INTELLECTUAL PROPERTY RIGHTS AND BIODIVERSITY: GLOBAL TRADE AND BIODIVERSITY IN CONFLICT

Khaleda Perven*

1. INTRODUCTION:

The trade-environment relationship is one of the most widely discussed issues in the today's world context. This is an era of globalisation and there are flows of free trade everywhere. In order to meet economic development and for the expansion of free trade all over the world, both at the national and international level the industrial system of growth and production are undermining the Mother Nature and its valuable resources. Sometimes the resources are exploited only for the basic needs to save life and sometimes to satisfy the greedy nature of people to make profit. Besides, industrial hunger also exploits and depletes biodiversity and claims exclusive ownership as well as monopoly right over these life forms.

In The early 1990s, it was finally recognized at the international level that the industrial system of production and its drive for continued growth at all costs, was literally costing the Earth[1] and its natural resources. At the same time, there has been a realization that local and indigenous communities in developing countries, who have nurtured this biological diversity and depend upon it, are equally under threat from the same forces. In addition, the new commercial opportunities opened up through developments in biotechnology, have resulted in engaging in a massive campaign to extort market control over biodiversity through the patent system, as well as changing the rules of that system in the process.

World Commission on Environment and Development, Our Common Future, London, OUP (1987), drew up a link between economic development and the protection of the environment, i.e. sustainable development[2]. We can not ignore development as well as we have to conserve and protect our environment for the sake of present and future generation. So, a comprehensive analysis of the relationship between the

---

* Khaleda Parven, Lecturer, Department of Law, Stamford University Bangladesh

1 Information Retrieve from "Global Trade and Biodiversity in Conflict" by the Gaia Foundation and Genetic Resources Action International (GRAIN), (Spring1999), (Electronic Version), http://www.greens.org/s-r/19/19-10.html, last visited on September 5, 2004, at 8:30 p.m.

2 The Commission defined, "Sustainable development is development that meets the needs of the present without compromising the ability of future generation to meet their own needs".

Agreement on Trade Related Aspect of Intellectual Property Rights (TRIPs) and the Convention on Biological Diversity (CBD) is a significant concern for both at the national and international forums.

The adoption of the CBD, which provided a framework for realisation of sustainable development, was followed by the formalisation of the TRIPs Agreement, where the emphasis was laid on protecting the rights of the inventors. Although the TRIPs Agreement and the CBD have largely been on parallel tracks, there are some obvious reasons why consistencies between them need to be examined. Firstly, both TRIPs Agreement and the CBD are outcomes of the multilateral system and therefore, in order to resolve any points of discrepancy that might arise in the two Agreements are need to be addressed so that the signatory countries are able to meet the requirements for complying with both the Agreements. This has been tacitly recognised in the Doha Ministerial Declaration[3].

Another reason for looking at the TRIPs Agreement and the CBD closely arises in the context of the functioning of the World Trade Organisation (WTO) Committee on Trade and Environment (CTE). The CTE has the mandate to bring the objectives of the Uruguay Round Agreements and those of the Multilateral Environmental Agreements (MEAs), including the CBD, on an equal-footing. This aspect of WTO's work programme is now being promptly run by the Doha Ministerial Declaration[4].

The purpose of this article is to analyse the CBD and the TRIPs Agreement and to reveal the approach in which the issues involving them can be resolved. The paper explores different areas. First section looks at the historical development of CBD and TRIPs Agreement, Secondly, it considers key provision of CBD and TRIPs regime. Thirdly, it addresses the inconsistencies between the two treaties and then the scenario of Bangladesh. Finally, the paper indicates briefly the way forward towards reconciling the CBD-TRIPs incompatibility.

---

3 Para 19 of the Doha Ministerial Declaration states: "We instruct the Council for TRIPS, in pursuing its work programme including under the review of Article 27(3)(b), the review of the implementation of the TRIPS Agreement under Article 71(1) and the work foreseen pursuant to paragraph 12 of this Declaration, to examine, *inter alia*, the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the protection of traditional knowledge and folklore, and other relevant new developments raised by Members pursuant to Article 71(1)[…]"

4 Para 32 of the Doha Ministerial Declaration provides the details of the work programme in this regard.

2. History of CBD and Agreement on TRIPS

In order to stop this destruction and secure the conservation and sustainable use of biological diversity, in 1992 Convention on the Biological Diversity was negotiated under the auspices of United Nations Environment Program (UNEP) and signed by 153 states and EC at United Nations Conference on Environment and Development in June 1992[5]. There are currently 188 parties to the CBD[6]. The Convention entered into force on December 29, 1993. The Convention establishes three main goals: 'the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources'[7].

However, the WTO was established with quite a different agenda. It is particularly established with a view to removing barriers to trade or trade obstacles. The organization promotes and oversees global rules on trade. So, the WTO administers a global trading system, much of which is founded on the private monopoly rights of transnational corporations over biodiversity. During the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations, developing countries were pressured to accept the inclusion of Intellectual Property Rights (IPRs) into the multilateral trade system. The main argument on the part of the industrialized countries was that weak IPR protection acts as a barrier to free trade. So, "the absence of strong intellectual property rights in developing countries was said to be a barrier to trade, costing industrialized countries some $200 billion in lost royalties per annum[8]". In 1988, in the early stages of negotiations, the US Trade Representative claimed that nearly 200 transnational corporations housed in the United States were being short-changed of US $24 billion by countries which have weak IPR systems. These were predominantly poor countries in the South[9]. TRIPs

---

5 Sands P., *Principles of international environmental law Framework standards implementation* 1995, at p.381, I.

6 Information Retrieve from "Parties to the Convention on Biological Diversity/ Cartagena Protocol on Biosafety", (Electronic Version), http://www.biodiv.org/world/parties.asp?tab=0, last visited on October 22, 2004, at 11:00 am.

7 Article-1 of CBD, 1992

8 Supra note 2

9 Intellectual Property Rights and Biodiversity: The Economic Myths, GAIA/GRAIN, Issue no. 3, October 1998, (Electronic Version), Retrieve from http://www.grain.org/briefings/?id=14, last visited on September 15,2004,7:00pm.

