BIOPROSPECTING VIS-À-VIS ACCESS AND BENEFIT SHARING UNDER THE BIOLOGICAL DIVERSITY (AMENDMENT) ACT, 2023: THE FUTURE OF PROTECTION OF INDIGENOUS KNOWLEDGE AT THE CROSSROADS OF GLOBALISATION

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Abstract

Globalisation, a multifaceted phenomenon, characterised with increased interconnectedness and interdependence of nations, economies and cultures, has permeated exchange of ideas, goods, services and technologies from the global to the local level. While such exchanges have made phenomenal advancements to humanity as a whole, it has substantially posed risks to the protection of indigenous knowledge. Bioprospecting, an emerging discourse in biotechnological developments, involves exploring the socio-economic value of various ecosystems and biological diversity in order to make new discoveries and products, further commercialising biodiversity. India is home to diverse traditional knowledge about medicinal, agricultural and ecological benefits sourced from nature, which has existed for thousands of years. However, in the wake of globalisation, there has been an increase in the exploitation of such indigenous knowledge by capitalists and multinational conglomerates who corner the profits made from commercialisation of the indigenous knowledge without fair and equitable benefit sharing with the indigenous discoverers. Access and Benefit Sharing (ABS), one of the cardinal objectives of the Biological Diversity Act and the indigenous knowledge protection regime encompasses the manner in which biological diversity can be accessed for use in academic research or industrial application and how the profits made from deploying traditional knowledge for utilising the commercial potential of biodiversity must be reciprocated to its providers in a fair and equitable manner. The 2023 amendments to the Biological Diversity Act (2002) have prioritised ease of business and profit-making for capitalist corporations over fair and equitable benefit sharing with the indigenous providers. This paper investigates the implications of the

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amendment on the protection of indigenous knowledge in the backdrop of this globalising world. The key changes in the act relating to ABS clearly circumvents the obligations of India under the Convention on Biological Diversity as well as the Nagoya Protocol. This paper will examine how the new biodiversity protection regime has transformed into a regime that exposes traditional knowledge to substantial threats at mercy of conglomerates to further exploit it.

***Keywords**: Intellectual property Rights, Commercialization, technology transfer, licensing, innovation policy, economic growth, Third–world countries, and sustainable development*

1. INTRODUCTION

Human beings and the natural environment have coexisted harmoniously for centuries. This symbiotic relationship has ensured the sustenance of human life on Earth. The Earth's biosphere, encompassing diverse life systems, has provided divergent habitats for numerous species of flora and fauna, many of which remain undiscovered by humans. The existing biological diversity is a showcase of the genetic differences among species living in distinct habitats. However, with the advent of industrialization and rapid population growth in this globalizing world, there has been widespread exploitation of nature and its resources to meet insatiable human demands. Bioprospecting, an emerging discourse in biotechnological developments, involves exploring the socio-economic value of various ecosystems and biological diversity in order to make new discoveries and products, further commercializing biodiversity. A nation's capability to convert the potential of biodiversity in a sustainable manner to further their economic as well as scientific development marks their real growth. Our future will be determined by our ability to utilize existing knowledge to create wealth for all living beings, whether flora or fauna, on this planet.

The global north actively engages in the depredation of biological resources belonging to developing and underdeveloped nations so as to establish a new world order of economic dominance.[1] The race to the bottom theory in environmental policy entails both the rollback of existing regulations and the implementation of new policies and even legislation in countries

[1] Shambhu Prasad Chakrabarty and Ravneet Kaur, "A Primer to Traditional Knowledge Protection in India: The Road Ahead" 42(3) Liverpool Law Review 402 (2021).

of the biologically diverse global south that promote less environmentally friendly practices but prioritize foreign investments for research and development. This move often results in multinational corporations pillaging the natural resources of third world countries for their own development under the garb of 'development for all'. While it's incumbent upon states to ensure the overall development of their citizenry as well as their economy, they cannot turn a blind eye to the livelihood of indigenous tribal groups who are totally dependent on the green cover for their survival.

