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INTERNACIONAIS

KARIN COSTA VAZQUEZ  
(EDITOR)

BRAZIL-INDIA RELATIONS  
BEYOND THE 70 YEARS

FUNDAÇÃO ALEXANDRE DE GUSMÃO

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**BRAZIL-INDIA RELATIONS**  
**BEYOND THE 70 YEARS**

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Ministry of Foreign Affairs  
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70170-900 Brasília-DF  
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Fax: +55 (61) 2030-9125  
Website: [www.funag.gov.br](http://www.funag.gov.br)  
E-mail: [funag@funag.gov.br](mailto:funag@funag.gov.br)

**Editorial staff:**

Eliane Miranda Paiva  
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Gabriela Del Rio de Rezende  
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## CHAPTER 5

### AN ACCOUNT OF INDO-BRAZILIAN APPROACHES FOR REGULATING MISAPPROPRIATION OF BIO-BASED RESOURCES AND ASSOCIATED TRADITIONAL KNOWLEDGE

*Sunita Tripathy*<sup>1</sup>

The World Intellectual Property Organization’s Inter-Governmental Conference (IGC) can be understood as an enabling measure contemplated under Article 41 of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) which notes that the UN (including its specialized agencies) and States shall “promote respect for and full application of the provisions of this Declaration and follow up the effectiveness of this Declaration” (UNDRIP Art. 41). Objections on the provision for including the principle of Free, Prior and Informed Consent (FPIC) in respect of genetic resources, traditional knowledge and folklore (GRTKF) – which would in-effect allow indigenous communities to veto a national legislation or policy from applying to them have been quite contentious in the IGC (LANG, 2011) (FREDRICKS, 2016). In accepting the UNDRIP the United States of America noted that it (now) understands the FPIC principle to mean “to call for a process

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1 Jindal Global Law School, O.P. Jindal Global University, India.

of meaningful consultation with tribal leaders, but not necessarily the agreement of those leaders, before the actions addressed in those consultations are taken” (Announcement of U.S. Support for the United Nations Declaration on the Rights of Indigenous Peoples Initiatives to Promote the Government-to-Government Relationship & Improve the Lives of Indigenous Peoples’ 2010) (RYSER, 2010). Canada, Australia, and New Zealand had also voted against the adoption of UNDRIP and have similarly endorsed it now with qualifying statements (UNDRIP Adoption and Voting record, September 2007). However, the two most biodiverse nations in the world, India and Brazil, have always sought to protect the rights of their indigenous people, the genetic resources, and the associated knowledge held by them. This article reflects on the approaches taken by India and Brazil towards protecting and utilizing GRTKF in a sustainable manner.

Preservation of biodiversity helps in maintaining the delicate balance in nature, while exploitation of indigenous knowledge for commercial purposes has a far-reaching impact on the overall equity, scientific development, and innovation. A consumer’s carbon footprint is no longer limited to her close surroundings, but may extend beyond national boundaries today. Similarly, abuse of the bio-resources and associated indigenous knowledge by corporations has deleterious effects at the macro-level. Several initiatives focus on conservation of the environment to prevent climate change but few discuss indigenous knowledge that can be tapped into and utilized for a sustainable future (BIOPROSPECTING/BIO-PIRACY AND INDIGENOUS PEOPLES, 1995). For instance, biodiversity prospecting which involves searching for, collecting, screening and deriving genetic materials from biological samples or flora and fauna that may have commercial use has emerged as an industry inflicting irreversible depletion of nature.

A study conducted by the U.S. National Cancer Institute, which screened over 35,000 plants and animals for anti-cancer compounds from 1956 to 1976 highlights the economic significance of associated indigenous knowledge. An evaluation of this project conducted later found that it could have been more successful in identifying anticancer compounds had it relied on traditional and folk medical know-how. (AXT *et al.*, 1993). Similarly, bio-piracy, a term used to describe the unjustified extraction of the environmental resources and indigenous knowledge for its economic exploitation and monopolization without due regard for the equitable distribution of its economic profit is rampant. These are categorized into the patenting of inventions that have been developed using biological resources or indigenous knowledge that is extracted illegally or without the requisite authorization from appropriate authorities, and which does not attribute any credit to the local communities that may have helped in such development in any manner called patent-based bio-piracy; the non-patent intellectual property rights (IPRs) for bio-based technologies developed in the same manner and finally the unauthorized extraction of bio-resources and indigenous knowledge without adequate benefit-sharing or attribution of any credit to local communities is known as 'misappropriation'.

