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Abstract: The continued sustenance of human being is, to a large extent, dependent on the conservation and/or preservation of the biological diversity in his particular environment. The totality of living thing around human being - ecosystems, species and genetic resources is useful for his existence and sustained development as well. But over the ages, biological diversity has been challenged by different issues like degradation, pollution, alien invasions and so forth which has led to the extinction of some biological diversity at one time or the other. In addition to these is the crucial challenge of patenting the traditional knowledge in genetic resources of traditional communities without due regard to same as their cultural heritage that need yield economic interest as well as morally deserving attribution. The international frameworks to tackle this challenge have also addressed the need to have different interests protected including the local or indigenous communities. With the aid of doctrinal method of research, this work aim at exploring the provisions of the international instruments being the Convention on Biological Diversity and the Nagoya Protocol on Access to Equitable Sharing of Benefits arising from the utilization of genetic resources cum how they relate to the protection of local and indigenous communities. It concludes that the instruments are targeted towards human sustainability generally but needs domestication and enforcement in our developing environments for there to be efficacy in the protection of the traditional knowledge in the biodiversity of local communities from misuse, misappropriation and abuse.

Keywords: Biological Diversity, CBD, Nagoya Protocol, Local Communities, traditional knowledge

Introduction

Every place on earth is home to one living thing or the other. There are different levels of their existence but due to one reason or the other, they are all confronted with the threat of extinction. This has led to resolve to finding solutions to help the environment keep its life with the resultant effect of sustaining human lives through concerted efforts at international levels which trickles down to local communities who are also already aware of their resources and

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crave for the benefit from the utilization of their resources having nurtured same through their traditional knowledge and sustained from generations past.(Barry, 1998)

Since the early 1980s, traditional communities, especially of developing nations, have craved for the protection of their traditional knowledge based genetic resources in biological diversity (biodiversity) (Dutfield & Suthersanen, 2024) which are considered as cultural heritage (Stamatoudi, 2022:29). Traditional knowledge, in this sense, is the skill or know-how that yields intellectual creations in traditional communities which can be seen in the area agriculture, medicine, ecosystem, technology amongst others. It is of great economic value to the communities. (Okediji, 2019) The call for protection of traditional knowledge became imminent following the exploitation of the biological resources of the traditional communities (termed 'bioprospecting') without authorization, acknowledgement of source and benefit sharing, (Okediji, 2022) and patenting of same in industrialised nations (Okediji, 2019). In 1992, the United Nation came up with the Convention on Biological Diversity (CBD) in Rio which about 196 countries have ratified including Nigeria. (United Nations) The CBD is an international legal instrument for the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.(Preamble, CBD) The CBD defines biological diversity to mean the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.(Art. 1, CBD) Thus, biodiversity is the totality of the variety of life found on earth - plant, animal, fungi and all living thing at different places. Therefore, it is important to conserve and preserve biological diversity for the sustenance of human being and further our development. (Coombe, 2001)

Against this backdrop, the objective of the CBD is to encourage actions geared towards a sustainable future - that is, the conservation of biodiversity is rendered 'a common concern of humankind'. (Preamble, CBD) As already stated, CBD covers biodiversity at all levels: ecosystems, species and genetic resources. It also covers biotechnology, including through the Cartagena Protocol on Biosafety, an international agreement which aims to ensure the safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health; it was adopted on 29 January 2000 and entered into force on 11 September 2003. As a matter of fact, CBD covers all possible domains that are directly or indirectly related to biodiversity and its role in development, ranging from science, politics and education to agriculture, business, culture and much more with the aim of preventing misuse, mismanagement, abuse and destruction. But the focus of this study is basically on its protection as it relates to traditional knowledge in flora and fauna exploitation.

Since biodiversity spans every aspect of the existence of man's sustenance, the need for protection of the rights of the local communities where they are situated cannot be overemphasized. Just like the Intellectual Property protection system is deployed as a veritable tool to protect the interest of creators in their intellectual works, there is need to protect the knowledge, innovations and skill of local communities in their biological resources. According to World Intellectual Property Organization (WIPO), genetic resources are 'subject to access and benefit-sharing regulations, in particular within the international frameworks defined by

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the CBD and its Nagoya Protocol'. (WIPO, 2023) Thus, it is safe to state that the CBD and its Nagoya Protocol also deal with traditional knowledge and genetic resources. This renders the review of the provisions imperative.

