

Understanding the Growing Impact of the Anthropocene: A Critical Look at the Convention on Biological Diversity Through International Laws and Theories

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Abstract—In today's epoch the flourishing culture of Anthropocene vindicates the veracity and fidelity of the fact that certainly there is a major decline in the pulchritude of environmental capacity. Primordially the International Environmental law prepares an ideal framework within which the concept of Sustainable development has been keenly emphasized to sub serve the human populace with efficient provisions and laws that can provide an instantaneous succor in analyzing the diversified roles of an individual in safeguarding the natural resources. It forms a substratum for establishing miscellaneous standards confirming to the norms and statutes concerning the agreements made in order to combat pollution and bringing into light the primary environmental concerns. Multifarious international treaties have also been signed in context of safeguarding the positive effervescence of Biodiversity upon the overall functioning of environmental structural pattern in a well-disposed manner nevertheless it is arduous to reach any reliable conclusion in terms of a healthy interconnectivity of variegated life forms. In this writing, the protocols and crucial aspects of Convention on Biological Diversity (CBD) have been primarily emphasized in order to cement the role of international environmental policies in ensuring an affluent and vibrant Biodiversity. It also reflects the ongoing modern trends which are assisting in providing a platform to the governments all around the world to analyze the sustainable goals designed under the governance of United Nations to empower the concept of Sustainable development and preserving Biodiversity to a huge extent. The writing delves into scrutinizing variegated laws concerning CBD and also highlights its efficaciousness in bringing the countries together for taking the concern related to Biodiversity into a solemn consideration.

Index Terms—International Treaties, Convention on Biological Diversity (CBD), Sustainable Goals, United Nations

I. INTRODUCTION

Convention on Biological Diversity (CBD) entails miscellaneous national strategies to keenly emphasize on fulfilling its objective of safeguarding the genetic resources and perpetually aggrandizing ecosystem communities with the primary agenda of ameliorating the concept of sustainable development. In 2002 Biological Diversity Act came into force with a major objective of assisting the provisions of Convention for increasing the productivity of biodiversity and steps by the governments from all over the world were also taken to improve the interconnectivity of variegated life forms. Afterwards in 2003 National Biodiversity Authority (NBA) was set up in order to regulate the provisions of Biological Diversity Act which came with a primary objective of not only focusing on the international community's which framed laws for the welfare of ecosystem communities but took a practical approach in the direction of reinforcing the environmental capacity at a broad scale¹. It is a state of severe despair that the Biodiversity is declining rapidly and the international governments have held diversified meetings, insightful discussions and debates on the factors which are leading to such decline nevertheless the extinction of species, degradation of ecosystem functioning is still on rise². International agreements persisting on conserving Biodiversity and interconnectivity of variegated life forms have been channelized under the United Nations Environmental Programmes (UNEP) to sub serve an ideal framework which can provide a preliminary analysis of the challenges faced by Biodiversity in the contemporary times³. Biodiversity vary in terms of distinctiveness, form, source of origin, etc. which determines the actual capacity of variegated life forms

but incessantly the ecosystem species are being hampered by the dwindling of environmental sustainability and slump within the structural processes of genetic resources⁴. Albeit the indefatigable efforts by international groups for setting out miscellaneous protocols pertaining to conservation of Biodiversity and empowering the facets of ecosystem diversity are regulated at a wide scale but it has ultimately lead to social conflicts, arguments, dismantling of opinions which created an imbalance in the social order and it is a warning of the nature that the human race would be at a huge risk if environment is continued to be treated in the same manner further⁵. International Year of Biodiversity is considered to be held in the year 2010 by United Nations for advocating the need of awareness that has to be spread in the direction of safeguarding Biodiversity and ecosystem development. This is the recognition of lack of environmental awareness due to which the species on land, water, and air are pertinently suffering to a huge extent⁶. Vital roles and responsibilities within the framework of sustainable development have been held by

¹ B Meenakumari and Rai S Rana, 'Implementing the Biological Diversity Act in India: Focus on ABS and Agro-Biodiversity' (2017) 30 Indian Journal of Plant Genetic Resources 25.

