

# Biodiversity Conservation and Legal Governance: A Multidisciplinary Framework for Achieving Unsustainable Development Goals

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## Abstract

*The loss of biodiversity has become a critical problem to the sustainability of the world that needs to have multilateral legal and policy solutions. The chapter has looked at the topic of conservation of biodiversity in a multidisciplinary manner, and an analysis of how the constitutional requirements are linked to the statutory provisions as well as the international obligations. It is based on Biological Diversity Act of 2002 and the Constitutional Articles 48A and 51A(g) of India, the Convention on Biological Diversity, and Nagoya Protocol to address how the legal governance frameworks can be oriented to the United Nations Sustainable Development Goals 1415. The traditional rights of tribal communities are given special focus to the Forest Rights Act as well as the adaptive green governance implementation to city biodiversity plans. The chapter recommends integration of cross sector policy, a focus where biodiversity conservation can only be synergised through the integration of environmental law, social equity and technological innovation to achieve the realisation of true sustainable development outcomes.*

**Keywords:** Biodiversity Conservation, Constitutional Law, Sustainable Development Goals, Forest Rights Act, Biological Diversity Act, Green Governance

## I. Introduction

Biodiversity, as a conceptualisation of the broad range of life on Earth, including genetic variation to entire ecosystems, is the substrate on which human

civilisation is premised. Nevertheless, according to some recent reports, biological diversity is weakening and has never been weakened that way. Intergovernmental Science-policy

Platform on Biodiversity and Ecosystem Services (IPBES) has known in its very first Global Assessment published in 2019 that approximately one million animal and plant taxa are now on the brink of extinction, with a large part of them becoming extinct in the next few decades, nearly tens to hundreds of times faster than the average rate of extinction over the last decade million (IPBES, 2019). It is not only an ecological crisis but also a comorbid legal, social, economic and governance crisis of paramount importance.

Erosion of biodiversity is connected to five factors of pressure including changes in land use on land and sea, direct trophic exploitation of life, climate change, man-made pollution, and invasion by alien species (IPBES, 2019). These pressures are exacerbated by the presence of structural inequalities; those between the developed and the developing nations, the city centres and the rural masses, the industrialised economies, and the aboriginal populations which are the traditional holders of biological diversity. India is one of the seventeen megadiverse countries on the planet with 6800 species listed in the world species catalogue which occupy 2.4 per cent of the total covered area in the terrestrial environment (Ministry of Environment, Forest and Climate Change [MoEFCC], 2020). This extraordinary biological richness puts in its place a legal and

moral obligation on India to lead in conservation efforts.

Erosion of biodiversity is related to five pressure factors, which are interconnected and they are changes in terrestrial and marine land use, direct trophic exploitation of life, climate change, anthropogenic pollution, and alien species invasion (IPBES, 2019). These forces are augmented by the fact that there are structural inequalities, not only among the developed and the developing states, the urban centres and the rural peoples, the economies that are industrialised, and the indigenous peoples who have always been the custodians of the biology richness. India is one of the seventeen megadiverse countries in the world, having an approximate population of 785300 species on the world species catalogue and covering only 2.4 per cent of the overall terrestrial area cover (Ministry of Environment, Forest and Climate Change [MoEFCC], 2020). This extraordinary biological richness puts in its place a legal and moral obligation on India to lead in conservation efforts.

In India, biodiversity governance is structured to have a multi-layered architecture, which consists of constitutional provisions, domestic legislation and the international treaty obligations. The constitutional provisions relating to the environment protection are entrenched in the very text

of the Constitution of India, with its Art. 48A and 51A(g), whereas the Biological Diversity Act, 2002 creates the key statutory tool in regards to protecting the environment and sharing the benefits of the biological resources fairly and equally. At the international level, India is a signatory to the Convention on Biological Diversity (CBD, 1992), Nagoya Protocol on Access and benefit sharing (2010), and it signed the Kunming-Montreal Global Biodiversity Framework (2022) which has established a target of protecting 30 percent of the land and water areas by 2030.