2. BIOLOGICAL DIVERSITY PROTECTION: OVERVIEW OF THE LEGAL PERSPECTIVE

2.1. INTERNATIONAL LEGAL FRAMEWORK

The evolution of International environmental in the 20th century saw the emergence of numerous substantive, procedural, and institutional rules, all aimed at protecting the environment. The UN Conference on Human Environment or Stockholm Conference (1972) was the first major attempt to address global problems related to conservation and regulation of the human environment by international agreements on a universal level.[2] This protection regime addresses aspects like conservation of biodiversity, water usage, pollution, desertification, and the limited availability of resources necessary for human survival, among others. In 1992, the UN Convention on Environment and Development or Earth Summit, marked a milestone in the efforts of the global community to forge international consensus to address the protection of the global environment.[3] Five documents were adopted in this conference, one of which was the Convention on Biological Diversity (CBD) which aimed at conservation of biodiversity, sustainable use of biological resources, fair and equitable sharing of the benefits derived from the gene stock, use of biological resources, traditional knowledge and other incidental matters.[4] In compliance with the third objective of the CBD, the Nagoya Protocol was adopted as a supplementary agreement with the CBD in 2010.[5] It aims to ensure fair and equitable sharing of benefits arising from the utilization of genetic resources, thereby contributing to the conservation and sustainable use of biodiversity.

[2] The United Nations Conference on Human Environment (Stockholm Conference), 1972.
[3] The United Nations Conference on Environment and Development, 1992.
[4] The Convention on Biological Diversity, 1992.
[5] The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity, 2010.

2.2. NATIONAL LEGAL FRAMEWORK

India is one of the most megadiverse countries in the world and is home to a large number of species of flora and fauna, as well as a reservoir of age-old traditional and indigenous knowledge. Since India is a signatory to CBD, in order to bring effect to its obligations, the Biological Diversity Act (2002) was passed, which embodied the cardinal principles and objectives of CBD.[6] This act aimed at creating a three-tiered institutional structure that would oversee the conservation of biological diversity, protect traditional rights and knowledge and regulate the use and access of biological resources. It applies benefit-sharing provisions to research, commercial utilization, bio survey as well as utilization. The Indian legal framework has also embodied the principles of the Nagoya Protocol. By affirming the rights of communities managing local ecosystems, it establishes a biodiversity framework that incentivizes the use and access to these ecosystems through the fair and equitable sharing of monetary benefits derived from the commercialization of resources by researchers or industrial corporations back to the indigenous holders. However, the obligation to protect the rights of indigenous communities has not been effectively implemented. The governance structure has failed to conserve and promote the sustainable use of the environment.

The biodiversity legal framework took a drastic turn regarding the provisions related to access to genetic resources and the fair and equitable sharing of benefits arising from their utilization after the 2023 amendments to the Biological Diversity Act (BDA).[7] The amendments were made in a hasty manner without following a democratic deliberative discussion and proper representations of the concerned stakeholders. From the ambiguity in what 'codified traditional knowledge' clearly constitutes to removal of representation of indigenous groups or local people in deciding the terms and conditions of benefit sharing to exempting registered AYUSH practitioners from the purview of the act, these amendments have opened the floodgates and loopholes for misuse by industrialists and multinational corporations. This article will examine the 2023 amendments to the Biological Diversity Act (BDA) from the perspective of indigenous groups, focusing on how bioprospecting under the new regime may allow capitalists to monopolize profits from the utilization of genetic resources under the guise of development for all. It will discuss the impact of changes to benefit-sharing provisions and how this new

[6] The Biological Diversity Act, 2002 (Act 18 of 2003).
[7] The Biological Diversity (Amendment) Act, 2023 (Act 10 of 2023).

approach undermines the environmental jurisprudence established in alignment with the objectives of the CBD and Nagoya Protocol.

3. BIOPROSPECTING IN THIS GLOBALISING WORLD - A CATALYST FOR SCIENTIFIC AND ECONOMIC INNOVATIONS

In our rapidly globalizing world, the exchange of ideas and resources has significantly contributed to the scientific and economic development of all nations. With the limited availability of natural resources, it becomes imperative to explore their socio-economic value sustainably. The potential of biological resources and knowledge sourced from biodiversity is not priceless or limitless, as its unsustainable use and exploitation come at the cost of the livelihood of indigenous groups, who have been entirely reliant on the green cover for their survival for centuries. The aspirations of mankind often overlook the two-fold role biodiversity plays in the sustenance of life on this planet, which encompasses the regulation and stability of other life systems as well, beyond the subsistence of human life.

