
INTERNATIONAL JOURNAL OF ADVANCED LEGAL RESEARCH

CONCEPT OF BIO-PIRACY¹**ABSTRACT**

Bio-piracy is a mechanism in which those who have abused local indigenous resources are granted monopolistic power to environmental resources and traditional knowledge, while the real privilege should be granted to the ethnic group who has the local traditions. The majority of developing regions will have enormous species variability but lack advanced technology, while advanced countries will have sufficient technology but no species variability, which will be the principal cause for bio piracy by industrialized economies. As a consequence, the existence and wellbeing of producers or societies who have dedicated their work and attention to preserving the environment have been jeopardized. Because of the wide variety of plant variants, species of animals, and cultural information found in India, it is one of the most common targets of bio piracy. Because of their own commercial gain, many large companies and multinational companies have abused and stolen our hundreds of years cultural heritage and diversity.. As a result, there seems to be an urgent necessity to reform and modify current legislation, and perhaps to implement new policies, for the safety of our biological diversity, as well as for the country, Nongovernmental organizations, as well as other nature lovers to put legitimate efficacy into place.

The article aims to grasp the idea of Indian bio piracy and has negative way it has contributed to the erosion of this nation's diverse heritage. The article also describes well-known instances of bio piracy in India, as well as the ethnic group's ethical and social privileges. The article's study is limited to India, and it makes no mention of those other developing or underdeveloped countries that have been targets of bio piracy. Furthermore, the analysis is entirely collected from various sources, with no primary data being obtained to make a judgment.

Keywords: Bio piracy, Nation's Diverse Heritage,

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INTRODUCTION

Bio piracy is a concept which is described as use of natural biodiversity and cultural heritage but with no permission of local people, who have been the true owners of the information and expertise. Bio piracy is primarily a concern in developing or underdeveloped countries, which have a wealth of biodiversity but lack access to quality technologies. Most emerging economies' biological resources have been depleted as a result of ice age depletion. Individuals also had the technology and resources to evolve; the only thing they needed is ecosystems, which they attempt to steal from nations with abundant species diversity. Bio piracy has a major impact on the drug and food industries. Farm workers nowadays rely heavily on plant genetics to enhance crop quality, but an issue arises whenever a corporation produces a species of plants, acquires the patent, and offers it to growers. However, engineered plant crops are not particularly helpful for planting, and businesses also keep their expertise as a patent troll.² Local producers will suffer the consequences of it because it is incredibly hard to purchase seedlings from a business on a consistent basis. Furthermore, since the rights of rural and tribal populations rely on traditional information and natural diversity in their daily lives, it is critical to conserve and conserve biodiversity as well as the interests of community groups. Plants grown from natural resource weren't really deemed inventions prior to 1930, and thus no copyright protection was given. Crop types that were separate and different were subsequently granted patent rights under "Plant Variety Act of 1970".

BIO PIRACY IN INDIA: CASE STUDIES

Basmati Rice

The basmati rice line and grain were another well-known example of bio piracy. This was the second national triumph over bio piracy. Basmati rice is an Indian rice variant that is among the most common in the world. "Rice Tec Inc", a Texas-based firm, lodged a standardized patent on basmati rice on July 8, 1994. In "United States patent and trademark office", the firm was attempting to obtain a claim on the basmati rice grains for cultivating, processing, as well as preparation. The firm also claimed to have invented the rice, despite the reality that it was gathered from multiple rice revolutions in India. That firm even argued that they are entitled to a patent because they developed a new variation of basmati lines and grains. The "United States

² "Kumar, P., 2009. Biopiracy, GM seeds and rural India. *Global Research*, 2"

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Patent and Trademark Office” repealed almost all of the terms of the Basmati patents when a barrage of protests against the company “Rice Tec Inc” being granted a patent.³

Turmeric

Turmeric is a part of every Indian household. It is a spice which every Indian food needs and an ingredient with many beneficial properties as well. It has anti fungal, anti bacterial and anti inflammatory properties which proves to be of a great medicinal importance through centuries. The “University of Mississippi” filed and was awarded a patent for the usage of turmeric for therapeutic benefits in 1994. The university reported that turmeric was primarily used in India to heal sprained ankles and as an anti-inflammatory, even though there was no evidence that it was being used to heal superficial wounds and abrasion. The “Indian Council for Scientific and Industrial Research” challenged this patent.⁴ This was done by sending necessary documents as well as Vedic samples, along with a 1953 study that demonstrated all use of turmeric for wound treatment. The “United States Patent and Trademark Office” withdrew a patent granted to “Mississippi University” for the usage of turmeric to treat superficial abrasions based on provided evidence.

