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"A Critical Analysis of the Doctrine of Access and Benefit Sharing"

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THE UNDERLYING DOCTRINE

Access and benefit-sharing is a system or an agreement discussed under public international law with an aim to distribute benefits arising from genetic resources somewhat between the users of genetic resources with country providing. It typically arisesconcerning bio-prospecting where indigenous knowledge is used to focus screening efforts for commercially valuable genetic and biochemical resources. It recognises that bio-prospecting frequently relies on indigenous or traditional knowledge, and that people or communities who hold such knowledge are entitled to share of benefits arising from its commercial utilisation.[1]

The over-reaching aim of doctrine of access and benefit-sharing (ABS) of genetic resources is to enable fair distribution of benefits between the users and providers for opening the doors for innovation and creating incentives for conserving biodiversity. Access to genetic resources is essential for research related to conservation of plant genetic resources and Research and Development for evolved crops and agricultural products that can adapt to different weather conditions brought about by climate change. Hence, access to genetic resources and benefit-sharing from that access is crucial for sustainable development to secure research and secure resource availability and environmental sustainability.

INTERNATIONAL PERSPECTIVE

ORIGIN OF THE DOCTRINE

The doctrine of access and benefit-sharing finds its primary principles within the Convention on Biological Diversity (CBD) (United Nations Convention on Biological Diversity, 1992). These principles are further specified within the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity (Nagoya Protocol, 2011). The CBD and the Nagoya Protocol, together with the Parties' decisions thereof, establish the international ABS goals.[2]

CBD was adopted in 1992, during the United Nations Conference on Environment and Development (UNCED) with the main focus on conservation, sustainable use of biological resources and fair and equitable sharing of benefits arising from such use of biological resources. The third objective of the CBD on fair and equitable sharing of benefits arising from genetic

[1] Introduction to Access and Benefit Sharing, Convention on Biological Diversity: ABS, (18th March 2021, 7:30 PM), https://www.cbd.int/abs/infokit/brochure-en.pdf
[2] *Id.*

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resources utilisation is considered an innovative approach adopted by a multilateral treaty. The principle is based on a series of dialogues on the issue and the consensus to recognise and reward countries and people who have contributed to the conservation of genetic resources and share the benefits with such providers.

CBD enables countries to control access to its sovereign resources subject to individual ABS agreements. Article 15 of the Convention regulates access to genetic resources by, inter alia: reaffirming the sovereign rights of States to their natural resources; stipulating that Parties shall endeavour to facilitate access to genetic resources; providing that access shall be subject to prior informed consent (PIC) and granted on mutually agreed terms (MAT); and requesting Parties to take measures to share benefits from the utilisation of genetic resources, on MAT.

The Nagoya summit was intended to clarify both provider and user state responsibilities in terms of both access requirements and benefit-sharing provisions, providing the basis for legal certainty and stimulating the development of 'minimum standards' to promote clarity and compliance.

SCOPE AND APPLICABILITY OF THE DOCTRINE

The doctrine of Access and Benefit Sharing, since 1992, has arguably become, the most studied and reflected upon concept in the CBD process. However, it is still not clear what is included within the scope of ABS.

Scope of ABS doctrine, in common parlence means what is covered under the ABS frameworks. It includes the actions, activities and circumstances which are included under certain ABS legal and regulatory principles and rules and the subject matter or phenomenon they apply to.

There has been a change in the scope of ABS over the years. Since its inception, the definition and conceptualisation of ABS has indefinitely and continuously shifted, expanded, opened up and changed to new meanings. This means that the efforts for implementing ABS at national and international levels have been challenging.

Even though there is a set of international principles laid down in the CBD and its 2010 Nagoya Protocol, the specificities of the activities which fall within its mandate are left largely to be defined by the national legislation and regulation. Even though the Nagoya Protocol has tried to narrow the contents of ABS by defining terms like "utilisation", "biotechnology" and "derivatives", States still struggles to create institutional and legal frameworks nationally so as to clarify what ABS means and covers in practice.

Inclusion of the traditional knowledge of indigenous people within the ambit of ABS frameworks and the notion of DSI as ABS subject matter has added another layer of complexity to ABS.

Clear scope is necessary for dissipating legal and practical uncertainties and further facilitates Research and Development, the precursor to both monetary as well as non-monetary benefit sharing. However, since its inception, legal uncertainties regarding scope has resulted in slow commercial Research and Development investment in genetic resources. The effects of stringent, costly and time-consuming ABS regulations on non-commercial, academic biodiversity research, including important conservation research are of particular concern. With scope not being clear, suspicions surround all forms of research, including academic research. Governments of various nations have also struggled to give permission for conducting research when they are also not clear on what is being regulated, and what they can approve, with many fearing charges of abetting bio-piracy.[3]

INDIAN PERSPECTIVE

ORIGIN OF THE DOCTRINE

India became a signatory to the Convention on Biological Diversity (CBD) in 1994. Twenty-seven years and several legislations later, India appears to have come a long way.