Biodiversity in Nigeria

Situated in the West African region of Africa, Nigeria lies between longitudes 30 E and 150 E and latitudes 40N and 140N. She has a land mass of 923,768 sq.km and is bordered to the north by the Republics of Niger and Chad; shares borders to the west with the Republic of Benin, while the Republic of Cameroun shares the eastern borders right down to the shores of the Atlantic Ocean which forms the southern limits of her Territory. She has maritime power due to her coastline of about 853km. (Nigeria, 2015) Nigeria has a large population of biodiversity and though she had ratified the CBD and the reeled out a number of policies, biodiversity is challenged in Nigeria by surge in population, alien species invasion, misappropriation, poverty, economic activity, habitat fragmentation, building construction, deforestation and so on. (Imarhiagbe et al, 2020). Of more relevance to this study is the challenge of religious bigotry and more especially bio-piracy by contemporary pharmaceuticals and research institutes without due benefits given to the traditional community. The case of NIPRISAN development using traditional knowledge by a national research agency, National Institute for Pharmaceutical Research and Development (NIPRD) which was patented comes to mind.(Perampaladas, 2010) Though the local that facilitated the traditional knowledge was paid, no further mention was made of his inclusion in all other transactions that was done pertaining to NIPRISAN.

Nigeria has however not domesticated the CBD as required by Section 12(1) of her constitution. But there are various laws to implement that align with the provisions of the CBD. She also has national plan for implementing CBD and submits reports accordingly.

Considering the challenges confronting biodiversity, issues relating thereto in terms of Traditional knowledge, innovations and practices of local communities are in jeopardy but for the intervention of the Convention and the Nagoya Protocols to it. (CBD factsheet, 2011) The Convention gave a pride of place to the protection of local communities in different parts through its three objectives. (UNCBD, 2023) This renders it extremely necessary to pay close attention to issues of biodiversity by the government.

Importance of Convention on Biological Diversity to Local Communities

The Convention and the Nagoya Protocol pay particular attention to the plight of local communities as regards traditional knowledge, innovations and practices. As stated before, it addresses also matters pertaining to genetic resources as it relates to local communities. It is evident from the Preamble that the Convention recognizes the 'close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components. Traditional knowledge is employed here to mean knowledge, innovations and practices of indigenous and local communities embodying

traditional lifestyles relevant for the conservation and sustainable use of biological diversity. (Blakeney, 2001)

According to Article 8(j) which is core to the application of the CBD to local communities, each contracting party or state shall, as far as possible, subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices:

There are yet other provisions that must be read in conjunction with Article 8(j) to draw the protection of local communities as regards their biological resources that can depict their knowledge, innovations and practices. Article 10 (c) which requires parties to 'protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements'. Such 'customary uses' can be considered to be synonymous with the "practices" referred to in Article 8(j), when both are relevant to or compatible with the conservation and sustainable use of biological resources. Also, Article 15 recognizes the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation. It further provides for the seeking of consent of contracting state who own genetic resources before being utilized, but encourages mutuality in such dealings.

Furthermore, Article 16(1) recognizes that transfer of technology (biotechnology) is essential for the achievement of the objectives of the Convention, so each contracting state 'undertakes, subject to the provisions of the Article, to provide and/or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment.

In addition, Article 19 is on handling of Biotechnology' and Distribution of its Benefits - the duties and corresponding expectations from contracting parties. Contracting Parties shall facilitate the exchange of information and such exchange of information shall include exchange of results of technical, scientific and socio-economic research, as well as information on training and surveying programmes, specialized knowledge, indigenous and traditional knowledge as such and in combination with the technologies referred to in Article 16, paragraph 1. It shall also, where feasible, include repatriation of information. (Article 17)

The Contracting Parties have to, in accordance with national legislation and policies, encourage and develop methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of the Convention. For this purpose, the Contracting Parties must also promote cooperation in the training of personnel and exchange of experts. (Article 18.4)

As stated above, for sustainable use of components of biodiversity, Article 10(c) states that each Contracting Party shall, as far as possible and as appropriate protect and encourage customary use of biological resources in accordance with traditional cultural practices that are

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compatible with conservation or sustainable use requirements. The status of "indigenous and local communities' traditional knowledge" is also affirmed by paragraph 9 of preamble to Decision III/14 of the Conference of the Parties regarding the implementation of Article 8 (j).

Besides Article 8(j), the CBD also states that access to genetic resources shall be subject to prior informed consent (PIC) of the Contracting Party providing such resources, unless otherwise determined by that Party. (Artcle 15.5) Access to genetic resources and benefit sharing arising out of the use of genetic resources are in consonance with traditional knowledge of indigenous and local communities. A combined reading of Art. 8(j), 10(c) and 15(5) would spotlight traditional knowledge as being useful in identifying sources of new products derived from genetic resources.