Indian Wheat

“Monsanto's” patent towards “Nap Hal”, a wheat variant of India, was invalidated by the “European Patent Office” in Munich in 2004. The “European patent office” issued the patent to “Monsanto”, a firm that is recognised as one of the largest seed companies, on May 21, 2003, under the name "plant." The “Research Foundation for Science, Technology, and Ecology”, along with a number of other groups, made an issue of a lawsuit, “Research Foundation for Science, Technology, and Ecology”, “V. U.O.I” & others, challenging the issuance of the “Nap Hal patent” for “Monsanto companies”, that culminated the patent being revoked.

Neem

The patent system of the neem tree's anti-fungal abilities is a well-known case of bio piracy in India. The neem plant, that is native to the age old country of India, is considered for having a wide range of therapeutic and farming uses. A patent was issued to a company named “W.R Grace” and the United States Government in 1994 for a given procedure of preventing invasion

³ “Mukherjee, U., 2008. A study of the basmati case (India-US basmati rice dispute): the geographical indication perspective. Available at SSRN 1143209”.

⁴ “Srivastava, M., 2011. Bio piracy of medicinal plants & practices: Sacrilege of aboriginal Indian traditional knowledge. Available at SSRN 2149878”

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and infection by fungi on crops by using herbal extract from Neem that contains neem oil derived through a hydrophobic approach that is completely free of “Azadirachtin”, “emulsifying surfactant”, and “water”. The patenting of the neem for its beneficial activities of keeping fungi away was resisted because neem is a native plants species of India, and the conventional experience of using neem for therapeutic reasons and anti-fungal applications in cultivation dates back generations.⁵ As a result, the patent will not be issued because it does not meet the two main requirements for issuing a patent, namely, creativity and ingenuity. The issued patent was overturned in May 2000 as a result of outrage from many Farming community, socio-political protesters, and researchers. If the patent had not been repealed, it would have had a number of consequences, including the marketization of neem, which would have had a negative impact on Indian peasants’ livelihoods because they would not be able to purchase the patent firm’s costly seeds.

BIOPIRACY AND FOREIGN TREATIES

This is critical to safeguard patent holders' interests while also ensuring that the interests of native groups or native inhabitants who already are familiar with traditional information and ecological usage are not infringed upon. Most areas of legislation, including international law, intellectual property rights, and environmental policy, have attempted to govern bio piracy in diverse manners.⁶ However, the key issue is that most of these regulations' clauses promote material ubiquity and benefit maximisation, whereas others seek to conserve the earth and ecosystems, as well as native peoples' interests. This inconsistency has caused conflict, so various “international treaties”, such as “TRIPS” and the “Convention on Biodiversity”, have created legislation to bridge the gap among benefit maximisation and the conservation of natural resource, as well as the rights of indigenous peoples.

TRIPS AGREEMENT

“TRIPS, or the Trade Related Aspects of Intellectual Property Rights Agreement”, was established by the “World Trade Organization in 1965” to safeguard intellectual property rights on a worldwide platform. The TRIPS agreement contributed to the international standardisation of intellectual property rules. Since the TRIPS agreement granted living things patentability, it has aided bio piracy. As per “section 27(3)(b) of the TRIPS agreement”, nation who is a

⁵ Porter, A.H., 2006. Neem: India's tree of life. *BBC News*, 17.

⁶ Mgbeoji, I., 2014. *Global biopiracy: patents, plants, and indigenous knowledge*. ubc Press.

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participant of the “TRIPS agreement” must have patent or sui generis rights for crop plants native to the member state, or perhaps both. Established and emerging countries have clashed over this theory. Geographical indication is also recognised under the TRIPS agreement. According to “Section 22(3) of the TRIPS agreement”, if the geographical indication being used by holders of the products for trademark application is inaccurate or ambiguous to the buyer of the products, the patent would be declared unfair. The very same theory was applied to the problem of bio piracy in the case of basmati rice.

