (last visited Apr. 10, 2026).

[64] *supra* note 14.

The 73rd Amendment Act aimed to uplift the people belonging to oppressed and backward castes by providing reservations to STs, SCs, and BCs. Therefore, it paves the way for their upliftment since it provides them a role in the decision-making at the grassroots levels[65]. It was a distant dream for these communities to get power, especially at the grassroots where casteism is prevalent. It led B. R. Ambedkar called village republics to be the ruination of India. Therefore, he said, *"Unless I am satisfied that every self-governing institution has a provision in it which gives the depressed classes special representation in order to protect their rights and until that is not done, I am afraid it will not be possible for me to assent to the first part of the bill"*[66]. The PR established in India appropriately addresses the contentions of Dr. Ambedkar fulfilling Mahatma's ideals.

Panchayats	Number of Panchayats	Total Elected Representatives in Lakh	Percentage of elected SC's	Percentage of Elected ST's
Gram Panchayat	239000	27.32	22.99	10.01
Block Panchayat	6405	1.68	19.39	7.07
Zilla Panchayat	589	0.16	16.57	10.78

Table 4: *Representation of SCs and STs in PR Institutions (Up to 2014-15):* The table reflects how the 73rd Amendment Act has been able to extend representation and political participation to historically marginalised groups. It shows that the 73rd Amendment Act has successfully reconciled Dr Ambedkar's fears with MG's vision[67].

The reservations given to depressed castes bring forward many positive examples, which at the same time reflect the sad realities of society. In the village of Indroka in Rajasthan where 75 per cent population belongs to the upper caste with a history of violence against Dalits. Rama Devi, an illiterate woman became the Dalit Sarpanch when the seat came to be reserved for SCs[68]. Such cases of discrimination and empowerment echo in many parts of the country.

The path towards achieving the ideal state of the Mahatma where there is no discrimination, casteism, and untouchability is a long and difficult one. However, the ensured representation of the lower caste population politically empowers them at grassroots levels where casteism is prevalent and potentially allows them to eliminate the very basis of inequality.

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[65] V Ravindra & Prof. G. Venkataramana, *Empowerment of Scheduled Caste and Scheduled Tribes Through Panchayat Raj, Int'l J. Multidisciplinary Research Rev.,* Vol. 10 9 (2024), (last visited Jan. 10, 2025).

[66] *Dr. B.R. Ambedkar on Village Panchayats,* Indian Liberals (Apr. 12, 2023), https://indianliberals.in/content/dr-br-ambedkar-on-village-panchayats/. (last visited Mar. 17, 2025).

[67] *supra* note 20.

[68] *Dalit Leaders inPanchayats,* PRIA(Mar.2003), https://www.pria.org/knowledge_resource/Dalit_Leaderships.pdf (last visited Jan. 10, 2026).

IX. Conclusion and Suggestions

Thus, the 73rd Amendment Act created the Panchayati Raj Institutions which was a crucial step in realizing the vision of the Mahatma Gandhi. Though problems persist, 73rdAmendment Act has remarkably succeeded in achieving a great degree of success in various arenas. Since it has been 33 years since Panchayati Raj was established, it presents a great opportunity to reflect upon the successes and failures we as a nation achieved in democratic decentralization. India has come a long way since 1992. The nation has achieved significant progress towards moulding India as per Bapu's dreams. Yet, we have a long way towards achieving the true essence of *Gram Swaraj.* The nation requires significant steps to be taken to further strengthen and empower the local self-governance institution. Effective reforms must be implemented to make these institutions self-reliant politically and economically, including effective measures to increase their own source of revenue. By using these institutions as a means, India must strive to mould an ideal state that Mahatma wanted where justice and equality prevails and an individual is free to shape his own destiny.

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LOCAL SELF-GOVERNANCE IN BRICS NATIONS: THE INDIAN EXPERIENCE IN COMPARATIVE PERSPECTIVE

Angel Mary John*, Jerrin Thomas Panachakel, Vipin Kumar Singh*****

Abstract

Local self-government is widely recognized as a pillar of democratic deepening, inclusive development, and responsive government. This paper offers a comparative institutional examination of local self-government across the early BRICS nations—Brazil, Russia, India, China, and South Africa—with India as the normative and analytical reference point. India's constitutional engagement with decentralization through the 73rd Constitutional Amendment Act, 1992, provides one of the most comprehensive legal frameworks for grassroots democracy; however, the translation of this framework into operational autonomy remains uneven across states. The research assesses all the BRICS countries on four important parameters: political autonomy, fiscal capacity, civil society participation, and administrative capacity. It finds that Brazilian and South African governments have institutionalised participatory processes and fiscal devolution to the local level, while political space and local autonomy remain constrained in Russia and China. India occupies a middle position—robust in normative intent but weak in implementation due to budgetary dependence, bureaucratic dominance, and asymmetries in institutional capacity. By situating India's Panchayati Raj Institutions within global decentralisation trends, the paper draws lessons and cautionary insights for consolidating local governance, emphasising that successful decentralisation depends not only on legal design but also on context-sensitive reforms, participative inclusion, and institutionalised accountability.

Keywords: Decentralisation, BRICS, Panchayati Raj Institutions (PRIs), Fiscal Devolution, Participatory Governance.

I. Introduction

i. Background and Rationale

Decentralisation is increasingly acknowledged as a cornerstone of modern governance, especially in societies characterised by socio-economic diversity and administrative complexity. It encompasses the redistribution of power, resources, and responsibilities from central governments to lower levels of authority. This restructuring is intended to make governance more participatory,

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efficient, and accountable. The principle behind decentralisation is that local governments, being closer to the people, are better equipped to understand and address their needs[1].

Effective decentralisation fosters an institutional ecosystem where citizens actively shape public policy and influence developmental priorities. It bridges the gap between the state and society, allowing for the co-production of governance and reinforcing state legitimacy. However, as James Manor argues[2], decentralisation must be viewed not as a technical fix but as a politically contested and institutionally complex process. Historical legacies, administrative cultures, and power dynamics shape how decentralisation unfolds in different contexts.

ii. BRICS as a Comparative Framework

The initial BRICS grouping—comprising Brazil, Russia, India, China, and South Africa—presents an ideal comparative framework for analysing decentralisation. Despite being unified by their status as large emerging economies with aspirations for global influence, these countries diverge significantly in political systems, state-society relations, and institutional development. For instance, while Brazil and South Africa operate within democratic and decentralised constitutional frameworks, Russia and China reflect centralised political traditions, with constrained political space at the local level[3].

India lies somewhere in between: it possesses a federal system and democratic institutions, but the practice of decentralisation varies substantially across states. The inter-national diversity within the BRICS, allows for a rich comparative inquiry. Moreover, these countries have all engaged in large-scale public sector reforms and social policy experimentation at the local level—ranging from participatory budgeting in Brazil to village elections in China—offering valuable insights into the functioning of local self-governance.

iii. India's Constitutional Commitment to Local Self-Governance

India's commitment to local self-governance found constitutional expression through the 73rd Constitutional Amendment Act, 1992. This amendment introduced a three-tier governance structure for rural areas: gram panchayats (village level), panchayat samitis (block level), and zila parishads (district level). It was a watershed in Indian democracy, granting constitutional legitimacy to Panchayati Raj Institutions (PRIs) and mandating their regular elections, financial empowerment, and functional devolution across 29 subjects listed in the Eleventh Schedule.

Today, PRIs represent one of the world's largest networks of elected local governments, with over 3 million elected members, including a constitutionally mandated minimum of one-third

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[1] Auditor-General of South Africa, General Report on the Audit Outcomes of Local Government (2023), https://www.agsa.co.za. (last visited March 2, 2026)

[2] James Manor, *The Political Economy of Democratic Decentralization* (World Bank 1999).

[3] *OECD & United Cities and Local Governments,* World Observatory on Subnational Government Finance and Investment (2022),https://www.sng-wofi.org.

women representation. While this framework was designed to democratise governance and enhance state responsiveness, studies suggest that the degree of functional and fiscal autonomy varies widely across Indian states[4]. The PRIs have shown great promise in enabling participation and improving service delivery, but they are often undermined by overlapping jurisdictions, weak planning capacity, and bureaucratic interference.

iv. Contemporary Developments and the Need for Reassessment

Recent policy initiatives have aimed to revitalise India's decentralisation project. The launch of digital governance tools such as *e-GramSwaraj* has introduced real-time monitoring of finances and planning, while the SVAMITVA scheme seeks to improve property rights in rural areas through drone-based mapping[5]. Moreover, the Panchayat Devolution Index provides a mechanism to benchmark states on their progress in functional, financial, and administrative decentralisation.

Despite these innovations, the effectiveness of PRIs continues to be hampered by persistent challenges: fiscal dependence on upper levels of government, bureaucratic dominance in local decision-making, low levels of own-source revenue mobilisation, and capacity constraints among elected representatives. Furthermore, inter-state variations in PRI performance point to the need for more nuanced, context-specific reforms that go beyond a one-size-fits-all approach.

Internationally, countries like Brazil have institutionalised mechanisms like participatory budgeting to strengthen accountability, while South Africa's Integrated Development Plans link municipal budgets to community-identified priorities. These comparative experiences call for a reassessment of India's approach to local self-governance—particularly in terms of aligning normative commitments with institutional practices and outcomes.

v. Objective and Structure of the Paper

This paper aims to conduct a comparative analysis of local self-governance across the BRICS countries, with a central focus on India. The analysis is framed around five critical dimensions: legal autonomy, fiscal capacity, civil society engagement, political autonomy and administrative capacity. By assessing these parameters, the paper seeks to identify cross-national best practices and context-sensitive strategies that can enhance the functioning of PRIs in India.

The remainder of the paper is structured as follows: Section 2 presents the theoretical foundations of decentralisation and outlines the methodological framework. Section 3 provides an in-depth account of India's experience with local self-governance. Section 4 examines the models adopted by other BRICS nations. Section 5 offers a comparative analysis of key similarities and

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[4] Saumitra Jha, Vijayendra Rao & Michael Woolcock, Governance in the Gullies: Democratic Responsiveness and Leadership in Delhi's Slums, 35 World Dev. 230 (2007); M. Govinda Rao & Nirvikar Singh, *The Political Economy of Federalism in India* (Oxford Univ. Press 2003).

[5] Ministry of Panchayati Raj, Year-End Review 2024 (2024), https://www.pib.gov.in.

divergences. Sections 6 and 7 draw lessons and policy recommendations, positioning India within a broader international perspective.

II. Theoretical Framework and Methodology

i. Theoretical Foundations of Decentralisation

Decentralisation is widely recognised as a critical reform strategy to improve governance, especially in large and diverse polities. It encompasses the transfer of authority, resources, and responsibilities from central to subnational governments with the aim of enhancing public sector efficiency, democratic responsiveness, and local accountability. Scholars typically conceptualise decentralisation through three interrelated dimensions: political, administrative, and fiscal[6].

