

GENETIC RESOURCES OF PLANTS AND TRADITIONAL KNOWLEDGE [PREVENTION FROM BIOPIRACY] BILL, 2023

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ABSTRACT

India is one of the richest biodiversity hotspots even though it's one of the victimised countries in the looting of genetic resources and traditional knowledge by Multinational Corporations. Biopiracy is a central theme which is connected by international discourse on patent rights. Biopiracy is the manipulation of intellectual property rights by corporations which includes commercial exploitation of knowledge of biological resources as well as native people and acts as a threat to the development of the country. This paper aims to prevent the ill effects of biopiracy such as, curtailment of economic development, loss of traditional knowledge, privatisation of indigenous knowledge and infringement of sovereignty of nation. The Indian Government regulates biopiracy through measures like Traditional Knowledge Digital Library (TKDL), Trade Related Aspects of Intellectual Property Rights (TRIPS), The Convention on Biological Diversity [CBD], The Nagoya Protocol, Access and Benefit Sharing (ABS) System etc., which only rectifies the practice of biopiracy but doesn't completely prevent it. The at hand legislation and the regimes against biopiracy is inadequate and biased towards Multinational corporations. It doesn't give sufficient recognition to the original knowledge holders. At the heart of this matter is ownership and yet these traditional resources and knowledge were rarely compensated at low cost. The absence of separate legislation paves way for increasing instances of biopiracy, As the theme of this paper is absolute prevention from biopiracy so we include Bill which concentrates on eliminating biopiracy and on sustainable development of nations.

Keywords: Biopiracy, Traditional knowledge, Intellectual property rights, Multinational corporations, commercial exploitation.

INTRODUCTION

The events of biopiracy are occurring more frequently than before all over the world,

especially in the southern hemisphere. The victims, in most of the cases, are the developing world, especially those which are rich in biodiversity. Nonetheless, the early explorers sailed east and west in search of gold, silver, and rare spices, and medicinal plants were the treasure they found. In his book “The Customs of the Kingdoms of India,” Marco Polo (1254–1324) wrote “We shall tell you next of the great kingdom of Malabar [Southwestern India] there is a great abundance of pepper and ginger, besides cinnamon in plenty and coconuts.” The Genetic Resources of Plant Materials and Traditional Knowledge are great resources for developing nations that need to be protected and used sustainably. This Research deals with the global problem of biopiracy, its effects and highlighting the importance to prevent it. Further, The paper will focus exclusively on the Global Biopiracy Incidents, Economic Impacts, and it examines Loopholes and the Measures to prevent Biopiracy and ends with a look at need for Separate Legislation.

DATA FROM SURVEY

For the purpose of this paper we conducted a Survey about Biopiracy Prevention, there have been 200+ responses we got. The main importance of the survey is that the majority of people favoured the need for separate legislation for preventing biopiracy. As by the result, Out of 100%,

- 46.5% responded that they know about biopiracy, and 20.9% responded No.
- 76.7% has responded that Genetic Resources and TK are being largely exploited by MNCs
- 48.8% of people responded that the existing legislation is not adequate, this implies the significance for a separate legislation.
- 58.1% responded that the measures at hand are not fully effective,so 67.4% responded that we need a separate legislation.

The majority of responses demand the need for Separate Legislation.

BIOPIRACY AND TRADITIONAL KNOWLEDGE

Patent, copyrights, trademarks, trade secrets, geographical identification and traditional knowledge are part of IPRs. There is no one acceptable definition of the term but different organisations and conventions have tried to define it.

The Convention on Biological Diversity talks about traditional knowledge as “the knowledge, innovations, and practice of indigenous and local communities embodying traditional life style as well as indigenous and local technologies.”

The Oxford Dictionary defines bio-piracy as “The practice of commercially exploiting naturally occurring biochemical or genetic material, especially by obtaining patents that restrict its future use, while failing to pay fair compensation to the community from which it originates.”