Agreement was thus directed to bring developing countries' IPR laws to the level which transnational trading interests deem necessary. Thus began a confrontational campaign to bring all countries' IPR systems up to the same 'minimal' level of protection through GATT. In 1994, the Agreement on Trade-Related Aspects of Intellectual Property Rights was concluded as part of The Uruguay Round package deal, which transformed GATT into the WTO. The TRIPs Agreement came into force on January 1, 1995. Although the Agreement on TRIPs deals with seven forms of IPRs, our discussion would be restricted only to patents; the form that we consider would have the most significant implications for biodiversity.

TRIPs Agreement imposes private Intellectual Property Rights on the South's biodiversity while the CBD recognizes the collective rights of local communities to the same. So, some objectives and issues of both the treaties are clearly in conflicts. Yet both treaties provide legally binding obligations for governments. A brief review and study about the main points of the conflicts suggests approaches to resolve it.

3. The Bio diversity Convention and IPRs:

The CBD provides a general framework for the management and conservation of Biological resources. It is primarily an environmental treaty but it is also concerned with the economic valuation of biological resources. It further recognises the importance of intellectual property rights in biodiversity management and specifically calls on member states to 'ensure that such rights are supportive of and do not run counter to its objectives[10]'. This probably constitutes the most explicit statement in international treaties concerning the relationship between environmental management and intellectual property rights.

TRIPs Agreement, on the other hand, deals with significant changes in the existing intellectual property rights regime. TRIPs Agreement is not directly concerned with environmental management. However, the intellectual property rights standards that it sets have wide-ranging impacts for biodiversity management.

3.1. The objectives and basic principles of the CBD

The CBD provides:

- The conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising out of the utilization of genetic resources, by appropriate access to genetic

[10] Article 16(5) of CBD,1992

resources and by appropriate transfer of relevant technologies included, taking into account all rights over those resources and to technologies... [Article 1]

- States have sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility not to cause damage to the environment of other States or of areas beyond the limits of national jurisdiction [Article 3]
- Parties need to adopt national strategies, plan or programmes for the conservation and sustainable use of biological diversity. It also requires governments to integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral, cross-sectoral plans, programmes and policies [Article 6(1)& (2)]
- States must respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promotes their wider application of such knowledge, innovations and practices with the approval and involvement of their holders. Again it must ensure that the benefits arising from the use of biological resources (by corporations, for example) are equitably shared with the communities and peoples from whom they have been taken. [Article 8(j)]
- Convention seeks to ensure access to genetic resources which have been provided by parties to the Convention, that are countries of origin or by parties that have acquired the genetic resources in accordance with the Convention [Article 15]
- Appropriate technology is to be transferred to developing countries for the purposes of biodiversity conservation [Article 16]
- Each contracting party must take all practicable measures to promote and advance priority access on a fair and equitable basis by contracting parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those contracting parties[Article19]

3.2. TRIPS Agreement and its goal

The Agreement on TRIPs is an international trade agreement, which sets minimum standards in the field of intellectual property (IP) protection (such as copyrights, patents, and trademarks). The basic objectives of the

TRIPs Agreement are "the protection and enforcement of intellectual property rights […]"[11]

As mentioned earlier our discussion would be restricted only to the areas of patents. The patent regime that the Agreement on TRIPs seeks to introduce has some distinguishable features. In the first place, the norms and standards of patenting (and other forms of IPRs) would be applied near uniformly in all WTO Member States (whether a previous GATT Member or a new WTO one) Taking into account the transitional periods allowed to developing and least-developed countries by the TRIPS Agreement. The developed countries were given until 1996 to comply with TRIPS standards by modifying their patent law if necessary, developing countries had until 2000, and least-developed countries have until 2006 (with possible renewal)[12]. The transition periods were provided to developing and least-developed Countries to give them enough time to implement the various TRIPS standards on intellectual property rights at national level. In other words, this implies that a near harmonization of patenting standards would be achieved. Otherwise, the norms and standards set by the Agreement would be effectively imposed through the elaborate dispute settlement mechanism provided by the implementing organization, the WTO. The specific nature of protection that the Agreement on TRIPs requires countries to introduce in the area of patents need to be examined. It can be argued that the patent regime introduced by the TRIPs Agreement has responded to the requirements of the narrow objectives of trade, rather than on sustainable development.

Under the TRIPs Agreement, nature and scope of patent protection has been expanded considerably beyond those available areas, either in the domestic legislations of any country or in the global regime for patent protection that was underlined by the Paris Convention for the Protection of Industrial Property. And the obligations on the patentees have been thinned. The TRIPS Agreement requires "member countries to make patents available for any inventions, whether products or processes, in all fields of technology without discrimination […]"[13].hence, TRIPs extends its principle of patentability to all fields of technology. It is also required that "patents should be available and patent rights should be enjoyable without discrimination as to the place of invention and whether products

---

11 Article 7

12 Article 65 (1) (2) & Article 66 (1)

13 Article 27 (1)

are imported or locally produced"[14]. The rights conferred on the patent holder, as mentioned above, provides that right to import is to be included as an exclusive right granted to the patentee.

Biotechnological inventions have been brought under the ambit of patent protection by including microorganisms and non-biological and microbiological processes. Barring a few exceptions, which include plants and animals, although WTO members can exclude plants from patent protection, they have to provide protection to plant varieties using an "effective *sui generic (*i.e. unique) system"[15]. Countries can exclude areas from being patented to protect public order, morality; this explicitly includes inventions dangerous to human, animal or plant life or health, or to prevent serious threat to their environment[16].

Under Article 28, the patent regime confers the exclusive right to the patentee to prevent third parties, not having his consent from the acts of making, using, offering for sale, selling, or importing the product that is covered by the patent, subject to the legitimate interests of the patent holder as well as those of the third parties are not unduly prejudiced. As there is clear elocution of the rights of the patentee, the above mentioned limitations provided here without prejudicing the legitimate interests of the patent holder as well as those of the third parties are remarkably erroneous.

Compulsory licensing and government use without the authorizations of the right holder are allowed, but are made subject to conditions aimed at protecting the interests of the right holder. The conditions are mainly contained in Article 31. The uneven relations between developed and developing countries in the field of trade and business for technology, that is visible in the adverse licensing arrangements, developing countries are forced to enter into, would become more obvious as a result of the intensity of the requirements of working are provided in Article 31. No grounds are explicitly given under which a compulsory licence, as provided in the Paris Convention[17], can be issued except in the case of pharmaceuticals where compulsory licenses can be issued to ensure access to address public health concerns. This follows the adoption of the Doha Ministerial Declaration on the TRIPs Agreement and Public Health. It may be argued that in all other fields of technology TRIPs Agreement does not

---

14 Ibid.

15 Article 27 (3) (b)

16 Article27 (2)

17 Article 5

unequivocally provide for the grant of compulsory licence either as a measure against abuse of monopoly rights conferred by a patent or to ensure working of the patent within the patent granting country. This runs contrary to Paris Convention where, as mentioned above, apart from the fact that the instrument of compulsory licence was made available to ensure working, non-working of a patent was considered to be an abuse.