- **Political decentralisation** empowers local elected officials, enabling citizens to influence policy decisions through voting, representation, and civic engagement. It fosters pluralism and institutionalises bottom-up accountability[7].
- **Administrative decentralisation** refers to the relocation of decision-making and operational responsibilities to local bureaucratic structures. It is closely associated with improved service delivery through proximity to end-users and context-sensitive planning.
- **Fiscal decentralisation** is considered foundational to the autonomy and sustainability of local governance. It includes the assignment of revenue generation powers, budgeting authority, and intergovernmental fiscal transfers to local governments[8].

However, as Bardhan and Mookherjee[9] argue, the success of decentralisation depends not only on institutional design but also on political economy dynamics—such as elite capture, bureaucratic incentives, and intergovernmental bargaining. When not carefully structured, decentralisation can result in fragmented authority, inefficiencies, or increased inequality.

Recent empirical research has also highlighted the importance of hybrid approaches that combine top-down capacity support with bottom-up participation. Gadenne and Singhal[10] show that in India, better-resourced panchayats perform significantly better in health and education delivery, particularly when embedded in inclusive planning mechanisms.

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[6] Dennis A. Rondinelli, John R. Nellis & G. Shabbir Cheema, *Decentralization in Developing Countries: A Review of Recent Experience* (World Bank 1983).
[7] Jean-Paul Faguet, Decentralization and Governance, 53 *World Dev.* 2 (2014).
[8] Paul Smoke, Decentralisation in Africa: Goals, Dimensions, Myths and Challenges, 23 *Pub. Admin. & Dev. 7* (2003).
[9] Pranab Bardhan & Dilip Mookherjee, *Decentralization and Local Governance in Developing Countries: A Comparative Perspective* (MIT Press 2006).
[10] Lucie Gadenne & Monica Singhal, Decentralization and Public Service Provision: Evidence from Indian Local Governments, 161 *J. Dev. Econ.* 102959 (2023).

ii. Concept of Local Self-Governance

Local self-governance represents the real-world application of decentralisation principles. It entails a system in which locally elected bodies manage governance functions autonomously, subject to democratic norms and institutional oversight. Essential features of effective local self-governance include:

- Democratic legitimacy through elections and political representation.
- Clearly defined functional responsibilities aligned with sectoral needs.
- Financial independence with the capacity to raise and allocate resources.
- Transparency and accountability mechanisms such as audits, public hearings, and social audits.

According to Faguet[11], self-governance thrives when local governments have discretion in planning and budgeting, are held accountable by informed citizens, and operate within a supportive legal and institutional framework. The presence of active civil society and robust grievance redressal mechanisms further strengthens governance outcomes.

In the BRICS context, the concept of local self-governance is unevenly applied. While India and Brazil have formal structures for elected local governments, Russia and China rely heavily on centrally appointed actors. These variations affect not only the quality of public services but also the nature of state-society relationships.

iii. Methodological Approach

This study adopts a comparative institutional analysis to examine the structure, performance, and outcomes of local self-governance across the BRICS countries—Brazil, Russia, India, China, and South Africa. It employs a qualitative case study approach, drawing upon a diverse set of secondary data sources, including national policy documents, decentralisation laws, international development reports, and peer-reviewed academic literature.

The analysis is framed around five interrelated dimensions that are essential to evaluating the depth and effectiveness of decentralisation:

- **Legal Autonomy:** The constitutional or statutory status and authority accorded to local governments;
- **Fiscal Capacity:** The ability of subnational bodies to raise, allocate, and control financial resources;

[11] *supra* note 8.

- **Civil Society Engagement:** The extent and institutionalisation of participatory mechanisms enabling citizen involvement;
- **Political Autonomy:** The level of decision-making independence enjoyed by elected local representatives;
- **Administrative Capacity:** The presence of skilled personnel, institutional infrastructure, and procedural efficiency at the local level.

By evaluating each BRICS country along these dimensions, the study uncovers commonalities and divergences, providing insight into how different governance contexts shape the outcomes of decentralisation. The Panchayat Devolution Index 2024, along with other governance and fiscal decentralisation indices, supports cross-national comparison while anchoring the Indian case in empirical detail.

III. Comparative Analysis of Local Self-Governance in BRICS Nations

This chapter gives an integrated analysis of local self-governance in the BRICS countries—Brazil, Russia, India, China, and South Africa—along five key dimensions: legal autonomy, fiscal capacity, civil society involvement, political autonomy, and administrative capacity. Although all five nations profess commitment to decentralisation, the depth and efficacy of their local governance systems differ significantly according to their political context, institutional setting, and historical background.

i. Brazil: Participatory Municipalism and Fiscal Autonomy

Brazil is widely recognised for its strong legal and fiscal framework supporting local self-governance. The 1988 Constitution granted municipalities' autonomous constitutional status, placing them on an equal footing with states and the federal government[12]. This structural autonomy is complemented by significant fiscal capacity, including the power to levy taxes and benefit from structured revenue-sharing mechanisms[13].

Brazil's hallmark innovation is participatory budgeting (PB), first launched in Porto Alegre. This initiative institutionalises citizen participation in budget allocation, improving equity, transparency, and local accountability[14]. However, while major urban municipalities have well-developed administrative capacity, regional disparities persist, and some smaller municipalities lack the technical resources to fully realise these frameworks[15].

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[12] Celina Souza, Participatory Budgeting in Brazilian Cities: Limits and Possibilities in Building Democratic Institutions, 13 *Env't & Urb.* 159 (2001).
[13] Brian Wampler, Participatory Budgeting in Brazil: Innovations and Adaptations, 14 *Glob. Pol'y* 45 (2023).
[14] Wampler, *supra* note 13; Leonardo Avritzer, *Participatory Institutions in Democratic Brazil* (Johns Hopkins Univ. Press 2009).
[15] Imke Harbers, Conceptualizing and Measuring Subnational Democracy Across Indian States, 26 *Democratization* 1 (2019).

ii. Russia: Centralisation Under a Federal Façade

Russia presents a stark contrast. Although the 1993 Constitution recognises local self-governance, the actual autonomy of municipalities has been steadily eroded. Recent legal reforms have eliminated direct mayoral elections in many regions and transferred key decision-making powers to regional governors[16]. This has undermined political autonomy and transformed Russia's federalism into a centralised model.

Fiscal decentralisation remains weak. Municipalities are heavily dependent on regional and federal transfers, with limited authority to raise local revenues[17]. The shrinking space for civic participation, due to tightened political control and constraints on civil society, further reduces citizen influence on local governance. Administrative capacity at the local level remains low, particularly in smaller towns and rural municipalities.

iii. China: Administrative Decentralisation without Political Autonomy

China's local governance operates under a unitary, party-dominated system, where administrative and fiscal decentralisation exist in the absence of political empowerment. Village committees are elected under the Organic Law on Villagers' Committees, but function under the tight supervision of Communist Party cadres[18]. Local governments control a substantial share of public spending—nearly 85% of education, health, and infrastructure delivery is handled sub-nationally[19].

However, local revenue generation is increasingly dependent on upper-tier transfers, especially following restrictions on land sales and leasing. While administrative capacity is high, China's local governments are evaluated through performance targets set by central authorities, not citizen input. The lack of bottom-up political mechanisms limits accountability and responsiveness, despite strong service delivery.

iv. South Africa: Developmental Local Governance with Equity Goals

Post-apartheid South Africa has enshrined developmental local government in its 1996 Constitution, with the aim of redressing historical inequalities and promoting social transformation[20]. The Municipal Structures Act (1998) and Municipal Systems Act (2000) provide for Integrated Development Plans (IDPs)—strategic frameworks that link municipal budgeting to community-identified priorities[21].

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[16] Vladimir Gel'man, *Authoritarian Russia: Analyzing Post-Soviet Regime Changes* (Univ. of Pittsburgh Press 2015).
[17] Rebecca M. Nelson & Cory Welt, *Russia: Domestic Politics and Economy,* Cong. Research Serv., R46518 (2020).
[18] Lily L. Tsai, *Accountability Without Democracy: Solidary Groups and Public Goods Provision in Rural China* (Cambridge Univ. Press 2007).
[19] *supra* note 3.
[20] Edgar Pieterse, From Divided to Integrated City? Critical Overview of the Emerging Metropolitan Governance System in Cape Town, 13 *Urb.* F. 3 (2002).
[21] Patrick Heller, Moving the State: The Politics of Democratic Decentralization in Kerala, South Africa, and Porto Alegre, 29 *Pol. & Soc'y* 131 (2001).

South African municipalities enjoy moderate fiscal capacity, with access to intergovernmental grants and some local taxation powers. Participatory governance mechanisms such as ward committees and community forums are formally embedded in local planning processes. Nonetheless, corruption, financial mismanagement, and staff shortages have impeded implementation, especially in rural and peri-urban municipalities.

v. India: Constitutional Mandate, Operational Gaps

India's 73rd Constitutional Amendment Act (1992) institutionalised a three-tier Panchayati Raj system, making it one of the most legally entrenched models among BRICS[22]. However, implementation has been uneven across states, with significant variation in the devolution of functions, finances, and functionaries.

PRIs have limited fiscal autonomy and are largely dependent on central and state transfers, with weak revenue-raising powers[23]. Mechanisms such as Gram Sabhas and social audits are mandated, but in practice, citizen participation is often irregular or symbolic[24]. Elected local representatives exist, but often face bureaucratic dominance, especially at the block and district levels. While some states like Kerala show innovation and strong institutional frameworks[25], others lack administrative and planning capacity.

vi. Synthesis: Insights from Cross-National Comparison

The comparative experiences of the BRICS countries demonstrate that legal frameworks alone are insufficient to ensure meaningful decentralisation. Brazil and South Africa show that institutionalising participatory mechanisms, such as participatory budgeting and IDPs, enhances accountability and equity. India, despite a strong constitutional foundation, struggles with fiscal centralisation and weak administrative support. China's model prioritises administrative efficiency over democratic responsiveness, while Russia's federal structure has become increasingly centralised.

Table 1 brings together essential decentralisation dimensions of the BRICS nations—Brazil, Russia, India, China, and South Africa. It contrasts five essential indicators: legal autonomy, fiscal capacity, civil society involvement, political autonomy, and administrative capacity, which describe how varying models of local self-administration function in variegated political and administrative conditions. The information highlights that although legal decrees form the basis, effective decentralisation hinges on whether or not there is overlap among fiscal empowerment, citizen involvement, and institutional capacity.

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[22] George Mathew, *Panchayati Raj: From Legislation to Movement* (1994).
[23] M. Govinda Rao & Nirvikar Singh, *The Political Economy of Federalism in India* (2005).
[24] Saumitra Jha, Vijayendra Rao & Michael Woolcock, Governance in the Gullies: Democratic Responsiveness and Leadership in Delhi's Slums, 35 *World Dev.* 230 (2007).
[25] T. M. Thomas Isaac & Richard W. Franke, *Local Democracy and Development: People's Campaign for Decentralized Planning in Kerala* (Bloomsbury Academic, 2002).