GLOBAL INCIDENTS OF BIOPIRACY

Using intellectual property rights, various countries get patents on indigenous medicinal plants, seeds, genetic resources, and traditional formulas of other countries by excluding local identity, as listed in Table 1.

Table 1

Global biopiracy incidents with details.

Incident	Country of Origin	Pirated Country	Reference
Turmeric (<i>Curcuma longa</i>)	India	USA	1
KothalaHimbutu (<i>Salacia reticulata</i>)	Sri Lanka	Japan, USA, Europe	2,3
Masbadda (<i>Gymnemasylvestre</i>)	Sri Lanka	Japan	3
Weniwalgeta (<i>Cosciniumfenestratum</i>)	Sri Lanka	Japanese, European, and USA pharmaceutical manufacturers	4
Neem (<i>Azadirachta indica</i>)	India Nepal	EPO to the US Department of Agriculture and the US-American firm W.R.	5
Enola Bean (<i>Phaseolus vulgaris</i>)	Mexico	USA	6
Rubber seeds (<i>Hevea brasiliensis</i>)	Brazil	England	7,8
Hoodia plant (<i>Hoodia gordonii</i>)	Southern Africa	CSIR gave patent to Phytopharm and Pfizer	9
Sacks of plant	Philippine indigenous people	Philippine National Museum	4

specimens			
Kakadu Plum (Terminalia ferdinandiana)	Australian	Aboriginal people USA	10
Aloe vera	Sri Lanka	USA	3

EFFECTS OF BIO-PIRACY

- Possibility of Monetary Losses to Native Communities
- It causes the extinction of existing species, the extinction of biodiversity, and the privatisation of biodiversity and indigenous knowledge.
- Unfair usurpation of traditional knowledge and indigenous resources by a patent holder will give them ill-earned profit.
- Other than forsaking their generational knowledge the farmers or communities may also have to compromise their livelihood
- Unjust and unethical exploitation by claiming such patents translates into the disturbance of a well-established judicial system.

TRADITIONAL KNOWLEDGE DIGITAL LIBRARY (TKDL)

The TKDL in India is a collaborative project between the Council of Scientific and Industrial Research (CSIR) and the Ministry of Agriculture, Food and Public Health (AYUSH). It is a nationally developed effort to ensure that patent offices around the world do not grant patents for applications based on India's ancient TK. Concrete measures have been taken to develop a programme aimed at documenting the knowledge and information contained in the ancient texts of Ayurveda, Siddha and Unani, as well as creating a database on the medicinal plants involved and their medical use. TKDL has transcribed more than 2.90 lakh medical formulations of Ayurveda Unani and Siddha in five internationally recognized TKDL as a collective resource in the management of intellectual property rights.

LOOPHOLES

First of all, there is a fair amount of disagreement regarding the best possible means through which TK can be protected. Indeed, existing literature already features catalogues of international law (both "hard" and "soft"), regional norms and domestic legislation that accord protection to TK within the framework of culture. While some believe that data aggregation and record creation is the best means to tackle bio piracy, others propose different approaches, such as negotiating access agreements between indigenous

communities and bio-prospectors.

Secondly, the TKDL has also attracted criticism because of its high level of confidentiality. In response to a right to information application, the Council for Scientific and Industrial Research (CSIR) clarified that the TKDL can only be accessed by foreign patent offices. It is not made available to the Indian Patent Office or to CSIR scientists. As per the same response, the decision to make the TKDL confidential was taken during a cabinet meeting in 2006, but there exists no legal instrument that mandates such confidentiality. TK databases in other countries do not impose access restrictions. The Korean Traditional Knowledge Portal, for example, explicitly states the motivation behind making itself publicly available: The database is presented on-line through the Korean Traditional Knowledge Portal (KTKP). The reasons for making the database publicly accessible through the KTKP are as follows:

- To lay the foundation for international protection of Korean traditional knowledge, thereby preventing unauthorized use of patents inside and outside the country.
- To provide an abundance of information on traditional knowledge and related research, thereby expediting the development of related studies and industries.
- To provide essential information for patent examinations, thereby enhancing the quality of intellectual property applications for traditional knowledge.