The provisions of the Agreement on TRIPs discussed above are aimed at strengthening the rights of the patent holder. The regime of IPRs is thus in fundamental conflict with the larger objectives of sustainable development, likewise the framework of the CBD.

4. Conflicting issues between CBD and TRIPS Agreement

The CBD considers intellectual property protection as a means to achieving the end of sustainable development, but the Agreement on TRIPs, on the other hand, considers strengthening of IPRs as an end in it. Further, the TRIPs Agreement of the World Trade Organization threatens to make the CBD impossible to implement, as because the two agreements embody and promote conflicting objectives, systems of rights and obligations. Since well over 145 countries adhere to both treaties, many states are questioning which treaty takes precedence over the other.

There are some conflicts between CBD and TRIPs Agreement involving some issues between them.

4.1 Conflicting objectives:

The basic objectives of the TRIPs Agreement are "the protection and enforcement of intellectual property rights […][18]." To achieve this goal, TRIPs provide monopoly control to those who claim to have 'invented' new plants, animals, microorganisms or uses thereof. Put simply, the agenda of TRIPs is to privatize, not to protect, biodiversity. It is likely that if a country in all good faith seeks to implement community rights, and does so through a CBD-framed policy, could find itself in serious contravention of the TRIPs Agreement. Because, The CBD is intended to strengthen developing countries' capacities to conserve and use biological diversity on a long-term basis, taking into account all rights over those resources, and including the right to enjoy the benefits of this resource base. In contrast, in order to ensure that corporate interests are safeguarded equally worldwide TRIPs is intended to provide private property rights over products and processes, whether they are biodiversity-

[18] Supra note 12

based or not. The fundamental conflict between CBD and TRIPs is simple and irreducible.

4.2 National sovereignty and private individual rights:

CBD recognizes that states have national sovereignty over their biological resources[19]. TRIPs Agreement tries to introduce private individual rights over the same. Within one country the states' sovereignty takes precedence, and the CBD framework may prevail. But between a foreign IPR holder and a sovereign state, the state's jurisdiction is limited and cannot countervail the IPR holder. Unless governments of a sovereign state take initiatives to resolve this discrepancy soon, ultimately these essential contradictions between CBD and TRIPs will come to a head.

4.3 Bio-diversity, food security and farmers' Rights

The biological diversity Convention is required to ensure food security. In the preamble of CBD Para 20 recognizes that "the contracting parties are aware that conservation and sustainable use of biological diversity is of critical importance for meeting the food, health and other needs of the growing world population".

Once the TRIPs Agreement is in force, the majority of developing countries will need to provide some form of intellectual monopoly right on food and medicinal biodiversity. According to the provision of TRIPs Agreement, Farmers using patented seeds are deprived of their right to use plant and their seeds. Consequently, Seed prices rise in poor countries and Transnational Corporations (TNCs) to suit their related commodity market interests in agrochemical, processing and trade is customizing the seeds. So, Farmers' access to diversity, their choice of planting material and options for management systems are significantly impaired. Besides, Farmers' rights to save and exchange seed are also legally restricted, if not prohibited, because of 'protection' granted only to the interests of monopoly holders.

Therefore, the top seed companies further consolidate their control of the industry, with 40% of the market already in the hands of 10 firms[20]. And then Corporations will be able to secure legal ownership of plant varieties, which contain genetic information, obtained from farmers' own fields in the South, which they then sell back to them with an added royalty charge. If farmers need to buy the seed and other biological diversity with an added charge, it will certainly cause adverse effect to the access of the

---

19 Article 3 of the CBD, 1992

20 Supra note 2

food and other agricultural products for the poor people of the developing and least developed countries.

Undoubtedly, Seed is the basis of agricultural production and livelihood systems over the world especially in the south, along with land and water. Agriculture represents a sizeable portion of the GDP of most industrialised countries and an overwhelming portion of that in the South. The patent protection under TRIPs Agreement extends to any plant in which the gene is inserted, not only do farmers have to pay higher prices for patented seeds but also they are prevented from reusing the seed. Very soon, TRIPs will legalise and expand this trend to the developing countries. Article 27.3(b) of the TRIPs Agreement makes IPR on plant varieties compulsory in all WTO member states.[21] It also throws up serious contradictions with negotiations in the biodiversity-related flora, such as the CBD and the Food and Agricultural Organisation (FAO), where Farmers Rights and Community Rights over the biological materials are seen as a *'priori rights'*.

Thus the biological resources and agricultural practices particularly the food security of the developing countries is being neglected in the TRIPs Agreement. Biodiversity represents a cultural and ecological heritage developed over generations and upon which our collective survival depends. Subjecting this heritage to a legal regime of commercial monopoly rights under TRIPS Agreement will destroy the conditions for its conservation and sustainable use, chiefly by the farmer communities, and thereby destroy society's access to diverse food. Food security and agricultural innovation will thus severely be declined.

4.4 Indigenous Intellectual Property Rights and genetic resources

At this stage of modernization, there has been a realization that local and indigenous communities in developing countries, who have nurtured this biological diversity and depend upon it, are under threat. Not only their livelihoods but their traditional knowledge systems and practices of innovation, accumulated over generations, and their a priori rights to this heritage, are being undermined by industrial hunger to exploit and deplete biodiversity and claim private monopoly right over the life forms.

In this phase, we tend to forget contributions of the Indigenous Peoples. They possess knowledge of the medicinal and nutritional uses of plants, herbs and other natural substances based on their continuing

---

[21] Developing countries have until the year 2000 to implement this, while least developed countries have until 2006.

relationship to the natural world. Though the CBD contains provision recognizing the rights of the indigenous people and their traditional knowledge and innovations[22] unfortunately the TRIPs Agreement gives no heed to indigenous intellectual property rights. It has ignored the intellectual property rights of indigenous peoples of under-developed world and thereby keeping away developing countries from access to information that could stimulate their struggling economics. "Since current intellectual property laws (under the TRIPs Agreement) recognize individual or corporation based ownership but do not acknowledge indigenous forms of community based ownership, indigenous peoples have no intellectual property rights […][23].

