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Harmonizing TRIPs and the CBD: A Proposal from India

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Many scholars argue that strong protection of intellectual property rights encourages creation and innovation,¹ but others point out that weak protection of intellectual property rights protects life itself by ensuring access to essential goods for medical treatment, sustenance and development.² This is particularly true in the areas of education and development.³ In the words of Indira Gandhi, "[t]he idea of a better-ordered world is one in which medical discoveries will be free of patents and there will be no profiteering from life and death."⁴

1. See Michael W. Smith, *Bringing Developing Countries' Intellectual Property Laws to TRIPs Standards: Hurdles and Pitfalls Facing Vietnam's Efforts to Normalize an Intellectual Regime*, 31 CASE W. RES. J. INT'L L. 211, 215 (1999) (stating that the traditional justification for intellectual property rights was to encourage artistic creation and innovation); see also Robert M. Sherwood, et. al., *Promotion of Inventiveness in Developing Countries Through a More Advanced Patent Administration*, 39 IDEA 473, 478-79 (1999) (suggesting that effective administration of intellectual property rights will maximize the contributions of inventors).

2. See D. Ravi Kanth, *WTO Allowed Drugs to be Priced Beyond Reach of the Poor: UN Panel*, BUS. TIMES, Aug. 22, 2000, available at 2000 WL 25565053 (stating that the TRIPS Agreement "gives exclusive rights to pharmaceutical companies to set high prices for their new drugs, making them unaffordable and inaccessible").

3. See Frank Emmert, *Intellectual Property in the Uruguay Round-Negotiating Strategies of the Western Industrialized Countries*, 11 MICH. J. INT'L L. 1317, 1383 (1990) (discussing the particular importance of protecting access to advances in education, agricultural materials and medicines to newly industrialized countries).

4. Ghandi's quote was taken from a speech given to the 1982 World Health Assembly. R. Michael Gadbaw & Leigh A. Kenny, *India*, in INTELLECTUAL PROPERTY RIGHTS: GLOBAL CONSENSUS, GLOBAL CONFLICT? 186, 186 (R. Michael Gadbaw & Timothy J. Richards eds., 1988), cited in Robert Gutowski, *The Marriage of Intellectual Property and International Trade in TRIPS Agreement: Strange Bedfellows or a Match Made in Heaven?*, 47 BUFF. L. REV. 713, 744 (1999); see also Gary P. Nabhan, *Sharing the Benefits of Plant Resources and Indigenous Scientific Knowledge*, in VALUING LOCAL KNOWLEDGE: INDIGENOUS PEOPLE AND INTELLECTUAL PROPERTY RIGHTS 186, 191 (Stephen B. Brush & Doreen Stabinsky eds., 1996).

The Trade-Related Intellectual Property Agreement (TRIPs) sets forth the minimum level of intellectual property rights⁵ which must be provided by all states party to the Global Agreement on Tariffs and Trade (GATT).⁶ TRIPs allows developing countries to phase in intellectual property rights over a period of time and ultimately creates a nearly uniform standard of protection without regard to the level of development or economic policies of a specific country.⁷

One scholar argues that stronger protection of intellectual property rights will benefit the countries producing the most intellectual property, which tend to be highly developed countries with effective channels to transfer research from educational and research facilities to industries.⁸ By contrast, developing countries like India stand to lose the most from strong intellectual property protection, because with strong intellectual property protection they lose access to affordable medicines, crop chemicals, and educational materials.⁹ According to Vandana Shiva, director of the Research Foundation for Science and Ecology in New Dehli, India, and a

5. Intellectual property rights are the legal rights that result from intellectual activity in the industrial, scientific, literary, and artistic fields. Because creations of the mind cannot be protected from another person's use like physical objects, intellectual property rights were created to safeguard producers of intellectual property by giving the producers time limited rights to control the use of their creations. See INTRODUCTION TO INTELLECTUAL PROPERTY THEORY AND PRACTICE 3 (World Intellectual Property Organization ed., 1997).

6. See GENERAL AGREEMENT ON TARIFFS AND TRADE-MULTILATERAL TRADE NEGOTIATIONS (THE URUGUAY ROUND): AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL RIGHTS, Dec. 15, 1993, 33 I.L.M. 81 (1994) [hereinafter TRIPs Agreement].

7. See INTERNATIONAL INTELLECTUAL PROPERTY LAW 278-79 (Anthony D'Amato & Doris Estelle Long, eds. 1997) (citing Jerome H. Reichman, *The TRIPs Component of the GATT's Uruguay Round: Competitive Prospects for Intellectual Property Owners in an Integrated World Market*, *FORDHAM INTELL. PROP. MEDIA & ENV'T.* L. J. 171 (1993)) (stating that some industries in developing countries will be displaced temporarily while the country is getting its intellectual property protection up to TRIPs standards).

8. See Jerome H. Reichman, *Intellectual Property in International Trade: Opportunities and Risks of a GATT Connection*, in INTERNATIONAL INTELLECTUAL PROPERTY LAW 272 (Anthony D'Amato & Doris Estelle Long eds. 1997) (arguing that developed countries have an advantage over developing countries and that these advantages should be taken into consideration in the creation of an international intellectual property rights regime).

9. See Emmert, *supra* note 3, at 1383 (stating that farmers, students, and the sick rely on cheap access to seeds, education, and drugs for their basic way of life); see also Dru Brenner-Beck, *Do as I Say, Not as I Did*, 11 UCLA PAC. BASIN L.J. 84, 84 (1992) (arguing that lesser developed countries do not benefit from intellectual property rights systems until they have reached a threshold level of development).

prominent activist in the area of biotechnology and biodiversity, the TRIPs Agreement is a continuation of over 500 years of colonialism of developing countries.¹⁰ She argues that developed countries create intellectual property protection laws that drain wealth and resources from third world countries and transfer it back to developed countries.¹¹

The protection of intellectual property rights at appropriate levels can benefit both developed and developing countries.¹² Intellectual property can help indigenous cultures protect their craftsmanship from foreign exploitation and protect their

10. See VANDANA SHIVA, *BIOPIRACY: THE PLUNDER OF NATURE AND KNOWLEDGE* 11-16 (1997); see also Jarbaksh Signh Nanda, *India's Commerce Minister Scores Effects of WTO TRIPS Accord*, at <http://www.wtowatch.org/news/index.cfm?ID=2135> (last visited July 17, 2000). Nanda quotes India's Commerce Minister, Murasoli Maran, at a three day forum of the World Intellectual Property Organization as stating,

[t]he patent rights born out of intellectual property fail the world's poor. Nations are more interested in strengthening the WTO. Instead, WHO [sic] must be redesigned and expanded to fill up the gaps and remove the inequities created by the IPR [intellectual property rights] and to take care of public health and other needs of the poor.

Id.

11. See SHIVA, *supra* note 10, at 10-11. But see Kevin W. McCabe, *The January 1999 Review of Article 27 of the TRIPs Agreement: Diverging Views of Developed and Developing Countries Toward the Patentability of Biotechnology*, 6 J. INTEL. PROP. L. 41, 47 (1998) (stating that broader intellectual property protection actually will promote social welfare and economic development of developing countries).