The progress made in biotechnology has contributed to valuable innovations of commercial importance, be it in the field of agriculture, pharmaceuticals, gene stock, healthcare, to name a few. Bioprospecting, an emerging discourse in biotechnology, refers to the systematic search for and development of new sources of chemical compounds, genes, proteins, and other products from nature, particularly from plants, animals, and microorganisms.[8] Be it chemical, gene or bionic prospecting, bioprospecting as a process is also underpinned by the understanding that indigenous knowledge holds a vast array of untapped potential that can address human needs and challenges, from curing diseases to enhancing agricultural productivity, at a large scale. While such an avenue can be highly rewarding for mankind at large, the skills and protected knowledge of indigenous communities are significantly compromised during the process. The unsustainable and unfair exploration of biodiversity has resulted in unprecedented environmental degradation and loss of biological diversity, pushing various species of flora and fauna into extinction, ultimately impacting the standard of living the tribal communities have led for ages.

Multinational corporations (MNCs) and industrialists play a pivotal role in globalization, engaging in various activities that promote the interconnectedness of markets, cultures, and

[8] Palpu Pushpangadan, Varughese George, Thadiyan Parambil Ijinu and Manikantan Ambika Chithra, "Biodiversity, Bioprospecting, Traditional Knowledge, Sustainable Development and Value Added Products: A Review" 7(1) Journal of Traditional Medicine and Clinical Naturopathy 256 (2018).

economies worldwide. They indulge in bioprospecting primarily to gain a competitive edge. By discovering and developing unique natural products, they can create new, patented products that can dominate markets and drive significant profits. The commercialization of bio-prospected resources contributes to scientific and economic development both locally and globally. For example, bioprospecting has the potential to address some of the most pressing global health challenges. The discovery of new medicinal compounds from traditional knowledge can lead to the development of novel therapies for diseases that currently have limited treatment options. However, this dialogue of 'well-being and social good of all' constructs a hegemonic narrative, completely marginalizing the viewpoints of indigenous communities regarding access to their territories and use of their indigenous knowledge.

4. ROLE OF INDIGENOUS KNOWLEDGE IN BIOPROSPECTING- THE 'DEVELOPMENT FOR ALL' RHETORIC

Traditional knowledge (TK) is a form of intellectual property with no universal definition. The World Intellectual Property Organization (WIPO) has taken initiatives to protect traditional knowledge, genetic resources and traditional cultural expressions. The Model Provisions for National Laws on the Protection of Expressions of Folklore against Illicit Exploitation and Other Prejudicial Actions (1982), a joint initiative of WIPO and UNESCO, was the first step taken at an international level towards the protection of traditional knowledge.[9] In May 2024, the WIPO Member States reached a significant milestone by adopting the WIPO Treaty on Intellectual Property, Genetic Resources, and Associated Traditional Knowledge.[10] This groundbreaking treaty marks the first comprehensive international agreement addressing the complex intersection between intellectual property, genetic resources, and traditional knowledge.

The indigenous and local communities hold TK in profound respect, viewing it as a core component of their cultural identities.[11] This reverence is well-founded, as TK is not only a repository of historical wisdom but also a crucial element for their future well-being and cultural vigour. It encompasses a broad spectrum of information, practices, and beliefs that have been passed down through generations. TK is particularly relevant in the face of

[9] Model Provisions for National Laws on the Protection of Expressions of Folklore against Illicit Exploitation and Other Prejudicial Actions, 1982.
[10] World Intellectual Property Organization, *WIPO Member States Adopt Historic New Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge*, PR/2024/919 (May 24, 2024).
[11] World Intellectual Property Organization, *Intellectual Property and Traditional Knowledge*- Booklet n 2 (2005).

contemporary environmental challenges such as climate change, biodiversity loss, and natural resource depletion, as the indigenous and local communities have developed sustainable practices over centuries, enabling them to live in harmony with their environment. While traditional knowledge includes knowledge of local ecosystems, medicinal practices, agricultural techniques and cultural rituals, indigenous knowledge is only its subset. Indigenous knowledge is a dynamic and evolving body of knowledge that reflects the creativity and innovation of the indigenous communities in order to thrive and evolve in the face of changing circumstances as well as contribute to the global tapestry of knowledge and culture.