This over complex global injustice is perpetrated because the intellectual achievements of 'local and indigenous communities' are not fully recognised and legally protected. As it stands, therefore, we, the biodiversity rich southern countries are allowing northern corporations to take the technologies, knowledge and biodiversity of our local and indigenous communities as if they were their own and in addition, to prevent 'local and indigenous communities' from using their own knowledge, technologies and resources. We are also allowing them to force the indigenous communities as well as farmers to keep buying back the very resources they took from them to begin with. Now the northern corporations renamed those resources as their own by merely making some modification, which originates from their resources (i.e. indigenous communities) ill-gotten by them, as in the case of the *Basmati rice* of India and Pakistan and *Neem* of India without any modification at all.

In the case of ***India-US Basmati Rice Dispute***[24] an American company RiceTec Inc, was granted a patent by the US patent office to call the aromatic rice grown outside India 'Basmati' in the late 1997. RiceTec Inc had been trying to enter the international Basmati market with brands like 'Kasmati' and 'Texmati' described as Basmati-type rice with minimal success. RiceTec Inc was issued the Patent number 5663484 on Basmati rice lines and grains on September 2, 1997. However, with the Basmati patent rights, RiceTec will now not only be able to call its aromatic rice Basmati within the US, but also label it Basmati for its exports. This has

---

22 Article 8 (j) of CBD, 1992

23 See Azam M. M, "Indigenous Intellectual property Rights: A survey of issues", Law Vision, Issue 7, December (2001), Faculty of law, University of Chittagong, Bangladesh, at p.23.

24 *CASE NUMBER: 493*

grave repercussions for India and Pakistan, because not only India will lose out on the 45,000 tonne US import market, which forms 10 percent of the total Basmati exports, but also its position will be crucial in the markets like the European Union, the United Kingdom, Middle East and West Asia. In addition, the patent on Basmati is believed to be a violation of the fundamental fact that the long grain aromatic rice grown only in Punjab, Haryana, and Uttar Pradesh is called Basmati. According to sources from the Indian Newspaper, Economic Times, "Patenting Basmati in the US is like snatching away our history and culture." Rice is an important aspect of life in the Southeast and other parts of Asia. For centuries, it has been the cornerstone of their food and culture. During this period, farming communities throughout the region developed, nurtured, and conserved over a hundred thousand distinct varieties of rice to suit different tastes and needs. It is for this reason that patenting of Basmati by RiceTec Inc. is perceived as not only intellectual property and cultural theft, but it also directly threatens farm communities in Southeast Asia. According to Dr Vandana Shiva, director of a Delhi-based research foundation, claims the "theft involved in the Basmati patent is, therefore, threefold: a theft of collective intellectual and biodiversity heritage on Indian farmers, a theft from Indian traders and exporters whose markets are being stolen by RiceTec Inc., and finally a deception of consumers since RiceTec is using a stolen name Basmati for rice which are derived from Indian rice but not grown in India, and hence are not the same quality.[25]"

In addition, Indians feel that the US government's decision to grant a patent for the prized Basmati rice violates the International Treaty on TRIPS. The president of the Associated Chambers of Commerce (ASSOCHAM) said Basmati rice is traditionally grown in India and Pakistan and granting patent to it violated the Geographical Indications act under the TRIPS. The TRIPS clause defines Geographical indication as "a good originating in the territory of a member, or a region or locality in that territory, where a given quality, reputation, or other characteristic of the good is essentially attributable to its geographical origin." As a result, it is safe to say Basmati rice is as exclusively associated with India and Pakistan as Champagne is to France and Scotch Whiskey is to Scotland. Indians argue that just as the US cannot label their wine as champagne, they should not be able to label their rice Basmati. If the patent is not revoked in the US because unlike the Turmeric case, rice growers lack documentation of their traditional skills and knowledge, then India as have been urged by

[25] www.american.edu"

many activist in the field should take the case to the WTO for an authoritative ruling based on the violation of TRIPS. India and Pakistan who are joining hands to tackle the crisis have a strong case against RiceTec Inc. British traders are also supporting India and Pakistan. The case is still unfolding and it will be interesting to find out what happens in the end once the government and government agencies have gathered the necessary data and information to support their case and to prevent their cultural heritage from being taken away from them.

Again, the use of '*Neem*[26]**,** century old tree which is most widely used in the Indian Sub-continent. It is mentioned in Indian texts written over 2000 years ago and has been applied for centuries in agriculture as an insect and pest repellent, in human and veterinary medicine, toiletries and cosmetics. It is also recognized in the culture, religions, and literature of the region. India has freely shared its "free tree" and knowledge of its myriad uses with the world community; but now, through the patent system, this important resource is becoming the private property of a few corporations.

Legal history was made on March 8th, 2005 in Munich, Germany when the Technical Board of Appeals of the European Patent Office (EPO) revoked in its entirety a patent on a fungicide made from seeds of the Neem tree, concluding a ten-year battle in the world's first legal challenge to a Biopiracy patent. Although some Indian companies have claimed patents on the Neem, they are outnumbered 2 to 1 by multinational corporations, such as the U.S. pharmaceutical company Rohm and Haas and the infamous agrochemical giant ***W.R. Grace***. It is important to note that the Neem patents do not involve a genetically engineered product; neither has the tree itself been patented, nor any of its parts.