Table 1: Comparative Overview of Local Self-Governance in BRICS Nations

Country	Legal Autonomy	Fiscal Capacity	Civil Society Engagement	Political Autonomy	Administrative Capacity
Brazil	High – Municipal autonomy enshrined in the 1988 Constitution[26]	Strong – Own tax powers and federal transfers[27]	High – Participatory budgeting widely adopted[28]	High – Direct elections and strong local policymaking powers[29]	Moderate–High – Strong in urban areas; varies in under-resourced regions[30]
Russia	Low – Constitutional guarantees undermined by legal centralisation	Weak – Reliant on federal transfers, limited taxation	Low – Shrinking civic space and weak local forums[31]	Very Low – Dominated by central executive control[32]	Low – Poor capacity in small municipalities[33]
India	Moderate – 73rd Amendment mandates PRIs; uneven implementation[34]	Weak – Low own revenue; dependent on state/central transfers[35]	Moderate – Gram Sabhas exist; effectiveness varies[36]	Moderate – Elected reps exist; often constrained by bureaucracy	Mixed – Progressive states like Kerala contrast with weaker performers
China	Low – No constitutional local autonomy; party-controlled[37]	Mixed – High local expenditure but limited independent revenue[38]	Limited – Civic participation heavily restricted[39]	Low – Cadre appointments and top-down control dominate[40]	High – Strong implementation capacity; performance-driven system[41]

[26] Celina Souza, Participatory Budgeting in Brazilian Cities: Limits and Possibilities in Building Democratic Institutions, 13 *Env't & Urb.* 159 (2001).
[27] Brian Wampler, *Participatory Budgeting in Brazil: Contestation, Cooperation, and Accountability* (Pa. State Univ. Press 2007).
[28] Leonardo Avritzer, *Participatory Institutions in Democratic Brazil* (Palgrave Macmillan, 2009).
[29] Benjamin Goldfrank, *Deepening Local Democracy in Latin America: Participation, Decentralization, and the Left* (Pa. State Univ. Press 2011).
[30] Thomas Risse ed., *Governance Without a State? Policies and Politics in Areas of Limited Statehood* (Columbia Univ. Press 2011).
[31] Governance Capacities in the BRICS, in *Change Ahead? Sustainable Governance in the BRICS* (Bertelsmann Stiftung ed., 2013).
[32] Vladimir Gel'man, *Authoritarian Russia: Analyzing Post-Soviet Regime Changes* (Univ. of Pittsburgh Press 2015).
[33] TomilaLankina&Lullit Getachew, Mission or Empire? The Human Capital Legacy in Postcolonial Democratic Development, 56 *Am. J. Pol. Sci.* 465 (2012).
[34] *supra* note 24.
[35] *supra* note 5.
[36] *supra*note 4.
[37] Lily L. Tsai, *Accountability Without Democracy: Solidary Groups and Public Goods Provision in Rural China* (Harvard Univ. Press 2007).
[38] Yingyi Qian & Barry R. Weingast, Federalism as a Commitment to Preserving Market Incentives, 11 *J. Econ. Persp.* 83 (1997).
[40] Diana Fu & Greg Distelhorst, Grassroots Participation and Repression Under Authoritarianism, 62 *Am. J. Pol. Sci.* 493 (2018).

South Africa	Moderate–High – Constitutional commitment to developmental local government[42]	Moderate – Local taxes and transfers available[43]	Moderate – IDPs and ward committees institutionalised[44]	Moderate – Local councils elected; political autonomy varies[45]	Moderate – Varies widely; some municipalities face corruption/ capacity gaps[46]

IV. Strategic Insights: Learning from BRICS to Strengthen India's Local Self-Governance

This section presents strategic insights for enhancing local self-governance in India, using the Indian experience as the anchor and drawing comparative lessons from the other BRICS nations—Brazil, Russia, China, and South Africa. The aim is to identify key institutional gaps, suggest context-sensitive reforms, and align India's normative framework with global best practices in decentralisation.

i. From Legal Design to Operational Devolution: India's Incomplete Journey

India's Panchayati Raj Institutions (PRIs) derive their legitimacy from the 73rd Constitutional Amendment, which mandates a three-tiered system of rural local governance. However, this constitutional commitment remains under-realised due to uneven implementation across states. Unlike Brazil, where the 1988 Constitution not only recognises municipalities as autonomous entities but also ensures fiscal and political empowerment, Indian PRIs often lack the authority, capacity, and resources to carry out key developmental functions effectively. Brazilian municipalities have the power to raise revenues and participate meaningfully in planning and budgeting, which enhances local accountability and responsiveness[47] . In India, by contrast, most PRIs are financially dependent on higher levels of government and have limited control over planning decisions. To overcome this, India must empower State Finance Commissions with real authority and enforce the mandatory devolution of all 29 subjects listed in the Eleventh Schedule, as originally envisioned[48] .

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[40] Pierre F. Landry, Decentralized *Authoritarianism in China: The Communist Party's Control of Local Elites in the Post-Mao Era* (Cambridge Univ. Press 2008).
[41] Chenggang Xu, The Fundamental Institutions of China's Reforms and Development, 49 *J. Econ. Lit.* 1076 (2011).
[42] Edgar Pieterse, From Divided to Integrated City? Critical Overview of the Emerging Metropolitan Governance System in Cape Town, 13 *Urb. F.* 3 (2002).
[43] Dep't of Coop. Governance, Republic of S. Afr., State of Local Government Report 2022 (2022).
[44] *supra* note23.
[45] *supra* note22.
[46] S. Afr. Loc. Gov't Ass'n, Annual Report 2021–22 (2022).
[47] *supra* note 13.
[48] *supra* note 5.

ii. Guarding Against Informal Recentralisation

While India is constitutionally a decentralised federal polity, trends in administrative practice often reflect a tendency toward centralisation. This mirrors Russia's trajectory, where, despite constitutional guarantees for local self-governance, power has been steadily centralised under federal and regional executives. In Russia, reforms such as the elimination of direct mayoral elections and the reallocation of municipal powers to regional authorities have undermined local autonomy[49]. A similar erosion is visible in several Indian states, where PRIs are bypassed by powerful bureaucratic hierarchies or controlled through partisan politics. To safeguard decentralisation in India, there is a pressing need for clearer legal protections that insulate PRIs from arbitrary political interference and for judicial mechanisms that enable timely redress in cases of institutional overreach.

iii. Reimagining Citizen Participation: Beyond Symbolic Gram Sabhas

Although the Gram Sabha is a central feature of India's decentralised governance model, its implementation is often symbolic or inconsistent. Many states hold Gram Sabha meetings merely to satisfy procedural requirements, without enabling genuine deliberation or decision-making. In contrast, Brazil's participatory budgeting model allows citizens to directly shape budget priorities, and South Africa's Integrated Development Plans (IDPs) integrate community consultation into the municipal planning process[50]. These mechanisms not only promote transparency and equity but also foster trust in local institutions. For India, revitalising citizen participation involves more than formal mandates. It requires making participatory planning legally binding, using digital platforms to expand accessibility, and integrating citizen feedback mechanisms—such as Jan Manch and Lok Samvad—into governance workflows.

iv. Building Local Capacity: India's Achilles Heel

One of the most persistent barriers to effective decentralisation in India is the limited professional capacity of local government staff and elected representatives. While the election of over three million local representatives is an achievement in scale, many lack the training and institutional support necessary for governance. South Africa faces similar challenges, with many municipalities struggling to maintain consistent service delivery. China, on the other hand, has developed a strong local bureaucracy driven by performance-based incentives, although it lacks democratic oversight[51]. India must institutionalise capacity-building through structured training systems, including Panchayat Resource Centres and ongoing digital education platforms. States like Kerala and Andhra Pradesh have demonstrated scalable models of digital training and mentoring that could be adopted nationally[52].

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[49] *supra* note 18.
[50] *supra* note 26.
[51] *supra* note 43.
[52] G. Ram Reddy & G. Haragopal, *Public Policy and the Rural Poor in India* (1985).

v. A Contextual, Not Uniform, Approach to Decentralisation

The comparative experiences of BRICS underscore that decentralisation is not a one-size-fits-all process. India's diverse political, economic, and administrative contexts demand differentiated strategies across states. While Kerala has implemented bottom-up participatory planning with notable success, many northern and central states lag due to weaker institutions and political resistance. Brazil's robust fiscal model functions well within its mature federal structure, but such models may not be directly applicable to countries like China with centralised governance. For India, decentralisation strategies must be tailored to state-specific realities. Tools like the Panchayat Devolution Index can help map progress and guide targeted policy interventions. Encouraging inter-state learning and innovation can further support adaptation and localisation of successful practices[53].

vi. Institutionalising Accountability: The Missing Layer

Despite formal structures for auditing and evaluation, India lacks a consistent and transparent system for holding PRIs accountable across states. This contrasts with South Africa's well-established municipal audit system and Brazil's civil society-led observatories that monitor local government performance. India would benefit from introducing a national Panchayat Performance Index, with clear indicators on fund utilisation, citizen participation, grievance redressal, and audit compliance. Making these performance metrics publicly accessible through digital dashboards and incorporating tools such as citizen report cards can enhance both top-down and bottom-up accountability. Transparent reporting and citizen feedback must become core components of India's local governance ecosystem to ensure that decentralisation translates into real outcomes.

V. Conclusion and Policy Recommendations

India's constitutional recognition of decentralisation through the 73rd Amendment remains a landmark step in global efforts to build local democracy. Yet, more than thirty years on, there is still a noticeable gap between what the Constitution envisioned and what actually exists on the ground. The experiences of Brazil, Russia, China, and South Africa show that decentralisation is not just about having the right legal provisions. It also requires strong political commitment, capable institutions, adequate financial resources, and meaningful citizen involvement. These international lessons offer valuable insights into how India can rethink and strengthen its approach to local governance.

For decentralisation to work in practice, India needs to move beyond simply meeting formal legal requirements. Panchayati Raj Institutions (PRIs) must be given real power and resources—not just in theory but in everyday governance. Brazil shows how combining legal backing with financial freedom and community participation can make local governance effective and inclusive. On the other hand, Russia illustrates how decentralisation can lose its substance when politics becomes too centralised. India must guard against similar trends by ensuring PRIs are not sidelined by state-level politics or bureaucratic control.

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[53] *supra* note 8.

Citizen participation is another area where much more can be done. Mechanisms like the Gram Sabha often exist more in name than in function. Learning from Brazil's participatory budgeting and South Africa's Integrated Development Plans, India can reimagine these forums as platforms for real decision-making—supported by digital tools and legal safeguards—to make people's voices truly count.

Another challenge is the lack of skilled manpower at the local level. While India has made impressive progress in terms of the number of elected representatives, especially women, many PRIs still struggle with day-to-day governance due to limited training and administrative support. Building dedicated resource centres, offering ongoing digital learning, and providing regular mentoring can help bridge this gap and improve outcomes at the grassroots.

Decentralisation in India also needs to reflect its regional diversity. While states like Kerala have built strong local institutions through participatory planning and innovation, others still lag due to weak political will or institutional inertia. A decentralisation strategy that balances national standards with local flexibility—and encourages states to learn from one another—can help ensure more consistent and equitable development.