THE NAGOYA PROTOCOL

The Nagoya Protocol on access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation was adopted in Nagoya, Japan on 29 October 2010. It is a new international treaty that builds on and supports the implementation of the Convention on Biological Diversity (CBD), in particular one of its three objectives, the fair and equitable sharing of benefits arising from the utilisation of genetic resources. The Nagoya Protocol is a landmark agreement in the international governance of biodiversity and is relevant for a variety of commercial and non-commercial sectors involved in the use and exchange of genetic resources. It also covers genetic resources and traditional knowledge (TK) associated with genetic resources, as well as the benefits arising from their utilisation.

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation was adopted in Nagoya, Japan on 29 October 2010. It is a new international treaty that expands on and upholds the execution of the Convention on Biological Diversity (CBD), specifically one of its three goals, the fair and equitable sharing of benefits emerging from the use of genetic resources. The Nagoya Protocol is a milestone

agreement in the international governance of biodiversity. It supports various commercial and non-commercial sectors involved in the use and exchange of genetic resources. Indeed it covers genetic resources and traditional knowledge (TK) associated with genetic resources, as well as the benefits derived from their use.

CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

Convention on Biological Diversity (CBD) is an international treaty designed to promote sustainable development of biological diversity, conservation as well as the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources” CBD has been ratified by 196 nations including India. Its overall objective is to encourage actions, which will lead to a

sustainable future. The Convention on Biological Diversity covers biodiversity at all levels: ecosystems, species and genetic resources.

ACCESS BENEFIT SHARING (ABS)

Access and benefit-sharing (ABS) refers to the way in which genetic resources may be accessed, and how the benefits that result from their use are shared between the people or countries using the resources (users) and the people or countries that provide them (providers).

COMPLEXITY OF ABS LEGISLATION

A first challenge to be discussed is the sheer complexity of ABS legislation. In a globalised economy, where companies typically source inputs from multiple countries and sell their products again in different markets, companies normally need to comply with a myriad of laws and regulations (e.g., trade, import, and export laws; tax and financial disclosure laws; and product approval or safety laws, etc.). Processes are easier for laws and regulations which have evolved over a long period of time, where there is a long history of sharing of best practices, and—above all—where there is a significant level of global harmonisation and where the laws are sufficiently concrete and precise to offer legal certainty.

RECENT CASES

Basmati Patent (*Oryza Sativa* Linn):

The Basmati is a long, slender-grained, aromatic variety of rice indigenous to the Indian subcontinent. In the year 1997 the United States Patent and Trademark Office (USPTO) granted a patent (No. 5663484) to a Texas-based American business enterprise

RiceTecInc for “Basmati rice line and grains”.

The Ayahuasca Case (BanisteriopsisCaapi Mort.):

For many centuries, BanisteriopsisCaapi Mort has been cultivated and planted by the Shamans, a local group in the Amazon basin. To make an authentic indigenous cocktail known as “Ayahuasca.” Ayahuasca which means “wine of the soul” is used by the Shamans in mystical and curing rites to cure sickness, attract ghosts, and foresee the future. An American citizen, Loren Miller was granted US Plant Patent, granting him rights over the alleged variety by BanisteriopsisCaapi Mort which he had collected from the Amazon and called “The Da Vine” and analysed for potential medicinal benefit.

- The Rosy Periwinkle:

In Madagascar, the rosy periwinkle was originally discovered. Now several other tropical countries around the globe have been introduced to it and planted it. This implements researchers from other countries being able to obtain knowledge in other nations from one nation and plant samples and discover new hybrids.

