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Developing Countries and the Convention on Biological Diversity: Navigating Obligations and Opportunities

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Abstract
This article critically examines the Convention on Biological Diversity (CBD) 1992 from the standpoint of developing countries, with particular reference to Pakistan. It explores the significance of biodiversity conservation, outlines the inequitable distribution of biodiversity benefits, and dissects major provisions of the Convention that serve the interests of developing states. Further, it reflects on the Convention's shortcomings and the challenges of implementing its provisions. Ultimately, the article argues that while the CBD is a landmark instrument in international environmental law, its true potential can only be realized through consistent international cooperation and a more robust benefit-sharing mechanism.

Keywords- Biodiversity, Developing Countries, Convention on Biological Diversity, Environmental Law, Pakistan, Conservation, Genetic Resources, Sustainable Use.

Introduction

According to environmental law experts, the Convention on Biodiversity (CBD) 1999 is the world community's most serious endeavor to deal with the threat of biodiversity loss by way of promoting cooperation between technology rich developed countries and gene rich developing countries (Boyle, 2002). Although the Convention appears to equally advance the respective interests of developed and developing countries, it can be argued that the developing countries have been its main beneficiaries (Adenle, 2015). Since Pakistan too is a developing state, the Convention provides it with a golden opportunity to reclaim its lost diversity. In this paper, at the outset conservation of biodiversity will be discussed keeping in mind its significance for survival of species. Secondly, policy position of developing countries will be considered with respect to conservation measures. In the third place, key provisions of the 1992 Convention promoting the interest of developing states will be highlighted.Fourthly, a number other provisions will be examined which make it advantageous for developing states like Pakistan to implement the Convention domestically. Finally, scholarly critique of the convention will be analyzed along with recommendations for improvement and finally conclusions will be made.

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Meanings of biodiversity

Before we proceed further, it is essential to understand what biodiversity is? Biological diversity has been defined as total variety of genes, species and ecosystem on earth, and it includes:

- the variety of ecosystems.
- the variety of species, and
- the variety of genes within the species.

Out of these, variety of ecosystems is arguably the most critical since all living things exist not in isolation but as part of the wider environment and only through protection of the entire ecosystem, diversity can be secured. The variety of species can be regarded as second in terms of importance for achieving purposes of the Convention. Species has traditionally been defined as classification of living organisms (Swingland, 2013).

Before coming into force of the 1992 Convention, international efforts were mainly directed towards protection or conservation of particular species. Nevertheless, of late the emphasis has shifted towards genetic diversity and a variety of genetic material within and between species. This is said to be of great value for manufacturing medicinal and agricultural products through bio-technology (Bowman, 1996).

Signification of conservation

The loss of biodiversity can have serious repercussions for life on the planet in general and for human welfare in particular. Natural habitat provides human beings with means of survival, such as supplying food including fruits and vegetables, construction materiel, medicines and wild genes. Furthermore, the natural ecosystem which sustains this incredible wealth of species also delivers vital ecological services like moderation of climate and soil formulation (Elisha, 2020). The interest in biodiversity has surged with the increase of human ability to produce high yielding species of plants by using biotechnology. Even though biological resources such as forests, wildlife, fisheries and crops are renewable and some of the species' extinction is part of natural processes, it is the alarming scale and speed of extinction caused by human activity which is of international concern (Sands, 2003). The rate of biodiversity loss has not been precisely measured. However, it is predicted by the World Economic Forum (WEF) 'that up to 23% of earth's natural habitats could be gone by 2100.' In many developed countries the biodiversity found within their territory has already disappeared. The United States for example has wasted all of its grassland and savannah, Europe has lost 56% of its forests. New Zealand has forfeited more than 90% of its grassland and savannah. The unprecedented loss of biodiversity can also be witnessed in developing countries. To illustrate, Madagascar has wasted 80% and Botswana more than 50% of their grassland and Savannah (WEF, 2020).

Since the developed countries have already lost their diversity affluent regions, remaining biodiversity can now be found in tropical regions inhabited by 12 developing countries. Consequently, specie rich areas of the world are nearly all located in the territories of developing states. Hence, the international efforts to conserve biological diversity should now be targeted towards the developing

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countries.