Indigenous knowledge plays a crucial role in bioprospecting, as it provides valuable insights into local ecosystems and biodiversity. Indigenous communities, with their deep understanding of plants, animals, and traditional practices, often hold information about the medicinal and practical uses of natural resources that are unknown to modern science. This knowledge is essential for identifying promising biological resources and developing new products. While integrating indigenous knowledge into the process of bioprospecting enhances the discovery process, it must be ensured that the benefits of bioprospecting are shared in a fair and equitable manner with the indigenous providers. Article 8 (j) and Article 15 (7) of CBD provide for protection indigenous knowledge and the need to respect the skills and knowledge of indigenous and local communities and to uphold fair and equitable benefit sharing of the profits derived from the utilization and commercialisation of their traditional knowledge.

Nevertheless, the presence of a protection regime alone has been insufficient in safeguarding indigenous knowledge, genetic resources and ensuring a fair and equitable benefit-sharing mechanism. According to the 5th Global Biodiversity Outlook report, even though there has been growing acknowledgment of the importance of TK in global policy forums and the scientific community, it is still not respected or widely accepted in practice, even after the incorporation of various protection provisions in national legislations.[12] The report also highlights the need to further enhance the role of indigenous peoples and local communities at the level of stakeholder engagement. Furthermore, even though there is an increase in the money flow for official development assistance, the financing is being directed towards activities harmful to biodiversity. For example, the economy of Cambodia is evolving from an agriculture-based economy to an agro-industrial economy and its rich biodiversity is being threatened to the point where several medicinal plants are facing extinction, significantly

[12] UN Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 5 – Summary for Policy Makers* (2020).

impeding upon the availability of the same for the local people.[13] The Kunming-Montreal Global Biodiversity Framework (GBF) adopted in 2022 has set a new roadmap to achieve 23 targets by 2030, where target 13 and 22 emphasize taking appropriate measures by member states to ensure fair and equitable sharing of benefits arising from genetic resources, digital sequence information and traditional knowledge in line with the international ABS instruments, as well as inclusive and effective participation of indigenous people and local communities in decision-making affecting their rights over land, territories, resources and traditional knowledge.[14]

This highlights that the indigenous people and local communities displaying discontent against bioprospecting represent a legitimate form of political expression and resistance.[15] These communities have long been the stewards of rich biodiversity and possess deep traditional knowledge about local ecosystems. However, the hegemonic narrative surrounding bioprospecting is largely controlled by powerful industrial nations. These nations often frame the discourse in ways that marginalize indigenous voices and priorities, presenting bioprospecting as a beneficial and regulated practice that ostensibly respects indigenous rights. Capitalist economies perceive biological diversity as a reservoir of economic wealth, further commodifying nature and altering the harmonious and symbiotic relationship shared between human beings and the environment. Takeshita elaborated on the 'win-win-win' rhetoric where bioprospecting supporters focus on three benefits of the process-[16]

1. Firstly, novel chemical compounds will be useful for fighting global health problems by exploring the potential of biological material;
2. Secondly, this avenue will help facilitate economic development in biodiverse developing nations by providing long-term and short-term compensation and,
3. Lastly, bioprospecting projects will bring about attitudinal change towards biodiversity as a reservoir of future genetic resources, furthering the goal of its conservation.

As discussed earlier, the international legal framework has obligated nations to ensure fair and equitable benefit sharing mechanisms, however, this rhetoric incorrectly assumes that the derived monetary benefits would proceed to the indigenous people and local communities who

[13] United Nations Development Programme, *The New Gold Rush: Bioprospecting* (August 3, 2022).
[14] United Nations Convention on Biological Diversity, *Kunming-Montreal Global Biodiversity Framework*, U.N. Doc. UNEP/CBD/COP/DEC/15/4 (2022).
[15] Chikako Takeshita, "Bioprospecting and its Discontents: Indigenous Resistances as Legitimate Politics" 26(3) *Alternatives: Global, Local, Political* 259-282 (2001)
[16] *Supra* note 15 at 261.

have been stewards protecting the biodiversity of their ecosystem since ages. The MNCs and powerful industrialists often disregard the perspective of the indigenous communities on what truly constitutes 'equitable' compensation, creating a power imbalance amongst them. Capitalists perceive protection and conservation of biodiversity as a reservoir of economic wealth, not ecological wealth and provide for conservation related compensation so as to preserve the biological resources as future source of capital.[17] Bioprospectors falsely justify their acts of exploration for research and mankind's advancement under the garb of 'development for all'. When indigenous knowledge is used in bioprospecting, indigenous communities must be fairly compensated for their time, skill, labour and knowledge. They must also be adequately represented in the decision-making process regarding ABS mechanisms, as their perspective of 'fair' and 'equity' is quite distinct from the hegemonic narrative thrown around by bioprospectors as 'ecological and conservation related investments'.