Prior to the enactment of the Biological Diversity Act in 2002, there was no formal legal regime regarding conservation of biodiversity, access to bio resources and sharing of benefits from the access to bio resources and traditional knowledge. After India ratified the Convention, there was no looking back. India became one of the first countries to enact a law, in 2002, the Biological Diversity Act, with an aim to implement the treaty within the borders.

India became a signatory to the Nagoya Protocol of the CBD in 2014. This international agreement explicitly deals with ensuring Access and Benefit Sharing of genetic resources. In other words, it ensures that the benefits which are obtained by using genetic resources are shared in a "fair and equitable way" with indigenous and local communities who possess the traditional knowledge regarding its use.

India's legislation for ratifying the Protocol came in the form of the ABS Guidelines notified by the NBA in 2014. The various aspects of benefit sharing are regulated by this doctrine: from the payment an applicant has to make in exchange of the commercial use of a genetic resource, how much of that payment should reach local communities, to exemptions for collaborative research agreements.[4]

[3] Sarah Laird and Rachel Wynberg, Why defining the scope of access and benefit sharing matter?, Research Gate, (18th March, 2021, 8:45 PM), file:///C:/Users/Home/Downloads/2020_ABSScopePolicyBrief.pdf

[4] Aathira Perinchery, Bioresource access and benefit sharing: how far have we come in India?, Mongabay, (19th March, 2021, 4:30 PM), https://india.mongabay.com/2020/04/india-bioresource-access-and-benefit-sharing-how-far-

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SCOPE AND APPLICABILITY OF THE DOCTRINE

The doctrine of Access and Benefit Sharing, set out in the Nagoya Protocol has been implemented in India by the domestic legislation, Biological Diversity Act 2002. The Act provides for a three tiered mechanism: the National Biodiversity Authority (NBA), State Biodiversity Boards (SBBs) and local level Biodiversity Management Committees (BMCs). The NBA performs regulatory, facilitative and advisory functions for conservation of genetic resources and ensuring fair benefit sharing. The SBBs advises the state governments on matters relating to biodiversity conservation and their sustainable use, and are required to deal with matters and applications related to the traditional knowledge and access to the biological resources made by the Indians; while, the BMCs implements conservation of the biodiversity at the grassroot levels (panchayats and municipalities) and prepares peoples' biodiversity registers or lists of all the biodiversity situated within their territories, as well as bio-resources and associated traditional knowledge.

Matters relating to requests for access to biological resources and associated knowledge (AK) by "non-Indian individuals or entities (body corporates/associations/organisations) having non-Indian participation (in its share capital/management)"for research and/or commercial utilisation; for transfer of results of research by any person (Indians/non-Indian individuals/entities) to non-Indian individuals or entities with non-Indian participation is dealt with by NBA. Also, applications from any person seeking approval before applying for an Intellectual Property Right (IPR) based on research/information on biological resources obtained from India is dealt by NBA. Further, NBA also deals with applications for transfer of the approved biological resources and/or AK to a third party, the approval from NBA is mandatory. NBA grants approvals subject to mutually agreed terms and conditions on the access to biological resources and/or AK which is set forth in the ABS Agreement so as to make the sharing of the benefits more equitable.[5]

Standing today, 29 states of India have established SBBs. There are 2,44,727 BMCs along with 4,371 additional BMCs in two Union Territories. The benefit from this network has been that the money has begun trickling in as early as 2007.

SUCCESS OF THE DOCTRINE

The application of the Access and Benefit Sharing doctrine in the national boundaries is not as complex as it is in the international domain. The Biological Diversity Act, 2002 does not hinders the conducts of bio-surveys or the utilisation of biological resources or commercial utilisation by

havewelcome/#:~:text=India%20became%20a%20signatory%20to,the%20benefits%20obtained%20through%20bio resources.

[5] Biodiversity and Access and Benefit Sharing in India, (19th March, 2021, 6:25 PM), http://nlsabs.com/?page_id=219

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Indian citizens. The only requirement is that they need to give SBB a prior intimation regarding their needs. The local people and communities, including the hakims, vaidyas and the cultivators are not restricted from utilising the resources as before and they do not even need to intimate SBB regarding their needs.[6]

In regards to the commercial use of the bio-diversity products within the national boundaries, Section 19 of the Act provides that non-Indian applicant, who intends to apply for patents or obtain any biological resources or associated knowledge for commercial purpose, needs to obtain approval from the NBA.