CONVENTION ON BIOLOGICAL DIVERSITY

The “Convention on Biological Diversity” seeks in order to preserve, restore, as well as sustain native forms as well as tribal communities' cultural heritage practises while recognising the importance and relevance of biodiversity's crucial role in the preservation of the all life forms. “Article 8” of the “Convention on Biological Diversity” encourages as well as focuses on the broader usage of conventional intelligence by obtaining approval from local communities who possess the skills for the aim of exchanging the information with a greater community of people so that they can gain similarly from ecosystem utilization.⁷

NAGOYA PROTOCOL

In 2010, the “Nagoya Protocol”, that primarily seeks to offer various mechanisms in order to implement the “Convention on Biological Diversity”, was adopted. The proposal's main goal is to gain insight to and spread the advantages that come from ecology. By strengthening laws, the approach aids in gaining wide facilities to biological and genetic tools. The procedures even include guidelines for governments, such as establishing a new entity to regulate operational licences for scientists and related companies, as well as building a good platform for managing the revenue generated from using natural resource and tracking the frameworks' effectiveness.

INDIA AND BIOPIRACY

India's battle towards natural resources piracy and conventional science piracy India has faced numerous hurdles in its efforts to preserve native crop plants and cultural heritage. The battles have resulted in substantial progress in the ecological sustainability. Following thorough analysis, the nation recognised the importance of biodiversity preservation and there is a need to ensure that almost all advantages gained from the use hit the place of origin. Due to the extreme

⁷“STOCK, T., 1992. The convention on biological diversity. *UNEP: Rio de Janeiro, Brazil, 1760*”
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abundance of crop plants and ecosystems in India, it is one of most vulnerable countries to bio piracy. In recent times, India has indeed been active in overturning patents issued to different US firms. It was the first time a third-world country had triumphed in a battle toward established and strong nations. The value of biodiversity was very well understood, and in order to safeguard our nation's biodiversity and conventional information against piracy, the Indian government implemented a new legislation in 2002 called the "Biological Diversity Act". The act's key goal is to conserve, restore, and appreciate our nation's ecosystems, as well as to have a much better and more controlled access to services without destroying ecosystems for gain. The act aims to protect conventional information and ecology that belonged to our nation, as well as to fairly distribute the revenue generated from use of these assets. Another relevant law aimed at preventing bio piracy is the "Patent Act of 1970", that stipulates that "*mandatory disclosure of source and geographical origin of the biological material in the specification when used in an invention*".⁸ It is very essential to recognize the fact which is, in case the person makes a patent declines to provide a country of origin or attempts to provide an incorrect country of origin, the patent will be revoked. The "Conservation of Plant Varieties and Farmers' Rights Act of 2001" also ensures that farm owners' interests as well as crop varieties are protected from bio piracy and commercialization. This law knows the significance of species of plants preservation and discovery for nutrition and forestry purposes, which is critical in achieving the objective of global defence and is also essential for long-term growth. One relevant legislation that recognises the country of origin of goods is "Geographical Indication of Foods Act", that came into effect in 2003. This act attempts to categorise goods based on the basis of their origin. "Darjeeling tea" was the first commodity in India to obtain a GI label. So as to avoid piracy of ecological resources and cultural as well as heritage of that area, that amounted to our country's native population, the Indian government founded the cultural heritage and online databases in 2001. The library catalogues diverse organic species native to the region. The library's material is accessible in five different languages, allowing a wider audience to access it. The library contains extensive information on the usage, features, and bibliographic references of a variety of materials. The main goal of this library's release is to establish a highly skilled framework for combating conventional information piracy and countering immoral patents. Our country's different medicinal regimes, such as "Ayurveda, Unani, and Siddha", are all represented in the collection. "TKDL" is a first Indian approach to protect discourages misuse of indigenous lands relating to India at global patent offices. It is a

⁸ Patent act section 4D

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community effort between “CSIR” and the “Department of AYUSH”, “Ministry of Health and Family Welfare”. Traditional information assumes public sphere information when it is lawfully recorded. This implies that it is deemed existing work within patent law and therefore is not protectable. Such an official document, in a format that is readily available to copyright locations around the world, will include a history of India’s prior art to all such departments. Patent examiners may quickly search these repository and refuse any provisional patent that appears to be a carbon copy of existing information. It’d be permissible to patent offices that need a complete account of case law, such as those in the United States, since it is in text format. It will deter incidents of ‘bio-piracy’ to this degree. Around the period the “TKDL” was organized in 2001, the “TKDL” working group reported that approximately 2,000 inventions pertaining to Indian medical practices were being awarded incorrectly by patents locations around the world each year.