On December 12, 1990 the multinational agribusiness corporation W.R. Grace of New York and the United States of America as represented by its Secretary of Agriculture, filed a European Patent Application with the European Patent Office (EPO) on the basis of a U.S. priority application of December 26, 1989, covering a method for controlling fungi on plants by the aid of a hydrophobic extracted Neem oil. This was the third application for a Neem-derived product, which had been filed by W.R. Grace. Nine months later a Legal Opposition to this patent was filed jointly by three "plaintiffs": **Magda Aelvoet**, MEP, then President of the Green Group in the European Parliament, Brussels, Dr. **Vandana Shiva**,

---

[26] The botanic name of the Neem Tree is ***Azadirachta indica***, which is taken from the Persian name for the tree, ***Azad-Darakth***, meaning "***the free tree.***" The tree is a member of the mahogany family and is indigenous to the Indian subcontinent.

on behalf of the Research Foundation for Science, Technology, and Natural Resource Policy, New Delhi, India, and the International Federation of Organic Agriculture Movements (IFOAM), based in Germany and represented by its then Vice-President (and future President), **Linda Bullard**. The Opponents claimed that the fungicidal effect of hydrophobic extracts of neem seeds was known and used for centuries on a broad scale in India, both in Ayurvedic medicine to cure dermatological diseases, and in traditional Indian agricultural practice to protect crops from being destroyed by fungal infections. Since this traditional Indian knowledge was in fact ubiquitous in Indian culture from ancient times, they asserted that the patent in question lacked two basic statutory requirements for the grant of a European patent, namely "novelty" (Article 54 of the European Patent Convention [EPC] and "inventive step" (EPC Article 56, in the U.S. called non-obviousness). It took five years for the case to come before the Opposition Division of the EPO. During this period the Opponents submitted evidence and affidavits gathered to support the claims they had made in the initial Opposition. Finally an Oral Proceeding was scheduled on May 9th and 10th, 2000, before the Opposition Division of the EPO in Munich.

Literally hundreds of such cases of genetic plagiarism have been recorded.

4.5 Benefit-sharing and genetic resources

The CBD assumes that when a state allows access to genetic resources, it is, in return, entitled to insist on a number of benefits. Convention seeks to ensure "each contracting party must take all practicable measures to promote and advance priority access on a fair and equitable basis by contracting parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those contracting parties[27]. Convention further provides, in order to ensure access to genetic resources which have been provided by parties that are countries of origin or by parties that have acquired the genetic resources in accordance with the Convention[28]. The treaty recognizes national sovereignty over all genetic resources, and provides that access to valuable biological resources be carried out on "mutually agreed terms" and subject to the "prior informed consent" of the country of origin[29]. Each country also has to take measures with the aim of

---

27 Article19

28 Article 15(3) /Article2

29 Article 15(1) (4) and (5)

sharing in a fair and equitable way the benefits from the use of genetic resources with the Party that provided that resource in the first place[30]. Again under Article 19, all the information generated by research on that genetic resource must be repatriated. Any biotechnology applied on the genetic resource must be made accessible to it. A fair and equitable share of benefits accruing from the use, including from commercial gains, of the genetic resource must also be given to it. But all this is conditional upon a mutually agreed contract.

TRIPs Agreement on the other hand, is intended to provide private property rights over products and processes, in order to ensure that corporate interests are safeguarded equally worldwide, rather intending to provide opportunities for a fair and equitable share of benefits arising from the use, including from commercial gains, of the genetic resource.

For example, "when the European Commission adopted a directive on patenting genetically engineered living things, it deleted the requirement for disclosing the country of origin of the living things used in the genetic engineering, which had been introduced by the European Parliament to help developing countries claim benefits from their genetic resources used by others. It seems that what they are saying is that we have to ignore the entitlement to a fair and equitable share of benefits from the use of our crop genetic resources. Benefit sharing is, therefore, being interpreted, as has been the case with resources in the past, as a one-way flow northwards". [31]

4.6 Medicine pharmaceuticals, drugs etc. and public health

There is a growing demand among all the industrialized countries around the world for the introduction of strict patent regimes. The introduction of strict patent regimes in developing countries required by the TRIPs Agreement under World Trade Organization is causing the price of patented drugs so high, often very expensive making them inaccessible to the poor people. The effective monopolies granted by TRIPs Agreement allow pharmaceutical giants to stifle the competitor, low-cost producers and to charge prices far above what is reasonable. This causes adverse effects in the ability of many poor consumers who are too poor to afford treatment.

---

30 Article 15(2) and (7)

31 Information retrieved from, "The TRIPS Agreement of the WTO and the Convention on Biological Diversity: The need for coordinated action by the South", (Electronic Version), http://www.twnside.org.sg/title/berhan-cn.htm, last visited on 25 September, 2004 at 8:00 pm.

TRIPS prohibits producer countries from exporting cheap copies of patented medicines, whatever the health needs in other countries, and even when there is no patent in force in the importing country. This represents a fundamental imbalance in the TRIPs Agreement. TRIPs allow countries to override a patent, for example if prices are too high, or supplies are limited. If certain procedures are followed, countries with their own production capacity, mainly the rich and industrialised, can take advantage of this to produce their own cheap generic versions of medicines. However, the majority of poor countries are not able to do this because they lack manufacturing capacity. Nor will they be able to dominate a patent to import medicines, because TRIPS stops generic-producing countries from exporting to them.

But CBD recognizes the access to and fair and equitable sharing of the benefits arising out of the commercial and other utilization of genetic material, such as pharmaceutical products, drugs etc[32]. Many developing countries cannot afford expensive patented medicines yet neither can they produce cheaper generic versions. Currently they can import these generic copies from a handful of other developing countries which do have the capacity to produce them, but which have not yet fully complied with the Agreement on TRIPs.

4.7 Access to and transfer of technology

Under Article-16, CBD affirms that appropriate technology is to be transferred to developing countries for the purposes of biodiversity conservation. So, there is adequate provision relating to access and transfer of technology including Biotechnology and distribution of its benefits on the most fair and favourable terms within CBD.

But some obstacles existed in the CBD regarding transfer of technology for the developing countries. The problems that developing countries have experienced in obtaining technologies that they require to further their developmental objectives have been addressed to in Article 16(2). This Article provides that developing countries shall have access to technologies on "fair and most favourable terms, including on concessional and preferential terms where mutually agreed..." This Article further provides that "in case of technology subject to patents and other

---

32 "IPR needed to protect bio-diverse resources", The Daily Star, at p.2, column 2, January 10, 2001.

intellectual property rights, such access and transfer shall be provided on terms which recognise and are consistent with adequate and effective protection of intellectual property rights". Article 16(2) thus represents an attempt to balance the interests of the owners of the technologies and the countries desirous of using them. The monopoly power provided by the patents and other forms of intellectual property protection has been the most serious issue that has undermined the North-South technology transfer. The problems in the area of technology transfer arising out of the exercise of market control by the private sector has been specifically addressed to in Article 16(4)[33].