12. Dr. M.D. Nair, a pharmaceutical industry consultant, argues that

[i]f developing countries are to become economically strong, they need to capitalize on their unique bio-assets, just as the OPEC countries prospered due to their oil wealth. In order to achieve this, they need to have systems that will provide them benefits from global development and marketing of their medicinal plant resources.

M.D. Nair, *Winning the War Against Bio-colonisation*, THE HINDU, May 17, 2000, available at 2000 WL 20488115; see also Doris Estelle Long, *The Impact of Foreign Investment on Indigenous Culture: An Intellectual Property Perspective*, 23 N.C. J. INT'L L. & COM. REG. 229 (1998) (arguing that developing countries can use intellectual property rights as both a sword and a shield against de-culturing foreign investments); Doris Estelle Long, *The Role of Intellectual Property in Developing Nations*, in INTERNATIONAL INTELLECTUAL PROPERTY LAW 65 (Anthony D'Amato & Doris Estelle Long eds., 1997) (arguing that the denial of intellectual property rights in developing countries denies those countries the ability to develop their own intellectual property); cf. Frank Romano, *International Conventions and Treaties*, in 536 GLOBAL TRADEMARK & COPYRIGHT 545, 562 Practising Law Institute (1998) (stating that because there is very little data on the impact of the new international intellectual property standards and their impact on areas other than intellectual property, there is still room for a debate of whether the standardization of intellectual property protection will "reap the harvest of global benefits").

traditional way of life.¹³ But without proper administration and intellectual property protection, indigenous cultures and developing nations can lose control over important aspects of their development and industry to the more “savvy” developed countries.¹⁴

This Note will examine the TRIPs Agreement and suggest how it can achieve a better balance of intellectual property rights between developing and developed countries. Part I examines the role of developing countries in the TRIPs Agreement, with a specific focus on India. India was chosen because of its vocal protest against the TRIPs Agreement at the Uruguay Round and its more recent proposal to amend the TRIPs agreement to give greater protection to developing countries. The proposal from India includes suggestions for harmonizing the TRIPs Agreement with the Convention on Biological Diversity (CBD). Part II begins by examining the TRIPs Agreement and the principal areas affected by India’s proposal. Then, it will address the CBD, how the CBD gives better protection to the rights of developing countries, and how India’s proposal incorporates the CBD into TRIPs. Part III reviews the merits of each of India’s proposals to integrate TRIPs into the CBD. Finally, part IV argues that while TRIPs offers many benefits, those benefits should not overshadow the changes which still need to be made, some of which are clearly addressed in India’s proposal.

13. According to the note by the Executive Secretary to the Committee of the Parties, “it is only through the use of some form of intellectual property rights that local and indigenous communities will be able to exercise the necessary degree of control in order to allow for proper internalization of the value of their knowledge, innovation and practices.” See *The Relationship Between Intellectual Property Rights and the Relevant Provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement) and the Convention on Biological Diversity*, United Nations Environmental Programme, Convention on Biological Diversity, Intersessional mtg. para. 4, U.N. Doc. UNEP/CBD/ISOC/5 (1999); see also Rosemary J. Coombe, *Intellectual Property Human Rights & Sovereignty: New Dilemmas in International Law Posed by the Recognition of Indigenous Knowledge and the Conservation of Biodiversity*, 6 IND. J. GLOBAL LEGAL STUD. 59 (1998) (discussing the limitations of using intellectual property rights to protect indigenous cultures).

14. See Emily Marden, *The Neem Tree Patent: International Conflict over the Commodification of Life*, 22 B.C. INT’L & COMP. L. REV. 279 (1999) (discussing the United States’ usage of the Indians’ knowledge of the neem tree and its characteristics to create a patent of its useful chemical properties).

I. THE PLIGHT AND ROLE OF DEVELOPING COUNTRIES IN THE TRIPS AGREEMENT

A. A CASE STUDY OF INDIA

While many Western countries saw the enactment of the TRIPs Agreement as a monumental achievement for intellectual property protection, it resulted in violent protests in India.¹⁵ India could not support the TRIPs Agreement and the intellectual property rights it would give developed countries because the country was still in the wake of what is referred to as "the neem tree incident."

1. *The Neem Tree Incident*

The neem tree, native to India, is used by the Indian people for a myriad of medicinal purposes. The bark has a compound which can be used to clean teeth,¹⁶ and the leaves and seeds have compounds which demonstrate anti-fungal, antiseptic, and anti-viral characteristics.¹⁷ Oils from the seeds have contraceptive properties,¹⁸ and the leaves and seeds also contain natural pesticides.¹⁹ Azadirachtin, a chemical extracted from the seeds of the neem tree, was identified as an active pesticidal substance.²⁰ The developed world seized upon the usefulness of this plant. W.R. Grace, an agricultural chemical company based in Boca Raton, Florida, stabilized azadirachtin in water and patented both the stabilization process and the stabilized form of azadirachtin with the United States Patent Office.²¹ W.R.

15. See George K. Foster, *Opposing Forces in a Revolution in International Patent Protection: The U.S. and India in the Uruguay Round and Its Aftermath*, 3 UCLA J. INT'L L. & FOREIGN AFF. 283, 283 (1998) (stating that anger and violence erupted in India after the passage of TRIPs).

16. See NAT'L RESEARCH COUNCIL, NEEM: A TREE FOR SOLVING GLOBAL PROBLEMS 9-10 (1992).

17. See *id.* at 8.

18. See *id.* at 10.

19. See *id.* at 1-3.

20. See *id.* at 4.

21. See U.S. Patent No. 5,281,618 (issued Jan. 25, 1994). The patent did meet all of the U.S. patent requirements under 35 U.S.C. sections 101, 102, and 103. These requirements were (1) the invention has some practical usefulness, (2) it is novel in relation to the "prior art," (3) it is not obvious to a person of ordinary skill in the art at the time the invention was created, and (4) the description provided would enable a knowledgeable person use of the invention in the best mode. 35 U.S.C. §§ 101-103 (1997); see also Marden, *supra* note 14, at 284 (discussing Grace's

Grace never applied for a patent in India as India did not grant patents for agricultural products at that time.²² Shortly after the U.S. patent was granted, a coalition of 200 different organizations and 35 states petitioned the United States Patent Office to invalidate the patent, calling it an act of "intellectual and biological piracy."²³ The dispute arose because it was the knowledge of the people of India which alerted the U.S. company to the tree's scientific uses. Without their knowledge, the tree would have been an ordinary tree to W.R. Grace.²⁴ Even though the properties of the neem tree are "common knowledge" in India, azadirachtin met the novelty requirement for U.S. patent law.²⁵ Section 102 of the U.S. Patent Act only allows very specific and limited types of prior foreign activity to invalidate a U.S. patent for lack of novelty, and none of India's activities meet the necessary criteria.²⁶ The effect of W.R. Grace's patent is that India, despite its ownership of the neem tree, has no legal right to develop the plant for medicinal or curative purposes.²⁷

After six years of persistently campaigning against and legally challenging the United States' acquisition of azadirachtin, India and the azadirachtin protesters²⁸ won a

stabilization and patenting of neem tree products).

22. See Foster, *supra* note 15, at 308 (stating that India does not recognize any biotechnology patents).

23. Ashok Sharma, *Tree Focuses Debate on Control of Resources; Environment: Third World Nations Contend They Should be Compensated for Protecting Natural Materials, Which First World Converts to Products and Profits*, L.A. TIMES, Nov. 19, 1995, available at 1995 WL 9846864.