- Enola Bean Biopiracy:

Named after Larry Proctor's wife, who authorised it in 1999. Enola beans are a unique variety of Mexican yellow beans: Sales of this bean were sold in North Mexico. Next, the patent holder sued several Mexican yellow bean importers. Thus, farmers face economic hardship. The lawsuit was filed against the farmers and the result was in favour of the farmers as ruled by the U.S. Patent and Trademark Office.

LEGAL REGIME RELATING TO BIODIVERSITY AT NATIONAL LEVEL

In India, the legal regime for the protection of traditional knowledge is primarily governed by the following laws:

1. The Biological Diversity Act, 2002: Traditional knowledge related to biological resources is protected by the Biological Diversity Act. According to the Act, local people and the State Biodiversity Board must first provide their informed agreement before any access to genetic materials and related traditional knowledge may be granted. The Act also allows for the distribution of gains from the use of traditional knowledge.
2. The Patents Act, 1970: According to provisions in the Patents Act, the patent office is permitted to deny the issue of a patent if the innovation is founded on traditional knowledge or if it was acquired from a community or group of people who claim to be the guardians of traditional knowledge.
3. The Traditional Knowledge Digital Library: The Council of Scientific and Industrial Research (CSIR) created the Traditional Knowledge Digital Library (TKDL), a digital

repository for traditional knowledge from a variety of industries, including handicrafts, agriculture, and medicine. By making traditional knowledge accessible in a digital format, the TKDL seeks to prevent its improper use.

4. The Geographical Indications of goods: Geographical indications (GI) in India are allowed under the Act, and they are also protected. The use of geographic indications (GIs) on products gives them a distinctive quality, reputation, and other qualities by identifying their origin. By enabling the registration and preservation of GIs linked to traditional knowledge, the Act safeguards its use.

NEED FOR SEPARATE LEGISLATION

- A separate, new legislation should be brought in to protect the biodiversity and traditional knowledge of our country from bio piracy. The legislation should provide the indigenous community absolute right over their knowledge and resource
- Digital libraries should be encouraged more as a well-managed database will make piracy of traditional knowledge a difficult task for the multinational giants.
- A strong mechanism should be incorporated such as a sui generis system for the protection of biodiversity.
- The indigenous groups should be made aware about the intellectual property rights and the practice of bio piracy and how it is going to negatively impact them.

BRILLOPEDIA

GENETIC RESOURCES OF PLANT AND TRADITIONAL KNOWLEDGE (PREVENTION FROM BIOPIRACY) BILL, 2023

PRELIMINARY

1. Short title, extent and commencement

(a) This Act may be called the Genetic Resources of plant and traditional knowledge (prevention from Biopiracy) Act 2023.

(b) It extends to the whole of India.

3. It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

2. Definitions

In this Act the following words and expressions are used in the following senses, unless a contrary intention appears from the context.

(a) Genetic Resources' refers to any biological material that contains genes of any plants,

animals, or microbial materials, which are of social & economic value as a resource and capable of self-replication to use it for future.

(b) 'Traditional knowledge' means specific knowledge, customs, and practices of indigenous people that have been developed from experience which is transmitted from generation to generation.

(c) 'Biodiversity' is the diversity of all living things from every resource on earth.

(d) 'Biopiracy' is the illegal exploitation of knowledge and genetic resources of indigenous communities by obtaining patent that restricts its future use.

(e) 'Indigenous people' are the native inhabitants of a particular isolated area who share collective ancestral ties to the lands and natural resources and possess prior right to the unique culture and practices.

GENERAL RULE

3. Object

The object of the present law is the conservation of genetic resources of plants and traditional knowledge of indigenous peoples as well as to distribute equal benefits between them.

4. Sovereignty

The State will exercise total and exclusive sovereignty over the component of biodiversity.

5. Recognition of Rights

The State recognizes their right and authority of indigenous people to decide on their traditional knowledge under various laws.

6. Items suitable for protection

This Act recognizes the Traditionally organized plant variety and the Traditional knowledge regarding the medicinal use of those plants and the collective knowledge of the indigenous people.