² RJ Smith and others, 'Governance and the Loss of Biodiversity' (2003) 426 Nature 67.

³ United Nations Environment Programme, 'Ecosystems and Biodiversity | UNEP - UN Environment Programme' <<https://www.unep.org/explore-topics/ecosystems>>.

⁴ Mehdi Heydari, Reza Omidipour and Jason Greenlee, 'Biodiversity, a Review of the Concept, Measurement, Opportunities, and Challenges' (2020) 4 Journal of Wildlife and Biodiversity 26 <<http://www.wildlife-biodiversity.com/>>.

⁵ S Morand, 'Biodiversity: An International Perspective' (2010) 29 OIE Revue Scientifique et Technique 65.

⁶ Elliot Shubert, '2010 International Year of Biodiversity' (2010) 8 Systematics and Biodiversity 417.

the United Nations Convention on Biological

Diversity which also facilitated the modern technologies to relocate the loss of biodiversity in any specific region but it has not been successful so far yet⁷.

II. INTERNATIONAL MORAL STANDARDS PERTAINING TO CONSERVING BIODIVERSITY

The Aichi targets intrinsically lays down the foundation of Convention on Biological Diversity (CBD) to exacerbate the development of global food security, health and clean water by interlinking the advanced technocratic resources and methodologies for a well-organized systemization of ecological processes and life supporting system. These targets aim at providing a comprehensive view of the biodiversity in terms of setting out miscellaneous standards for aligning the efforts made in the direction of decreasing excessive duress on biodiversity with the international treaty⁸. The role of biodiversity has been always thought in the capacity of coordination and harmony at multinational level between the environmental institutions whose primary agenda is to reinstate the progressive nature of ecological capacity. Human acts are estimated as the primary cause of the corroding of biological constituents and curtailment in the ecosystem diversity which is certainly pernicious for paving a way for the meticulous governance of genetic resources⁹. Biological resources are an indispensable part of the ecosystem which can satisfy the human needs but for safeguarding the biodiversity in an efficient manner the international communities and groups must act in a co-operative order to upraise the living force of ecological units. Sustainable development is at large hampered by the over excessive utilization of natural resources and exploitation of ecosystem biodiversity which prominently allows the distortion of environmental structural pattern¹⁰. In the age of globalization depletion of biological processes is deemed to be a very common thing but it is very much solicitous for us to cogitate over the issue interconnected with the facets of diversified ecosystem management and accuracy. Biotechnology sub serves the human welfare by enabling the efficient productivity of biological resources in order to emancipate the developed and developing countries from the impact of external and internal factors which assists in

upgrading the functioning of ecological sustainability at a large scale but there is risk involved in the regulation of products of biotechnology as it can somehow lead to the disfigurement of the biodiversity life supporting systems and momentarily affect the human health also. The risks attached with the

⁷ Matta Gagan, Bhadauriya Gaurav and Singh Vikas, 'Biodiversity and Sustainable Development: A Review' (2011) II International Journal for Environmental Rehabilitation and Conservation 72 <https://www.proquest.com/scholarly-journals/discerns-special-education-teachers-about-access/docview/2477168620/se-2?accountid=17260%0Ahttp://lenketjener.uit.no/?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aed>.

⁸ Kirandeep K Dhani, 'National Aichi Biodiversity Target 1-an Assessment in India' (2021) 6 MOJ Ecology & Environmental Sciences 61.

⁹ Virendra A Shende, Kishor S Janbandhu and Kishor Gopal Patil, 'Impact of Human Beings on Environment' [2015] International Journal of Research in Bioscience, Agriculture and Technology 23 <https://www.researchgate.net/publication/273948259_Impact_of_Human_Beings_on_Environment/link/551120950cf2a8dd79bfc6f2/download>.