World Resource Institute (WRI) has identified following root causes of biodiversity loss:

i. Population pressure and increasing resource consumption.
ii. Lack of awareness about species and ecosystems.
iii. Poorly conceived state policies, such as environmentally destructive subsidies.
iv. The effect of the global trading system which creates pressure for building economies on comparative advantage.
v. Inequality of resource distribution.
vi. Failure to account fully for value of biodiversity.
vii. Defective rules of national and international law which provide inadequate protection of intellectual property rights and fall short of offering incentives for conservation.
viii. Introduction of man-made alien species into the natural ecosystem for large scale food production and industrial agriculture.
ix. Absence of any system of sustainable use of natural resources. (Sims, 2025)

Consequences of biodiversity loss for the developing countries

According to credible research, the bulk of biological diversity is now concentrated in developing states and the measures needed to minimize its loss necessitate changes in the policies of these countries, having an impact on their economic and developmental activities. For example, conservation is the principal tool to address the loss of biodiversity, however, it may have a negative impact on key industries like agriculture, animal husbandry and forestry. Thus, it has been suggested, even though developing countries bear much of the cost of conservation, they do not get the full economic value of their resources. The multinational companies of the developed countries, including pharmaceutical, chemical and agricultural companies are said to get full value of the end product which is manufactured from the extracts of plants and animals found in developing countries. However, these countries rarely get anything over and above the value of raw material (Yasmin, 1995).

In addition to above, developing countries are further exploited by intellectual property rights protection afforded to profits, products and technology of the developed countries by the international treaty regime. Such protection under the WTO laws draws a distinction between natural products and man-made improvement of the natural products, with the result that patent protection is largely given only to the latter. According to an Indian environmentalist Vandana Shiva, biodiversity loss in the developing countries is attributable to the developed countries at least in two respects. First, habitat destruction is caused mainly as a result of internationally financed development projects such as dams and highway construction and mining operations in the biodiversity rich forests. Second, technological and economic push to replace the diversity with homogeneity in forestry, agriculture, fisheries and animal husbandry through the use of modern agriculture methods relying on uniformity and monoculture is another contributor.

These factors justify the claim that developed countries should pay their debt to nature by funding the cost of conservation in developing states (Shiva, 2020). In

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the past, many in the developing countries were of the view that concerns for the loss of biodiversity were exaggerated by experts from developed countries to control the ownership of natural resources of these countries, so as to ensure free access to the natural resources needed as a raw material for the biotech industry. In the like manner, they viewed heightened interest in habitat protection as a downright threat to their national programs of social and economic development (Swanson, 1999). The policy makers of the developing countries believed that their possession of species rich areas gave them an unmatched opportunity to bargain with developed countries who did not have these resources but had technology and capital to utilize them. Hence, in their view the access to natural resources should have been tightly regulated.

During the negotiations leading to the 1992 Convention, the policy position of the developing countries revolved around the need for equitable return for utilization of their natural resources and transfer of technology enabling them to exploit resources within their territories. This policy was based on the principle of permanent sovereignty over natural resources. They also wanted to recover the full value of genetic resources. The adoption of the 1992 Convention points to the fact that developing countries have been largely successful in realizing these objectives (Glowka, 1994).

Major Provisions of the 1992 Convention Favoring Developing States

The Convention was signed by 150 states at the UN Conference on Environment and Development (UNCED) 1992 and was entered into force in December 1993. It can be regarded as the international community's most persuasive response up till now to confront the challenge of biodiversity loss (Jefferson 1999). By the end of 2016, the Convention had 196 parties, including all UN member states and the European Union with the exception of the United States. In view of this, it can be considered as one of the most widely subscribed international environmental treaties (Chazournes, 2009). The Convention is supplemented by two further agreements, namely Cartagena Protocol on biosafety and Nagoya Protocol on access and benefit sharing of genetic resources. While the former is designed to control the movement of living modified organisms (LMO's) resulting from biotechnology from one country to another, the latter is concerned with providing a transparent legal framework for equitable sharing of the benefits arising from the utilization of genetic resources (Felix, 2023). Pakistan ratified the Convention in 1994, became a party to Cartagena Protocol in 2009 and acceded to Nagoya Protocol in 2016.