Instances of bio-piracy and bioprospecting have been prevalent in India and Brazil (ROBINSON, 2010). The patent on the healing properties of *haldi* (turmeric), the *basmati* rice case, and the *neem* case of India are reminders (BALASUBRAMANIAN, 2017); while Brazil, which is home to one of the largest biological deposits with the dense tropical rainforest of Amazon encounters rampant misappropriation of resources such as *ayahuasca*. (CORREA, 2002). These unethical exploitations of biological resources and indigenous knowledge allow for the erosion of biodiversity, causing environmental hazards and must be checked

(BHATTACHARYA, 2014). Thus, the legal frameworks established for their protection ought to be robust.

### **Comprehending the international legal framework protecting biodiversity**

The Convention on Biological Diversity, 1992 (CBD) which was the result of discussions at the United Nations Conference on Environment and Development in Rio de Janeiro is the main instrument towards an international strategy for sustainable development. India and Brazil are both signatories to the CBD. All signatory countries, undertake to establish national norms and ensure international cooperation to preserve and conserve biodiversity, its sustainable use, and the equitable distribution of the benefits arising from its use.

Principle 22 of CBD reads

*Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture, and interests and enable their effective participation in the achievement of sustainable development.*

The CBD does not create a *sui generis* legal right for the protection of biodiversity or indigenous knowledge systems but acknowledges that a traditional understanding of patent rights may compromise the welfare of local communities that have been involved in the nurturing and preservation of these systems over centuries, once corporations appropriated them through legal means. Such communities are often culturally unaware of IPR instruments and may be stripped of their rightful claims if not especially accorded protection. Therefore, 'prior informed consent'

is the standard for ensuring a fair and equitable benefit sharing under the CBD.

It also recognizes the sovereignty of the country of origin over its biological resources and provides that whoever seeks access to such material shall have the responsibility to ensure that the said country must know in advance what will be done with the resource, and what benefits will be shared. Article 16.2 lays down that in addition to encouraging the access and benefit-sharing agreements for the protection of indigenous knowledge, IPRs may influence how new technologies are developed, transferred and used by source countries. Furthermore, Article 16.5 requires all signatories to develop national legislation in congruence with international law to ensure that IPRs are supportive and do not run counter to the objectives of the CBD.

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization furthers the objectives of the CBD and provides the framework for the equitable sharing of benefits arising out of the utilization of genetic resources. It was adopted on 29 October 2010 in Nagoya, Japan with the aim to guide as per the protocols to be followed to allow access to genetic resources to developers by the source country so that benefit sharing is ensured. Article 15 of the Nagoya Protocol reads

*All Parties to the Nagoya Protocol are obliged to take measures to provide that genetic resources utilized within their jurisdiction have been accessed in accordance with prior informed consent (PIC), and that mutually agreed terms (MAT) have been established, if such PIC and MAT are required by the domestic access and benefit sharing (ABS) legislation or regulatory requirements of the other Party.*

Article 16 of the Nagoya Protocol lays down similar obligations as in Article 15, with a specific focus on indigenous knowledge associated with genetic resources. Thus the CBD and the Nagoya Protocol acknowledge that countries have sovereign rights over their natural resources.

The World Trade Organizations' Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 1995, especially in Article 27, recognizes IPRs as private rights without any regard to the sovereign rights of countries. It also does not lay down any requirements for benefit sharing with the country of origin while ensuring that IPRs are protected harmoniously across national boundaries. More so, while CBD lays down prior informed consent requirements and involvement of indigenous communities before any IPRs can be granted; in the manner that the TRIPS deals with the grant of IPRs as private rights, none of these conditions is mandatory. Thus, there is an apparent conflict between TRIPS and CBD with regard to their legal mandate.