Thereby, several developing countries have voiced their concerns in relation to the access to technology, which they feel is growingly difficult to obtain from commercial sources. Such concerns are justified, while developing countries have been required to expand and enhance their intellectual property regimes, very little is in the WTO agreements to effectively facilitate and promote the access to technology. Both North and South want to conserve biodiversity, that it be made accessible to the North, but that, in exchange, modern biotechnology also become accessible to all but primarily to the South. In this way, both North and South can benefit fairly and equitably. The Convention on Biological Diversity, adopted in Rio de Janeiro in 1992, was aimed at regulating this understanding.

Under The TRIPs Agreement Biotechnology is a highly patented product and that means a title – holder may be reluctant to transfer in the absence of intellectual property protection and whereby they can exploit their technology alone. So, a single patent can dominate a marketed product. As such, patent protection may result in pricing above competitive levels. If the patented technologies become too expensive, developing countries may not be able to afford them.

Several leading scholars and institutions have found these concerns justified. An important view has been expressed by *Prof. Barton*[*] that "the

---

[33] This Article provides that "Each Contracting Party (to the CBD) shall take legislative, administrative or policy measures, as appropriate, with the aim that the private sector facilitates access to, joint development and transfer of technology ... for the benefit of both governmental institutions and the private sector of developing countries...".

[*] Barton, John, (1999), Intellectual property, biotechnology, and international trade, Two examples, prepared for Berne World Trade Forum, Bern University, August, 28-29.

risk that intellectual property rights slow the movement of technological capability to developing nations, suggests that harmonization efforts might most wisely consider one common standard for developed nations and a different one for developing nations"[34]

Thus, particular attention has been paid to the effects of the TRIPs Agreement on the transfer of technology. The North-South technological gap has continued to grow since the adoption of the TRIPs Agreement. This is also frightening that the enhanced protection given to IPRs will not effectively promote the development process, this concern have been voiced by many developing countries.

So, strengthening and expansion of IPRs under TRIPS are likely to adversely affect the conditions for access to and use of technology, and thereby the prospects of industrial and technological development in developing countries[35]. Their development process and their commitments under CBD will be under threat. Not only that, there is a clear conflict between the two international Agreements.

4.8 Bio-piracy

Under The TRIPs Agreement the patent system makes the theft of biological resources and traditional knowledge possible. Indigenous communities are unfairly deprived of their rights over and access to the resources due to the imposition of patent rights over biological resources and traditional knowledge which they have nurtured and conserved over generations. This clearly contradicts the key principles and provisions of the CBD.

6.9 Individual monopoly rights and Collective rights

The TRIPs Agreement imposes private intellectual property rights (IPRs) on the South's biodiversity while the CBD recognizes the collective rights of local communities to the same. Governments, scientists and many social sectors accept that our survival depends on the conservation and free availability of biodiversity, not on its privatization. TRIPs Agreement

---

34 Information retrieved from, "Review of the trips agreement: fostering the transfer of technology to developing countries" by Carlos correa, (electronic version), http://www.twnside.org.sg/title/foster.htm, last visited on 28 September 2004, at 10:00 p.m.

35 Correa, C. M., *Intellectual property rights, the WTO and developing countries, the TRIPs Agreement and policy options*, published by Zed Books Ltd., London and New York, at p.18-19.

counteracts collective rights, by stating in the preamble "[…] Intellectual Property Rights are private rights". So, in the view of critics of TRIPs Agreement, the agreements are showing disregard to the communities' rights. Indeed, many communities share their resources, knowledge and cultures among themselves, which is recognised by the CBD**.**

In a three day workshop titled "National Workshop on Intellectual Property Rights (IPR): S & T perspectives" organized by the Ministry of Science and Technology (MOST), Bangladesh, Dr. Pushpangadan, director of National Botanical Research Institute of India, in his paper 'Biodiversity Biotechnology, intellectual property Rights and Benefit Sharing', expressed apprehension that another colonization process could start again by the developed nations to sell their products made from the third world countries.

5. Bangladesh perspective:

Among all the issues that has been included in the post-1995 world trade regime, the TRIPs Agreement is the most questionable one of them. TRIPs Agreement has a potential to cause uproar in different sectors of the national economy and environment of developing countries. To begin with, developing countries were not ready to join any form of discussion on the issue of IPR, as they were suspicious about the intentions of the developed countries. In a bid to run the negotiations the developed countries argued that the discussions would centre only on 'trade in counterfeit goods'. But during discussions on IPR the developing countries lacked the capacity to understand the probable implications of the issues and they had no knowledge on how to defend their interest. Nor they had the economic strength to turn the negotiations in their favour. Realising these constraints, the developing countries threatened to withdraw from the discussions. In contrast the developed countries insisted the developing countries by saying that if they did not agree to re-enter the discussions on IPR within the GATT rules, they would not agree to discuss about agriculture and other related issues. When the developing countries found them consistently squeezed by the US-led developed countries to agree to their proposal on TRIPS, a group of Third World Countries did present a draft agreement on TRIPS during the Uruguay Round. Finally, The IPR included into the Uruguay Round of GATT and 'the TRIPS came into existence'[36].

[36] Articles 27-34 of the TRIPS Agreement deal with the subject, scope and protection of patents.

5.1 Conservation of Biodiversity, scenario in Bangladesh:

Bangladesh is rich in biodiversity[37], and mainly an agricultural country. Most of the basic survival needs of the people and the farmers come from the biological diversity. "With more than 130 million people and a population growth rate of 1.6%, the pressure on the nation's natural resources is intense[38]. In order to meet our daily needs, the resources of biodiversity provide us, our food supplies, opportunities for recreation and tourism, and sources of wood, medicines and energy. It is also contributing in the essential ecological functions. Our personal health, and the health of our economy and human society, depends on the continuous supply of various ecological services that would be extremely costly or impossible to replace. All these resources come from the biological diversity, which the country is losing every year.