Finally, accountability needs to be built into the system. Without effective monitoring, transparency, and public engagement, even the best-structured PRIs can fall short. A national-level Panchayat Performance Index, combined with public dashboards and citizen feedback tools, could offer a meaningful way to track performance and ensure both upward and downward accountability. As India looks to the future, these steps will be essential for making local self-governance a truly transformative force.

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BIOMEDICAL WASTE MANAGEMENT AND RIGHT TO CLEAN ENVIRONMENT: AN INDIAN SCENARIO

Arunima A*

Abstract

The objective of writing this paper is to study the impact of biomedical waste on the environment. This article attempts to offer insights intothe various methods adopted to dispose of the waste generated in biomedical areas. This paper examines the intersection of biomedical waste management and environmental rights, highlighting the regulatory framework, challenges, and strategies for strengthening biomedical waste management.Right to a clean and healthy environment implicit in Article 21 of the Constitution is an essential criterion for the healthy well-being of human life. In order to ensure proper biomedical waste management, protecting human life and health, various judicial interpretationsof Article 21 have been reinforced through landmark judgments and the Biomedical Waste Management Rules, 2016.In India, the vast, growing healthcare sector generates a significant amount of biomedical waste, which poses a threat to the environment and human health. This study examines the Indian scenario, highlighting the challenges and regulatory framework.

Keywords: Biomedical Waste, Segregation, Occupier, Operator, Biomedical Facility.

I. Introduction

With the alarming decline of the natural world, the United Nations General Assembly declared that everything on the planet, even the smallest organism, has a right to live in a healthy and clean environment. Initially, these international conventions gave more importance to air, water, and land pollution and their control measures.Over the years, it has become clear that another critical environmental concern warrants attention alongside air, land, and water pollution. This emerging priority is the proper and systematic management of biomedical waste.The waste that is generated from the hospitals, health camps, nursing homes, clinics, dispensaries, veterinary institutions, animal homes, laboratories, blood banks,etc., during treatment, diagnosis, immunization of human beings or animals, or research activities is enormous and is infectious. Anatomical waste, laboratory waste, sharps, and others if not properly disposed would be fatal. This waste that is generated from all these sources is termed as Biomedical Waste. Management of biomedical waste is not the sole responsibility of the health care sector, but it is also the duty of all people supporting and financing. The role of local self-government is crucial in the management of this biomedical waste. The waste management takes place at the ground level, and these local bodies are the ones who are duty-bound to collect, segregate, and dispose of the waste generated from health care facilities

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Hospitals and their biomedical waste are topic of global concern. It is not limited to one nation; it is a global issue that is being addressed at an international level. Some international conventions[1] speaks about the medical waste management and its effect on the environment, and measures taken to combat such a situation. Howerver biomedical waste has not been comprehensively as a distinct category in Intl. environment law. Some of the conventions, like the Stockholm declaration[2] the Minamata Convention raised the concern of biomedical waste management. The Minamata Convention deals with the effects of the release of mercury from various sources. The medical sector is a major source of mercury release. Mercury is a poisonous metal in liquid form,which is being generated in large quantities from hospitals, clinics, laboratories, etc. It has a wide range of health hazards, including being fatal and toxic to humans and the environment. A report from the U S Agency for Toxic Substances and Disease Registry[3] concludes that biomedical waste poses a great threat to the doctors, nurses, janitors, laundry workers, and refuse workers.

The right to a clean and healthy environment is a basic right of every individual. It has been guaranteed by our constitution through Article 21 that is the right to live peacefully and in a decent environment. The constitution 42nd Amendment Act, 1976[4] has incorporated two new articles with the aim to make the Indian Constitution as the first in the world by giving constitutional status to the environmental protection and implementing sustainable development. Article 48A and Article 51A(g) was the two articles introduced in the constitution. Article 48A states that the State shall endeavor to protect and improve the environment and safeguard the forest and wildlife of the country.Article 51A(g) says that it's the duty of every citizen to protect and preserve the environment[5].

The industrial units located in Rajasthan were producing certain chemicals, such as oleum[6] and H-Acid[7] without obtaining the necessary clearance. The toxic effluents of these industries percolate deep into the sea and pollute the groundwater. The court held that the central government should determine the amount incurred to carry out the remedial measures, including the removal of sludge, and it should be paid to the respondent industries. The surface of the river Palar had been polluted by the discharge of effluents from the tanneries. This was brought to the knowledge of the Supreme Court through public interest litigation. The court observed that, though the leather industry is of vital importance to the countries and generates foreign exchange, it has no right to destroy the environment. From all these landmark judgments, it proved that the judiciary played a very important role in the interpretation of fundamental rights of individuals. The Supreme Court gave more importance to the protection of the environment through various judgments in M C Mehta v. Union of India; M C Mehta v. Kamal Nath[8], etc.

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[1] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 1673 U.N.T.S. 57.

Declaration of the United Nations Conference on the Human Environment, June 16, 1972, 11 I.L.M. 1416.

[3] M. Y. Lichtveld, S. E. Rodenbeck & J. A. Lybarger, The Findings of the Agency for Toxic Substances and Disease Registry Medical Waste Tracking Act Report, 98 *Envtl. Health Persp.* 243 (1992).

[4] Constitution (Forty-Second Amendment) Act, No. 44 of 1976.

[5] India Const. art. 51A(g).

[6] U.S. Envtl. Prot. Agency, *Hazardous Substance Fact Sheet: Oleum (Sulfuric Acid, Fuming)* (2020).

[7] Int'l Union of Pure & Applied Chem., *Nomenclature of Organic Chemistry: IUPAC Recommendations and Preferred Names 2013* (Henri A. Favre & Warren H. Powell eds., Royal Soc'y of Chemistry 2014).

[8] *M.C. Mehta v. Kamal Nath,* (1997) 1 S.C.C. 388 (India).

If proper biomedical waste management is not followed or adopted, it would result in environmental contamination or pollution that would affect the general public's health. If not properly disposed of, it would be toxic to humans or animals or even spread infectious and deadly diseases.

The rapid growth of the medical sector would lead to the generation of biomedical waste on a large scale.This growth could benefit both people and society, but if proper waste management measures are not followed, it can severely harm the environment. Yet another issue faced today with regard to waste management is the lack of knowledge pertaining to the safe disposal of biomedical waste and the segregation of hazardous and non-hazardousbiomedical waste[9].

The COVID-19 pandemic resulted in an increase in biomedical waste all over the world. India is one of the nations that is severely affected by COVID-19 due to poor management of biomedical waste. From the objectives of various conventions like the Stockholm Declaration (1972) and the United Nations Conference on Environment and Development (1992) it can be understood that environmental protection was their priority. But it should be rightly understood that protection and conservation of the environment is not enough, but the proper management of biomedical waste also ensures the right to life under Article 21 of the Indian Constitution.

Biomedical Waste Management Rules 2016[10] and its amendment rules in 2018[11] are the guidelines from the Ministry of environment forest and Climate Change to regulate the handling of biomedical waste. This particular rule applies to all those who collect, receive, store, transport, treat, dispose or handle biomedical waste in any form arising from hospitals, nursing homes, animals house, dispensaries, veterinary hospitals, pathological laboratories, research or educational institutions, blood banks, Ayush hospitals, clinical establishments, health camps, medical or surgical camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs. This enactment doesn't apply to radioactive waste, hazardous waste, municipal waste, battery waste, etc. This enactment alone deals with all sorts of medical waste arising from the aforesaid mandate. Approximately 10 -20 % of waste generated from the health care sector is biomedical waste and is of an infectious nature if not properly managed.

The following are the different types of medical waste:

1. Medical waste: *It is being streamed from hospitals or research centers. It includes dangerous chemicals, radioactive materials, etc*.
2. Infectious waste: *Waste generated from laboratories, body fluids, trash from autopsies, swabs, bandages, etc.*
3. Pathological waste: *Contaminated animal carcasses, tissues, body parts, etc.*

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[9] D. Kanyal, Biomedical Waste Management in India: A Review, 15 *Indian J. Forensic Toxicol.* 10–13 (2021).
[10] Bio-Medical Waste Management Rules, 2016, G.S.R. 248(E), Gazette of India, Ministry of Env't, Forest & Climate Change (Mar. 28, 2016).
[11] Bio-Medical Waste Management (Amendment) Rules, 2018, G.S.R. 234(E), Gazette of India (Mar. 16, 2018).

4. Chemical waste: *Heavy metals, disinfectants, laboratory preparations, etc.*
5. Pharmaceutical waste: *Immunisation Vaccines, pharmaceutical waste, etc.*
6. Radioactive waste: *Radiotherapeutic materials, radionuclides, radioactive diagnostic materials, etc.*
7. Non-hazardous or general waste: *These wastes do not harm and do not pose a threat to the environment.*
8. Solid medical waste: *It includes anatomical waste, needles, infusion sets, bandages, and other contaminated materials.*
9. Liquid medical waste: *Blood, body fluid, dialysis solution, chemical regents, acids, solvents, expired medicines, residues of used medicines, etc.*

II. Role of local self-government and biomedical waste management

Local Self Government is the decentralization of powers among the local bodies such as panchayats, municipalities, etc. They have the autonomy to implement policies and make decisions. They are entrusted with a wide range of functions in implementing programs for eradicating poverty, social welfare, healthcare service, maintaining law and order, managing waste collection, segregation, etc. Among all these functions, waste management, especially biomedical waste management, is a great responsibility of these local bodies. Biomedical waste if not properly treated, would affect public health and the environment.Local self-government plays a significant role in protecting public health and preventingenvironmental pollution. The main part of biomedical waste management is carried out by these local bodies.Educating the public regarding the management of this waste and its collection, segregation, and disposal is the key responsibility of these bodies.

Biomedical Waste Management Rules, 2016 contain the regulations and guidelines relating to the management of biomedical waste, and the Local Self Government should ensure that these healthcare facilities comply with all these rules and regulations. Proper training should be given to the healthcare professionals involved in the collection and segregation of infectious, hazardous and general waste. Autoclaving, microwaving, incineration, gas sterilization, etc., are some of the eco-friendly biomedical treatment and disposal methods. It's the duty of the Local Self Government to ensure that the healthcare facilities are following this environmentally friendly method to treat and dispose of the biomedical waste. If a proper treatment method is not available in the biomedical facility, it should be provided by the local bodies.

III. Steps in biomedical waste management

There are many steps involved in biomedical waste management. Segregation, collection, and pre-treatmentare the exclusive duty of the occupier. He should take all necessary measures to ensure that the biomedical wastes are collected, segregated, and pre-treated without any adverse effect on the environment and health. Treatment and disposal are vested with the operator. The waste thus

collected should be kept in a safe, ventilated room in separate-colored bags.The use of chlorinated plastic bags and gloves, except blood bags, has been totally prohibited after the 2018 Amendment[12]. The chlorinated plastic bags and gloves on incineration release carcinogenic dioxins and furans.By providing bar code facilities to these color-coded bags before transportation and disposal, the biomedical waste should not be mixed up with other wastes. All highly infectious and laboratory waste should be pretreated before transportation.

