

**BIOPIRACY IN INTELLECTUAL PROPERTY RIGHTS  
REGIME: A LEGAL STUDY WITH SPECIAL REFERENCE TO  
THE RIGHTS OF INDIGENOUS PEOPLE**

**ABSTRACT OF THE THESIS  
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## ABSTRACT

The researcher has conducted the present research work entitled **‘Biopiracy in Intellectual Property Rights Regime: A Legal Study with Special Reference to the Rights of Indigenous People’** with the objective to study and analyze the biopiracy disputes and its effect on the rights of the indigenous people, to study the reasons behind the growth of biopiracy cases and issues involved, to examine some national legislations and international initiatives for the protection of the indigenous people and their knowledge associated with biological resources and to make some practical and legal proposals in order to reduce the cases of biopiracy and protect the indigenous people.

Biopiracy refers to the unauthorized commercial use of biological resources or associated traditional knowledge or the patenting of spurious inventions based on such knowledge, without compensation. The developing nations, rich in biodiversity and valuable resources have become a subject of interest to many corporations as well as individuals, as developed countries rich in technology look to make profit from the diverse biological resources of the developing nations. While searching for ways to gain profit, the corporations and individuals of developed nations often encounter indigenous communities who already have made use of the valuable resources of that region. Thus, when the developed nations decide to claim any plant variety as their own and indigenous communities are overlooked and their interests are ignored by the developed nations biopiracy dispute arises. Biopiracy has never been more relevant than it has been in 20th and 21st centuries, as never before have individuals been allowed sole ownership of biological matter. The emergence of patent regime beginning in the 1930s allowed plant material to be patented and thus it led to the current rise in biopiracy cases and debates surrounding biopiracy.

Biopiracy has become an exploding issue today. The lack of legal protection of the biological and cultural heritage has made the indigenous

communities of the third world vulnerable to biopiracy. This is a matter of great concern for the countries rich in biological resources since patents, which were supposed to prevent piracy, have now become legitimized process for theft of their indigenous knowledge making it an exclusive property of multinationals. Through biopiracy the rights of indigenous cultures to their biological resources and knowledge are erased and replaced by monopoly rights. The patent policy, thus, generated enormous conflict and divided the developed and developing nations on the issue of biopiracy. Corporations in developed nations complain that inadequate patent laws are leading to losses; developing nations claim that biopiracy is robbing them of valuable resources. The biopirate countries argue that it is not stealing resources of the indigenous people but rather creating innovative products. To developing nations, where most traditional knowledge is located, patents utilizing such knowledge represent "*biopiracy*", a theft of their resources and culture. On the other hand, for industrialized countries, which have the technology to produce such commodities, these patents are a means of rewarding and encouraging important inventions.

Thus the issue of biopiracy has come into sharp focus because of industrialized nations' interests in securing trade benefits for high technology industries and developing nations' attempts to maintain a hold over resources that are used by these high technology industries. It has become a serious problem in biologically rich developing nations because patents on non-patentable knowledge are granted which are either based on the existing indigenous knowledge of the developing world, or a mirror variation.

Since the last two decades multinational corporations are profiting by patenting the biological resources and associated knowledge of the indigenous people. Bio-piracy is hampering developing nations' biodiversity, the livelihoods of communities and farmers who have invested their time, care, hard work and knowledge in restoring their heritage. Various plants and vegetables like turmeric, neem, basmati rice, ashwagandha, pudina, kalamegha, aloe-vera, karela, and jamun were victimized by biopiracy and

where India have successfully put forward its perspective in the international courts and came forth as a winner. There is a dire need of modification or amendments in international and national laws in order to safeguard national interests and to negate the privatization of international knowledge and resources and protect the rights of the indigenous people.

The researcher examined the available material related to the history and concept of Intellectual Property Rights (IPR)<sup>1</sup> and biopiracy and various laws and legislations related to it but no particular international instrument is found that would be able to put a check on growing biopiracy. In India, not a single law is found which specifically deals with biopiracy. Though on the international level the existing international agreements and conventions talks about the protection of biological resources and their conservation but no clear cut legislation focuses on the issue of biopiracy. Thus it can be said that at present there is no specific law to curb biopiracy both at the national and international level and the international instruments which talks about the protection of biological resources are not very effective.