ANALYSIS

After thoroughly examining the incidents, it is clear that our nation's intellectual property laws are insufficient to defend the safety of our nation's local people. The laws contain numerous flaws that enable multinational companies and individuals to exploit ethnic groups' cultural heritage because of their own selfish enrichment. The policies have failed spectacularly to protect the interests of these peoples, resulting in bio piracy of native ecosystems and also conventional information. Cultural awareness is now seen as a public endeavour for the sake of marketing as well as a way to make money without providing anything else in exchange to the societies that are the brains behind all this. The “High Court of Uttarakhand” ruled in “Divya Pharmacy vs. U.O.I” that no business may extract natural resource without first obtaining approval from the broader residents. The justice went on to say that such cultures are mainly accountable for preserving and biodiversity conservation and cultural understanding, and that they have complete ownership of them. The recently revised Indian patent law has included a new clause that addresses the issues experienced by local populations. The declaration of the country of origin of the biological organism or conventional information is now needed for a product to be licensed in India, according to the new section. The law also contained clauses that provided for the termination of a patent if the object’s country of origin was incorrect or not disclosed. Several new laws were also indoctrinated in the act to protect cultural heritage from bio piracy, like “Section 25” that states, “anticipation of invention by available local knowledge including oral knowledge”. For instance, “Novartis v. Union of India”, pharmaceutical firm

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known as “Novartis” applied in order to issue a patent on medication called “Glivec”, that was used for treatment of tumour in India. The supreme court rejected the Swiss company’s application because the compound in the medication, “imatinibmesylate”, was issued a patent earlier, so this new medicine, “Glivec”, seems to be the similar substances except having slight adjustments, so patent could not be issued to Novartis because it couldn’t be considered an innovation under “section 2(1)(j) of the Patent Act”. So, indeed this is clear, this includes government, not only the malicious firms and businesses, is a main cause of theft of natural support and materials. Since the state does not provide adequate protection to ethnic tribes in order to ensure their survival, the country urgently needs a rigorous ecosystem control system. Our Judicial system has also made inaccurate bio piracy judgments, including the instance “Environment Support Group vs. National Biodiversity” . In this particular instance, “Biodiversity Board of the state of Karnataka” has placed a lawsuit not in favour of “Mosanto” for bio piracy of a regional aubergine type. However, the appeal against the corporation was rejected by the province’s “High Court” because it lacked merit. As a result, it is evident that our nation’s government, courts, and representatives share responsibility for bio piracy in our nation almost as much as multinationals.

SUGGESTIONS

1. To safeguard our nation’s ecosystem and conventional information from bio piracy, a different, modern law must be enacted. The law must give native peoples complete control over their information and resources.
2. More emphasis needs to be placed on digital repositories, as a well-managed library would make theft of conventional information somewhat complicated for multinationals.
3. A powerful framework, such as a one-of-a-kind scheme, must be implemented to preserve ecosystems.
4. Native communities must be educated regarding their rights on their property which they own and practise of Biopiracy, as well as the way it affects them.

CONCLUSION

Without a question, India is a land rich in natural and conventional information, making this one of the most susceptible to bio piracy. Conventional information and also our nation's ecosystems are abused and stolen by established powerful nations without a fair value share.

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Our nation's native communities have shown no desire to share their cultural wisdom with an intruder for material reward. They are still interested in sharing their experience with others without requesting much in exchange. As a result, our proportion of rural people are trapped in a poverty trap, whereas global corporations that profit from it amass ever-increasing sums of capital. The vast majority of local populations or native populations are unaware of their rights on their property or practise of Biopiracy. A lot of such activities had a negative impact on our ethical and moral beliefs. Improvements and revisions to the current patent law relating to the preservation of conventional information and ecosystems from plagiarization by huge corporations are urgently needed.

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