Though with such commitments, there is a wide gap between the intentions of the law and the ground realities of conservation. The problem with biodiversity governance remains split institutions, inadequate enforcement systems, poor community involvement, and inadequate funding. The traditional ecological knowledge of tribal and indigenous people, perhaps the best and most efficient custodians of biodiversity, is being systematically underestimated and subject to biopiracy by law. The spread of cities is done with minimal consideration to the ecological connectivity, and the future of technologically advanced conservation tools is still unevenly spread.

The chapter challenges the conservation of biodiversity by utilizing the multidisciplinary approach, which

combines the constitutional law, statutory analysis, and the international legal requirements, community rights jurisprudence, urban planning, and the technological governance. It assumes that successful conservation of biodiversity requires not individual law tools, but an integrated governance system that incorporates law, science, social equity, and innovation in support of the requirements of the United Nations Sustainable Development Goals, specifically SDG 14 (Life Below Water) and SDG 15 (Life on Land). The chapter is organized into ten analytical parts that result in specific policy recommendations which are to be put in place to achieve a single national biodiversity governance strategy.

## **II. Conceptual Framework – Biodiversity and Sustainability**

The term biodiversity was popularised in the 1980s by a biologist, E.O. Wilson and defined within the Convention on Biological Diversity (CBD) as variability in living organisms of any origin including, but not limited to, terrestrial, sea and other aquatic ecosystems and ecological complexes of which they are components; including within-species, between-species and between-ecosystems (CBD, 1992, Article 2). It is this conceptualization of biodiversity in three parts i.e. genetic diversity, species diversity and ecosystem diversity that is the conceptual frame of the current law and policy of biodiversity.

Biodiversity is not an aesthetic or scientific value but a material foundation of human life and wealth. The ecocentric services to provisioning services (food, water, medicine) regulating services (climate regulation, flood control, pollination) cultural services (spiritual, recreational, educational), and supporting services (soil formation, nutrient cycling) are known as ecosystem services and have been grouped into provisioning services, regulating services, cultural services, and supporting services (Millennium Ecosystem Assessment, 2005). These services have been estimated to have an economic value of about USD 125-145 trillion per annum around the world (Costanza et al., 2017), which is more than the global gross domestic product, and this indicates the disastrous economic effects of biodiversity collapse.

Biodiversity and sustainability have a constitutive and instrumental relationship. Biodiversity makes up sustainability in the sense that no long-term human prosperity is imaginable on a biologically poor world. It also contributes to sustainability: a variety of ecosystems are more resilient to shocks, more productive, and more able to cope with the pressures produced by anthropogenic processes (Cardinale et al., 2012). The idea of sustainable development that was offered by the Brundtland Commission and that claims

that sustainable development is a life style in which the needs of the current generation are fulfilled without cutting short the abilities of the future generation to fulfill their needs (World Commission on Environment and Development [WCED], 1987, p.43) implicitly implies that there should be conservation of biodiversity as an inter-generational imperative.

The Supreme Court of India has used this in the Indian legal tradition in its constitutional doctrine of intergenerational equity in the case of *M.C. -Mehta v. Union of India* (1997) where the Court determined that the State was supposed to be a trustee of the natural resources on behalf of the present generation and future generations. The Indian constitutional jurisprudence of the Public Trust Doctrine, which was imported into Roman law via the American environmental law, offers a robust legal tool in the governance of the biodiversity (Sax, 1970). All these theoretical premises, ecological, economic, constitutional, and philosophical, make the preservation of biodiversity the core requirement of sustainable governance.