24. See Charles R. McManis, *The Interface Between International Intellectual Property and Environmental Protection: Biodiversity and Biotechnology*, 76 WASH. U. L.Q. 255, 269 (1998); see also John Tanner, *India: U.S. Giant, Peasants Battle for "Blessed Tree"*, INTER PRESS SERVICE GLOBAL INFO. NETWORK, Oct. 12, 1993, available at 1993 WL 2534808 (quoting Vandana Shiva as saying, "[w]ithout the Indian peasants knowledge of the medicinal and pesticidal properties of [the tree], neem would just be another tree to Grace").

25. See Shayana Kadidal, *Subject-Matter Imperialism? Biodiversity, Foreign Prior Art and the Neem Patent Controversy*, 37 IDEA 371, 376 (1997) (stating that "while almost all domestic prior knowledge, use, or invention is considered against a later United States patent, almost all similar foreign activity is not").

26. See *id.* at 376; see also Patent Act, 35 U.S.C.A. §102 (1984).

27. See Frederick Nzwill, *Multinationals Lose Exclusive Rights Over Neem Tree*, AFR. NEWS SERV., May 22, 2000, available at 2000 WL 2161415.

28. The major protesters include Vandana Shiva, head of the Research Foundation for Science, Technology and Ecology (RFSTE); the International Federation of Organic Agriculture Movement (IFOAM); and Magda Alvoet, Environmental Minister of Belgium and a former Green member of the European Parliament. See *id.*

major victory when the opposition division of the European Patent Office revoked the patent granted to the United State Department of Agriculture (USDA) and W.R. Grace.²⁹ The protesters in the neem tree incident hope this ruling will "mark a turning point in the struggle against bio-piracy."³⁰ Others believe the victory will be brief and any euphoria over the ruling is misplaced because the only way effectively to stop bio-piracy is through an integrated approach, not a case by case challenge that protects traditional health systems in developing countries and stops bio-colonization by multinational firms.³¹

2. *India and the Enactment of TRIPs*

The enactment of the TRIPs Agreement occurred at the Uruguay Round Agreements despite India's and other developing countries' dissatisfaction with the intellectual property rights provided in the agreement.³² For several reasons, India was left without much choice. The TRIPs Agreement was a part of a larger package of economic agreements, many of which were beneficial to India.³³ At the time, India was in one of the most severe financial crises in its history and could not forgo any benefits of increased exports.³⁴ Moreover, the breakdown of the Soviet Union and the end of the Cold War took away India's ability to threaten to enter the communist bloc.³⁵ Democratic countries no longer needed to pacify India to keep it part of the western alliance.³⁶

Since the enactment of the TRIPs Agreement, India has addressed many of its economic problems. Prior to 1991, India encouraged neither foreign investment nor production for export.³⁷ According to the World Bank Group, India decreased

29. *See id.*

30. *Id.* (quoting Vandana Shiva's statement after the European Patent office's ruling).

31. *See Nair, supra* note 12.

32. *See Foster, supra* note 15, at 312 (discussing the treatment of TRIPs in India after its creation in 1995).

33. For example, one of the Uruguay Round agreements called for phasing out the Multi-Fiber Arrangement (MFA). The MFA allowed countries to create substantial trade barriers on their textiles. India, as the third largest exporter of textiles to Europe and the fourth largest to the U.S., stood to gain a lot by the reduction of trade barriers in the textile industry. *See id.* at 315-16.

34. *See id.* at 316.

35. *See id.* at 317.

36. *See id.*

37. *See* The World Bank Group, Countries: India, at <http://www.worldbank>.

its national debt after introducing a new policy aimed at transforming and expanding its economy.³⁸ Trade liberalization and privatization of state run industries and services led to the recovery of private investment and rapid growth in exports.³⁹ Currently, India has the world's sixth largest economy measured in terms of gross domestic product (GDP). India's total exports are expected to triple by the end of the year 2000 thereby making India's economy the fourth largest in the world.⁴⁰

3. *India's Proposal*

Now in a slightly restored position of bargaining power, India is prepared to lobby for its desired protections to be included in the TRIPs Agreement.⁴¹ India wants to protect its unique biological resources (such as the neem tree) as well as its artisans and traditional craftspeople from future exploitation.⁴² To do this, India has created a proposal with five components.⁴³ The first component is that any commercial exploitation of innovations based on biological resources would be allowed only if the innovators share the benefits with the country through which the resources came. This would be done through the use of material transfer or transfer of information agreements.⁴⁴

org/html/extdr/offrep/sas/in2.htm (last visited Sept. 8, 2000) [hereinafter World Bank Group].

38. See *id.* India's national debt dropped from 8.4 percent of GDP in 1990-91 to 5.6 percent in 1998. See Foster, *supra* note 15, at 318 (discussing India's economical and political environment during this time period).

39. See World Bank Group, *supra* note 37.

40. See Katherine Cox, *The Inevitability of Nimble Finger? Law, Development and Child Labor*, 32 VAND. J. TRANSNAT'L L. 115, 152 (1999).

41. See *India for Harmonising TRIPs with Bio-diversity Pact*, BUS. LINE, Sept. 3, 1999, available at 1999 WL 24404141 [hereinafter *India for Harmonizing*].

42. See G. Srinivasan, *India: Move to Prevent Theft of Traditional Skills*, BUS. LINE, Aug. 26, 1999, available at 1999 WL 24403294.

43. According to Dr. Bishwajit Dhar, the collapse of the Third Ministerial Conference of the WTO in Seattle presented little evidence of any progress on any of the issues flagged by India. Dr. Bishwajit Dhar, *Did India Gain at Seattle?*, ECON. TIMES, Dec. 14, 1999, available at 1999 WL 29165824; see also *India Wants Harmony in Rules on IPR, Biological Diversity*, ASIA PULSE, Sept. 6, 1999, available at 1999 WL 18772523 [hereinafter *Harmony in Rules*]; *India for Harmonising*, *supra* note 41; *India calls for Harmonising TRIPs with CBD*, THE HINDU, Sept. 3, 1999, available at 1999 WL 21355720; Sarabajeet K. Ken, *India: 7 New Laws in the Offing to Meet the TRIPs Deadline*, BUS. LINE, Aug. 30, 1999, available at 1999 WL 24403797.

44. These would be in the form of compulsory licensing agreements. See *India Wants Harmony in Rules*, *supra* note 43; *India for Harmonising*, *supra* note 41; see

Second, the application process for the intellectual property right would include a statement as to the biological source of the material and the country of origin.⁴⁵ Third, the patent application should be open to public scrutiny before approval.⁴⁶ Fourth, the special protection granted to geographical indications on wine and spirits should be expanded to include other foods and products.⁴⁷ Fifth and finally, the proposal contains a provision for a more effective implementation of the transfer of technology to developing countries by requiring companies which produce environmentally sound technology to sell this technology at fair and favorable terms to states that are obligated to adopt the environmentally sound technologies by international law.⁴⁸

B. OTHER OPPOSITION TO TRIPS

India has not been the only voice to recognize the shortcomings of TRIPs and the need for greater biodiversity protection.⁴⁹ Another treaty, the CBD,⁵⁰ conflicts with the TRIPs Agreement because of its greater protection of biodiversity rights.⁵¹ The CBD covers the conservation of biological diversity,

also Raghav Narsalay, *India: Evolving a WTO regime - India's agenda*, Aug. 10, 2000, BUS. LINE, available at 2000 WL 24947965 (suggesting that India should "muster necessary support on the positive interpretation" of TRIPs so that developing countries may better protect their plant varieties).