Moreover, it is the provisions of the CBD that the Contracting Parties shall, in accordance with national legislation and policies, encourage and develop methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of this Convention. For this purpose, the Contracting Parties are to also promote cooperation in the training of personnel and exchange of experts.

The Nagoya Protocol on Access and Benefit-Sharing

The Nagoya Protocol to the CBD was signed in 2010 but came into force in 2014. Just like the CBD, Nigeria ratified the Nayoga Protocol but is yet to domesticate it. In order to address the linkage between biodiversity conservation and its sustainable use, the Convention on Biological Diversity (CBD) introduced as one of its three objectives the fair and equitable sharing of the benefits arising out of the utilization of genetic resources with those providing such resources. The Nagoya Protocol as supplement to CBD covers the use of genetic resources without misappropriation (bio-piracy) as it relates to traditional knowledge - emphasizing Prior Informed Consent (PIC) of the local communities that own traditional knowledge in genetic resource, Access and Benefit Sharing (ABS) and mutually agreed terms (MAT). (Nagoya, Preamble)

Emphatically, the purpose of the Protocol is to implement the fair and equitable sharing of benefits arising from the utilization of genetic resources as it relates also to traditional knowledge. It builds on the access and benefit-sharing provisions of the Convention. Moreover, Parties to the Protocol are to ensure that their nationals comply with the domestic legislation and regulatory requirements of provider countries related to access and benefit-sharing of traditional knowledge associated with genetic resources. The ABS system creates incentives to conserve and sustainably use genetic resources which in turn enhances the contribution of biodiversity to development and human well-being in the communities.

Nagoya Protocol applies to genetic resources within the scope of Article 15 of the Convention and to the benefits arising from the utilization of such resources. It also applies to traditional knowledge associated with genetic resources within the scope of the Convention and to the benefits arising from the utilization of such knowledge. (Article 3) A combined reading will show that as stated in the Preamble to the CBD, States have sovereign rights over their own biological resources. Access to genetic resources by users must therefore be based on prior informed consent and equitable benefit sharing must occur on mutually agreed terms

- that is PIC and MAT, respectively as contained in Nagoya Protocol, Articles 5 and 6 and also in CBD, Articles 15, 16 and 19 which all present the way the ABS provisions of the Nagoya Protocol and the CBD are designed to work as regard traditional communities' interests.

Brief Critique

It is abundantly clear from the foregoing that both the CBD and Nagoya Protocol are plausible proactive measures to forestall unworthy utilization of biodiversity at the international level prescribing best practices for contracting parties. However, it goes without saying that there is bound to be some limitations as they are work in progress expected to be accomplished by the efforts of contracting parties through their national laws and other collaborative efforts. For instance, as part of effort to reposition Traditional knowledge, WIPO had just adopted the Treaty Intellectual Property, Genetic Resources and Associated Traditional Knowledge at the Diplomatic Conference to Conclude an International Instrument Relating to Intellectual Property, Genetic Resources and Traditional Knowledge Associated with Genetic Resources held in Geneva between 13th and 24th May, 2024 (WIPO, 2024 GRATK/DC/7); which would further enhance the protection sought to be done under the CBD and the Protocol by the indigenous and traditional communities.

Conversely, definition of local communities seems not to have been certain or is multifaceted and limitations in applying the provision have been identified as part of the shortcomings of the Protocol. More importantly, despite the importance of the Nagoya Protocol, intellectual property is largely absent from it with the exception of its mention as a means for possibly securing equitable benefit sharing.

Conclusions and Recommendations

Like most developing countries, for example Uganda which also possess a good number of biodiversity, Nigeria as a State party has laws and policies that are geared towards the goals of sustainable development but has not domesticated these international instruments. This has occasioned misuse and abuse of genetic resources as relates to traditional knowledge in the form of bio-piracy - pharmacy using genetic resources without prior consent of local communities; religious bigotry against biodiversity and unwholesome standards for indigenous healing medicine produced from genetic resources. (WIPO IGC, 2010; Gasu et al, 2021)

The CBD and Its Protocol aims to protect traditional knowledge which is beneficial to Nigeria. Thus, it is recommended that Nigeria domesticates these instruments and follow up on their implementation for the objectives of the CBD to be realised in terms of protecting local communities, their genetic resources and traditional knowledge while the further efforts at protecting intellectual property in genetic resources by WIPO awaits commencement.

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