After the collection of this waste, it needs to be segregated at the point of generation. Color-coded bags should be kept at the places of waste generation,and these color-coded bags should be in line with biomedical waste management rules. Human anatomical waste, animal anatomical waste, soiled waste, discarded or expired medicines, microbiology, biotechnology, and other clinical laboratory waste, and chemical waste should be segregated in the yellow-colored non-chlorinatedplastic bags.Recyclable contaminated waste should be kept in the red colored non chlorinated plastic bags. Waste sharps, including metals, should be collected in the white colored translucent, puncture proof, leak proof, temper proof container and glassware and metallic body implants should be kept in the puncture proof leak proof boxes or containers with blue colored markings. All these bags carrying biomedical waste must be labelled with symbols of bio hazards or cytotoxic hazards as per the rules.[13]

After proper segregation, it should be collected from the waste generation centers at a fixed interval of time on a daily basis. Untreated human anatomical waste, animal anatomical waste, soiled waste, and biomedical waste shall not be stored beyond a period of 48 hours, but if, for any reason, it needs to be stored beyond the said period, the occupier should take all appropriate measures to store this waste and ensure that it doesn't adversely affect the environment or human health. Proper methods should be adopted to prevent biomedical waste from being mixed with municipal waste. The municipal waste and biomedical waste should not be collected at the same time in the same trolley where the biomedical waste is collected. The occupier and operator should provide training to the workers involved in the segregation and collection of this waste. Immunize all the workers and others handling this biomedical waste for protection against diseases like hepatitis and tetanus.

The biomedical waste should be carried from the segregation area to the collection center through closed trolley or containers with wheels for easy transportation. Biomedical waste in this trolley should be kept in the proper ventilated collection center room specifically designed for this purpose and this room should not be nearto the public or visitors room or patient room. Each and every waste so collected in the collection room should be treated in different ways. Human tissues, organs, fetus and other body parts segregated in the yellow bags should be handed over to CBWTF and no treatment should be carried out at the health care facility except pretreatment or sterilization. No treatment shall be carried out at the veterinary hospitals or medical colleges, or animal houses, except for the pretreatmentor sterilization processes on experimental animal body waste, organs, tis-

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[12] Bio-Medical Waste Management (Amendment) Rules, 2018, G.S.R. 234(E), Gazette of India (Mar. 16, 2018).
[13] Paramjit S. Jaswal, Nishtha Jaswal & Vibhuti Jaswal, *Environmental Law* 568 (5th ed. 2021).

sues, including the experimental waste from veterinary hospitals, medical colleges, or animal houses. Animal anatomical waste can be disposed of through deep burial in the veterinary hospitals only in those situated in rural or remote areas.[14]

Soiled waste like blood or body fluids like plasters, cotton swabs, gloves, bags containing discarded blood fluids, etc., in the yellow-colored bags should be handed over to CBWTF. All discarded or expired medicines and pharmaceutical waste in the yellow-colored bags should not be treated at the health care facility and all the expired medicines, including cytotoxic drugs, can be returned to the manufacturer or to CBWTF. If the HCF has its own disposal or treatment facility, it can be disposed of through common biomedical or hazardous waste incinerators with prior intimation to the Central Pollution Control Board and the State Pollution Control Board. The chemical waste in the yellow-colored bags should also be given to CBWTF and not be treated at the collection center.

Most of the HCFs have their own disposal and treatment facilities. In case of anatomical waste contained in the yellow-colored bags should be disposed of through plasma pyrolysis unit or twin chambered compact incinerators with a two-second retention time in the secondary combustion chamberand adequate air pollution control devices, and they should comply with all standards put forth by the Biomedical Waste Management Rules 2016. The same method is adopted for soiled waste. If incineration is not possible, then soiled waste can be treated through autoclaving, hydroclaving, and microclaving. It can also be disposed of through captive deep burial, where these hospitals are located in rural or remote areas.

The HCF, with its own treatment facilities and disposal facility, can dispose of the expired medicine through twin chambers captive incinerators with two seconds retention time in a secondary combustion chamber, which can withstand a temperature of 1200°C with an adequate air pollution control device. The chemical waste should be incinerated in a captive incinerator, or it can be sent to nearby hazardous waste TSDF for disposal. The recyclable waste, like urine bags, tubing, bottles, catheters, syringes without needles, gloves, etc., in the red category shall be pretreated or sterilized using autoclaving, hydrocalving or microwaving, followed by shredding or mutilation, and after sterilization, it shall be given to the registered recyclers. After treatment, this waste should be disposed. Disposal methods may differ according to the efficiency, cost-effectiveness, availability, and impact on the environment. Most of this biomedical waste should be made pathogen-free before disposal. This avoids the spread of infectious diseases. If proper treatment and disposal method is not followed, it would result in widespread disease.

Incineration, autoclaving, gas sterilization, chemical disinfection, microwaving, thermal inactivation, etc., are some of the treatment and disposal methods. Incineration is the process of burning waste at high temperatures ranging from 1800°F to 2000°F. This method has both advantages and disadvantages. The positive effect of incineration is that it reduces waste volume and destroys pathogens, and the ashes that are generated can be reused for agricultural purposes, etc. But the major

[14] Bio-Medical Waste (Management and Handling) Rules, 1998, Gazette of India, Ministry of Env't & Forests 276–84 (July 20, 1998).

concern regarding incineration is the air pollution caused by the release of pollutants like oxides of nitrogen, acid gases, etc., which is the root cause of many issues like cancer, respiratory problems, and neurological damage. If proper methods are not adopted, these residue ashes contaminate the groundwater and soil.

Autoclaving is an alternative method of incineration. It sterilizesor disinfects the biomedical waste before dumping it into the landfills, the steams start for a specific time at a definite temperature and pressure. It's a cost-effective and eco-friendly waste treatment and disposal method. Almost 90% of the biomedical waste are suitable for autoclaving but it is not suitable for cytotoxic pathologic chemical waste. Liquid wastes can be treated through chemical disinfection. Microwaving is another process in which the waste is disinfected through moist heat and steam that is generated by microwave energy.

State Pollution Control Board and Pollution Control Committees are the prescribed authorities for implementation of the provisions of their rules in respect of states and union territories, respectively. The Director General, Armed Forces, Medical Services, under the control and supervision of the Ministry of Defence, shall be the prescribed authorities for the enforcement of the provisionsof these rules in respect of hospitals, clinics, animal houses, veterinary institutions, blood banks, and laboratories of the Armed Forces under the Ministry of Defence.[15]

An annual report to the above prescribed authorities shall be submitted by the occupier or operator of the common biomedical waste treatment facility on or before 30th June of every year. This prescribed authority shall review, compile, and analyze all the information to the Central Pollution Control Board. The Central Pollution Control Board shall review, compile, and analyze this information along with their suggestions, observations, or comments to the Ministry of Environment, Forest, and Climate Change on or before 31st August every year. This annual report is made available to the public through the websites of occupiers, the State Pollution Control Board, and the Central Pollution Control Board. All authorized persons shall maintain records relating to the generation, collection, reception, storage, transportation, treatment, disposal, and handling of Bio Medical Waste for a period of 5 years in accordance with the rules prescribed by the Central Pollution Control Board, State Pollution Control Board, or Central Government, or other prescribed authority.

In case any accident occurs at the institution or facility or any other site while handling biomedical waste or during transportation of segregated waste shall be reported immediately to the prescribed authority about such accident. If it's a major accident like the toppling of trucks carrying biomedical waste, or fire hazard a blast, or the release of any biomedical waste into the water bodies, flooding or erosion of the deep burial pits, etc. It is mandatory under the Biomedical Waste Management Rules 2016 to report each or any major accident by the health care facility to the State Pollution Control Board or Pollution Control Committee, respectively. The record of remedial action

[15] World Health Org., Safe Management of Wastes from Health Care Activities (1999).

should alsobe produced along with it. An accident report should be filed within 24 hours of the accident. If it's a minor accident, it need not be reported. Besides this accident reporting the operator or occupier shall report to the State Pollution Control Board or Pollution Control Committee,if the waste collection agent or CBWTF doesn't collect the bio-medical waste within 48 hours of generation. It's the duty of Healthcare Facilities to report to the State Pollution Control Board or Pollution Control Committee, the reason for storing the biomedical waste beyond a period of 48 hours. They should also report the remedial measures taken by them to ensure no adverse effect on the environment and human health.[16]

The occupier or operator shall be liable under the Bio MedicalWaste Management Rules, 2016 if any damage is caused to the environment or public due to improper handling of waste management. Both occupier and operator shall be liable under Section 5 and Section 15 of the Environmental Protection Act, 1986. Section 5 of the Act deals with the closure, prohibition, or regulation of any operation or process, and stoppage or regulation of the electricity or water supply, or closure of a Health Care Facility. Section 15 of the Act[17] deals with the punishment that can be imposed on the operator or occupier in default. They shall be imprisoned for a period of 5 years or with a fine of up toonelakh rupees for each failure or contravention of the rules or both. If the violation continues, an additional fine ofup to five thousand rupees for every day of violation. If the contravention continues for a period of one year,the offender shall be punished with imprisonment for a term extending up to seven years.[18]

IV. Waste management in other countries

Many nations adopt different methods for biomedical waste management. Germany has implemented a waste management system. They generate around 4500 tons of waste every year. Only one to three percent of this total waste is infectious. Many modern technologies, like landfilling, have been used for the disposal of healthcare waste. When it comes to China, they have paid less attention to waste management before 2003. But the situation has changed after 2003, many enactments and regulationsrelating to health care waste collection, storage, transportation, etc., were put forward by the concerned authorities. Whereas Bangladesh uses dumping methods, Greece uses recycling, reuse, pyrolytic combustion, and landfilling.

V. Environment and climate impact

Climate change is one of the worst effects of environmental pollution, and it has far-reaching consequenceson our ecosystem. We have widely discussed the effect of industrial, transportation, deforestation, etc., as the major causes of climate change, but one least discussed areasand an equal-

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[16] Bio-Medical Waste (Management and Handling) Rules, 1998, Gazette of India, Ministry of Env't & Forests (July 20, 1998).

[17] Environment (Protection) Act, No. 29 of 1986, India Code.

[18] P. Datta, G. K. Mohit & J. Chander, Biomedical Waste Management in India: Critical Appraisal, 10 J. Lab. *Physicians* 6–14 (2018).

ly important area of climate change is the biomedical waste. Improper handling and disposal of biomedical waste leads to environmental pollution. It contaminates the soil, water and air. If the biomedical waste is not properly treated and if it is dumped into the water bodies or on land without adopting proper disposal and treatment methods it would definitely affect the environment adversely. If bio medical waste is dumped into the landfills without any proper treatment, harmful chemicals enter the environment. The release of any biomedical waste not only affects humans, wildlife and the environment, but it also indirectly affects climate change. The introduction of pathogens into the waterbodies can disrupt the aquatic ecosystem, affect the natural balance, andresult in the release of greenhouse gases from biogeochemical processes.