SCOPE OF PROTECTION

7. Scope of Protection Under these Regulations

These regulations establish a special protection regime for the genetic materials of plants and traditional knowledge of indigenous peoples.

8. Exception to the regime

This regime shall not affect the traditional exchange, between indigenous peoples of the collective knowledge protected under this regime.

PURPOSE

9. Purpose of the regime

The regime shall have the following purpose:

- (a) To promote the standard of indigenous peoples by use of traditional knowledge in benefit of them and mankind in general.
- (b) To promote fair and equitable distribution of the benefits derived from the use of such traditional knowledge.
- (c) To improve administration for effective management of the components of biodiversity.
- (d) To ensure environmental safety to all citizens as a guarantee of social , economic and cultural sustainability.
- (e) To prevent grant of patent to inventions obtained or developed from the traditional knowledge of indigenous peoples if such knowledge is not taken into account as prior art in the examination as to novelty and inventiveness of the said inventions.

ACCESS TO TRADITIONAL KNOWLEDGE

10. Constitution of the Organization

- (1) With effect from such date as the Central Government may, by notification, Appoint, there shall be established, for the purposes of this Act, a Commission To be called as “Organization of Indigenous People” to perform the Functions assigned to the Commission under this Act.
- (2) The Commission shall have its office at such place as the Central Government May decide from time to time.
- (3) The Commission shall be a body corporate by the name aforesaid having Perpetual succession and a common seal with power, subject to the provisions Of this Act, to maintain and grant access on behalf of the consent of the indigenous communities and to act as a mediator for benefit sharing.

11. Functions of the Commission

- (1) To protect the rights and collective knowledge of the indigenous communities.
- (2) To maintain proper and unambiguous records of collective traditional knowledge of all indigenous communities.
- (3) To Act as a mediator on granting access to traditional knowledge , the organisations should inform the greatest possible number of indigenous people possessing the specific traditional knowledge and shall take due account of their interest and concerns.
- (4) In event of access to traditional knowledge a licence agreement shall be signed which

ensures the protection of the knowledge and guarantees equitable distribution of the benefits deriving therefrom.

12. Representatives of Indigenous Peoples

For the purpose of this regime indigenous people shall be represented by the Representative organisations.

REGISTRATION OF COLLECTIVE KNOWLEDGE OF INDIGENOUS PEOPLES

13. Registries of Collective knowledge of indigenous peoples

The Collective knowledge of indigenous peoples may be registered in two types of registries:

- National Biodiversity Authority.
- Local Registries of collective knowledge of indigenous peoples.

14. Registration at the request of indigenous peoples

Any people may through its Representative organization, may register the Collective knowledge in their possession in the National Biodiversity Authority and the Local Registries of collective knowledge of indigenous peoples.

15. Local Registries of collective knowledge of indigenous peoples

Indigenous Peoples may organize local Registries of collective knowledge in accordance with their practices and customs.

16. Cause for Cancellation of Registration

At the request of the parties concerned, may apply for the Cancellation of registration or licensing under the National Biodiversity Authority where

- (a) In violation if any provisions of this regime
- (b) when the data in the application or the Licensing contracts are false or inaccurate.

LICENSING

17. Compulsory Registration of License Contract

License contract shall be entered in a registry kept for the purpose by National Biodiversity Authority.

18. Compulsory written form for License contracts

The License contracts between the Representative organizations and the third parties must be in written form with clear terms.

19. Contents of License Contracts

For the purpose of this regime, contracts shall contain the following clauses:

- (a) Identification of parties
- (b) A Description of Collective knowledge for which the Access granted
- (c) A Statement about the share of benefit to the indigenous people must be unambiguous
- (d) Both the parties must have been agreed on the terms of the contract
- (e) When the parties violate the obligation of contract must have to compensate under this regime

20. Scope of Licensing

The Licensing shall not prevent the others from using or Licensing the same knowledge.