### **III. Constitutional Mandate for Biodiversity Conservation in India**

The same constitution of India adopted in 1950 before the actual formulation of the modern environmental laws,

however, also carries with it provisions, which the courts have interpreted to cover the protection of biodiversity. In 1976, the 42ND Constitutional Amendment added article 42A to the Directive Principles of State Policy, and mandated that the State should endeavor to protect and improve the environment and also to maintain the forests and wild life in the country. Meanwhile Article 51A(g) was introduced as a Fundamental Duty which obliges all citizens to safeguard and preserve the natural environment that is composed of forests, lakes, rivers and wild life and to have mercy to living beings. Even though Directive Principles have not been considered as enforceable legal rights, the Supreme Court has always believed that they should be interpreted together with Fundamental Rights, specifically the Article 21 (right to life), thus making environmental obligations judicially binding. In *Subhash Kumar v. State of Bihar*, the Court clearly stated in (1991) that right to life under Article 21 encompasses the right to clean water and clean air. This judicial expansion has been increasingly applied to biodiversity related concerns. In *T.N. Goda Varman Thirumulpad v. Forest conservation*, the Supreme Court (1997) has provided a detailed set of guidelines governing forest conservation which in effect constitutionalised the protection of forest biodiversity as a mechanism of long-term judicial supervision of forest management.

The Public Trust doctrine as utilized in *M.C. Mehta v. Kamal Nath* (1997) believes that some natural resources like rivers, forests, seashores, and consequently, the biodiversity-rich environments are owned by the State on behalf of the people and cannot be sold or destroyed to serve personal commercial interests. Mangroves have been safeguarded using this doctrine in *Bombay Environmental Action Group v. State of Maharashtra* (2006) and to dispute the diversion of wildlife corridors to industrial development. Environmental constitutionalism was further institutionalised in 2010, when the National Green Tribunal Act, 2010, created a specially created judicial institution with the power to enforce environmental law, including those relating to biodiversity.

However, there are limitations to constitutional protection of biodiversity in India. The allocation of legislative powers pursuant to the Seventh Schedule makes forests found in the Concurrent List (Entry 17A) and protection of wild animals and birds in the Concurrent List (Entry 17B) potentially leading to federal-state disputes. This means that the protection of biodiversity in India is a matter of judicial interpretation, as opposed to express textual directive, unlike the Ecuadorian, Bolivian, and South African constitutions, which explicitly guarantee the right to a healthy environment (Kothari & Bajpai, 2020). A constitutional amendment to formally

acknowledge the rights to nature and biodiversity, which a number of legal scholars are urging India to undertake, would go an extra mile in enhancing the governance framework in India.

#### **IV. Statutory Framework – The Biological Diversity Act, 2002**

In India, the obligations contained in the Convention on Biological Diversity are addressed by the Biological Diversity Act, 2002 (BD Act). Having been introduced to safeguard biological diversity and promote sustainable use of the biological resources in the country as well as equitable and fair distribution of benefits of bio-resources, the BD Act has created the three-level system of regulations and they are the National Biodiversity Authority (NBA) at the central, State Biodiversity Boards (SBBs) at the sub-national and the Biodiversity Management committees (BMCs) in the local levels.

The BD act gives the NBA the authority to regulate the inflow of foreign nationals, corporate or non-resident Indians into the biological resources, and permission of intellectual property rights in the biological resources excavated in India under section 6 of the BD act. The access-and-benefit-sharing (ABS) model includes that any business or research utilization of Indian biological resources must be accompanied with a fair and just

distribution of the benefits with the local communities, particularly those with related traditional knowledge. The Nagoya Protocol Implementation Rules, 2014 still convert the international ABS commitments of India to the working procedures.

The most conspicuous feature of the BD Act is that it has established the People Biodiversity Registers (PBRs) that are kept by the BMCs and they are preserved to catalogue the local biological resources, their habitat, utilitarian aspects, and any other information about them. The PBRs will perform two functions: contributing as a voice in a court of law to prove that biopiracy is a fallacy as evidenced by a documentary account of the same, and to allow local communities to become active participants in managing the biodiversity (Gadgil et al., 2000). India has over 197000 BMCs, which make up the majority in the country, yet there is no balanced distribution of their PBRs (NBA, 2022).