"Over the last 100 years, Bangladesh has lost about 10% of its mammalian fauna, 3% avifauna, and 4% reptile species. Altogether, there are 10 species of mammals, 2 species of birds and 1 species of reptile are nationally extinct. IUCN Bangladesh has identified 58 spp. of fish, 8 spp. of amphibians, 63 spp. of reptiles, 47 spp. of birds, and 43 spp. of mammals in the country, which are threatened under different degree of risk of extinction. Altogether 327 spp. of vertebrates are currently categorized as data deficient"[39]

---

[37] The country has about 113 species of mammals, over 630 species of birds, 125 species of reptiles and 22 species of amphibians. It has 260 freshwater species and 475 marine species. As far available information, other faunal species include 327 mollusks and 66 corals. Status of insect species is not available but it is reported to be highly diverse. It has been the abode of 5000 angiosperm species and several subspecies. Of them 160 species are used as crops. The crops are rice, wheat, jute, pulses, oilseed plants, minor cereals, sugar corps, fruit plants, vegetables, root rubber crops, spices, forest trees, beverage crops, flowers, medicinal and aromatic plants and other wild plants. Bangladesh has also high diversity of species, as for example the country has tiger, elephant, Ganges dolphin, Whitewinged Wood Duck, Palass's fishing Eagle, Python, River Terrapin which are globally threatened species. Bangladesh has also quite a diverse ecosystem recently; faunal survey has been completed in five ecologically critical areas – namely St. Martins Island, Himchari Coastal Belt, Tanguar Haor, Baind Tract and Chalan Beel. National Herbarium has also conducted floral survey in these areas, [Source: IUCN- the World Conservation Union, Bangladesh Country office]

[38] Nishat A. "Biodiversity Conservation and Bangladesh", IUCN- the World Conservation Union, Bangladesh Country office.

[39] Supra note 36.

Bangladesh has signed, ratified, accepted and acceded to CBD. The country has signed and ratified the Convention on Biological Diversity in 1992 and 1994 respectively. Thus it adheres and commit to the conservation of biodiversity and the environment[40]. In pursuant to Article 6[41] this Convention, Bangladesh has adopted its National Biodiversity Strategy and Action Plan (NBSAP) with the coordinated help of United Nation Development Programme (UNEP) and Global Environmental Fund (GEF), under the supervision of the Ministry of Environment and Forest (MoEF). The draft of this National Biodiversity Strategy and Action Plan (NBSAP) is prepared by IUCN-Bangladesh[42].

Unlike India and many other countries of the world, Bangladesh is yet to enact specific comprehensive law to deal with biological diversity, the management of which is still left to sectoral laws having different management and goals[43]. So, as a means to conserve biodiversity the country has several sectoral laws to deal with the specific areas like, the Bangladesh Wildlife (Preservation) Act 1974; the Bangladesh Environment Conservation Act 1995; the Protection and Conservation of Fish Act, 1950, The Forest Act 1927 etc.

The Bangladesh Wildlife (Preservation) (Amendment) Act, 1974 is that legal instrument which protects or conserves the important species of the country.

The Environment Conservation Act, 1995 is another legal instrument to conserve important degraded ecological areas of the country. The Act has empowered the Government to declare an area as Ecologically Critical Area (ECA).

In this regard, Halima Neyamat[*] has shown her concern stating "we (Bangladeshi) need a separate Biodiversity Conservation Act, an umbrella law covering all the aspects of biodiversity. Our most of the laws are

---

40 Information retrieved from "Position of Bangladesh vis-à-vis Convention on Biological Diversity", (Electronic Version), http://www.sdnbd.org/biodiv_iucn.htm, last visited on 10 October 2004 at 9:30 p.m.

41 "It requires parties to adopt national strategies, plan or programmes for the conservation and sustainable use of biological diversity".

42 "jatio jibo baichitra sanrakhan er kaoshul o karmaporikalpana grihito" *The Daily Prothom-Alo*, 3 October, 2004

43 Hasan, S. R, *Protection of Ecosystem, Natural Resources and Biodiversity in Bangladesh*, The Bangladesh Today, Saturday, May 17, 2003, p.5.

* Halima Neyamat, Assistant Programme Officer, IUCN, Bangladesh Country Office.

outdated, inadequate and ineffective. In the law making process, the decision makers should consult with the stakeholders i.e. people directly affected or benefited by this law"[44]

So, now the NBSAP will help the concerned authority to identify areas where immediate action is needed for the conservation and sustainable use of biodiversity including the adoption of comprehensive law or amendment of the existing laws in this regard.

6. The way forward

Under TRIPs negotiations the proposals to extend patent protection to plants, micro-organisms, biotechnological techniques, food and essential drugs under the new trade regime raised numerous ethical and legal problems for many developing and least developed countries. The extension of the application of the intellectual property rights system to living things - a process which has been globalise by the World Trade Organisation through the TRIPs Agreement - has resulted in gross injustice to the countries of the South, in particular to its local and indigenous communities. By sanctioning the patenting of varieties of genetic materials developed over generations by such communities and enabling northern corporations to secure monopoly control over them, the TRIPS Agreement is undermining the concept of 'equitable benefit-sharing' envisaged in the Convention on Biological Diversity adopted at the Rio Earth Summit. Besides, Patent protection has come to be applied to living things, and yet nobody has as yet learned to create a living thing. We have, so far, only managed to discover living things, not to invent even one. But now, the industrialised countries are patenting living things as if they have invented them.

The UN Sub-Commission on the Promotion and Protection of Human Rights in August 2000 expressed strong concerns about "the impacts of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement on human rights and environment, and on biodiversity-related indigenous knowledge[45]. The TRIPs Agreement under WTO provides patent protection to living organisms, including genetic materials"[46]. It has enabled private companies in the North to benefit financially from genetic

---

45 Information retrieved from, "Traditional knowledge, Global Implementation of the Convention and Cooperation with other Conventions and Processes, Chapter 5, Global Biodiversity Outlook"(electronic version), http://www.biodiv.org/gbo/chap-05/chap-05.asp, last visited on May 31, 2003.

46 Supra note 16.

resources of the developing countries. It is a threat to national sovereignty and possibly to genetic materials themselves. Though national sovereignty over the genetic materials has been recognized by the CBD[47] such patenting will be detrimental to farmers and consumers' rights in developing countries and moreover will render sustainable agriculture extremely difficult. It is also a direct risk and danger towards their infrastructure and overall development. If the southern poor countries do not raise their voice against this type of harmful initiative taken by the Northern developed countries, poor Third world countries will become poorer day by day and it is definite that their sustainable infrastructure will be worn-out.

In emphasising the way out for Southern countries, some examples of Africa's co-ordinates action in the international forum can be referred to in this regard. In 1998 in Bratislava during the COP meeting, Africa introduced into the debate the issue of the unfairness of Article 27.3(b) of the TRIPS Agreement and the problems it creates for the conservation and sustainable use of biological diversity. Africa's delegations convincingly argued that the CBD should have supremacy over The TRIPS. The debate is now firmly established in the CBD forum, and it is inevitable that it will influence the development of The TRIPS and the WTO. Again, The African Group set the pace in the negotiations to create a Biosafety Protocol by presenting the first and most comprehensive draft protocol.