There are a few reported cases which show the success of the doctrine of Access and Benefit Sharing.

- Red Sanders case: This case of 2015 paved the pathway for the establishment of the National Biodiversity Authority, State Boards and local communities for utilisation of the Access and Benefit-sharing of the biological resources. In the instant case, Government of Andhra Pradesh had conducted a global E-auction for sale of Red Sanders of high economic value by the bidders of Indian and foreign origin before accessing the biological resources. The successful purchasers had to pay 5% to the NBA or SBB. 95% of the total benefits were to be transferred to the BMC at the local level. The Access and benefit sharing arrangement proved its utility in the State. It provided the people with a source of income and also engaged them in the decision-making, which had the capability of encouraging them for the sustainable utilisation of the genetic resources. Consequently, people from all walks of life in the state such as indigenous people, tribal people, and forest-dwellers would be benefited from the auction. This is innovative instance of access and benefit sharing has changed the way companies have been utilising genetic resources.
- PepsiCo-seaweed: A multinational company, PepsiCo has also signed access, and benefit sharing agreement where there has been successful implementation of ABS doctrine. PepsiCo India Holdings Private Ltd. for the export of seaweed (Kappaphycusalvarezi) cultivated by the State of Tamil Nadu's fishing community, entered into access and benefit-sharing agreement with the NBA for Rs.37 lakhs in the year 2007. PepsiCo has approximately exported2000 metric tons of seaweed to nations like Malaysia, Philippines, and Indonesia. The beneficiaries of the agreements are spread across 4 districts in the State of Tamil Nadu. The company paid the NBA for the access of the genetic resources from the Gulf of Munnar area in the state of Tamil Nadu. The company

[6] Handbook on Biodiversity Law, Access and Benefi Sharing, Centre for Environmental Law, Education, Research and Advocacy, National Law School of India University, Bangalore, (19th March, 2021, 7:45 PM), https://nlspub.ac.in/wp-content/uploads/2019/05/Handbook-on-Biodiversity-law-Access-and-Benifit-Sharing.pdf

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has signed a year-long agreement with the NBA to export the seaweed for commercial utilisation in the food and cosmetics industry.

- Bio India Biological-Neem case. NBA collected 55,035.00 (about USD 924) from Bio India Biological for the export of 2000 kilograms of neem to Japan. People from the village named Amarchinta in the state of Andhra Pradesh bundled the leaves and dried them and then handled it to the company for the export by entering into an undertaking with the company for a few special operations. The NBA transferred a "part of the royalty amount" to the local biodiversity body in Amarchinta for "planting neem saplings and creation of awareness about biodiversity conservation." The BMC has reportedly utilised the money for awareness programs, planting of saplings and fencing.
- Novozymes Biologicals Inc. is a multinational corporation of USA with expertise in microbiology, biotechnology, and gene technology. It has signed an access and benefit sharing agreement with the NBA for commercial use of Bacillus and Pseudomonas bacteria to screen for plant growth from Malampuzha forest division in Kerala.The sample of the bacteria would be used in a laboratory for promoting crop production of lettuce, tomato, rice, among others. The NBA, since 2004, has charged the corporation with 5% annual royalty from the sale of the product derived from the biological resource.
- In April, 2015, the Uttarakhand State Board has entered into access and benefit sharing agreement with a reputed cosmetic company, Habib Cosmetics Private Limited. This has been a significant step towards the implementation of the Biological Diversity Act, 2002. It was the first of its kind by any State Biodiversity Board after the Guidelines' notification issued by the Government of India in 2014 on Access to Biological Resources and Associated Knowledge and Benefits Sharing Regulations. The share of benefits which was generated by the Habib Cosmetics Private Limited, a total sum of Rs 3,22,991/- has been shared with the State Biodiversity Board of Uttarakhand for the year 2013-2014, which the State Biodiversity Board would utilise as per rules.

FAILURE OF THE DOCTRINE

Kanchi Kohli, the senior researcher at the Centre for Policy Research and ShaliniBhutani, a lawyer,believes that despite all the treaties and regulations existing, the access to genetic resources continues while benefits remain illusory. The chase for the benefit is still far from being over for the local communities and this scenario is not going to change any time soon because of four fundamental reasons.

Firstly, regulation of benefit sharing is mainly dependent on self-disclosure of accessors or the enforcement action by the NBA or the SBB, which results in many slips. Secondly, establishing ownership of a resource remains a fundamental issue. An excellent example of illustrating this issue is the case of the Kani tribe in Southern Kerala. Thirdly, due to the lack of clarity on regulations for benefit sharing on access to knowledge of the people, benefit sharing is

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quiteresource-centric. Finally, BMCs and other local bodies do not have the powers to determine ABS norms, whether it is regarding the regulation of access or designing different ways in which benefit sharing can take place.