This conflict touches upon several aspects of international law. The CBD came into force in 1993 and TRIPS in 1995, and neither treaty is subject to the other. CBD affirms that it shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement (CBD Art. 22). As mentioned, TRIPS was not in existence at the time the CBD came into force. Therefore, the conflict subsists, and so does the confusion about how to reconcile it. In my view, IPRs in its current form is not the way to preserve biodiversity or to ensure equity in the manner that indigenous knowledge is used. Even with efforts to build capacity, indigenous knowledge as such is nurtured and developed over several centuries by communities passing it from one generation to another. It is impossible to identify rights holders, or 'actual' owners of such knowledge, even for national governments. On

that account, the rhetoric of preventing misappropriation fails, and may even exacerbate it, if not by international players, then by national governments to the detriment of communities in the face of economic gain. This is a tricky problem; however, its solution most definitely does not lie in IPRs as is. Both India and Brazil have repeatedly sought for validation of indigenous efforts in biodiversity conservation during the IGC meetings; perhaps a system that embraces elements of attribution may arguably be less detrimental and more suited for fostering bioscience innovations globally.

### **Biodiversity conservation and scientific innovation: solutions from India and Brazil**

India ratified the CBD in 1994 and became a party to the Nagoya Protocol in 2014. Thereafter it formulated a ‘National Policy and Macro-level Action Strategy on Biodiversity’ (NPMASB) in 1999. The NPMASB was to help India work with its state and local governments, communities, industry and other interested parties in a coordinated manner so that benefits accruing from the utilization of its natural resources and indigenous knowledge would consequentially multiply. Then India took pro-active legislative steps to compliment the NPMASB (LAGUNA & LAMBA, 2013). It enacted the Plant Varieties Protection and Farmers’ Rights Act 2001 (PVPFR), and Rules 2013 to ensure protection of plant breeders’ rights over the new varieties and give farmers the entitlement to register them and also to save, breed, use, exchange, share or sell the new plant varieties developed, improved and maintained over many generations. Two amendments to the Patents Act of 1970 were also introduced in 2002 and 2005.

These prohibited patenting of plants, animals, and traditional knowledge. The amended patent laws required “mandatory disclosure of source and geographical origin of the biological



material in the specification when used in an invention” to check misappropriation. India proposed this regulatory strategy before the World Intellectual Property Organization and suggested that disclosure requirements are economically viable than the revocation of wrongly granted patents at a later date (WIPO, 2005). Biodiverse developing economies can thus avoid significant litigation costs and preempt biopiracy.

In 2002, the Biological Diversity Act came into force to ensure India’s compliance of the CBD. The Act regulates access to biological resources and indigenous knowledge to ensure equitable sharing of benefits arising out of their use. It mandated the implementation of its provisions through a three-tier institutional mechanism with the National Biodiversity Authority (NBA) at the apex, the State Biodiversity Board at the State level and the Biodiversity Management Committee that keeps an account of and maintains rosters of the flora and fauna indigenous to an area amongst other duties prescribed under the Act. Over time, tedious bureaucratic processes and discrepancies in the implementation of the Act are suspected of discouraging biodiversity-related research in India (THE HINDU, 2018). Foreign entities are reluctant to conduct business where the laws are imprecise and may lead them into criminal litigation due to systemic failures or delay in obtaining prior approval from the NBA. The government sought to reform the system by organizing National Biodiversity Congresses to further the goals of protection and sustainable use of GRTKF. As a result, India has established the Traditional Knowledge Database Library (TKDL), a database containing 34 million pages of information on approximately 2,260,000 traditional medicine formulae, managed by the Council of Scientific and Industrial Research (CSIR), and the Department of AYUSH (now the Ministry of AYUSH). This effort ensures that no patent granting authority issues erroneous patents based on India’s traditional knowledge. The reform has

been applauded as a defensive mechanism and emulated globally by biodiverse nations.

Brazil has also been facing severe hurdles while conserving the Amazon rainforest. In December 2016, its government amended its Constitution to freeze public spending in several areas, including biodiversity conservation for as long as the next twenty years (MAGALHÃES, 2017). This was a measure adopted to minimize its international debt and limit expenditure in all areas save those that are essential for the functioning of the State. Thus, prominent environmental agencies such as the Brazilian Institute of Environment and Renewable Natural Resources and the Chico Mendes Institute for Biodiversity Conservation had no funding. Recruiting staff for regulatory enforcements ceased, thus instances of land exploitation, wildlife trafficking, and biopiracy were on the rise (LE DUC, 1996). To counter such plight proactively, UN Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP 21) met in Paris in 2015 and resolved that member States initiate a fund for Reduced Emission from Deforestation and forest Degradation (REDD Fund) to enable biodiverse countries like Brazil to conserve genetic reserves sustainably.