45. See *India for Harmonising*, *supra* note 41.

46. See *id.*

47. See *id.*

48. See *India Calls for Harmonising TRIPs with CBD*, *supra* note 43.

49. See Klauss Bosselmann, *Plants and Politics: The International Legal Regime Concerning Biotechnology and Biodiversity*, 7 COLO. J. INT'L ENVTL. L. & POL'Y 111 (1996) (arguing that the protection of biodiversity has been sacrificed for the increasing need for and protection of biotechnology, which has resulted in the TRIPs Agreement); see also Valentine Tejera, *Tripping over Property Rights: Is it Possible to Reconcile the Convention on Biological Diversity with Article 27 of the TRIPs Agreement?*, 33 NEW ENG. L. REV. 967 (1999) (arguing that TRIPs needs to include provisions from the CBD in order to recognize the rights of indigenous peoples and communities).

50. *The Convention on Biological Diversity and the Agreement on Trade-Related Intellectual Property Rights (TRIPs): Relationships and Synergies*, United Nations Environmental Programme, Convention on Biological Diversity, 3d mtg. para. 43, U.N. Doc. UNEP/CBD/COP/2/23 (1996).

51. See Tejera, *supra* note 49, at 982-83. Tejera discusses this conflict by using the specific example of a letter written by the President of the United States urging Congress to adopt the CBD. In his letter, the President recognized that the CBD attempts to conserve biological diversity, the sustainable use of its components, and the fair and equitable sharing of genetic resource benefits. See Letter of Transmittal from William J. Clinton to the United States Senate, Convention on Biological

the sustainable use of biological components, and the equitable sharing of benefits arising from the use of genetic resources.⁵² Although the CBD gives effective intellectual property rights to developing countries, those rights are taken away by agreements such as TRIPs.⁵³ Without adequate protection of biogenetical rights, scholars argue that India's biogenetical wealth will be transferred into the "hands of the corporations of the industrialized world."⁵⁴ Because the CBD attempts to give more protection to biodiversity, much of India's proposal for amending the TRIPs agreement involves harmonization of the two agreements by incorporating provisions of the CBD into TRIPs.⁵⁵

Some argue that the protection of biodiversity granted under the CBD, while protecting individual countries from exploitation, is not enough to protect indigenous cultures from exploitation.⁵⁶ When developing countries are granted sovereignty to develop their own systems for patenting indigenous or traditional knowledge, the developing country

Diversity 1, Nov. 20, 1993, *available at* 1993 WL 796847, at *1. The letter further stated that the United States would, however, resist any efforts leading to a decrease in levels of protection over intellectual property rights. *See id.*

Thus, it seems that the policy of the United States is willing to respect a country's autonomy regarding its conservation policies as long as it does not interfere with a system of intellectual property rights. It is difficult to reconcile the United States' position, which limits the autonomy of signatory nations with Article 3 of the CBD.

Tejera, *supra* note 49, at 982. Article 3 of the CBD recognizes that "(s)tates have...the sovereign right to exploit their own resources pursuant to their own environmental policies." United Nations Conference on Environment and Development: Convention on Biological Diversity, S. TREATY DOC. No. 103-20 (1993), *reprinted in* 31 I.L.M. 818, 823 at art. 3 (entered into force Dec. 29, 1993) [hereinafter CBD]. "Thus, now there exists a large discrepancy between the terms of Article 3 of the CBD and the terms of the TRIPs Agreement." Tejera, *supra* note 49, at 983.

52. *See generally* CBD, *supra* note 51.

53. Ms. Shiva stated that even though "[t]he Biodiversity Convention accords India sovereignty over its own resources to be used in a sustainable manner...[t]rade liberalisation policies seek to undermine sovereignty of the nation state by diminishing the state's control over flow of resources and replacing it with market control." VANDANA SHIVA, ET AL., *ECOLOGICAL COST OF ECONOMIC GLOBALIZATION: THE INDIAN EXPERIENCE* 10 (1997).

54. *Id.*

55. *See generally* *Harmony in Rules*, *supra* note 43; *India for Harmonising*, *supra* note 41; *India calls for Harmonising TRIPs with CBD*, *supra* note 43; Ken, *supra* note 43 (giving examples of ways in which TRIPs can be harmonized with the CBD).

56. *See* Lakshami Sarma, *Biopiracy: Twentieth Century Imperialism in the Form of International Agreements*, 13 TEMP. INT'L & COMP. L.J. 107, 109 (1999).

must choose between profiting from the sale of indigenous innovation and protecting the indigenous knowledge from exploitation.⁵⁷ Developing countries face pressure from developed countries to equalize their economies with the developed countries, and thereby gain more power in the global marketplace.⁵⁸ The result is that although the indigenous cultures are no longer being exploited by foreign states, an indigenous culture may be exploited by its own state.

II. BACKGROUND OF TRIPS AND CBD

A. CURRENT PROTECTION UNDER THE TRIPS AGREEMENT

The TRIPs Agreement went into effect on January 1, 1995, and is the most comprehensive multilateral agreement on intellectual property.⁵⁹ The TRIPs Agreement has several main goals and objectives, which include: (1) the reduction of distortion and impediments to international trade; (2) the promotion of effective and adequate protection of intellectual property rights; and (3) the assurance that the measures and procedures used to enforce intellectual property rights do not themselves become barriers to legitimate trade.⁶⁰ These goals and objectives further include the promotion of technological innovation, the transfer and dissemination of technology, and "the mutual advantage of producers and users of technological knowledge...in a manner conducive to social and economic welfare, and to a balance of rights and obligations."⁶¹

TRIPs is a minimum standards agreement that allows states to give greater protection to intellectual property rights if they choose.⁶² It also assures owners of intellectual property rights that all GATT member states will recognize their intellectual property rights at least at the required minimum

57. See *id.* at 109 n.21.

58. See *id.*

59. See Overview: the TRIPs Agreement, at http://www.wto.org/english/tratop_e/trips_e.htm (last visited Sept. 9, 2000) (referring generally to TRIPs and giving a broad overview of the agreement and its aspects) [hereinafter Overview].

60. See TRIPs Agreement, *supra* note 6, at pmb1.

61. *Id.* at art. 7.