The researcher has studied and analysed various international instruments such as International Labour Organisation Convention No.169, Universal Declaration of Human Rights, Vienna Declaration, Mattatua Declaration, Draft Declaration on Indigenous Rights 1993, The International Covenant on Economic, Social and Cultural Rights, The United Nations Declaration on the Rights of Indigenous Peoples, 2007, The World Commission on Environment and Development, The United Nations Conference on Environment and Development, The 1992 Rio Declaration, Forest Principles, Agenda 21, The Convention on Biological Diversity, The Nagoya Protocol, the International Convention for the protection of New Varieties of Plants (the UPOV Convention), the TRIPS Agreement, efforts of World Intellectual Property Organisation and national legislations such as Geographical Indications Act, the Patents Act, Protection of Plant Varieties and Farmers Act, Biological Diversity Act and various forest legislations and

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<sup>1</sup> Hereinafter referred to as IPR

policies and traditional knowledge database. In spite of all these legislations and policies, the original holders of the indigenous knowledge concerning biological resources are the victims of biopiracy, their rights are violated. Hence the existing international instruments and national legislations are not very effective due to poor implementation.

The researcher has studied and analysed various biopiracy disputes which shows that the big corporations of the developed countries are stealing genetic materials especially plants and other biological materials of the indigenous people by the patent process in the name of invention. Biopiracy issues are increasing because big corporations rich in technology are making money by obtaining patent on the biological resources of the indigenous people. Against many patents indigenous people protested because neither their consent was taken nor was any compensation given to them. Thus, there is no benefit sharing with the holders of the traditional knowledge. This shows that the multinational companies are making money by fully utilizing their knowledge without sharing the profit with them.

The researcher has divided the thesis into following six chapters.

Chapter One is Introduction which introduces the thesis with statement of the problem, objectives, hypothesis, literature review, research methodology and the methods of hypothesis testing.

Chapter Two is Concept and History of Biopiracy and its Implications on the Rights of the Indigenous People. It provides an overview of concept and history of biopiracy and its impact on the rights of the indigenous people in the Intellectual Property Rights regime. In this chapter the researcher has discussed the meaning of indigenous people, concept of traditional knowledge and threats to indigenous knowledge in the Intellectual Property Rights Regime. Although there is no universally accepted definition of indigenous knowledge and it is a term that takes on many meanings for different people, there are, however, some generally accepted concepts associated with discussions on knowledge possessed by the indigenous people which are dealt by the researcher in the

present chapter. The holders of indigenous or traditional knowledge face various difficulties. In some cases, the very survival of the knowledge is at stake, as the cultural survival of communities is under threat. The challenges which are faced by the indigenous people are many such as lack of respect and appreciation for indigenous knowledge, the commercial exploitation of their knowledge by others, the role of prior informed consent, and the need for equitable benefit-sharing, international dimension of the protection of traditional knowledge possessed by the indigenous people and benefit-sharing for associated biological resources. A major threat to the indigenous people, known as Biopiracy, which emerged in the intellectual property rights regime is dealt in detail by the researcher in this chapter.

Chapter Three is Protection of the Rights of Indigenous People under International Law. In this chapter the researcher examined and analysed various international conventions, treaties, agreements and legislations and policies relating to the protection of the rights of the indigenous people in the intellectual property rights regime. The reason why indigenous peoples are considered to need particular protection, that is to say a protection which exceeds the protection under international human rights regimes, is the fact that these peoples have been deprived by the immigration of other peoples of their rights. In particular, they have lost rights concerning the land they traditionally occupied, and the possibility to develop and sustain a community reflecting their particular values. Apart from that, these peoples face the danger of losing their identity or, at least, they face difficulties adjusting their traditional values or customs to new conditions of life. Although the endeavours to establish a regime for the protection of indigenous peoples in the IPR regime are part of the ongoing process of a progressive development of international law, such a regime will, if accepted and implemented, add a new dimension thereto.

Chapter Four is Protection of the Rights of Indigenous People and their Knowledge in India. It is an analysis of the Indian legal regime in which the researcher has explored how far it is adequate to protect the traditional knowledge and the rights of the indigenous people. The rich biodiversity of

India is matched with equally rich cultural diversity and a unique wealth of indigenous knowledge system developer preserved and practiced by millions of ethnic and indigenous people living in the tribal and rural sectors. This indigenous knowledge system encompasses a plethora of unique and time-tested knowledge, wisdom, belief, traditions and practices associated with conservation and sustainable use of biological resources. Most of this knowledge are held within the traditional communities and are transmitted orally from one generation to another. The present chapter provides a general insight to the laws and policies in India which relates to the protection of indigenous people and their knowledge. Although there is no specific law in India to protect the indigenous people and combat biopiracy, to conserve the biological resources and counter the problem of biopiracy and protect traditional knowledge, Indian Parliament enacted the following legislations- The Protection of Plant Varieties and Farmer's Rights Act, 2001; The Biological Diversity Act, 2002; The Patents (Amendment) Act, 2005, which are discussed by the researcher. The Government of India has also established Traditional Knowledge Digital Library (TKDL)<sup>2</sup> database to prevent patenting of inventions based on Indian traditional knowledge. The researcher has discussed the TKDL in detail which aims to act as a bridge between the traditional knowledge existing in local languages and the patent examiners at various international patent offices and thus helps to prevent biopiracy cases.