If the landfills are not properly constructed, it would lead to the contamination of the drinking, surface, or groundwater. Incineration is a widely used method of Bio Medical Waste Management treatment. Incineration of metals leads to the spread of toxic metals in the environment. It will also release pollutants into the air resulting in the generation of ashes. If the incineration material contains chlorine, it would generate dioxins and furans, which are human carcinogens, and it affect human health badly. Chemical treatment would produce chemical residues into the atmosphere. Grinding and shredding is another bio medical treatment method that has many negative consequences in the atmosphere. The noise generated from it causes noise pollution. A huge amount of dust is released through grinding and shredding and it contaminates the air and causes air pollution. Landfills, on the other hand, have a long-term impact on the environment if the proper method is not adopted.Many developed nations use landfilling as a biomedical waste treatment method but there are other alternative methods like microwaving, autoclaving etc., which minimize the release of pollutants or other chemical hazardous emissions into the atmosphere.India and a few other nations are now following the international emission standards for dioxins and furans.The biomedical waste accident happening at the time of transportation leads to a severe environmental impact. Risks like spills, potentialexposure incidents, and leakage of hazardous materials have a long-term impact on the environment.

Despite all these rules and regulations, many violationshave been reported throughout India. A newspaper reported an incident in which a used sharp from a hospital was thrown in a public place, which injured a person.Trade in used medical equipment is a worst situation or a major problem faced by the health care sector, which caused a deadly outbreak of Hepatitis B in India. When an investigation was conducted on the outbreak of Hepatitis B in India in 2009, it uncovered a deadly trade in used medical equipment. It showed the corruption and ignorance in the healthcare sector.

The report unearthed a network trading illegally in medical waste. More than 240 people fell ill in a district in Gujarat. Tainted needles were the source of infection in that area. It was found that some of the doctors were recycling the equipment despite the low cost of disposable syringes. Waste pickers were collecting the used needles and syringes that were disposed of from the hospitals, which were allegedly cleaned, repacked, and resold to the private medical clinics. These incidents led to the compulsory use of auto-disposal syringes in the public sector. This has slightly reduced the use of syringes and needles in the healthcare sector, but cases are still being reported in various states across India. No one can confidently say how many used syringes are circulating in the market. However,

the government has taken several measures to prevent this situation from happening again. They launcheda large-scale Hepatitis B vaccination program throughout the nation, especially in the affected areas[19].

The incident that took place in India has not only shocked our nation, but it has also tilted the sentiments of outside nations. Several measures should be carried out to combat this situation. Proper training in the health care sector and awareness programs to inform patients about alternatives to injections, educating them to demand new syringes, and to identify and distinguish between new and used syringes, are considered some of the suggested measures to overcome this situation. New methods should be adopted to ensure that medical wasteis not recycled for its original purpose.

VI. Conclusion

Biomedical waste management is still a concern of the nation. Even if Article 21 of the Constitution provides us the right to live in a clean and pollution-free environment, more and more measures need to be taken to achieve an environment in which we can live without any pollution. A pollution-free environment is still a dream that needs to be secured. Proper implementation of this rule helps in reducing environmental contamination and degradation. Biomedical waste is a less debated topic in environmental pollution issues, but it is one of the main reasons for our atmospheric degradation. Every nation should focus on the management of biomedical waste as it affects public health, the safety of healthcare workers and the environment. Every person involved in the activities from the stage of segregation and collection till the treatment of waste can contribute significantly in reducing the spread of infection, chemical exposure, environmental degradation, etc. So, sustainable biomedical treatment methods help in contributing to a safer and healthier community.

At the same time, it needs to be understood that proper biomedical waste management is not achieved by rules alone but also by strong enforcement and coordinated efforts among healthcare facilities, local self-governments, and regulatory bodies. Judicial interpretations under Article 21 have also shown that protection of the environment is closely connected with the right to life, which increases the responsibility of institutions to handle biomedical waste carefully and scientifically. There is also a need for more awareness and training among healthcare workers because the success of biomedical waste management depends a lot on how responsibly the people at the ground level follow the procedures. In addition to this, adopting eco-friendly technologies like autoclaving, microwaving, and plasma pyrolysis, along with proper monitoring and reporting, can reduce many environmental hazards. By strengthening these measures, we can move towards a more sustainable system of biomedical waste management and ensure better protection of human health and the environment in the future.

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[19] Seetharam S., Hepatitis B Outbreak in Gujarat: A Wake-Up Call, 6 *Indian J. Med. Ethics* 120–21 (2009).

IMPACT OF ARTIFICIAL INTELLIGENCE ON THE INDIAN JUDICIARY SYSTEM

Md. Jiyauddin*

Abstract

As technology keeps on changing how people perform their duties and work, manyaspects of human existence are likely to be substituted or added by novel technologies. While numerous human endeavours have been altered throughout the period as a result of human development,modern technological developments are transforming the practice of law and the way judges make decisions in a judicial process. These duties may range from simple ones, such as process service, to more challenging ones that like as evidence assessments.This would not only eliminate the courtroom time, which would mean more effective utilisation of public duties, but it might also help to diminish the effect of the judge's personal biases in making decisions.Surely, irrespective of howbright they are, trained robots cannot replace human judges. Nonetheless, they may help fairness determine matters through their careful and fair opinions, ensuring that justice isn'tsuffered as a result of dealing with a huge number of cases. The researcher used both primary and secondary data sources in their doctrinal study.Artificial intelligence has demonstrated its value in many different kinds of fields. It will definitely be a blessing to ensure an efficient and rapid justice delivery system. As a consequence, implementing artificial intelligence in the legal system is a viable technique for decreasing case backlog.The objective of this paper is to examine the influence of AI on judicial systems and the issues surrounding the usage of artificial intelligence in court.

Keywords: Artificial intelligence, law & AI, judges, Decision-Making, Judicial Perspective.

I. Introduction

Everything in the human world is legal; everything legal is 'rule-based,' and every rule is intended to fit into facts. Fitting the rules into the circumstances is a difficult assignment; here comes the interpretation to undertake the difficult work. Human environment is built up of an ever-growing chunk of information kept together by a complicated network of laws; as it expands, it becomes more complex. The judiciary maintains order and balance in society by deciding contested facts and upholding justice. The process of judicial decision making is complicated and abstractand also it is influenced by a variety of elements, including the particular judge's background, culture, emotions, intuition and so on. Judges break down facts and fit them into law, bend and twist the law with the instrument of interpretation, and fit it into facts, and have complete control over their own process. Language is the means through which both law and fact are conveyed for presentation before a court. We are all aware that the function of a judge is difficult. It can consist ofinvolvement, complex interactions with individuals, handling of cases, governmental and specific education campaigns,

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comments on society, and adjudicatory activities undertaken alongside other judges or in some jurisdictions, together lay people[1]. These discussion regards artificial intelligence as another strong instrument to be utilised. It will enhance the operation of the judiciary and has no bearing on the previous and contemporary trajectories of technology for information and communication growth in justice systems. Artificial intelligence is depicted as a wholly new technology having absolutely nothing in connection with digital resources on which courts have relied for several decades, such as software for case management and e-filing systems.

Since the 1950s, humanity has actively participated in the practical application of AI. In 1956, John McCarthy delivered one of the first concepts of artificial intelligence at a conference at the University of Dartmouth: "a body of knowledge (science) and methods capable of processing data to develop complex computer problems." Nevertheless, owing to the lack of automated modelling of emotional features, AI fails to entirely replace humans. For example, a judicial system might grant confirmed proof of a defendant in failure to pay compensation; nevertheless, the machine accepts no concessions.Furthermore, AI has several documented problems and failures. It has substantial evidence that AI provides legislative analysis findings but it cannot guarantee a full judicial investigation method.[2]

While using the case of human-like robot Sophia, who was awarded nationality in Saudi Arabia? Chief Justice of India said, "In contemplating the intersection of AI and personhood, we are confronted with fundamental questions about the ethical treatment of these technologies. We must reflect on whether all humans who live, breathe and walk are entitled to personhood and citizenship based on their identity."[3]

According to Teng Hu and Huafeng Lu, artificial intelligence will shape the coming years of professional development and capacity training in legal professional education. The combination of AI Systems and Machine Learning are not a futuristic notion; these are already various technologies implemented into the working of the courts all over the world, such as readmission prediction in a criminal context, prospective justice, and numerous others.[4]

The most recent edition of International Webster's Comprehensive Dictionary of the Language of English (Encyclopaedic Edition) describes artificial intelligence in four different ways.[5]:

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[1] *Tania Sourdin & Archie Zaronni* eds., *The Multi-Tasking Judge: Comparative Judicial Dispute Resolution* (Lawbook Co. 2013).

[2] V. P. Karchevskii, *Man and Robot: Development of Learning Processes,* 4 UNESCO Courier 43 (2022).

[3] Shobhit Gupta, CJI Chandrachud Says World "Confronted with Questions About Ethical Treatment" of AI, *Hindustan Times* (Nov. 25, 2023), https://www.hindustantimes.com/india-news/cji-chandrachud-says-world-confronted-with-questions-about-ethical-treatment-of-ai-101700892345678.html. (last visited Jan. 28, 2026).

[4] Samson Abiodun, *Exploring the Potentials of Artificial Intelligence in the Judiciary,* 5 Int'l J. Eng'g AppliedSci. & Tech. 23 (2020).

[5] International Webster's Comprehensive Dictionary of the English Language (Encyclopaedic Edition) 89

1. A study area within the field of computer science. The creation of machines capable of engaging in human-like mental processes such as learning, reasoning, and self-correction is the focus of artificial intelligence.

2. The idea that robots may be developed to mimic human intelligence in areas such as learning, adaptation, self-correction, and so on.

3. The use of computers to enhance human intelligence in the past, when physical power was increased via the use of mechanised tools.

4. In a narrow sense, the study of ways to make computers work better via improving programming skills.

II. Objectives

1. To highlight the most important uses of AI in the justice system.

2. To gain access to AI's ethical issues in the judiciary.

III. Research Methodology

The current study takes a doctrinal approach, with facts and material obtained from primary and secondary sources, to undertake a detailed examination of the influence of AI in India's justice system. If artificial intelligence is used in our judicial system, what sorts of advantages and impacts will occur? Statutes, regulations, schemes, circulars, expert committee reports, and court decisions are among the major sources. Secondary sources of information used in this study include books, commentaries, dictionaries, encyclopaedias, legal reports, newspapers, journals, and websites.

IV. Review Literature

Promila Dhar,[6] The author discusses the Indian legal system is now suffering a severe difficulty, there is a large backlog of pending cases at all levels of the judicial structure, from Taluka Courts to the Honourable Supreme Court of India. It has lately been challenged that if early action is not taken, the judicial system could fall apart, become practically worthless, and even worse, the general public will lose trust in the legal system. Justice must be served as soon as possible. The Supreme Court noted in one of its opinions that "justice delayed is justice denied." Lastly author explain about the courts, investors, particularly international investors, are concerned about the efficacy of the legal system. When an investor considers investing in India, their first fear is that there would be no fast justice or conflict settlement. This may cause the investor to reconsider his decision to invest.

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[6] Promila Dhar, India: Role of Artificial Intelligence in Justice Delivery System, Warwick Legal Network (2023), https://www.warwicklegal.com/news/627/india-role-of-artificial-intelligence-in-justice-delivery-system (last visited Jan. 14, 2025).