62. TRIPs is set up as a minimal terms agreement in the first Article of the agreement. It reads, "members shall give effect to the provisions of this Agreement. Members may, but shall not be obliged to, implement in their law more extensive protection than is required by this Agreement, provided that such protection does not contravene the provisions of this Agreement." *Id.* at art. 1.

level.⁶³ Generally, the three main areas of the TRIPs Agreement are standards, enforcement provisions, and dispute settlement provisions.⁶⁴ The substantive standards include protection of copyrights, trademarks, geographical indications, industrial designs, patents, layout-designs of integrated circuits, undisclosed information (including trade secrets), and the control of anti-competitive practices in contractual licenses.⁶⁵ TRIPs builds upon several previous treaties by attempting to: (1) extend patents to all areas without regard to the area of technology; (2) create a minimum of 20 year protection for all patents; (3) impose criminal sanctions for infringements; (4) allow for the possibility of an exemption because of moral beliefs; (5) assure reasonable payment for compulsory licensing; and (6) allow for more effective dispute resolution over terms of the agreement.⁶⁶

Prior to TRIPs, the Paris Convention, an intellectual property agreement that became effective in 1967, specifically dealt with patents, trademarks, and designs.⁶⁷ A second treaty, the Berne Convention, which dealt with copyrights, became effective in 1971.⁶⁸ TRIPs is a more comprehensive treaty because it fills the substantial gaps left by the Paris and Berne conventions. The Paris Convention only required a second country to recognize a patent granted by a first country if the inventor applied for a patent in the second country within one year from when the patent was granted by the first country.⁶⁹

63. See *id.*

64. See Overview, *supra* note 59. See generally, TRIPs Agreement, *supra* note 6 (stating the specific language of the agreement).

65. See M.A. Kamal, *Role of WTO in Shaping a Balanced Global Economy*, INDEP., Aug. 26, 1999, available at 1999 WL 21950370. See generally TRIPs Agreement, *supra* note 6.

66. See BANKOLE SODIPO, *PIRACY AND COUNTERFEITING: GATT, TRIPS AND DEVELOPING COUNTRIES*, pt. 1, sec. 1.5.5, at 24-25 (1997) (discussing TRIPs extension of previous treaties).

67. See Convention of Paris for the Protection of Industrial Property March 20, 1883 revised at Stockholm on July 14, 1967, 828 U.N.T.S. 305 [hereinafter Paris Convention]. The main goal of the Paris Convention was to "eliminate discrimination on the national level, thereby assuring foreigners that they could acquire and enforce their intellectual property rights in the same way as nationals of any member country of the Convention." Laurinda L. Hinks & James R. Hobein, *Convergence of National Intellectual Property Norms in International Trading Agreements*, 12 AM. U. J. INT'L L. & POL'Y 769, 778-79 (1997).

68. See Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised July 14, 1967, 828 U.N.T.S. 221 [hereinafter Berne Convention]; see also Sodipo, *supra* note 66, at pt. 2, sec. 6.2 at 196.

69. See Foster, *supra* note 15, at 287.

The Paris Convention also lacked effective enforcement mechanisms and did not require any specific degree of protection.⁷⁰ The Berne Convention did not contain any minimum standards for determining when an infringement occurred, nor did it have an enforcement mechanism, or any way to impose sanctions for infringement.⁷¹

Most notably, TRIPs applies to all nations that are party to the GATT, whereas the Paris and Berne Conventions applied only to those states that were parties to the conventions.⁷² This was an important gap to fill in the eyes of developed countries because some of the major culprits of piracy and counterfeiting were countries that were not party to the Paris and Berne Conventions.⁷³ The majority of the wrongdoers were developing countries that created industries based upon counterfeiting.⁷⁴ Many developing countries refused to grant patents for pharmaceuticals and built businesses on the production of drugs pirated from other countries.⁷⁵ For these reasons, developing countries were generally opposed to TRIPs.

Counterfeiting was not the only concern of developed countries addressed in the TRIPs Agreement. An estimated two-thirds of the world's plant species originate in developing countries; and it is estimated that thirty-five percent of endangered species may have medicinal properties.⁷⁶ It is

70. See *id.* Disputes under the Paris Convention were to be handled by the International Court of Justice, which subjected any dispute to long and cumbersome procedures. See Monique Cordray, *GATT v. WIPO*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 121, 131 (1994).

71. See ANTONY D'AMATO & DORIS ESTELLE LONG, INTERNATIONAL INTELLECTUAL PROPERTY LAW 267-68 (1997) (discussing problems found under previous treaties). The disputes under the Berne Convention were also subject to the jurisdiction of the International Court of Justice and its long and cumbersome procedures. See Cordray, *supra* note 70, at 131.

72. See Foster, *supra* note 15, at 288 (naming several developing countries that were not party to the Paris Convention and therefore did not have to follow the provisions of the convention).

73. See Sodipo, *supra* note 66, pt. 2, sec. 6.2, at 196 (discussing TRIPs' extension of previous treaties).

74. See Reichman, *supra* note 7, at 278 (discussing the costs of the displacement of developing countries industries that are dependent upon piracy and counterfeiting).

75. See Xiao-Lin Zhou, *US-China Trade Dispute and China's Intellectual Property Rights Protection*, in INTERNATIONAL INTELLECTUAL PROPERTY LAW 414 (Anthony D'Amato & Doris Estelle Long, eds., 1997) (discussing the differences in how countries grant intellectual property rights, including some countries which do not grant any patents for drug development).

76. Gumisai Mutume, *Trade: Environmental Protection Runs Up Against Free Trade*, INTER PRESS SERV., Feb. 24, 2000, available at 2000 WL 4089981.

further estimated that pharmaceutical industries in developed countries receive at least \$3 billion per year from plants and other microbials of developing countries.⁷⁷ According to Anju Sharma, the coordinator for the global environmental governance unit of the Center for Science and Environment based in New Delhi, India, "[p]owerful economic interests and the pharmaceutical industry have essentially ended up dominating the decision making."⁷⁸

Another scholar accused the United States and other developed countries of circumventing the United Nations World Intellectual Property Organization (WIPO).⁷⁹ The complaint contends that the United States used the GATT as the enforcing agent on an agreement for international recognition of intellectual property rights to take advantage of the limited leverage developing countries have in the GATT.⁸⁰ This limited leverage allowed the United States and other developed countries to push the TRIPs Agreement through without considering the concerns of developing countries.⁸¹ Developing countries, as members of the GATT, were forced to comply with the TRIPs Agreement because all members of the GATT must

77. *Winning the War Against Bio-colonisation*, THE HINDU, May 17, 2000, available at 2000 WL 20488115.

78. Danielle Knight, *Environment: Global Pacts Favor Wealthy Nations*, New Book Says, INTER. PRESS SERV., Apr. 20, 2000, available at 2000 WL 4090857 (quoting Sharma in an article about Sharma's recent book, "Green Politics, Global Environmental Negotiations." The book outlines and critiques international environmental treaties, including the CBD).

79. See SUSAN K. SELL, POWER & IDEAS: NORTH-SOUTH POLITICS OF INTELLECTUAL PROPERTY & ANTITRUST 222 (1998). WIPO is a United Nations agency which aims to promote creative intellectual activity and facilitate the transfer of technology with regard to intellectual property in developing countries. See Convention Establishing the World Intellectual Property Organization, July 14, 1967, 828 U.N.T.S. 389. One of the reasons developed countries may want to circumvent the WIPO is the belief that "the WIPO is dominated by UN-style voting blocs" which are controlled by developing countries. See Alexander A. Caviedes, *International Copyright Law: Should the European Union Dictate its Development?*, 16 B.U. INT'L L. J. 165, 177 (1998). Developed countries criticize the WIPO for failing to provide effective enforcement procedures and for creating provisions which are too vague to provide for adequate intellectual property protection. See Hinks & Hobein, *supra* note 67, at 782. Since the passage of TRIPs in 1995, the WIPO has addressed issues not raised by TRIPs. These issues resulted in three additional treaties; the Draft Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works, the Draft Treaty for the Protection of the Rights of Performers and Producers of Phonograms, and the Draft Treaty on Intellectual Property in Respect of Databases. See Romano, *supra* note 12, at 555-56.