Other than the IPR legislation, there is also a need to look into some of the existing laws and policies which have some relation, direct or indirect, to the conservation of biological resources, recognition of the rights of local and indigenous communities etc., which also have an implication on Traditional Knowledge (TK)<sup>3</sup> protection. A brief account of the forest and wildlife legislations, Joint Forest Management, the National Environment Policy, 2004 from the perspective of TK protection is made by the researcher. In the quest for a system to protect TK in the interest of the local communities and the

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<sup>2</sup> Hereinafter referred to as TKDL

<sup>3</sup> Hereinafter referred to as TK

national interest, existing legal provisions and policies have been examined by the researcher to see if they recognise the importance of availability of natural resources to the holders of TK. For this purpose, a legal analysis of the Indian Forest Act, 1927, the Forest Conservation Act, 1980, and the Wild Life Protection Act, 1972 has been attempted. Since the primary subjects of these Acts are forest and wildlife and not TK, the researcher studied these laws to find out whether they provide the holders of TK access to the natural resources, which is extremely necessary for the existence and development of TK.

Chapter Five Biopiracy Disputes discusses various biopiracy disputes and its impact on the rights of the indigenous people. The researcher has discussed the biopiracy of indigenous peoples' knowledge and the cases in which many countries have to fight to revoke the granted patents which require huge cost and time. By discussing various disputes such as the turmeric patent dispute, the basmati dispute, the neem dispute, wheat grain, Indian ginseng, ayahuasca, enola beans, aloe vera, high-oil maize, Hawaiian Taro, bitter gourd, nuna beans, kanis, pudina dispute, the researcher has focused how the developed countries, through patents, are commercially exploiting biological resources associated with indigenous peoples' knowledge which is a major threat to the very survival of the indigenous communities.

Chapter Six Conclusion and Suggestions is a concluding note that provides summary of the research and ways and means are suggested to prevent biopiracy and protect the rights of the indigenous people and biological resources based on their traditional knowledge.

The researcher suggests the following measures for the protection of traditional knowledge of the indigenous people and prevention of biopiracy.

- There should be an international agreed instrument, particularly for the protection of the traditional knowledge of the indigenous people associated with biological resources, for the recognition of national level protection. This would not only prevent misappropriation and avoid biopiracy but also ensure that national level benefit sharing mechanism and laws are respected worldwide.

- A protection regime at the international level that will not only protect the rights of local and indigenous communities but also respect and comply with a wide variety of diverse systems of customary laws and practices is required. Such common international regime should incorporate a certain degree of harmonization in order to be effective in foreign jurisdictions.
- Local protection to the rights of TK holders should be provided through national level sui generis regimes including customary laws as well as others and its effective enforcement inter alia through systems such as positive comity of protection systems for TK.
- Sui generis systems for TK protection should not be consistent with existing intellectual property models which protect individual rights and whose objectives are exclusively commercial, but should be tailored to the distinct characteristics of traditional innovation processes. They should recognise the holistic characters of TK – i.e., its close linkage with biodiversity, traditional territories, cultural values and customary laws, all of which are vital for maintaining TK.
- Sui generis systems and Access and Benefit Sharing regimes should be developed and administered with the active participation of diverse indigenous and local communities through a bottom-up process. The Convention on Biological Diversity process to negotiate an international regime on Access and Benefit-Sharing on Traditional Knowledge protection needs to be broadened to enable representatives of indigenous and local communities to participate fully in the decision-making process. Such participation needs to be made a priority in World Intellectual Property Organisation's work to develop guidance for Traditional Knowledge protection.
- The recognition of customary laws and authorities should form the basis of sui generis systems at all levels, including in determining access to and rights over TK and bio-resource, procedures for Prior Informed Consent and equitable benefit-sharing. TK and genetic resources are often shared freely between communities, even at cross borders, collective rights;

decision-making and benefit-sharing amongst neighbouring communities should be recognised.

- Besides designing and implementing *sui generis* systems, national and international initiatives for protecting TK could include formulating legislation to govern access to genetic resources and TK and make Prior Informed Consent of relevant indigenous communities compulsory.
- A procedure needs to be followed whereby the use of indigenous knowledge from one country is allowed, particularly for intellectual property rights protection or commercialization, only after the competent national authority of the country of origin gives a certificate that source of origin is disclosed and prior informed consent, including acceptance of benefit sharing conditions, obtained.
- Particular criteria for benefit sharing should be laid down whereby the maximum benefit should go to the indigenous communities.
- At the national level, the Government should take steps to preserve, protect, and promote the traditional knowledge of the indigenous and local community people and for this purpose a specific law for the protection of the rights of the indigenous people and protection of traditional knowledge of the indigenous people concerning biological resources should be enacted in India. Not only specific enactment of specific legislation is required but it should also be effectively implemented in order to avoid biopiracy of the indigenous peoples' knowledge.
- State governments must include in their plans and policies to protect biological resources and the associated indigenous knowledge and also the protection of the rights of the community holding it.
- Non-government organizations should be a part of government policy and interact directly to the indigenous communities at the local level.
- The best way for communities to protect their knowledge and resources is at local level. The indigenous knowledge holders should be appropriately educated at the local level so that they are made aware of their rights and

responsibilities with regard to safeguarding their biological resources and the knowledge associated with it.