The Convention has three main goals

a. The conservation of biological diversity.
b. The sustainable use of its components.
c. The fair and equitable sharing of benefits arising from genetic resources.

Its objective is to develop national strategies for the conservation and sustainable use of biological diversity. The developing countries are expected to benefit from the following vital provisions of the Convention:

Principle of Permanent Sovereignty Over Natural Resources

The preamble provides that every state has a sovereign right over their biological resources, and they are free to exploit and control access to these. However, the

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said right is qualified by the fact that states are responsible to conserve biodiversity and use their biological resources in a sustainable manner. Additionally, the right may also be said to have been constrained by the customary rule that the activities of states should not cause harm to the territories beyond their national borders. Clearly, by virtue of this principle, the developing states are at liberty to use their biological resources as they see fit subject to considerations of sustainability, conservation and no harm to neighboring states (Chiarolla, 2011).

Recognizing that special provision is required to meet the needs of developing countries

The preamble of the 1992 Convention highlights the special needs of developing countries for new and additional financial resources, and appropriate access to relevant technology. Accordingly, article 16 proclaims that the overriding priority of the developing countries is economic development and eradication of poverty in view of which it is imperative that technology be transferred to these countries to conserve biodiversity (Stilwell, 2010).

Fair and Equitable Sharing of Benefits

Article 15(1) affirms that the authority to determine access to genetic resources rests with the national governments of the territorial state, and it is subject to national legislation of such a state. The article specifies further that the states having the resource shall facilitate access to it by other contracting parties for environmentally sound uses. Correspondingly, states to whom the access is granted shall carry out scientific research as to its benefits and share the results of research, and benefits arising from its commercial and other uses upon mutually agreed terms with the party providing the resource and other contracting parties (Morgera, 2014).

Financial Incentives and Differentiated Responsibilities

The Convention takes note of the fact that the developing countries would require substantial assistance to implement the Convention and the cost of implementation should be borne by the developed states. Article 20 places differentiated responsibilities on all parties, accordingly, it stipulates that the parties must provide support and incentive in accordance with their capabilities. For example, it obliges developed states to provide financial and technological resources to enable developing states to implement the obligations under the Convention. Such resources would not be the part of any ongoing developmental assistance program. The financial and technological assistance to be provided to developing countries shall include the cost of conservation as well as administration. Lastly, article 20(4) provides that the extent to which the developing countries will honor their commitments under the Convention will depend on the developed countries effectively performing their obligations related to financial resources and transfer of technology (Sterck, 2001).

Access to Genetic Resource and Transfer of Technology

Article 16 specifies that state parties must ensure that the countries which undertake to provide genetic resources have access to the technology that makes use of those resources, called biotechnology. Moreover, the article lays down that parties which provide genetic resources must take part in biotechnological

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research and equitable sharing of benefits of such research. Article 16 sets out that the technology transfers must be on a fair and equitable basis and the private sector should step forward to facilitate access to technology. In addition to above, the article calls on the parties to make sure that intellectual property rights are observed in providing access to the resource and transfer of technology. At the same time, it prescribes that intellectual property rights are to be respected only insofar as they are consistent with the aims and objectives of the Convention (UNEP, 2020).

State Cooperation in Conservation Efforts:

Article 8 requires state parties to establish a system of parks and protected areas, and to formulate policies aimed at promoting conservation of biodiversity in a sustainable manner. In this respect two types of conservation are underscored by the Convention, that is, ex situ conservation and in situ conservation. Ex situ refers to removing species from their natural habitat and keeping them in viable conditions elsewhere generally in zoos and wild life parks for captive breeding in order to restore and protect the species. By contrast, In situ speaks about the protection of species within their natural habitats. It focuses on maintaining the integrity of ecosystems and allowing species to thrive in their original environments. Thus, article 9 provides that ex situ conservation should be used as a complement to in situ conservation. According to the Convention, in both ex situ and in situ conservation parties are obliged to cooperate in providing financial and technical assistance to developing countries. They must also cooperate in developing ex situ conservation facilities in the developing countries (WEF, 2020).