The cultural and social identities of indigenous communities must not get lost in the narrative of them being perceived as stewards or protectors of biodiversity. One must avoid unifying the notion of global environmental interests with the rights of indigenous communities over their territories and traditional knowledge. Indigenous knowledge is deeply rooted in the cultural identities of indigenous communities and constitutes a significant part of their heritage. It is crucial to regulate and monitor this knowledge carefully when it is shared in the public domain. While commodifying traditional knowledge is not criticised per se, it must be done in a sustainable manner after taking proper consent from the indigenous communities, ensuring their democratic participation and representation in the decision-making process, and ascertaining their share in the benefits accrued from the commercialisation of biodiversity.

5. INDIAN SCENARIO

India's diverse geographical terrains, from the towering Himalayas in the north to the lush Western Ghats in the south, are home to an incredible variety of flora and fauna. These landscapes and their indigenous inhabitants have coexisted for centuries, maintaining India's ecological and cultural heritage, and earning it recognition as one of the world's global biodiversity hotspots. India is home to around 706 ethnic communities, comprising around 8.6% of the total population.[18] The indigenous communities predominantly live in forestial terrains and have acquired centuries old traditional knowledge about living harmoniously with

[17] *Supra* note 15 at 267.

[18] International Work Group for Indigenous Affairs, *The Indigenous World 2023: India* (March 29, 2023).

the environment while utilising the potential of biodiversity for their sustenance in a sustainable manner. The Traditional Knowledge Digital Library (TKDL) documents traditional medicinal knowledge to prevent its misappropriation and ensure that it is accessible to patent offices globally for prior searches. According to Section 2(ea) of the Biological Diversity (Amendment) Act, 2023, codified traditional knowledge refers to the authoritative books specified in the First Schedule to the Drugs and Cosmetics Act (1940). Yet, much of the undocumented indigenous knowledge in India remains unfamiliar to the modern scientific community. Similar to many countries in the global south, India has experienced misappropriation of its indigenous knowledge by countries in the global north and continues to display reticence towards unfair access to their traditional skills and knowledge.

After becoming a signatory to the CBD in 1993, India adopted the Biological Diversity Act in 2002. It required the government authorities to incorporate provisions related to the conservation, enhancement, and sustainable management of biological diversity into appropriate plans, programs, and policies. In order to embody the principles of the Nagoya Protocol, the Access to Biological Resources and Associated Knowledge and Benefits Sharing Regulations were also passed in 2014. Sections 3, 4, 6, 7 & 21 of the Biological Diversity Act 2002 and Rules 14-19 of the Biological Diversity Rules 2004 lay down a clear, predictable and transparent process for accessing Indian biological resources and/or associated traditional knowledge and sharing of the benefits accrued from the commercial utilisation of indigenous knowledge.

In 2023, the Biological Diversity Act was amended, which brought in changes to the above mentioned provisions of the 2002 act. However, in this analysis, I'll restrict myself to the implications of those amended provisions that will impact the Indian ABS mechanism in bioprospecting. The provisions are as follows:

I. Insertion of the word 'resources' in place of 'diversity' in Chapter II heading portrays a narrative that biodiversity is a stock of economic capital;
II. Amendment to section 3 (2)(c)(ii) expands the scope of Indian companies with foreign alliances to undertake biodiversity related activities without prior permission of the National Biodiversity Authority;
III. Amendment to section 7 exempts registered AYUSH practitioners from the purview of obtaining prior consent to obtain biological resource for certain purposes;

IV. Amendment to section 21 (1) has removed the representation and democratic participation of the benefit claimants, i.e. indigenous people and local communities, in deciding the profit-sharing terms and conditions, restricting such decision-making only between the party claiming for ABS and BMC;