Urvashi Aneja[7] In 2019, the author developed the legal document translation tool SUVAS in 2019, there has been a growing interest in applying AI to automate court processes and legal research. Organisations and academic institutions are developing novel tools for case analysis and prediction. The proposed phase 3 vision statement for the e-Courts project also envisions a future in which repetitive and mechanical activities are automated, significantly reducing pendency and delays in the legal system. Finally, the author stated that while AI in courts is still in its early stages in India, now is a good time to investigate how automation will affect the judicial system and foresee the problems it would cause for individuals, communities, and legal organisations.

Habeeb Ahmed[8], the author defined AI as a discipline of computer science that focuses on the creation of intelligent machines that operate and behave like humans. Speech recognition, recognising images, translation of languages, acquiring knowledge, organising, and solving problems are all examples of activities that artificial intelligence can perform.

Handel, L. M.,[9] author, defines AI as a field of computer science that studies the link between computation and cognition. The purpose of AI is to do tasks that would typically need human intelligence. AI software may replicate and imitate cognitive activities or qualities connected to human intelligence, including as reasoning, resolving issues, and understanding. Lastly author explained that AI applications are integrated in the architecture of numerous goods and sectors, including web search engines, recognition of speech, robotic control, diagnosis in medicine, internet search, advertisements, and entertainment.

Sounak[10], author currently explained that Courts in various locations have installed computerised systems that recognise standard request channels based on a standard language interpretation and perform intelligent file analysis. Furthermore, such systems can generate a case element database for extracting critical elements, indexing legal standards and their implementation situations, and searching facts and regulatory elements. Finally, the author discusses how the conditions of retrieved legal records may be organised as well and mathematical representations can be used to describe the data's qualities along with regulations.

V. Effective Expectations of Artificial Intelligence Legal Protection Application

AI can enhance the "quality" of court proceedings. The judiciary AI advocates hope to use technology in order to analyse similar cases using large amounts of data, develop that corresponds regulations for evidence norms, examine and assess such requirements, preclude incorrect evidence,

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[7] Urvashi Aneja, *Artificial Intelligence in Indian Courts, Responsible Tech* (2023), https://www.responsibletech.in/post/artificial-intelligence-in-indian-courts (last visited Jan. 28, 2026).

[8] Habeeb, *Artificial Intelligence* (2020), available at ResearchGate (last visited Jan. 14, 2026).

[9] L. M. Handel, L. Gaudette, R. Fleming & R. Arnold, *Artificial Intelligence in Higher Education at Worcester Polytechnic Institute* (Worcester Polytechnic Inst. 2024), https://digitalcommons.wpi.edu/iqp-all/5784 (last visited Dec. 20, 2025).

[10] Sounak, *The Reality and Prospects of the Application of Artificial Intelligence in Judicial Practice—Based on the Intelligent Aided Case Management System of Shanghai Court Administrative Cases,* 5 ECUPL J. 67, 67–76 (2018).

eliminate illegal evidence, prevent interference from outside parties, and enhance judicial credibility. Using the Internet, an AI-assisted system can accomplish total transparency of the trial process as well as the court's case-handling method. As a result, judicial proceedings may become more accessible. Using large amounts of information on a single platform, judicial AI may be used to push the case record management application to leave markings throughout the whole procedure, delivering the impact of full monitoring throughout the case adjudication process. The data sharing can help achieve the goal of having identical events that result in the same phrase. Furthermore, judicial AI can not only provide a fresh approach for dealing with challenging problems. It may also help in the harmonisation of judicial decision-making standards.[11]

AI assistance may improve the outcome of court proceedings by saving the judge from having to perform repetitive tasks through the use of voice and image recognition technology, as well as neural network technology. Furthermore, the time required by the court to collect relevant law provisions and comparable instances is reduced. Finally, the judge may create referee documents with a single click, substantially easing the court's resource scarcity. In brief, the application of artificial intelligence inside the courtroom for the trial improves legal processes, permitting judges to concentrate more effort on tackling difficult situations and increasing court efficiency.

VI. AI In the Indian Judicial System

According to statistics from the National Judicial Statistics Grid, India's justice system is clogged with remaining lawsuits. As a result, there is a need for a quick resolution mechanism for unresolved litigation, and in this case, the use of technology will be beneficial to the judges[12]:

- **E-courts:** Based on the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary - 2005," the "E-Courts Project" was established in 2013. This portal's objective was to revolutionise the Indian judiciary via court ICT enabling. E-Court is a centralised site for subordinate courts that provides case information to individuals across the country from any district or taluka court. The portal provides case status, cause lists, orders and judgements.

- **Supreme Court Vidhik Anuvaad Software (SUVAS):** In 2019, the SUVAS site was released, which is an AI-trained machine translation tool. This tool is specifically intended for the judicial domain and has the capacity and competence of translating English Judicial papers, Orders or Judgements into nine vernacular language scripts such as - Marathi, Hindi, Kannada, Tamil, Telugu, Punjabi, Gujarati, Malayalam and Bengali and in the other directions. This programme uses natural language processing to simplify and expedite the translation of judicial orders and verdicts.

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[11] Gulimila Aini, *A Summary of the Research on the Judicial Application of Artificial Intelligence,* 11 Open J. Soc. Sci. 378 (2020), https://www.scirp.org/journal/paperinformation?paperid=98503.

[12] *National Judicial Data Grid (NJDG),Dep't of Justice, Gov't of India,* https://doj.gov.in/the-national-judicial-data-grid-njdg/ (last visited Dec. 26, 2025).

» **SCI - Interact:** In the year 2020, the Supreme Court created a programme named 'SCI-Interact' in order to render all 17 of its benches paperless. This application helps judges access papers, submit annexures to applications, and take notes on machines.

» **The Supreme Court Portal for Court Efficiency (SUPACE):** SUPACE an AI-driven research site aimed to make research easier for judges and thereby reduce their workload was released in 2021. The Supreme Court plans to use this site to harness machine learning to cope with the massive volumes of data received at the time of case filing. This site focuses on several activities such as data mining, legal research, case progress projection and so on.

In March 2023, the Punjab and Haryana High Court employed the AI technology ChatGPT to decide a bail case.[13] The court, led by Justice Anoop Chitkara was considering a bail plea from an accused who was taken into custody in June 2020 on charges of rioting, criminal harassment, murder, and a criminal conspiracy. The judicial bench sought ChatGPT's opinion on the global legal precedent for allowing bail in cases where the accused person has been convicted with a cruelty-related violation. Following a hearing of ChatGPT, the judicial bench denied the accused's bail motion. The judicial bench stated in its order, "To inflict death is cruel in and of itself, but when cruelty leads to death, the situation changes." When a bodily attack is perpetrated brutally, the bail restrictions shift." This is the first time in India that ChatGPT has been utilised to decide on a bail application.[14]

VII. Advantages and Disadvantages of AI

i. Advantages of AI in Judging[15]

a. Efficiency: By speedily analysing enormous amounts of legal documents and extracting essential information, AI may considerably improve the efficiency of the judicial process. This speeds up research, allowing lawyers to concentrate on strategy and debate.

b. Consistency: Unlike humans, AI systems do not suffer from exhaustion or mood swings, allowing them to apply legal rules more consistently. This may help to reduce differences in judgement outcomes. Biases of any kind are readily eradicated, which contributes to the purpose of judicial impartiality.

c. Data-Driven Insights: AI may deliver data-driven insights that help legal professionals make sound judgements. Analysing previous cases and their results might provide useful information for constructing arguments and forecasting probable verdicts. This will eliminate erroneous judgements that may have resulted from a legal error.

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[13] *Jaswinder Singh v. State of Punjab,* CRM-M-22496-2022, at 3 (P&H High Ct. Mar. 31, 2023) (India).

[14] *In a First, Punjab & Haryana HC Uses ChatGPT for Deciding Upon Bail Plea,The Print* (Mar. 28, 2023), https://theprint.in/india/in-a-first-punjab-and-haryana-hc-uses-chat-gpt-for-deciding-upon-bail-plea/1479966/ (last visited Jan. 10, 2025)

[15] *Role of AI in Judging: Advantages and Disadvantages, Prime Legal* (Aug. 20, 2023), https://primelegal.in/2023/08/20/role-of-ai-in-judging-advantages-and-disadvantages/ (last visited Dec. 28, 2025).

d. Time and Cost Savings: By automating repetitive procedures, AI may save legal practitioners and the judicial system a substantial amount of time and money. This will aid in the adjudication of comparable or routine instances that are generally not significantly different from others. Efficiency can assist relieve the strain on already overcrowded judicial systems.

e. Allows for judicial creativity: By enabling AI to rule on regular situations, judges will have more time and freedom to deliberate on more delicate and novel topics. This data may then be put into AI to make it more generic. This would not only relieve the pressure on judges, but will also allow for the fair trial of newer and more delicate matters that demand a meaningful hearing by a human-judge who can comprehend emotions and make appropriate decisions.[16]

f. Aids in the reduction of the number of ongoing cases: Because AI is rapid and efficient, it can aid in the resolution of cases more quickly. AI should absolutely be employed in a country like ours, where there are crores of cases ongoing and more new cases are submitted every year.

g. Cloud data storage can make precedent application easier: If AI rulings from many courts are stored in the cloud, it can be straightforward to discover which court has ruled what on a certain topic. This will facilitate the simple and painless implementation of precedents.

ii. Disadvantages of AI in Judging[17]

a. Lack of Contextual Understanding: AI is incapable of applying minute information to a scenario. It lacks the human ability to apply law depending on the context of the case, which might influence decision-making.

b. Concerns about bias and fairness: AI systems are educated on past data, which may have inherent biases. AI judgements may perpetuate existing imbalances in the judicial system if these biases are not recognised and rectified.

c. Legal Reasoning Complexity: Legal decisions can entail sophisticated reasoning, interpretation, and ethical concerns. The profundity of human legal thought and ethical judgement is difficult for AI to mimic. It is incapable of thinking differently or even comprehending feelings. In this sense, it is a Tutored Box, as it can only apply what it has been taught.

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[16] Karen Yeung, *A Study of the Implications of Advanced Digital Technologies (Including AI Systems) for the Concept of Responsibility Within a Human Rights Framework,* Council of Eur. (2019), https://rm.coe.int/a-study-of-the-implications-of-advanced-digital-technologies-including/168096bdab. (last visited Feb. 20, 2026)

[17] *Id.*

d. Unpredictable Decision-Making: Because AI choices are computational in nature, they can be difficult to explain and question. This lack of openness may weaken public faith in the legal system.

e. Requires reasonable technological efficiency-: In our nation, where the majority of the people still lives in rural regions, not everyone is well-equipped to cope with AI. Even elder generations struggle to keep up with technological innovations.

f. Expensive: It would be costly to set up AI, install computers that would regularly feed it data and hire technical staff. As of today, developing countries will be unable to afford AI.

g. Does not comprehend regional languages: In India, where English is not widely spoken, most cases are argued in regional languages. AI is only available in English, which will provide a problem to Indian courts.