80. See Sell, *supra* note 79, at 222.

81. See *id.* (stating that the one concession granted to developing countries was giving them a longer period of time to implement TRIPs in their own countries).

comply with its agreements. Developing countries cannot afford to sacrifice GATT membership in protest of a specific treaty because they need to belong to the GATT to reap the benefits of treaties which favor their countries.⁸² India depends on the GATT for import and export benefits. This makes India an excellent example of a developing country circumvented by the passage of TRIPs through the WTO, then forced to enact TRIPs despite disagreeing with many of the TRIPs provisions from the beginning.⁸³

India's proposal specifically incorporates changes to parts of already existing articles in the TRIPs Agreement. The proposed changes alter Articles 22 and 23, which cover geographical indication protection, and Articles 27-34, which cover patent protection.⁸⁴ A few other provisions of the TRIPs Agreement also are relevant to India's proposal; these include Article 65, dealing with transitional arrangements for developing countries, and Articles 41-60, dealing with the mechanism for dispute resolution.

1. *Geographical Indication Protection*

Article 22 of TRIPs defines geographical indications as "indications which identify a good as 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."⁸⁵ Article 22 gives the state that is being petitioned the right to refuse the trademark registration if the goods indicated are not originally from the territory indicated and if the trademark would mislead consumers.⁸⁶ There is no provision requiring that a third party

82. See Sodipo, *supra* note 66, pt. 2, sec. 6.2, at 196-97.

83. See *supra* note 33 and accompanying text (referring specifically to India's need for the textile benefits GATT would bring to India). India's Commerce Minister commented on this situation, stating

[t]here is a proverb that just because the camel knelt down, it was loaded. The developing countries met with the same fate in the Uruguay Round because they knelt down. Thus, knowingly or unknowingly, the developing countries have made a major concession of vital nature, and the whole architecture of international trade has to be fundamentally recast by national governments.

Nanda, *supra* note 10.

84. See *supra* notes 44-48 and accompanying text (discussing India's proposal to harmonize TRIPs and the CBD).

85. TRIPs Agreement, *supra* note 6, at art. 22, para. 1.

86. *Id.* at art. 22, para. 3.

be given the right to prevent another country from recognizing a trademark using a geographical indication in the third party's country.⁸⁷ For example, India does not have the right to object to a trademark recognized by the United States, even if the product indicates that it is from India, unless the U.S. has created legislation allowing third parties to object.

Geographical indications for wines and spirits are treated differently. Under Article 22, general indications of geographical distinctions can be challenged by an outside country "if legislation so permits or at the request of an interested party,"⁸⁸ but under Article 23 for wines and spirits, "[e]ach member *shall* provide the legal means for interested parties to prevent use of a geographical indication identifying wines for wines not originating in the place indicated. . . ."⁸⁹ This provision applies even when the public is not being misled, there is no unfair competition, and the indication on the product is accompanied by words such as "kind," "style," and "imitation".⁹⁰ The right for third party complaints to be heard with regard to wines and spirits is mandatory under TRIPs. Article 23 further incorporates the same language used in Article 22, allowing countries to ask for refusal or invalidation "if a Member's domestic legislation so permits or at the request of an interested party."⁹¹

2. *Patent Protection*

Under Article 27, TRIPs provides broad protection for patents by obligating members to make patents available for both products and processes and to provide for patents in all fields of technology.⁹² TRIPs prohibits patent discrimination based on the place of the invention, field of technology, and whether the product is going to be produced domestically or imported from another country.⁹³ The purpose of Article 27 is to

87. See *id.* at art. 22 (indicating generally that no provision such as this exists).

88. *Id.*

89. *Id.* at art. 23, para. 1 (emphasis added).

90. Overview, *supra* note 59.

91. TRIPs Agreement, *supra* note 6, at art. 23, para. 2.

92. *Id.* at art. 27, para. 1. The words "inventive" and "capable of industrial application" are synonyms for the words 'non-obvious' and 'useful.' See Michael L. Doane, *TRIPs and International Intellectual Property Protection in An Age of Advancing Technology*, in INTERNATIONAL INTELLECTUAL PROPERTY LAW 275 (Anthony D'Amato & Estelle Long, eds. 1997).

93. Doane, *supra* note 92, at 275 (discussing the prohibitions on patent discrimination under TRIPs).

stop individual countries from excluding certain materials from patentability.⁹⁴ These materials include drugs and medicines, farm chemicals, and products to be produced out of the country.

There are a few exceptions in Article 27 that allow countries to deny patents.⁹⁵ Article 27(2) allows members to exclude inventions from patentability if avoiding commercial exploitation of the material is necessary for *ordre public* or morality.⁹⁶ Article 27(3)(a) allows members to exclude "diagnostic, therapeutic and surgical methods for the treatment of humans or animals,"⁹⁷ and 27(3)(b) provides for the exclusion of "plants and animals other than micro-organisms, and essential biological processes for the production of plants or animals other than non-biological and microbiological processes."⁹⁸ Despite the exception in 27(b)(3), members *must* provide for protection of plant varieties "either by patents or by an effective *sui generis* system or by any combination thereof."⁹⁹

Although these exceptions might seem to allow countries extensive leeway in refusing to grant patents, the exceptions are not as broad as they appear.¹⁰⁰ In the WTO, the "national treatment principle" forbids governments from treating foreign goods differently than domestic goods.¹⁰¹ This principle condemns the creation of additional requirements to protect domestic industries from foreign competition.¹⁰² So, when a country decides to regulate a certain area under TRIPs, the regulation cannot apply only to foreign imports, it has to be a genuine regulation that also applies to domestic production of

94. See *id.* (stating that "[t]his section represents a significant step towards establishing basic patent standards in international law").

95. TRIPs Article 27(3)(b) is currently under review, although there is disagreement about how much the review should encompass. Developed countries argue that review should only include the implementation methods, while others such as India, Egypt, and the African Group would like the review to include a possible revision of Article 27(3)(b) itself. See Nair, *supra* note 12, at *6.

96. TRIPs Agreement, *supra* note 6, at art. 27, para. 2.

97. *Id.* at art. 27, para. 3(a).

98. *Id.* at art. 27, para. 3(b).

99. *Id.*

100. Foster, *supra* note 15, at 290 (stating that even though the exception may appear broad on its face, it will not be useful for local copiers because of the requirements for the exception). But cf. Doane, *supra* note 92, at 275 (stating that the exceptions substantially limit protection for biotechnology).

101. Alan O. Sykes, *Regulatory Protectionism and the Law of International Trade*, 66 U. CHI. L. REV. 1, 16-17 (1999) (discussing the difference between regulatory protectionism and genuine regulation for a legitimate objective).