The above-mentioned amendments have encouraged ease of business over protection of indigenous knowledge and livelihoods of indigenous communities. The amended provisions were passed in the absence of the entire opposition and all but one of the 21 recommendations proposed by the Joint Parliamentary Committee were accepted.[19] This move by the central government has undermined years of environmental protection precedents and efforts by concerned environmentalists, counteracting the ethos of the CBD and Nagoya protocol. Furthermore, the Environment Impact Assessment Notification 2006 further weakened the mechanism ensuring public involvement in the decision-making process in environmental matters. Instead of enhancing the current legal framework to better protect the rights of indigenous communities and ensure they receive proper recognition and monetary compensation for their traditional knowledge, this new biological framework is fundamentally flawed. It fails by entirely excluding indigenous communities from having a say in the terms and conditions for sharing benefits.

6. BIOPROSPECTING VIS-À-VIS ACCESS AND BENEFIT SHARING MECHANISM UNDER THE NEW REGIME IN INDIA

The Nagoya Protocol requires that when local and indigenous communities hold established rights over genetic resources, countries must implement measures to secure their prior informed consent (PIC) or approval and ensure their involvement before accessing these resources and associated traditional knowledge. This means that nations are obligated to respect the rights of these communities by obtaining their consent and including them in decisions related to the use of genetic resources and traditional knowledge, thereby recognizing their ownership and role in the process. The Access and Benefit Sharing (ABS) Mechanism is designed to ensure the fair distribution of benefits derived from biological resources, promoting justice and equity. However, its effectiveness is undermined by weak enforcement and insufficient commitment from authorities, coupled with a lack of awareness among potential benefit claimants. As a

[19] Leo F. Saldanha, "Modi Government's New Environmental Laws a Threat to India's Biodiversity and Forests" *Frontline* (August 5, 2023)

result, the intended benefits do not always reach the relevant stakeholders, such as indigenous communities and local populations, who are often the custodians of these resources.

The ABS mechanism in India is implemented through the Biological Diversity (Amendment) act (2023), Biological Diversity Rules (2004) and ABS Regulations (2014). Under the new regime, the insertion of the term 'resource' instead of 'diversity' in the heading of Chapter II, now read as 'regulation of access to biological resource', constructs a narrative by reducing the intrinsic value of diverse ecosystems to mere commodities or assets for satisfying human insatiable needs. This shift can lead to a diminished appreciation for the complex interconnections and inherent worth of biological diversity beyond immediate human interests. Moreover, this encourages bioprospectors to view India's rich biodiversity as a reservoir of economic wealth, creating opportunities for corporate giants and capitalist entities to prioritize business ventures over sustainable biodiversity exploration.

The amendments to section 3 of BDA can be very beneficial for foreign bioprospectors to pursue their research and development by forming alliances with Indian partners in order to access the resources without approval from the National Biodiversity Authority. By easing the approval process for foreign bioprospectors, it opens the floodgates for the exploitation of India's biodiversity and associated traditional knowledge without adequate oversight. Foreign bioprospectors, driven by commercial interests, may prioritize profit over sustainable practices, leading to the exploitation and degradation of ecosystems. The exemption of registered AYUSH practitioners under Section 7, from the purview of obtaining prior consent to obtain biological resources for certain purposes, further hampers the ability to protect indigenous knowledge. The AYUSH knowledge system indulges in consumerism, and this exemption will expose traditional knowledge to the public domain without any legal protection. The AYUSH practitioners will exploit traditional knowledge and resources without accountability, increasing the likelihood of misappropriation. Without the requirement for prior consent, there is little to prevent these practitioners from utilizing indigenous knowledge for commercial gain, claiming credit for discoveries and innovations that rightfully belong to local communities. Consequently, indigenous communities may be deprived of recognition and fair compensation for their ancestral knowledge and contributions to biodiversity.

As per the amended section 21, the terms for benefit will now align with the mutually agreed terms between the Biodiversity Management Committee and the applicant, entirely excluding the representation and input of indigenous and local communities. Without robust mechanisms

to ensure fair and equitable benefit-sharing, these communities may be deprived of rightful monetary compensation and recognition for their contributions. The potential for stolen credits and intellectual property rights issues is high, undermining the socio-economic well-being of these communities. This not only erodes trust but also threatens the sustainability and integrity of traditional knowledge systems that are integral to biodiversity conservation. Thus, while the amendments may facilitate international research and development, they risk exacerbating inequities and environmental harm.