¹⁰ Richard T Corlett, 'Safeguarding Our Future by Protecting Biodiversity' (2020) 42 Plant Diversity 221 <<https://doi.org/10.1016/j.pld.2020.04.002>>. progression of biotechnological resources must be identified apparently, brought into the limelight of human opinion and also analyzed in the perspective of welfare of the overall planet so that the food webs, minerals, nutrients and other sources of biological components which determine the actual capacity within the variety of life forms can be surcharged with a sustainable approach¹¹. A keen sense of global responsibility has to be felt within the various organizations, groups and societies who are incessantly working internationally to conserve the biodiversity and appreciating the efforts of government to up build the management of ecological

processes. National Biodiversity Strategy (NBS) is an initiative for relying on the national action plans to safeguard the sustainable use of the components of biological diversity¹².

III. MISCELLANEOUS INTERNATIONAL APPROACH IN CONTEXT OF UPHOLDING THE COGENT PROVISIONS OF CBD

The immeasurable variations in the species across the world form miscellaneous kind of interrelations with biodiversity and intrinsically holds a great significance in the systematic management of environmental structure which sub serve the human society with the sustainable use of genetic resources. Convention on Biological Diversity (CBD) sophisticatedly promotes the rhetorical framework for decreasing the effect of pernicious elements which acts as a prominent source in accruing the natural beauty of environment¹³. Intergovernmental panels at international stratum are being indulged in performing many programmes to highlight the cause of the deterioration of biodiversity and preventing it as to the best of ability of human endeavor nevertheless the situation still remains worrisome worldwide in channelizing the policies concerned for protecting species and resources. There is no explicit picturesque of the future in terms of catering an ideal standard for shifting the focus on conserving the interplay within the community of diversified biological processes and life supplanting ecosystem¹⁴. The convention further derives inspiration from the precautionary principle which enshrines the provision that where there is a threat to the biodiversity or apprehension of species getting endangered, lack of full scientific certainty shall not be used as a reason for not taking action. The primary emphasis revolving around the concerned management of biodiversity is somehow not aligned in an accordance of systematic order which worldwide misleads the link of sustainable development in aggrandizing the network of scope pertaining to the needs of future

¹¹ Tamene Yohannes and Tesfaye Woldeamayate, 'Biotechnology and Biodiversity Conservation: Are They Conflicting?' (2017) 9 International Journal of Current Research 55427.

¹² Tomoko Uetake and others, 'Quantitative Analysis of National Biodiversity Strategy and Action Plans about Incorporating Integrated Approaches in Production Landscapes' (2019) 62 *Journal of Environmental Planning and Management* 2055 <<https://doi.org/10.1080/09640568.2018.1530202>>.

¹³ SA Laird, 'The Convention on Biological Diversity: Changing Ethical and Legal Frameworks for Biodiversity Research and Prospecting' (2001) 52 *Unasylva* 22.

¹⁴ Reeta Kumari, Deepali A and Sonal Bhatnagar, 'Biodiversity Loss: Threats and Conservation Strategies' (2021) 68 *International Journal of Pharmaceutical Sciences Review and Research* 242. generation¹⁵. Traditional knowledge also plays a pivotal role in safeguarding the biological resources as many confidential stratagems regarding the crucial aspects in maintaining the environmental balance have been mentioned in the etymology and radix of variegated transcendental Vedic literatures, Puranas, Smritis, etc. Educating people worldwide by establishing an international forum where awareness sessions related to conserving biodiversity and reflecting the need for organizing the sustainable resources in consonance with the provisions of international treaty can be upheld on a regular basis must be promoted at a large scale¹⁶. National Biodiversity Strategies and Action Plans (NBSB) is a practical initiative in the direction of implementing the protocols of convention widely at the national level and it places its primary focus upon accruing the economic prosperity of the country by establishing the international standards. Sustainable development goals and Aichi biodiversity targets can be easily tracked by scrutinizing and centralizing the synergies which are occurring between the facets of biological progression but the preliminary and primary agenda must be to rely upon Agenda 2030 for relatively act for the welfare of future generation needs¹⁷. Global Biodiversity Framework (GBF) is a systematic pre planned regulatory ideal framework designed for giving an outlet of the overall functioning of the international bodies to conserve biodiversity and natural resources. Agricultural productivity, intersectional relations between marine ecosystem, aerial species and human beings hugely depends upon the biodiversity conditions and effervescence¹⁸.