Several proposals aimed at developing the interface between the TRIPS Agreement and the CBD have been made:

- There should be no patenting of any form of life, including plants, animals, micro-organisms, and genetic materials or any part thereof or any altered form thereof or processes, including genetic engineering and similar techniques. It seeks to protect and promote farmers' rights and to conserve plant genetic resources. The provision of Article -27(3) (b) of the TRIPs Agreement should not become the international regime for countries and peoples. In this case in relation to biodiversity conservation CBD should establish its own IPR regime and Biosafety Protocol, 2000 should come in to force without any delay.
- The TRIPs Agreement is imposing wrong concept of innovation. Innovation is a crucial process in any country, developed or developing. It does not recognise, much less promote, the kind of innovative processes and capacities that most developing countries are rich in and without which they cannot survive.

---

47 Article-15 (1) of CBD, 1992.

- The TRIPs Agreement should invite a very broad assessment of the costs and benefits to developing and least-developed countries, and particular attention should go to the application of TRIPs to biological diversity and how it will affect the economic resource base, indigenous knowledge, ethics and the terms of access to scientific information, as well as the control of society's food and medicine.
- The existing IPR or trade regimes are not appropriate to protect indigenous peoples' intellectual and cultural property rights. Several possible alternative regime include the adoption of community-based IPR and resource rights regimes, civil society resistance and the revival of farming and medicinal systems should established by facilitating the repatriation of cultural property to rightful indigenous owners and ensuring that the rights of indigenous peoples to own and benefit from their ancestral lands and territories are fully protected in their domestic laws and policies as well as suspending projects in indigenous peoples' territories that were initiated without their full and prior informed consent.
- Indigenous and local communities should be legally empowered to demand and grant a prior informed consent (PIC) before the collection of genetic resources on their land and it also includes bringing all the bio-prospecting activities under a formal system. Different organisations in the country are working separately to make an inventory of biodiversity, but the process needs to be co-ordinates.
- Technology plays a growing role in the creation of competitive advantages and in any development strategy. Transfer of technology to LDCs, according to Article 66(2) of the TRIPs Agreement, developed Member countries are obliged to provide incentives under their legislation to enterprises and institutions in their territories for the purpose of promoting and encouraging the transfer of technology to LDCs "in order to enable them to create a sound and viable technological base". So the provision should comply accordingly and technology transfer policy should aim at the absorption of foreign technologies and the building up of local capabilities. Any future action concerning technology transfer within WTO should recognize the strong linkages existing between the transfer and local technological capacity building, which remains a main responsibility of host countries. The improvement of the conditions for access to and effective use of foreign technologies will require a broad approach beyond the TRIPs Agreement.
- The impact of the WTO rules on the transfer of environmentally sound technology (EST) should consider carefully. Access to and transfer of EST should be made of a most favourable way, in particular to developing countries, including on concessional and preferential terms [48].

[48] Chapter 34 of Agenda 21

- The supply of technical and financial cooperation for developing and least-developed countries is mentioned in Article 67 of the Agreement, but no specific obligations or operative mechanisms are provided for. The provision of the assistance is on request and subject to "mutually agreed terms and conditions". Such cooperation should include assistance in the preparation of laws and regulations on the protection of IPRs as well as conservation of biodiversity including the prevention of their abuse, the establishment or reinforcement of domestic offices, including the training of personnel.
- For the purposes of achieving a harmonization of the TRIPS Agreement with the CBD, it is necessary to incorporate a provision establishing that patents inconsistent with Article 15 of the CBD must not be granted.
- The following measures can be taken for the protection of national interest while opting for IPR- (I) collation of indigenous technology of the nation for establishing ownership over such technology and over the resources themselves, (ii) informing people about the importance of the indigenous knowledge, innovations and practices; biological resources and conventional biotechnology, they should also be informed about the social, moral, economic, political and legal implications of modern biotechnology and ensuring adequate compensation for use and patenting of indigenous and communities' knowledge, innovations and inventions. At the national level, governments should explore other systems to promote investment, R&D and technological capacity building.
- Governments and civil society therefore must urgently confront the contradiction between TRIPs and the CBD by taking the following measures: (I) countries should recognize and affirm in law the primacy of the CBD over TRIPs Agreement under the WTO, in the area of biological resources and traditional knowledge systems. (ii) Implementation of TRIPs in developing countries should be challenged and suspended on the basis of its irreconcilable conflict with the CBD. (iii) The Collective Rights of indigenous and local communities freely to use, exchange and develop biodiversity should be recognized as a priori rights and be placed over and above private intellectual property rights. This has to be reflected in legislation and public policy at the national level. Legislation that fills in this gap should be developed in the South, and only after that can the North be expected to recognise community rights.
- The CBD should be fully developed as an international instrument to promote the sustainable use and conservation of biodiversity, based on community control of resources. The CBD should not be allowed to degenerate into a marketplace for the commercialization of biological resources and related knowledge.

7. Conclusion

The World Development Report, 1992 (World Bank, 1992) stated that, "protection of environment is an essential part of development. Without adequate environmental protection, development is undermined; without development, resources will be inadequate for needed investment, and environmental protection will fail." During the recent past, these have evoked a deep concern of mankind. This is now an almost international feeling that something must done to conserve the biodiversity as well as for the sustainable form of development.

Pursuing this view the CBD come in to existence. As Biodiversity are crucial for world agriculture, food security and the global economy. They are vital for the pharmaceutical industry and important assets for developing countries as well as the patents and IPRs associated with the development of new products to some extent, are important to trade in these resources.

Thus, The WTO on the other hand, is carving out a role for itself in the global governance of trade and intellectual property regimes. The Preamble of The TRIPs Agreement provides, "Members desire to reduce distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade […]"It establishes standards of rights that all WTO members must provide through the different fields of intellectual property.

So, Current discussion tried to examine the relevant international agreements, the Convention on Biological Diversity (CBD); TRIPS Agreement and other relevant areas. It provides the first full-scale account of how to integrate the requirements of the CBD into an equitable global IPR regime and make compatible with TRIPs Agreement, taking into account ethical concerns, environmental and social impacts, technology transfer and traditional knowledge.