Despite its broad-brushed mandate, the BD Act has been faced with a chronic problem of implementation. Empirical evidence always indicates that SBBs are systematically understaffed and underfunded, and ABS agreements are never finalised, and punitive measures against violations are not adequate to discourage commercial biopiracy (Bavikatte & Robinson, 2011). In the year

2021, the proposal of amendments to make the use of the act easier by Indian entities, such as the Ayurveda, Yoga, Unani, Siddha, and Homeopathy (AYUSH) industry, received a strong backlash among conservation scientists and indigenous rights groups, as it was argued by critics that liberalizing the access control but not strengthening the benefit-sharing provisions will undermine the fundamental goals of the act (Dsouza, 2021). The inherent conflict between the promotion of bioresource based industries and the maintenance of biodiversity and community rights highlight a central dilemma of governance that cannot be resolved by a simple statutory reform.

#### **V. International Obligations: CBD, Nagoya Protocol, and the Kunming-Montreal Framework**

The international treaty commitments have a greater influence in the biodiversity governance of India. The Convention on Biological Diversity (CBD) adopted at the Earth Summit in Rio de Janeiro in 1992 and which became effective in 1993 had three key objectives: conservation of biological diversity, sustainability of its uses, and fair and equitable sharing of the benefits which accrue as a result of the utilisation of genetic resources (CBD, 1992, Article once more). The largest international

regulatory system of law on biodiversity is the CBD which has 196 parties.

The third goal of the CBD is realised in the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising out of their Utilisation (ABS) of 2010 which came into effect in 2014 and puts forward a clear international framework of ABS. According to the Protocol, the parties are required to take legislative and administrative measures ensuring that genetic resources obtained in their jurisdiction are done based on prior informed consent and on mutually agreed terms, and that the distribution of benefits are equal to the country providing them and the communities (Nagoya Protocol, 2010, Articles 57). The Biodiversity Act and Biodiversity ABS Rules of India is supposed to enforce these requirements though on international level this is very challenging because of the complexity involved in tracking of the genetic resources across the borders.

The other significant recent trend in biodiversity law on an international level is the KunmingMontreal Global Biodiversity Framework (GBF), adopted at COP15 of the CBD in December 2022. The GBF has four overall goals and 23 action goals to accomplish by 2030 to prevent and undo the degradation of biodiversity, and a long-term vision of living in harmony with nature by 2050.

The most prominent, Target 3, also referred to as the 30 x 30 target, binds the parties to ensuring the effective use of at least 30 per cent of the total terrestrial, inland, coastal water, and marine resources in the world by 2030 (CBD, 2022). As in the case of India, the implementation of this objective needs to be intensified by covering the number of networks of the controlled areas or by increasing the work on the preservation of biodiversity in non-protected landscapes, including agricultural and urban landscapes.

India already has two National Biodiversity strategies and action plans (NBSAPs) submitted to the CBD in 2008 and 2014 and is currently working on an updated NBSAP, as per the GBF targets. The biodiversity has always been identified as a core part of the implementation strategy of the Sustainable Development Goals in India as part of the Voluntary National Reviews (VNRs) to the UN High-Level Political Forum (Government of India, 2020). However, the critics notice that the existing net of safeguarded spaces in India (which ratio is roughly 5 per cent of the nation) is not even near the 30 30 guarantee and that the governance of the current reserves is spoiled by intrusion, poaching of creatures, and alterations of the environment associated with climate fluctuations (Wildlife Institute of India, 2021).

## **VI. Tribal Communities, Forest Rights, and Biodiversity Conservation**

Co-relationship between tribal and indigenous communities and biodiversity is a multidimensional interdependence that has been strictly recorded in various ecosystems. Empirical literature continues to show that lands under the control of indigenous communities have significantly greater rates of biodiversity as compared to lands under official state control (Garnett et al., 2018). Scheduled Tribes and Other Traditional Forest Dwellers (which constitute about 8.6 percent of national population) are concentrated in the most biodiverse areas of the nation, namely: the Western Ghats, the Northeast, the central Indian forests, and the Andaman and Nicobar Islands.

Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights): The Scheduled Tribes and Other Traditional Forest Dwellers, 2006 is a landmark act that tried to give forest rights to the tribal communities which had never been accorded forest rights in the previous regimes, under the colonial and post colonial rule. The FRA provides individual rights to forest land to be utilized in habitation, cultivation and Community Forest Rights (CFRs). These CFRs confer the rights to protect, regenerate, conserve and to manage the community forest resources (FRA, 2006, Section 3). In particular, CFRs may be

considered as the powerful instrument in the protection of biodiversity, in which the local communities are able to possess the legal ability as well as institutional will to administer the forests, which they have constantly administered.

The indivisible nature between environmental protection and tribal rights has officially been accepted by the Supreme Court of India. The Court decreed in *Orissa Mining Corporation vs. the Ministry of Environment and Forest* (2013) that the gram Sabha of the Dongria -Kondh tribe could decide whether to mine or not in the Niyamgiri Hills, which was a recognised biodiversity hotspot and sacred land of the people, in favour of community consent in making environmental decisions. The latter is linked to this precedent with the principles of the Free, Prior, and Informed Consent (FPIC) in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007) and ILO Convention No. 169 on Indigenous and Tribal Peoples (1989).

The accumulated knowledge, practices and beliefs about interactions of living entities (people included) and the environment as compiled by indigenous people through a process of adaptation and passed down through generations is known as Traditional Ecological Knowledge (TEK) which is being recognized as a vital resource in conservation of biodiversity and

sustainable development (Berkes, 2008). One of the mechanisms through which TEK can be documented is in the Protected Biodiversity Reserve (PBR) system of India, which was implemented in accordance with the Biodiversity Act. Nevertheless, documentation, without a strong legal framework against misuse and a real community ownership of its application, is not enough to protect the very knowledge and those who preserve it. To that end, the creation of a sui generis legal framework on the protection of TEK in balance with the CBD and the WIPO frameworks is an urgent legislative priority.

## **VII. Urban Biodiversity and Green Governance**

Since the urban population of India keeps growing, which is expected to hit 600 -million people by 2031 (Ministry of Housing and Urban Affairs, 2019), the management of urban biodiversity has become one of the most important, but least studied sides of the national sustainability policy. The urban ecosystems are fragmented and modified and they are the home to immense biodiversity, in the form of urban forests, wetlands, green corridors, parks, and informal green spaces. Such ecosystems provide crucial services that include purification of air, alleviation of urban heat island effect, control of storm water and psychological health (Elmqvist et al., 2013).

The Smart Cities Mission initiated in India, in 2015, provides an institutional means of incorporating biodiversity factors in the urban development. However, a methodical review of the Smart Cities proposals shows that the use of biodiversity indicators is not often involved in the city building plans, and urban growth still jeopardizes ecologically valuable regions in the urban areas, such as wetlands, sacred groves, and river corridors (Nagendra et al., 2018). Cities like Bengaluru, Hyderabad, and Chennai among others have recorded the destruction of urban wetlands which are the most important habitats of migratory birds and natural flood defenses despite being ordered by the judiciary to preserve them.

The lessons of the comparative experience are presented by Singapore, City in a Garden model and the German urban biodiversity legislation. Singapore has incorporated biodiversity within its urban master planning by including the Nature Areas network, ecological profiling, and compulsory proportion of green plots to new developments (Tan et al., 2013). The Federal Nature Conservation Act of Germany obliges the consideration of the biodiversity in all spatial plans and the ecological compensation of the inevitable losses of biodiversity (Bundesstaat im Naturschutz, 2020). Such models imply

that proper governance of urban biodiversity requires a combination of regulatory compulsions and positive planning commitments both of which India does not have in its present urban governance system.

### **VIII. Technology and Innovation in Biodiversity Conservation**

Digital and biotechnological revolution is changing the nature of biodiversity monitoring, conservation planning and governance. Remote sensing imaging techniques, such as satellite images, LiDAR, and drones, have now made it possible to monitor forest cover change, habitat fragmentation, and conversion of land use in near-real-time scales that were previously impossible (Turner et al., 2015). The Forest Survey of India, a body in India, has been using satellite-based monitoring to come up with bi-annual State of Forest Reports, which are used by policy makers in matters relating to forest management and conservation of the protected areas.