IV. EMBOLDENING THE RADIX OF INTERNATIONAL LAWS ON BIODIVERSITY AND SIGNIFICANT ROLE OF TRADITIONAL KNOWLEDGE IN BIODIVERSITY CONSERVATION

Convention on Biological Diversity (CBD) globally interconnects various ideologies related to the transfiguration of Biodiversity and at accessible platforms of social transformation it upholds the idea of maintaining the integrity of environmental balance in a long run. The apocalyptic effervescence of indecipherable human activities has not only resulted in distorting the ideal framework of Biodiversity at an international level but has also profoundly impacted the very foundation of socio-economic structure of the nation¹⁹. Exasperating farrago of the decrepit ideals and standards of CBD entails a pessimistic picturesque of divergent manifestation concerning the anthropological studies about the ancient sources of Biodiversity has out broken the preliminary ad junction of international community's who tend to work to turn the face of Biodiversity in the contemporary era. The modular structure of environment lays its foundation upon the vitality and motley of Biodiversity to a great extent and it

¹⁵ Carlos Ignacio González Arruti, 'The Precautionary Principle and the Protection of Biological Diversity' (2022) 8 *American Journal of Applied Scientific Research* 1.

¹⁶ M Gadgil, F Berkes and C Folke, 'Indigenous Knowledge for Biodiversity Conservation' (1993) 22 *Ambio* 151.

¹⁷ Patrick Gannon and others, 'Status and pro Spect for Achieving Aichi Biodiversity Target 11: Implications of National Commitments and Priority Actions' (2017) 23 *Parks* 13.

¹⁸ Haigen Xu and others, 'Ensuring Effective Implementation of the Post-2020 Global Biodiversity Targets' (2021) 5 *Nature Ecology and Evolution* 411.

¹⁹ LD Guruswamy, 'The Convention on Biological Diversity: Exposing the Flawed Foundations' (1999) 26 *Environmental Conservation* 79. would not be

erroneous to say that the vagaries to which presently the structural pattern of Biodiversity is subjected confounds the lead in the capacity of rejuvenating its vigor. CBD also substantially highlights the significance of indigenous resources as intrinsically a part of Traditional Knowledge (TK) in maintaining the enriching qualities of Biodiversity at a wide scale. Indigenous resource database has been analyzed by many international forums in the capacity of providing a high intellectual system of organization which could provide a succor in the amelioration of species enrichment at a global level. Biological Diversity is extensively governed by the traditional knowledge of indigenous people, which has been accentuated in Article 8(j) and indispensable provisions of CBD. Sustainable utilization of natural resources and safeguarding species are the crucial aspects which are inherited within the affluence radix of indigenous information which regulates the overall functioning of Biodiversity in a systematic organization. Indigenous communities are certainly found at places where ecosystems and genetic resources are viable and prosperous in nature²⁰. These communities derive their source of inspiration in terms of social milieu, traditions, customary practices from the core foundation of traditional aspect of indigenous knowledge which is also helpful in enshrining miscellaneous principles related to the safety of Biodiversity and genetic resources. Aichi Biodiversity Target 18 also adopts a similar approach in manifesting the actual potency of Biodiversity by placing a keen emphasis on the sustainable management of resources and conservation of resources in order to analyze the future generation needs with a broader perspective and palpable vision. For the smooth and effective implementation of the provisions relating to National and Global conservation efforts in context of safeguarding genetic resources ubiquitously forms a substratum for an aggrandized network of traditional knowledge and also advocates the need of meticulous re-structuring of the environmental pattern²¹. Traditional knowledge primarily channelizes the driving force which incessantly helps in the amelioration of the functions of Biodiversity and also enriches the quality of genetic resources. Indigenous database imparts the knowledge which proves to be useful in providing strength to the environmental capacity²². It is evident from the historical sayings that the waning of indigenous