FUND FOR THE DEVELOPMENT OF INDIGENOUS PEOPLES

21. Allocation of Share Percentage to the Organizations

- (a) A Percentage which shall not be less than fifteen percent of the value before (15%) tax, of gross sale resulting from the marketing of goods developed by using collective knowledge.
- (b) The parties may also agree on a higher percentage according to the degree of traditional knowledge in production of goods.

22. Purpose of the share percentage

The Representative organisations have the obligation to allocate the share percentage to the indigenous people for the development and for the rise of their standard of living.

LIABILITY OF THE PARTIES

23. Circumstances for the liabilities of parties

- (a) when the party violates the terms and conditions of the Licensing contract;
- (b) when the party negotiates on the percentage share after the signing of the Licensing contract;
- (c) when the party fails to do its legal obligations;
- (d) When the party uses the traditional knowledge to an excessive degree or for other purposes.

PENALTIES FOR INFRINGEMENT

24. Cognizance of offences

1. Subject to the provisions Of this Chapter, no Court shall take cognizance of any offence under this Act except complaint made by:

- (a) Ministry of Environment, Forest and Climate change or The National Biodiversity Authority.

(b) No court inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class shall try any offence punishable under this act.

25. Punishment for false claims

Whoever makes or attempts to make false claims under the provision of the Act, shall be punishable with fine or imprisonment or both.

26. Punishment for failure to comply with Chapter-VI

Whoever fails to comply with the provisions of Chapter VI of the Act, which includes the components of a licensing contract, shall be punishable with fine not less than five percent of the average turnover, as may be determined from the books of accounts or returns if income tax filed by such businesses.

CONCLUSION

India is no doubt a country rich in biodiversity and traditional knowledge and therefore is one of the countries that is the most vulnerable to bio piracy. This paper analysed about global biopiracy incidents, the need to prevent Biopiracy, and the economic impacts, and tools and their Loopholes, and the need for the Separate Legislation and includes a survey which demanded a separate legislation. And lastly we attached a separate bill for the protection of genetic resources of plant materials and traditional knowledge of Indigenous Peoples.

References

- Kumar S. India wins battle with USA over turmeric patent. *The Lancet*. 1997;350(9079):p. 724. doi: 10.1016/s0140-6736(05)63536-2. [CrossRef] [Google Scholar]
- Court of Appeal. In the Matter of an Application in the Nature of Writs of Mandamus, Certiorari and Prohibition under Article 140 of the Constitution of the Democratic Socialist Republic of Sri Lanka. Sri Lanka: Court of Appeal; 2017. <http://courtofappeal.lk/> [Google Scholar]
- Amarasinghe K. Bio-piracy and its impact on Biodiversity: a special review on Sri Lankan context. *Journal of Environmental Protection Science*. 2018;269 [Google Scholar]
- Gupta A. *Human Rights of Indigenous Peoples: Protecting the Rights of Indigenous Peoples*. Delhi, India: Isha Books; 2005. [Google Scholar]
- Singh D. Corporate hijacking of food is the most important health hazard of our time. *BMJ*. 2003;327(7420):p. 890. doi: 10.1136/bmj.327.7420.890-d. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- POD-NERS LLC. Field bean cultivar named enola. 1996. US 5894079.
- Smith N., Plucknett D., Williams J. *Tropical Forests and Their Crops*. New York, NY,

USA: Cornell University Press; 1992. [Google Scholar]

- Gollin M. Biopiracy started with a bounce. *Nature*. 2008;451(7182):p. 1055. doi: 10.1038/4511055a. [CrossRef] [Google Scholar]
- Millum J. How should the benefits of bioprospecting be shared? *Hastings Center Reports*. 2010;40:24–33. [PMC free article] [PubMed] [Google Scholar]
- Robinson D. *Confronting Biopiracy: Challenges, Cases and International Debates*. Oxfordshire, UK: Taylor and Francis; 2010. [Google Scholar]



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