Machine learning algorithms are increasingly used to predict the biodiversity hotspots, simulate the effects of climate change on the species ranges, and establish optimal locations of the protected area networks (Guisan et al., 2013). The eDNA (environmental DNA) technology that allows detecting species with the help of genetic material

released to water, soil, or air has reinvented biodiversity assessment because it is significant as it enables the rapid identification of entire ecological communities with non-invasive processing (Bohmann et al., 2014). These technologies are quite relevant in the freshwater biodiversity monitoring of India that is among the most threatened and least reported in the world.

Digital Sequence Information (DSI) as the term is defined as digital genetic sequence information generated out of biological resources has become one of the most controversial topics in modern biodiversity governance. The issue of whether DSI fell under the ABS framework of the CBD and Nagoya Protocol since it can be accessed and used without the physical location of the biological resources was a key point of the negotiations at COP15 and it resulted in an agreement establishing a multilateral mechanism to share benefits derived by the use of DSI, with a special global fund (CBD, 2022). A country like India has great national interest in the fairness, transparency, and functionality of the DSI governance mechanisms since it serves as a source of much diversity and genetic resources.

Biological Diversity (Amendment) Act, 2023 also came up with the provisions to support bioresource based research and innovation, especially to the AYUSH industry and local companies. The

technological innovation of the industries based on biodiversity should be fostered, but it should be underpinned on sound protections to ensure that the commercialisation of genetic resources is not done without sharing significant benefits with the source communities (Dsouza, 2021). Technology, overall, should be controlled, not only implemented.

## **IX. Alignment with UN Sustainable Development Goals**

The conservation of biodiversity is a critical nexus crossing a number of SDGs, which explains the acknowledgment inherent in the 2030 Agenda that environmental sustainability cannot exist independently of social development and economic advancement. Whereas SDG14 (Life Below Water) and SDG15 (Life on Land) are the most directly relevant goals, the management of biodiversity is substantively linked to no less than eight of the seventeen SDGs.

The SDG 15 objectives include the elimination of deforestation, rehabilitation of degraded land, protection of the mountain ecosystem, elimination of poaching and trafficking of the endangered species, integration of biodiversity values in the national and local planning systems, and mobilisation of financial resources towards the conservation of biodiversity (United Nations, 2015). The development of India

in comparison to SDG 15 indicators is a mixed picture: the governmental data claim that the forest coverage is increasing marginally, but when independent reporting is considered, it is feared that the quality of forests, especially, the plantation forest cover, is instead of the natural forest, and that the governance of the area under protection is not sufficient (WWF India, 2022).

SDG14 deals with the protection of the marine ecosystem and coastal ecosystem, control of fishing, reduction of marine pollution and safeguarding of coral reef. The 7,517 km coastline and Exclusive Economic Zone of India has an extraordinary marine biodiversity comprised of coral reefs in the Lakshadweep Islands and the Gulf of Mannar, seagrass meadows and mangrove forests which serve as breeding grounds of some important commercial fish species. It has been criticized that the Coastal Regulation Zone Notification (2019) has weakened protection of ecologically sensitive coastal areas to promote tourism and industrial development (Menon and Kohli, 2020).

The nexus of biodiversity and SDGs goes beyond SDGs 14 and 15. SDG 1 (No Poverty) and SDG 2 (Zero Hunger) are closely interconnected with biodiversity as the rural and tribal populations depend on ecosystem services to obtain food, water, medicine, and livelihood.

SDG3 (Good Health and Well-Being) relates to biodiversity also because the pharmaceutical industry relies on natural compounds, and because zoonotic diseases (the emergence of which is strongly associated with habitat destruction and wildlife trading) are a social issue of health concern (Daszak et al., 2020). SDG 13 (Climate Action) is closely connected with biodiversity both in terms of forests and wetlands as carbon sinks and due to compounding impacts of climate change on species extinction. The idea of managing the loss of biodiversity and climate change simultaneously, so-called twin crisis approach, is becoming more and more popular as a scientifically supported and policy-effective measure (IPBES-IPCC, 2021).