According to BalakrishnaPisupati, Former Chairman of NBA and the Chairperson of the Forum for Law, Environment, Development and Governance, one of the significant failures of the Biological Diversity Act, 2002 is that the communities who should be receiving 95% of the benefits accruing under the ABS provisions are not reaching them. One possible reason for this may be lack of guidelines issued by the NBA on the modalities for sharing benefits. In certain cases, the monetary benefits have not reached the local communities. For instance, PepsiCo's payments for access to seaweed in 2007 have not reached beneficiaries yet.

There are many challenges in the use of bio resources. Identification of both beneficiaries and accessors is a concern in many cases. Many companies use bio-resources, but very few of them apply to the NBA or the SBB. Many companies are not even aware that this is required.

Another big challenge is ensuring that BMCs are functional. Several BMCs though have been settled after the directions of the National Green Tribunal, there is still a long way to go before they become strong and effective institutions.

For instance, the CAG report on the State of Andhra Pradesh in September 2018 stated that though the State Biodiversity Board was formed a decade earlier, the state has not attained the level of preparedness necessary for implementing Biological Diversity Act, 2002. In a total of 13,725 local bodies, only 2,908 had formed BMCs, and only 75 had prepared the registers. The National Green Tribunal, in September 2019, came down heavily on 14 states, including Karnataka, for having no progress in creation and maintenance of biodiversity registers.

The CBD and the Nagoya Protocol have also come under attack for hampering conservation research. In 2018, scientists from 35 countries were of the opinion that obtaining field permits to access specimens for the purpose of non-commercial research had become immensely difficult. Modern technologies redefine modalities of utilisation and access of genetic resources in ways that were not foreseeable at the time of Nagoya Protocol Negotiations.

Recent developments in the field of science and technologies have challenged some of the elements on the ABS Protocol. One such issue is the use of Digital Sequence Information, where genetic sequence information available in the public domain is enough for the development of the products commercially, and there is no need for physical access.

The Biological Diversity Act, 2002 says that the local communities should be consulted, while the Nagoya Protocol clearly states prior informed consent. The purpose of seeking consent is

compromised if one only consults the communities. Thus, there is a gap in the implementation of the Protocol at the national level.[7]

WAY FORWARD

Interestingly, Access and Benefit Sharing has turned out to be one of the overwhelming focus areas of the implementation of the Biological Diversity Act in India and is given more priority than the other objectives of the law, such as conservation, sustainable use and biodiversity impact assessments.

A new and revised set of ABS regulations – the Guidelines on Access to Biological Resources and Associated Knowledge and Equitable Sharing of Benefits Regulations, 2019, which was made available for public comments in early 2019, lays stress on the definition of 'biological resources' to include any associated knowledge. It also explicitly states that the SBBs, based on the powers vested in the state apparatus, can apply the new regulations for benefit sharing as well.

Notably, as per the Nagoya Protocol mandate, the NBA has been appointed as the "checkpoint". Though the NBA has designated various checkpoints to looks into the issues of compliance, the implementation of actions by the checkpoints are unclear with NBA conducting limited monitoring and evaluation on the role and actions of the checkpoints.

Despite these challenges, many are of the opinion that ABS holds an "enormous" scope in India.

Considering India is a mega-bio-diverse country, the potential for using our bio-resources has been more. If India adopts a facilitating approach for implementing the ABS provisions under the 2002 Act, it can act as an innovative financing mechanism.

This "ABS potential" of the country is required to be studied and understood in a better way. The draft guidelines, regulations and Act itself are under review to make the process for ABS application simpler.

The reviews further include reworking the draft to accommodate various timelines for specific aspects of the ABS process and subsequently computerising the entire system, thus moving to a "more transparent" mechanism and an online portal. Efforts are being carried on for the development and implementation of an electronic Peoples' Biodiversity Register ePBR framework. This would be useful in monitoring the resources over time, too. Metadata will be available for protecting data and preventing it from being accessed in the public domain.Prior

[7] CBD Technical Series No. 38, Access and Benefit Sharing in Practice: Trends in Partnerships across sectors, (19th March, 2021, 8:30 PM), https://www.cbd.int/doc/publications/cbd-ts-38-en.pdf

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informed consent of the beneficiaries can be given online, and there can also be the development of mutually agreed terms between the beneficiary and accessor through this system.

There are also plans for the development of an incentive mechanism for the ABS system, in which the applicants will be provided an “ABS-compliant” certificate.