resources with the fast pace of globalization certainly results in distorting the very preliminary idea of Sustainable Development which further makes the overall functioning of environmental structural pattern hollow. Influencing procedural guidelines on the repartition of traditional knowledge creates a high level of intellectual system which not only governs the social functioning of many communities but also restores the information data source which is indispensable for conservation and sustainable use of Biological resources. Therefore it is our prime duty to preserve the traditional knowledge which creates a robust link between the indigenous communities and social life moderations²³. Today the indigenous information holds a primary role in empowering the functional growth of Biodiversity and reinforcing Sustainable Development at international platform. The strong roots of

²⁰ Wan Izatul Asma Wan Talaat, Norhayati Mohd Tahir and Mohd Lokman Husain, 'Traditional Knowledge on Genetic Resources: Safeguarding the Cultural Sustainance of Indigenous Communities' (2012) 8 Asian Social Science 184.

²¹ Andrea Perino and others, 'Biodiversity Post-2020: Closing the Gap between Global Targets and National-Level Implementation' (2022) 15 Conservation Letters 1.

²² Ashish Kothari, 'Traditional Knowledge and Sustainable Development' [2007] International Institute for Sustainable Development, Draft for Discussion, September, Canada
<http://search.iisd.org/pdf/2007/igsd_traditional_knowledge.pdf><http://www.iisd.org/pdf/2007/igsd_traditional_knowledge.pdf>.

²³ Biba Jasmine and others, 'Traditional Knowledge Systems in India for Biodiversity Conservation' (2016) 15 Indian Journal of Traditional Knowledge 304.

democratic society derive its effect and potency from the very discourse of traditional knowledge and indigenous resource value which also emboldens the provisions of the international treaty at a global scale. The preliminary approach in the direction of safeguarding Biodiversity seems to be obfuscated as international global systems interlinked to the

management of traditional knowledge are certainly failing constantly to uphold the dignity and honor of crucial indigenous information and resources. If the struggle pertaining to Biodiversity did not come to an end, then the future of human society will be in dark. Thus the provisions of CBD should be disseminated at a wide platform with a keen emphasis on the protection of Traditional Knowledge (TK) and reflecting its role in safeguarding biological resources and genetic resources for striking out a firm balance in the environmental structural pattern²⁴. Confidential secret knowledge pertaining to the systematic governance of Biodiversity has been well accentuated within the wide ambit of Traditional Knowledge. Industrial economy and prosperous living conditions are those facets which have been contributing in vitiating the global functioning of ecological structure since centuries and with the effect of time traditional knowledge has also been certainly waning at a constant speed. The Cartagena Protocol on Biosafety subscribes to the idea of an affluent and systematic functioning of Biodiversity by comprehensively empowering the relations of various modified living organisms in a well- equipped format. Many such agreements in past have been signed with the international governments for strengthening the concept of Sustainable Development in order to safeguard indigenous resources for contemplating on the needs of future generation in common²⁵. It is quintessential to shift our focus on the conservation of Traditional Knowledge Digital Library (TKDL) which envisages and crafts the perspective concerning the need of conserving biological resources in the overall development of Biological Diversity. An official meeting of the professional experts on Biodiversity was held at the United Nations Environment Program (UNEP) in 1988. The experts envisaged the concept of Convention on Biological Diversity (CBD) forward and also enlightened many crucial aspects related to the systematic governance of multitudinous life systems at a wide scale²⁶. Insightful conference on the "Intrinsic Challenges of Biodiversity in Contemporary Era" was held in Nairobi, Kenya in 1992. The main agenda of this conference was to explicate in a detailed manner about the role of ecosystem, species and genetic resources in reinforcing the concept of Sustainable Development and maintaining the efficiency of Biodiversity²⁷.