Arguably, there can be two impelling causes for bringing into force the 1992 Convention. First, equitable allocation of economic benefits of biodiversity while protecting the interests of the developing world. Second, redesigning the world economy based on the concepts of conservation and sustainable use. However, the Convention goes well beyond conservation and sustainable use and covers issues like respect for indigenous knowledge and inter-generational equity in the second place (Koester,1995). Some of the important provisions of the Convention reflecting its holistic approach are given below:

Common Concern of Mankind

The Convention does not globalize the ownership of biological resources within a state; however, it refers to biological diversity as 'common concern of mankind.' This means the international community has a valid interest in conservation and use of resources external to their territory, such as migratory birds and animals. The protection of such resources is a common concern of all states even if they are not directly harmed by the depletion of such resources. This implies that the sovereignty of states to make use of natural resources beyond national borders is not finite. Instead, state parties are required to cooperate for the welfare of the international community as a whole. In view of which, article 5 obliges state parties to cooperate with regard to areas beyond national jurisdiction and matters of mutual interest concerning conservation and sustainable use (Tinker, 1999).

Utilitarian Approach

While the preamble recognizes intrinsic value of biodiversity, it is referred to as a useful resource for mankind in the substantive part of the convention. It can

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therefore be argued that the Convention postulates that conservation efforts must be directed towards taking advantage of the biological or genetic resource for human consumption as contrasted to taking delight in its aesthetic value. Therefore, no limit is placed on human use or exploitation of the resource apart from sustainability or interests of future generations (Loh, 2004).

International Equity and Sustainable Use of Resources:

Preamble of 1992 Convention provides that parties shall conserve and sustainably use the components of biodiversity for the benefit of present and future generations. Article 2 defines sustainable use as 'use of the component of biodiversity in a way, and at a rate that does not lead to its long term decline and meet the needs of present and future generations. The concept of sustainable use can be described as spending the interest and keeping the capital. It is based on the consideration of balancing the needs of present and future generations (Jerome, 1998). Some basic features of sustainable use include management of living resources focusing on the ecosystem as a whole, setting quotas for declining species, preventing species pollution through living modified organisms, integrated approach, research efforts, restoration and rehabilitation at' species and monitoring of ecosystems. Article 7 requires the identification of components of biodiversity important for conservation and use. They must be monitored with special emphasis on those requiring urgent conservation measures and those offering greatest potential for sustainable use. Parties are also required to identify processes and activities which have adverse impact on conservation and sustainable use, monitor their effect and maintain a database (Shiva, 1997).

Respect for Knowledge of Indigenous People:

Article 8 of the Convention delves into inter-dependence of environment, sustainable development and well being of indigenous people. In the first place, the preamble touches on the importance of sharing equitably the benefits arising from the use of traditional knowledge held by indigenous people. In the same way, article 8 prescribes that each party shall respect the knowledge and practices of indigenous people relevant to conservation of bio-diversity. Parties are obliged to promote such knowledge and share with indigenous people the benefits arising from such knowledge (Robinson, 2020).

Precautionary Principle and Environmental Impact Assessment:

The Convention does not advert to the precautionary principle directly; it merely affirms in preamble that where there is a threat to diversity, lack of scientific certainty should not be used as a reason to postpone measures designed to prevent harm in anticipation. That being said, it is pertinent to note that failure to refer expressly to precautionary principle has been counterbalanced by Convention's provisions on Environmental Impact Assessment (EIA). Thus, article 14 requires parties to introduce procedures for environmental impact assessment of proposed projects likely to have significant adverse impacts on biological diversity (Motsumoto, 2010). In this way, an effort has been made to cope with scientific uncertainty by conducting impact surveys before embarking on a developmental activity having environmental consequences (Nijar, 2004).