AI that is fully devoid of human psychology flaws may deliver an objective outcome of a study of a complicated collection of data and make reasonable judgements. The absence of emotions in AI will provide a neutral and equitable judge. For example, AI judgeswould never be subjected to the physical or psychological stresses that human judges are subjected to, because all knowledge is a symbol to them. When analysing the potential for innovation of traditional instruments and AI used in judicial practice, the rationality of the conclusions reached and the likelihood of their influence on future judicial practice in general should be assessed. Without a doubt, AI-generated court rulings and human-judged court decisions must adhere to the same principles of fairness as well as the law's standards.[18]

The employment of AI technologies based on a single law for AI and the judge will serve as a foundation for the legal system's stability, as well as ensuring justice and legality as its cornerstone. Furthermore, AI is being used as a tool by judges in the judiciary. Minor issues can be addressed by AI in some countries, signalling caution in its application in the field of justice. Given the lack of transparency in AI algorithms and the importance of justice in democratic societies in general, we believe such an approach is completely unwarranted. To attain the purposes of justice, old ways must be organically merged with new technology. Thus, in order to have a good impact on the judiciary, the AI justice process should be founded on the following principles[19]:

1. The inadmissibility of procedural rights abuse;
2. AI efforts to decrease prejudice.
3. A secure and high-quality AI machine learning framework;

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[18] Aditi Prabhu, *Artificial Intelligence in the Context of the Indian Legal Profession and Judicial System,* in SUPREME COURT OF INDIA, ANNUAL REPORT 2022–2023, at 104, https://main.sci.gov.in/Annualreport/annual_report/SupremeCourt-2023.pdf (last visited Dec. 29, 2025).

[19] *Maria Dymitruk, Ethical Artificial Intelligence in Judiciary* (May 31, 2019), https://www.researchgate.net/publication/333995919_Ethical_artificial_intelligence_in_judiciary (last visited Jan. 13, 2026).

4. The open and unbiased teaching and organisation of justice with artificial intelligence,and
5. The level of autonomy of AI usage for users is adequately provided so that they may best accomplish their procedural functions.

VIII. AI's Role in The Judicial System

The impact of technical advancements and the current COVID-19 epidemic has caused attorneys and judges to recognise the value of technology and the importance of using machine learning and artificial intelligence tools to perform their responsibilities. AI is helpful in the automation of numerous processes and also in the effective and efficient performance of duties. Beyond attorneys and judges, ordinary public access to legal analytics and research tools can promote public involvement and knowledge of the law. Consider the technical advancements that AI will bring to the Indian judicial system. The Supreme Court assists in the analysis of enormous volumes of data relevant to case files, making it simpler for justices to distinguish the essential facts and problems in a new case.

a. **Due Diligence -** Artificial intelligence may assist in automating the process of evaluating vast numbers of papers, identifying significant legal risks and concerns, and providing due diligence reports.

b. **Legal research and analysis –** AI-powered systems may help with legal research by analysing massive volumes of legal material such as case laws, legislation and legal opinions. This will help attorneys and judges make speedy decisions while saving time and effort on manual research. AI can help with time-consuming tasks like e-discovery, contract assessmentand background research.

c. **Automated papers -** AI may be used by businesses to develop standard templates as well as a library of available papers with a single click. It may free up lawyers' time to take on more significant and challenging matters.

d. **Decision making -** AI may enhance human decision-making processes by providing data-driven insights and analysis. AI systems may help humans make more informed and efficient decisions by swiftly processing massive amounts of data and recognizing patterns, leading to improved outcomes.

e. **Intellectual property -** Artificial intelligence may help in the procedures of patent analysis, trademark searches, and infringement detection, making it simpler for attorneys to oversee their clients' patent and trademark portfolios.

f. **Contract evaluation and analysis -** Understanding the terms, dangers and possibilities of diverse agreements is a critical duty for attorneys. As a result, AI assumes the function of a contract manager, understanding and extracting crucial information from contracts. Artificial intelligence may assist you in identifying significant provisions, duties, risks and opportunities in your contracts and comparing them to your standards, best practices and market benchmarks.

g. **Litigation prediction** - AI systems can analyse historical data and patterns to forecast case outcomes and give insights into the chances of victory in legal conflicts. This can help attorneys build successful strategies, manage client expectations, and perhaps reduce the pressure on courts by promoting settlement conversations.

h. **Virtual assistants and legal chatbots** - Legal chatbots and virtual assistants are examples of intelligent technologies that can be developed to give prospective litigants easier and more affordable access to basic legal services while also assisting them in making better decisions about their legal rights. A bot may offer interactive toolkits that prescribe next steps such as finding facts for the issuance of a legal notice, filing an FIR, and even delivering a success forecast based on facts and existing legislation. AI can also analyse enormous amounts of criminal justice-related data to forecast possible criminal recidivism[20].

IX. Examination of Problems in The Judicial Use of Artificial Intelligence

Two concerns require our attention. The first concern is whether artificial intelligence's capacity to improve judicial efficiency is likely to be translated into objective functions. The second concern is whether the application method complies with or violates conventional judicial norms. Furthermore, the limits encountered throughout the specific application technique, as well as the difficulties that arise, provide substantial practical hurdles that need our active response.

- **Essential Flaw:** We must combine judicial reform with new scientific advances, allowing technology to play a bigger role.To reduce litigation and other expenses, we should consider how we may integrate judicial activity with science and technology to create and deploy artificial intelligence products that meet the goals of judicial reform. To that end, we can investigate the judicial use of artificial intelligence and judicial reform. The purpose of judicial system reform is to improve judicial efficiency while ensuring judicial impartiality. During the application process, judicial artificial intelligence systems may appear to accomplish these aims.[21]

- **Prerequisite Error:** According to the operational logic of artificial intelligence, its application is inextricably linked to the help of judicial huge data sets and algorithmic guidance. The present scenario is as follows. First, judicial huge datasets are confusing, untrustworthy, and unbiased. Approximately half of the referee paperwork is not accessible online. Even online referee materials do not include all of the information that might affect the outcome of the referee's decision, pre-trial procedures, and role discussions. The judge's testimony process is frequently closed to the public, and certain judgement documents only include the judges' opinions. The information supplied by the courts is inaccurate. Certain Internet judgement documents include redundant material, as well as multiple

[20] Christopher Rigano, *Using Artificial Intelligence to Address Criminal Justice Needs,* Nat'l Inst. Just. (July 19, 2019), https://nij.ojp.gov/topics/articles/using-artificial-intelligence-address-criminal-justice-needs.
[21] *National Strategy for Artificial Intelligence,NITI Aayog, Gov't of India* (June 2018), https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf (last visited Dec. 29, 2025).

contradictory rulings and variations in local practice. There are Hundred decisions for 100 judges, with 25 similarities; nevertheless, resemblance does not indicate the best way. Artificial intelligence will attempt to handle similar difficulties in the future using historical data. However, many solutions to the same problem may be accessible at different times.

- **Process Defects:** The primary goal of the judicial decision-making system is to objectively evaluate the facts of the case while applying legal principles accurately. First and foremost, proof is necessary for reestablishing the facts of the case. Currently existing judicial artificial intelligence software attempts to replicate the judge's evidence-thinking process. However, in terms of the judge's ability to examine and support evidence, artificial intelligence is ineffectual for force judgement and common judgement proof. Second, true and objective restitution of the facts of the case requires the case handler's skill, value judgements, and, in certain cases, even the judge's spirituality. For example, in divorce proceedings, the court must prove that the couple's connection has broken down before issuing a divorce decree.

In addition to objective evidence, the judge can make a detailed decision during the trial based on the couple's eyes, language and other conduct to establish if the relationship has dissolved.[22] However, no matter how powerful the technology, artificial intelligence cannot mimic a judge's value determinations since it lacks human nature. One expert said that human nature is the source of sentiments and emotions, which is distinct from the intellect that artificial intelligence can replicate. The judge may make a comprehensive decision throughout the trial based on the two people's eyes, language, and other behaviour to determine if the relationship has ended. According to one expert, human nature is responsible for sentiments and emotions, which cannot be replicated by artificial intelligence. Judicial artificial intelligence software struggles to understand the judges' dynamic appreciate judgement.

X. Conclusion and Suggestions

There is currently no autonomous use of judicial decision making in India. A review of relevant literature and legal documents strengthens the study work. As previously indicated, AI-based IT systems might be used in the judiciary to aid judges with their job in a variety of scenarios. Given the increasing number of court-resolved cases and the growing body of legal opinions, it is a viable choice. As a result, the introduction of automated artificial intelligence systems may require regulative and regulatory reconsideration. The right to justice encompasses not only the right to have one's case heard by any specific government body, but that authority must also meet certain criteria. Only judges have autonomy in adjudication, thus a virtual court based on AI would not meet this need. As a result, it would not be considered a court under the Indian Constitution. The author proposes legal changes that would result in the creation of AI systems that aid judges with a variety of court operations.

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[22] Stanley Greenstein, *Preserving the Rule of Law in the Era of Artificial Intelligence,* 30 ARTIFICIAL INTELLIGENCE & L. 291, 291–310 (2022), https://link.springer.com/article/10.1007/s10506-021-09294-4 (last visited Dec. 24, 2025).

As a result, not all court cases, particularly difficult ones, will be handled by automated systems designed to replace judges. According to the study report made accessible here, they should not be employed in every instance or when administration is being reviewed by a judge. In criminal procedures, their use may be limited to a few lower-level scenarios, such as those in which a punitive order can be issued. The most promising uses of AI-based IT systems might be found in judicial processes. We may envisage a variety of scenarios that should be studied in this manner. It is acceptable to build such a system for cases now heard under electronic writ of payment processes, which are already substantially automated. Because of technology breakthroughs and a changing environment, the employment of AI systems in the courtroom is just a matter of time. The development of such systems is clearly promoted by factors such as lower court costs and the fact that, in terms of analytical power, such computers beat even the most able judges. However, the shortcomings in such a change must not be overlooked. Finally, analyse the social roles of the judiciary. The employment of artificial intelligence in the judiciary threatens dehumanising the legal system. When developing such systems, keep them open and secure to avoid unauthorised involvement in the substance of given judgements. The adoption of AI should be preceded by an educational campaign directed particularly at individuals with limited applicable IT (technical) abilities, as well as adequate transition periods. All of this does not alter the fact that, when it comes to the employment of AI in judicial application of the law, the question should be when and to what degree, rather than if it will occur at all. These adjustments are unavoidable.

As AI technology advances, questions regarding data security, privacy, human rights, and ethics may arise, necessitating significant self-regulation by AI developers. The legislature will also be needed to regulate externally through legislation, rules, and regulations, as will the courts through judicial review and constitutional principles. This study focuses on an overview of phenomenon interpretation and general principles, examining the judicial application process of artificial intelligence from a macro perspective.However, in order for artificial intelligence to function effectively in the judicial sphere, its application must be assessed at both the macro and micro levels. As a result, the article's flaw is a lack of necessary thought on how to ensure the implementation and execution of the concept of fair trial in the application process when confronted with very detailed and important problems, such as how to strike a balance between "fairness" and "efficiency" in the application process.

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