- There is currently no dedicated service providing practical advice, information, suggestions and contacts for indigenous peoples and communities across the range of intellectual property issues that are emerging. Thus, an international resource/education center on traditional knowledge should be established and it should include regional offices that would provide easier access to its resources.
- There should be co-operation between the indigenous people and scientists and biologists for which the States must ensure the availability of latest technology, and guidance about the use of such technology which the indigenous people in co-operation with such well-versed persons in science can use to develop the biological resources so that they can innovate something new and benefit the whole nation.
- Plant related traditional knowledge of indigenous should be protected through registers of TK databases in order to avoid misappropriation. TK should be documented in a participatory way. Such registers and databases would prevent patents on indigenous resources and related TK by establishing prior art and also prompt sharing of benefits resulting from commercial use of such materials. India has already made inroads in this area in the form of the Traditional Knowledge Digital Library-a computerised database of documented TK related to medicinal and other plants. All the biodiversity rich nations should maintain registers and databases of biological resources associated with traditional knowledge. The option of documentation is not without its limitations. With the amount of TK being owned by innumerable indigenous communities being very vast, it is not possible to develop a completely comprehensive and extensive register of such knowledge. So TK should be documented with full participation of the indigenous people who holds such knowledge.
- A worldwide extensive database of existing Traditional knowledge should also be established. Such a database will be very useful to patent authorities

while conducting prior search before granting a patent. This could help to ease the process, lessen the litigation costs that arise after the granting of patent.

- Disclosure of Information should be made mandatory. It is possible for developed countries to regulate the use of traditional knowledge by making it mandatory for the companies to completely disclose information. Mostly, the companies do not divulge the information. Such a regulation could prevent a possible misuse of traditional knowledge.
- Appropriate incentive schemes should be formulated in consonance with the opinion of indigenous and local communities which could lead to effective protection of biological resources related TK. Core incentives could include security of tenure over land and natural resources and co-management of natural resources, with monetary and non-monetary benefits being added to suit specific situations. Private research and collecting institutions could also aid in this process through contractual obligations based on fair and equitable benefit-sharing arrangements. With regard to providing incentives, it is important to understand that no one incentive will suffice for all situations within or across communities. Incentives would thus have to be tailored to suit different kinds of knowledge, skills, practices, innovations and holders of TK as well as the needs of particular communities and of particular members of the community.
- At the international, national and state level, ways should be developed to genuinely prioritize indigenous peoples' participation, collaboration and partnership in projects that will utilize, engage, document or use traditional knowledge. Government should find out what local traditional knowledge management practices are, and how they can be incorporated into research projects in appropriate ways by which the indigenous people who are the holders of TK can reap benefit. It will develop trust and respect between government, researchers and the indigenous people.

- There should be sustained work by and with indigenous peoples and communities on local knowledge management systems, thereby creating means for emboldening local authority and governance processes. Developing contextually driven protocols and guidelines for engagement with communities that are appropriate for all parties, including those that are not literate will help produce accessible frameworks for indigenous peoples and communities to make informed decisions about the extent of knowledge use permissible, and the reality of benefits that will be returned.

The importance of biological resources associated with TK to indigenous people and its application to the contemporary world is inevitable. It is proven that even though traditional knowledge is accessible to the public, it is still protected by the local communities and the people who live around that knowledge. There is a proven link between indigenous communities, biological resources and their TK because indigenous communities rely on such knowledge for their survival, daily life, healing or medicinal purposes and other nutrition needs. The IPR regime needs to be fine tuned in such a way that it can bolster the cultural identity of indigenous communities and give them greater say in its management. This calls for a comprehensive strategy with community, national, regional and international dimensions. This framework should ensure avoidance of acts of biopiracy and that the control and sovereignty over biological resources rest with the local community and that they receive adequate compensation when these resources are utilised by outsiders. Although national and international recognition is a good beginning to indigenous intellectual property protection, only particular law to combat biopiracy and protect indigenous people and their knowledge and binding international regulations will grant indigenous people equal treatment for full protection of their intellectual property. If concern for indigenous people and their traditional knowledge associated with biological resources can become a real element in formulating international intellectual property law and national legislations, the benefits could go beyond the protection of such traditional knowledge and indigenous cultures.