The Brazilian Biodiversity Law, that is, the Access and Benefits Sharing of Genetic Resources and Associated Traditional Knowledge 2015 (Law No. 13.123/2015) also compliments the above initiative by repealing the old law and ensuring clearer processes for access and benefit-sharing of bio-resources through a set of simple to follow protocols allowing for safe and monitored use of bio-resources. This reduces expenses as well as minimizes bureaucratic requirements that encourage compliance on the part of corporations and scientists. The new regime expedites the government approval process by requiring researchers to submit details regarding their research electronically (PINTO, 2016). It

also envisages a system where 1% of the total income generated from the sale of Brazilian bio-based products be payable to the government management fund utilized for projects that aim at environmental conservation, technology transfer, human resource training or the sustainable use of genetic resources (BIASI & EMRICH, 2016). Furthermore, as a practical measure, the law exempts small businesses and agricultural cooperatives from the mandatory compliance of benefit sharing agreements to allow them to research and explore the genetic resources and indigenous knowledge without monetary payouts.

### **Final considerations**

The intellectual debate on traditional systems of medicine, agriculture, intangible cultural knowledge, and heritage requires a clearer understanding of the underlying cultural philosophy for protecting, preserving, and developing these systems (LESLIE, 1976). Such clarity will enable coexistence of the traditional and the modern in all appropriateness (SRINIVASAMURTHY *et al.*, 2001). Considering that all folk knowledge preserved in local and traditional practices qualify as indigenous knowledge (BRUSH, 1996); cases of misuse and misappropriation can be resolved when “every patent office in a Western country should insist that the patent applicant declare that the knowledge and resources used in a patent have been obtained lawfully and rightfully” (GUPTA, 1997). Lawful acquisition of knowledge and resource must mean that the prior informed consent of local communities and creative individuals has been ensured, assuming that the donor country has laws requiring such consent and approval. Thus, rightful acquisition involves an ethical inquiry into a corporation’s compensation protocols and practice.

In conclusion, it must be stated that both international and national legal frameworks must tackle the issue of

misappropriation of biogenetic resources and associated indigenous knowledge cautiously. There is a strong reason for governments of Brazil and India to consider moving beyond traditional IPRs to protect their biodiversity through right-based understandings of indigenous knowledge. The grant of private rights, as opposed to community rights, will only limit access to and erosion of bio-based resources, while still maintaining the rhetoric for its protection (UDGAONKAR, 2002 & CORPUZ, 2009). With the establishment of the TKDL, India is on the right path of conservation of its resources and should invest more in capacity building and projects endorsing attribution features. Brazil's new Biodiversity Law is a progressive one which allows for more straightforward implementation and compliance. These good practices must be promoted through international cooperation and confidence-building measures that conserve biodiversity and uphold indigenous right holder's interest all across the world.

The proposals made by both India and Brazil at various multilateral negotiations concerning GRTKF preservation and commercialization emphasize the advantage of involving indigenous communities as important stakeholders for sustainable development. At present, there seems to exist a divide between indigenous and modern systems of knowledge (AGRAWAL, 1995). The documentation of these knowledge systems is often absent, increasing difficulty in disseminating their benefits to users (ABBOTT, 2014). Incorporating GRTKF, existing community institutions, and appropriate indigenous technology into development projects can greatly increase their efficiency, effectiveness, and sustainability and at the same time, empower the communities towards healthier subsistence. A practical and long-term solution for safeguarding the interest of future generations lies in making systemic changes that align to such proposed measures.

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**India, Brazil and the new 'trans-  
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Since the early 2000s, Brazil-India relations gained new impetus as seen in the increase of high-level visits and trade flows between the two countries. A landmark of this process was the signing of the Brazil-India strategic partnership in 2006. At the multilateral level, the two countries jointly articulated positions at the UNGTAD and the G77 and supported the formulation of an alternative discourse on development and global governance through the establishment of the IBSA Forum and the BRICS.

As Brazil and India begin to identify complementarities and share perceptions about the evolving international order, there is still an enormous potential to be explored on the road ahead.

This book offers a prospective view of academics and policy makers of the two countries on the potential for greater Indo-Brazilian collaboration in the areas of science, technology and innovation; defense; sustainable and inclusive development; renewable energy; multilateral cooperation; and people-to-people exchange.

After reaching the 70-Year landmark of diplomatic relations, dialogue and cooperation must gain more density and autonomy. Our scholars can assist policymakers to identify new opportunities for advancing bilateral relations by bringing fresh views and new perspectives.

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