102. See *id.*

the same good.¹⁰³ Following this principle, the TRIPs Agreement contains an *ordre public* exception, which allows a country to deny a patent on the grounds of the public policy of that country.¹⁰⁴ However, the *ordre public* or morality exception can only be used if the marketing of the invention is outlawed or regulated evenly within the country's boundaries.¹⁰⁵ The medical methods exception aims to facilitate the dissemination of innovative medical treatment and cannot be used as a general term to refuse patents to pharmaceuticals.¹⁰⁶ The word "effective" is used as a limitation on the *sui generis* systems; countries cannot completely create their own systems without boundaries.¹⁰⁷

A further exception to unlimited patent rights is found in Articles 30 and 31 of TRIPs. Article 30 provides that "[m]embers may provide limited exceptions to exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties."¹⁰⁸ Article 31 provides for the compulsory licensing of patents,¹⁰⁹ circumscribed by a strict set of circumstances.¹¹⁰ Compulsory licensing may occur when consideration of the individual merits of the situation show that the license has been made on reasonable terms and conditions, the scope and duration of the license is limited, the license is non-exclusive and non-assignable, and it is authorized for primarily domestic market purposes.¹¹¹ The Article also provides for remuneration if a license is used improperly and for methods of judicial review.¹¹²

103. See *id.*

104. See Timothy G. Ackermann, *Dis'ordre'ly Loopholes: TRIPs Patent Protection, GATT and the ECJ*, 32 TEX. INT'L L.J. 489, 504 (1997).

105. See Foster, *supra* note 15, at 290 (explaining the reasons why TRIPs' patent exceptions are not as broad as they may appear).

106. *Id.*

107. *Id.* at 290-91.

108. TRIPs Agreement, *supra* note 6, at art. 30.

109. Compulsory licensing is defined as an "involuntary contract between a willing buyer and an unwilling seller imposed and enforced by the state." Gianna Julian-Arnold, *International Compulsory Licensing: The Rationales and the Reality*, 22 IDEA 349 (1993) (quoting P. Gorecki, *Regulating the Price of Prescription Drugs in Canada: Compulsory Licensing, Product Selection and Government Reimbursement Programmes* (Economic Council of Canada, 1981)).

110. TRIPs Agreement, *supra* note 6, at art. 31.

111. *Id.* at art. 31(a)-(f).

112. *Id.* at art. 31(g)-(l).

3. *Transitional Arrangements*

Although they are not included in India's proposal for harmonizing TRIPs and the CBD, the transitional arrangements for developing and least-developed countries deserve discussion. All countries had a one-year grace period after the enactment of TRIPs before they had to enforce the agreement within their country.¹¹³ Article 65 gives developing countries a five-year period of transition during which they do not have to enforce the laws of the TRIPs Agreement.¹¹⁴ But if the developing country previously excluded patent protection for a specific intellectual property right, that developing country is given a total of ten years to comply with TRIPs in that specific area.¹¹⁵ Article 66 gives least-developed countries a ten-year grace period for creating laws that will enforce adequately the TRIPs Agreement.¹¹⁶

4. *Dispute Resolution*

There is one last area of TRIPs that deserves discussion. The provision relating to dispute resolution is set forth in Article 41; this provision sets the TRIPs Agreement apart from all prior international intellectual property agreements. Paragraph 1 of the dispute resolution mechanism in the TRIPs Agreement provides:

[m]embers shall ensure that enforcement procedures as specified in this Part are available under their national law so as to permit effective action against any act of infringement of intellectual property rights covered by this Agreement, including expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements. These procedures shall be applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide for safeguards against their abuse.¹¹⁷

Further, paragraph 2 provides that the procedures for enforcement should be fair and equitable and not unduly complicated, costly, or time consuming.¹¹⁸ The inclusion of this mechanism allows countries to bring any dispute that arises

113. *Id.* at art. 65, para. 1.

114. *Id.* at art. 65, para. 2.

115. *See id.* at art. 65, para. 4.

116. *See id.* at art. 66, para. 1.

117. *Id.* at art. 41, para. 1.

118. *Id.* at art. 41, para. 2.

under the treaty before a dispute resolution body.¹¹⁹ No intellectual property agreement prior to TRIPs had such a mechanism. Because the agreement is under the GATT, there are also adequate measures to ensure enforcement of the decisions made by the dispute resolution body.

B. PROTECTION UNDER THE CONVENTION ON BIOLOGICAL DIVERSITY

The CBD was a product of the United Nations Conference on Environment and Development in Rio De Janeiro (the "Earth Summit") in June of 1992,¹²⁰ and became effective on December 29, 1993.¹²¹ There are 175 parties to the Convention, including all major countries except the United States.¹²²

The Preamble lays out the three broad objectives of the CBD: (1) conservation of biological diversity; (2) sustainable use of biological diversity; and (3) fair and equitable sharing of benefits arising out of the utilization of genetic resources.¹²³ Article 3 gives states "the sovereign right to exploit their own resources pursuant to their own environmental policies."¹²⁴ Biological resources are defined to include "genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity."¹²⁵

Like the TRIPs Agreement, the CBD addresses the issue of transferring biotechnology between states. Unlike TRIPs, which obligates countries to give adequate, minimum protection to intellectual property rights, the CBD obligates countries to conserve, sustainably use, and guarantee access to genetic resources in return for the fair and equitable sharing of benefits from the utilization of the genetic resources.¹²⁶ Although these

119. See generally *id.* at pt. 3, arts. 41-60 (discussing the general provisions of the dispute resolution mechanism).

120. See CBD, *supra* note 52.

121. See *id.*

122. Craig L. Carr & Gary L. Scott, *Multilateral Treaties and the Environment: A Case Study in the Formation of Customary International Law*, 27 DENV. J. INT'L L. & POL'Y 313, 324 (1999). The U.S. signed the treaty in 1993 but had not ratified the treaty as of 1999. See President's Message to Congress Transmitting the Convention on Biological Diversity, 29 WEEKLY COMP. PRES. DOC. 2411 (Nov. 19, 1993).

123. See CBD, *supra* note 52, at pmb1.

124. *Id.* at art. 3.

125. *Id.* at art. 2.

126. McManis, *supra* note 24, at 260 (discussing the major provisions of the CBD).

aims are quite different from TRIPs, they are not diametrically opposed to TRIPs. Without reconciliation, they can produce quite different results - one allowing a country to protect itself against bio-piracy of foreign states and one forcing a state to recognize intellectual property rights which may not be beneficial to the preservation of the biodiversity in that state.

1. *Article 15 - Access to Genetic Resources*

Article 15 of the CBD provides for access to genetic resources.¹²⁷ Paragraph 1 recognizes the state's sovereign rights over its resources and the state's ability to regulate its resources through national legislation.¹²⁸ Paragraph 2 acknowledges that although states have sovereign rights, the states should work toward the facilitation of access to genetic resources and not to create restrictions that run counter to the objectives of the CBD.¹²⁹ In facilitating access, the state is not simply giving a benefit. Rather, the access to and the sharing of benefits from genetic resources "shall be on mutually agreed terms" between the state and the party desiring access to the genetic material.¹³⁰

2. *Article 16 - Transfer of Technology*

Article 16 addresses the access to and transfer of technology.¹³¹ Paragraph 1 specifically recognizes "that technology includes biotechnology."¹³² Paragraph 1 further states that members are to "facilitate access for and transfer to... technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment."¹³³ Paragraph 2 specifies the terms of the access and transfer. The terms shall be facilitated on "fair and most favourable terms, including [] concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism."¹³⁴ Paragraph 2

127. CBD, *supra* note 52, at art. 15.

128. *Id.* at art. 15, para. 1.