The above discussed amendment clearly violates the cardinal principle of the Nagoya protocol, i.e., securing prior informed consent, finalizing mutually agreed terms and ensuring fair and equitable benefit sharing. The new biodiversity protection framework has many loopholes that the bioprospectors can exploit for their own scientific and economic development, at the cost of the rights of indigenous communities over their territories, resources and knowledge. The implications of the new amendments are in line with the 'win-win-win' rhetoric discussed earlier, where under the guise of 'development for all,' the sole beneficiaries of this initiative are the bioprospectors. Notably, bioprospecting still remains highly unregulated in India. There's no appropriate mechanism or trained personnel monitoring this exercise. Another important aspect resulting in the misappropriation of indigenous knowledge is the lack of awareness amongst indigenous and local communities about their rights to protection of their traditional knowledge and to be compensated for the benefits accrued from its commercialisation.

7. DOMINANCE OF EXPROPRIATION REGIME OVER PROTECTION OF INDIGENOUS KNOWLEDGE UNDER THE 2023 AMENDMENT

The 2023 amendments to the Biological Diversity Act (2002) have significant implications for MNCs and capitalist conglomerates interested in bioprospecting. By relaxing regulations, these amendments aim to foster greater collaboration between businesses and the Indian state, facilitating the discovery of potential genetic stocks or chemical compounds that could drive advancements in various sectors, including agriculture, pharmaceuticals, cosmetics, and healthcare, to name some. However, the new framework raises concerns about the protection of Indigenous knowledge and skills, potentially undermining the efforts of the stakeholders in environmental protection by creating an expropriation regime rather than a protection regime.

While the economic and scientific benefits of relaxed bioprospecting related regulations are substantial, the amendments have sparked fears that the emphasis on facilitating business could

lead to the exploitation of Indigenous communities and their traditional knowledge. The streamlined regulatory framework may overlook the rights of Indigenous communities, whose knowledge of local biodiversity is invaluable. There is a risk that these communities may not receive fair compensation or recognition for their contributions. Further, the commercialization of bio-resources discovered through traditional knowledge could lead to disputes over intellectual property rights. Indigenous communities may find it challenging to assert their ownership and protect their knowledge from being misappropriated. The reduction of traditional knowledge to a mere resource for profit undermines the cultural heritage and identity of Indigenous peoples.

Indigenous knowledge is embedded in the culture's identity. To apply the IPR regime to Indigenous knowledge, one must engage in an interpretative exercise encompassing social, political, cultural, as well as communal aspects. Merely assessing indigenous knowledge in monetary terms can be highly culturally insensitive. By prioritizing commercial interests, the new framework may lead to a decline in conservation initiatives, which would further hamper the ecosystem services vital for life on this planet. Once indigenous knowledge is in the hands of bioprospectors, the indigenous providers don't have much control over its utilisation. Hence, the amendments represent a double-edged sword. On one hand, it opens up opportunities for scientific and economic development by relaxing the access and benefit sharing mechanisms, but it also poses substantial risks to the protection of indigenous knowledge and the sustainable use of biodiversity. Hence, it's imperative to implement these amendments cautiously to secure the interests of indigenous communities as well as global environmental interests.

8. CONCLUSION

India must strive to protect its rich biodiversity as well as the rights of its inhabitants. The state must make appropriate and informed decisions regarding bioprospecting projects so as to avoid suppressing indigenous identities, knowledge and interests. The legal justifications for providing access to genetic resources and associated traditional knowledge must not neglect the perspective of the indigenous people and local communities in the decision-making process, especially while mutually deciding the terms of benefit sharing. Biodiversity is not a stock of capital at the mercy of capitalists' giants. It is high time for India to have well-defined regulatory mechanisms, institutions and trained personnel monitoring the bioprospecting projects closely. Capitalist regimes often undermine the cultural identity

linked with biodiversity, which outweighs the scientific and economic advancements they can attain through bioprospecting. Hence, a dominant narrative constructed by them must not be determining the rights of indigenous communities over their skills, labour and knowledge, as their realities of what is ‘fair’ and ‘equitable’ differ drastically.