Enforcement Procedure:

At international level, the Convention proposes financial incentives to foster

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compliance. Contrarily, at national level it advocates adoption of such economically and socially sound measures that may serve as incentives for conservation and sustainable use (Rosendal, 2004). The governing body of the Convention is the Conference of the parties (COP) established by virtue of article 22. COP enjoins each party to report periodically measures taken to implement the Convention within national jurisdiction. In areas beyond national borders, responsibility to ensure compliance is assigned to appropriate international or regional organizations. The primary function of COP is to keep under review the implementation of the Convention. Even though COP lacks powers to monitor or inspect conservation facilities of state parties on its own, it can encourage states to review national legislation and promote incentives for conservation. (Raustiala, 2001)

Framework Convention:

The provisions of the Convention are expressed in the form of overall goals rather than precise obligations. Hence, it can be regarded as a framework convention that establishes broad principles which states must take into consideration while making national laws and policies aimed at regulating conservation within their jurisdiction (Gepts 2006). Apart from this, Cartagena protocol lays down extensive rules in regard to safe handling and transfer of LMOs, whereas Nagoya protocol goes into detail about access to genetic resources and fair and equitable sharing of benefits from their use (Albuquerque, 2015).

Critique on Biological Diversity Convention 1992:

By affirming the principle of permanent sovereignty over natural resources, the Convention is said to have left preservation of indigenous culture to volition of national governments (Cullet, 2001). Furthermore, it is argued that although the Convention obliges state parties to share with the indigenous people profits derived from traditional knowledge, it falls short of quantifying such share. Consequently, national governments are free to exploit traditional knowledge without making adequate compensation (Mugabe, 2001).

In the second place, at the time of negotiations, the common heritage principle was opposed by both developing and developed states as the developing states wanted to protect access to biological resources and the developed states wanted to prevent access to laboratory bred genetic resources through application of patents (Muller, 2012). Therefore, to bring the parties to a consensus, the principle of permanent sovereignty was adopted so that states may pass national laws to regulate access to their natural resources beyond borders. The Convention does not create an international regime and puts faith in national governments to give effect to its obligations. Nevertheless, the widespread subscription of the Convention is indicative of willingness of the majority of the states to implement at national level guidelines and principles set forth by the Convention (Chazournes, 2005).

Another argument is that states which are using irreplaceable resources, such as rain forests cannot be compelled to discontinue their use at once, to ensure sustainability (Beyerlin, 2011). In response to this, it can be suggested that the wording of the Convention is flexible enough to accommodate varied interests of states. Therefore, it uses the flexible terms like 'as far as possible' and ' as

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appropriate'(Sadeleer, 2001). This implies that the implementation shall be to the extent permissible by national interest. That said, the widespread ratification of the Convention points to the fact that states are willing to accept the duty to cooperate in the protection and use of living resources (Najam, 2006).

Conclusion:

The 1992 Convention on biodiversity makes a clear distinction between burdens to be shared by developing and developed states. On the one hand, developed states are expected to provide financial resources and technology to developing states to meet the cost of implementation.Alternatively, developing states are obliged to facilitate access to biological or genetic resources subject to their control (Schrijver, 1997). It needs to be emphasized that such commitments could reverse the loss of biodiversity, if taken and enforced by all state parties in letter and spirit (Hunter, 2011). All said and done, it would be early to comment on the success or failure of the Convention and its Protocols with respect to reversing the loss of diversity as it depends on cooperation of parties in providing financial and technological support and constant overview of the compliance. Nevertheless, it can be said beyond doubt that the Convention has significantly enhanced the scope and effectiveness of the international legal regime for conservation of biodiversity (Feichtinger, 2015).

It stands to reason that developing states tend to be the main beneficiaries of the Convention. At the outset, all state parties are bound to recognize its permanent sovereignty over biological resources found within its jurisdiction and will authorize its national government to give access.Second, biological resources are required to be used in the modern biotech industries of developed countries (Chiarolla, 2008). After ratifying the Convention, a signatory state gets into position to demand full price of its biological resources.The acquiring states and their industries will be bound to pay full price, not merely the price of the raw material. Next, by joining the Convention, benefits of research and commercial uses of the resource will also be necessarily passed on to the state of origin of the resource (Kiss, 2007). Furthermore, a resource providing state will be entitled to receive compensation for abandoning its national development projects in the diversity rich areas. Moreover, developed countries will be further bound to provide funding for establishing conservation facilities in resource rich states. Not only that, loss of diversity itself is a grave problem and the survival of entire human race depends on its reversal. Therefore, each state being a responsible member of the international community is under moral obligation to help address this issue.

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