²⁴ Wan Izatul Asma Wan Talaat, 'Protection of the Associated Traditional Knowledge on Genetic Resources: Beyond the Nagoya Protocol' (2013) 91 *Procedia - Social and Behavioral Sciences* 673 <<http://dx.doi.org/10.1016/j.sbspro.2013.08.468>>.

²⁵ Aaron Cosbey and Stas Burgiel, 'The Cartagena Protocol on Biosafety : An Analysis of Results' (2000) 21 *International Institute for Sustainable Development* 227.

²⁶ United Nations Environment Programme UNEP, 'Report of the Ad Hoc Working Group on the Work of Its First Session: Ad Hoc Working Group of Experts on Biological Diversity' 15 <<https://www.cbd.int/doc/meetings/iccbd/bdewg-01/official/bdewg-01-03-en.pdf>>. ²⁷ CBD, 'Section IX. Nairobi Final Act of the Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity' [2005] *Handbook of the Convention on Biological Diversity* 397.

V. CONCLUSION

Marine ecosystem has always remained a boiling concern for the Convention on Biological Diversity (CBD) which insists on seeing the pernicious harm which has been done to the aquatic life in the capacity of feeble environmental structure. European Union Strategy Framework Directive is an ideal structure of Marine ecosystem which was regulated with a viewpoint to allocate the sustainable management of marine biodiversity under the wide ambit of United Nations Convention on the Law of Sea (UNCLOS). Cynicism being a part of the ideal structural model of Convention on Biological Diversity (CBD) has timely lauded many skirmishes pertaining to the divergent attitudes of international government and institutions in context of presenting the principle of Sustainable Development to advocate the real cause of misery to Biodiversity. There is no iota of skepticism in it that the ecosystem is subjected to myriads of vagaries and diversions that certainly prohibits the progression of environmental capacity to a great extent and to cater to the needs of future generation and safeguarding genetic resources many developing countries in the sake of financial assistance to carry out programs at various level to aware common public about the procedural organization of genetic resources relies

upon the international treaty, Convention on Biological Diversity (CBD) substantially. Global scenario is not propitious in terms of Biodiversity as the negative effervescence concerning the destruction of forests, accruing levels of pollution, use of scientific tools and techniques to uplift agricultural productivity, etc. have put the whole ecosystem functioning into a state of severe quandary. Sitting at our own comfortable places and keep advancing adverse comments and arguments could not anyhow overturn the historic legacy of International trends which reinforces Biodiversity at a wide platform rather everyone should at least try to analyze the international dissensions and conflicts. Many disbeliefs and skirmishes occur at the time of aligning the ideal standards of international treaty at a practical platform between government organizations, institutions and political scenario. The fair interplay of various living organisms is perpetually coming to a disastrous end. Polarization is also intended to be a contributing factor in the incessant waning of genetic resources as many political beliefs and agenda has traumatized the very intrinsic functioning of Biodiversity at an international level. The Contemporary era is marked by many deficiencies and invariabilities in context of channelizing the protocols of international treaty of Convention on Biological Diversity (CBD) and it is not an easy task to rejuvenate the actual potency of Biodiversity at International platform with a limited set of resource database. Let not the civil society sit and watch the play on their social media handles pertaining to the international scenario disruption of Biological Resources rather united coming forward to contribute in the systematic organization of genetic resources can make a certain optimistic impact on the structure of environmental pattern.

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