## **X. Challenges and Policy Recommendations**

Biodiversity governance architecture in India is relatively well-developed in terms of legal complexity, but it faces structural problems. The National Biodiversity Authority and State Biodiversity boards are continuously underfunded, overworked and operationally weak. Biodiversity Management Committees, which are meant to be the engine of the system at the grassroots, have been operationally in the name only in most states and the quality and utility of the People Biodiversity Registers is unevenly

distributed (Bavikatte & Robinson, 2011). The coordination between the MoEFCC and the Ministry of Tribal Affairs and the Ministry of Agriculture is still quite internalized thus the mandate and incoherence of the policies.

The bio-piracy still poses a threat to the Indian biological wealth. Although patents have been effectively challenged on neem, turmeric and basmati rice, the Digital Sequence Information phenomenon establishes new, previously uncharted vectors of misappropriation of genetic resources (Shiva, 2001). Climate change only increases these issues by increasing the rate of extinction of species and compromising currently protecting investments in conservation- to current predictions, up to 70 per cent of plant species in the western Ghats would be locally extinct by 2080 with high-emission scenarios (Krishnaswamy et al., 2014).

There are five recommended policy interventions. Firstly, a full National Biodiversity Strategy has to be issued with the targets of the Kunming-Montreal Global Biodiversity Framework, the Paris Agreement, and the 2030 Agenda consolidated into one legally binding instrument with specific timeframes and accountability measures. Second, the Biological Diversity Act should be reinforced and no longer amended to facilitate easier access, but

strengthened by increasing the enforcement of ABS, giving the BMCs specific funding, and creating a sui generis legal framework on the protection of Traditional Ecological Knowledge. Third, urban biodiversity should be centralized by enforcing Biodiversity Impact Assessment of all urban development schemes and minimum legal green area provision in urban and cities master plans. Fourth, it is necessary to operationalise a specific Biodiversity Finance Mechanism based on green bonds, international climate finance, and biodiversity offsets, to fill the USD 700 billion per year biodiversity financing gap (Deutz et al., 2020). Fifth, and most importantly, the forest and community rights of tribal people under the Forest Rights Act should be full-fledged implemented- the community-conserved areas should be the same as state-protected areas under the law and the major line of protective biodiversity of India.

## **XI. Conclusion**

The necessity to protect the biodiversity is not an auxiliary matter on the environment, but a civilizational obligation. The chapter explores the biodiversity governance in India using the approach of a multi-disciplinary approach by assessing the constitutional provisions, legislative acts, global obligations, rights of the communities, ecological systems in urban areas, and

technological regulation frameworks. The paper illustrates that India has formally advanced structure; nonetheless, this structure is not supported by institutional strength, financial resources, and political will to implement this framework into transformative conservation realities.

Biodiversity protection is set as a duty of the Indian State and its citizens, and the Articles 48A and 51A(g) of the Constitution, supported by decades of the Supreme Court jurisprudence, cement it. The Biological Diversity Act, the Forest Rights Act is an integrated collection of the statutory architecture of the conservation and benefit-sharing. The territory has been compelled to protect one-third of its lands and seas by 2030 by the KunmingMontreal Global Biodiversity Framework ratified by India, and that will require immediate, systematic changes in governance.

The main finding of this discussion is unanimous: no law can protect biodiversity. It will be necessary to have a combination of stringent legal frameworks, neighbourhood empowerment, technological creativity, urban ecological planning, and transformative financing in line with the unified goals of the Sustainable Development Goals. India is a megadiverse democracy with a strong

history of environmental constitutionalism, which has the ability and obligation to lead this synthesis. The spear of irreversible biological loss is narrowing, and the law is already there, and the force must now be the will and the sense of urgency and action.

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