129. *See id.* at art. 15, para. 2.

130. *Id.* at art. 15, paras. 4 & 7.

131. *Id.* at art. 16.

132. *Id.* at art. 16, para. 1.

133. *Id.*

134. *Id.* at art. 16, para. 2. The financial mechanism is established in Articles 20

further recognizes that when the technology is subject to patents or other intellectual property rights, the access and transfer to the technology must be consistent with the protection of intellectual property rights.¹³⁵

Paragraph 3 requires each contracting party to "take legislative, administrative or policy measures...with the aim that the Contracting Parties, in particular those that are developing countries, which provide genetic resources are provided access to and transfer of technology which makes use of those resources."¹³⁶ Paragraph 3 also provides that the access and transfer must be on mutually agreed terms and be in accordance with international law and paragraph 4 and 5 of the Article.¹³⁷

Paragraph 4 aims at the contracting party's national legal obligations with respect to the regulation of the private sector:

Each Contracting Party 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 referred to in paragraph 1 above for the benefit of both governmental institutions and the private sectors of developing countries.¹³⁸

Private parties who are not directly addressed through the Convention are indirectly reached through each contracting party.

Paragraph 5 is a statement of cooperation, recognizing that other intellectual property rights have an effect on the implementation of the CBD, but requiring all contracting parties to work to implement the Convention and create laws which do not run counter to the Convention's objectives.¹³⁹ The contracting parties adopted Paragraph 5 as a compromise between the view that intellectual property rights are essential for technology transfer and the opposing view that intellectual property rights can be ignored.¹⁴⁰ Because the dispute was not resolved, the parties drafted this compromise paragraph, which neither strengthened nor weakened intellectual property

and 21 of the CBD.

135. *Id.* at art. 16, para. 2.

136. *Id.* at art. 16, para. 3.

137. *Id.* at art. 16, para. 3.

138. *Id.* at art. 16, para. 4.

139. *Id.* at art. 16, para. 5.

140. McManis, *supra* note 24, at 264 (citing Michael Gollin, *The Convention on Biological Diversity and Intellectual Property Rights* in BIODIVERSITY PROSPECTING: USING GENETIC RESOURCES FOR SUSTAINABLE DEVELOPMENT 289, 295 (1993)).

rights.¹⁴¹ The parties left the dispute for resolution by the Uruguay Round of GATT negotiations.¹⁴²

The CBD's protection of the transfer of technology for the use of biological sources from a country is important to protect developed countries from intellectual property exploitation. According to President Ali Hassan Mulinyi of Tanzania:

[m]ost of us in developing countries find it difficult to accept the notion that biodiversity should flow freely to industrial countries while the flow of biological products from industrial countries it patented, were expensive and considered private property at the firms that produce them. This asymmetry reflects the inequality of opportunity and is unjust.¹⁴³

Article 16's transfer of technology agreement creates a positive commitment by developed countries to "provide and/or facilitate" the transfers of technologies.¹⁴⁴ These transfer of technology agreements have grown out of the idea that developed countries have a moral duty to assist developing countries in an attempt to bridge the economic development gap.¹⁴⁵ Transferring technologies to developing countries on concessional and preferential terms is one way to attempt to bridge the gap.¹⁴⁶

III. EXAMINING INDIA'S PROPOSAL

India's proposal for harmonizing TRIPs and the CBD contains positive and necessary suggestions, but some of its suggestions are ineffective for helping India and other developing countries reach a more equitable system of intellectual property protection. For purposes of discussion, India's proposal has been broken down into three main categories: transfer agreements; changes to the application

141. See *id.*

142. See *id.*

143. Quoted in Craig D. Jacoby & Charles Weiss, *Recognizing Property Rights in Traditional Biocultural Contribution*, 16 STAN ENVTL. L. J. 74, 89 (1997) (citing *Report of the United Nations Conference on Env't and Dev.*, at 36, UN. DOC. A/CONF. 151/26/Rev.1 (1993)).

144. CBD, *supra* note 52, at sec. 16, para. 1; see also Gaetan Verhoosel, *Beyond the Unsustainable Rhetoric of Sustainable Development: Transferring Environmentally Sound Technologies*, 11 GEO. INT'L ENVTL. L. REV. 49, 49 (1998) (stating that the relevant clauses of the CBD create a commitment to transfer technology).

145. Verhoosel, *supra* note 144, at 50 (discussing the ideological debate behind transfer of technology agreements).

146. See *id.*

process; and geographical indications.

A. TRANSFER AGREEMENTS

India's proposal includes transfer agreements in two different areas: one for the use of biological resources¹⁴⁷ and another for environmentally sound technology.¹⁴⁸ Currently TRIPs does not include specific provisions providing for transfer agreements of biological resources or environmentally sound technology. Instead of providing specifically for transfer agreements, it could be argued that TRIPs provides for the transfer of necessary knowledge and resources through its compulsory license provision¹⁴⁹ and the exceptions listed under Article 27(3).¹⁵⁰ Compulsory licensing and Article 27(3) do give states some ability to limit the exclusive patent rights of the right holder, but for a compulsory license all of the specific provisions stated in Article 31 must be met.¹⁵¹ One of these conditions is obtaining authorization from the right holder under "reasonable commercial terms and conditions."¹⁵² It is only when "such efforts have not been successful within a reasonable period of time" that a state may use the patent without permission from the right holder.¹⁵³ But even without permission, the right holder "shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization."¹⁵⁴ Furthermore, both the compulsory license provision and Article 27(3) only allow a country to refuse to recognize and enforce a patent within its borders. Neither provision in TRIPs creates an

147. See *supra* note 44 and accompanying text (discussing India's proposal requiring transfer of information for the use of biological resources).

148. See *supra* note 48 and accompanying text (discussing India's proposal requiring transfer of environmentally sound technology).

149. See TRIPs Agreement, *supra* note 6, at art. 31.

150. See *supra* notes 97-99 and accompanying text (listing the exceptions under Article 27(3)).

151. See *supra* notes 108-112 and accompanying text (discussing the requirements for compulsory licensing under Article 31 of TRIPs).

152. TRIPs specifically states, "such use may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time." TRIPs Agreement, *supra* note 6, at art. 31(b).

153. *Id.* The requirement of waiting for a reasonable time may also be waived "in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use." *Id.*

154. *Id.* at art. 31(h).

affirmative obligation on the part of developed countries to ensure developing countries have access to necessary biological resources and environmentally sound technologies.

The CBD, on the other hand, provides for transfer agreements of biological resources and environmentally sound technology.¹⁵⁵ Transfer agreements and compulsory licensing are similar in that both create a situation where the rights of a potential or actual patentor are suspended to allow general use of the material. But transfer agreements go beyond compulsory licensing and the enforcement of involuntary contracts by providing that developed countries should have an affirmative obligation to transfer technology and biological resources that will aid developing countries in their own development.¹⁵⁶ Article 15 of the CBD states, "[e]ach Contracting Party shall endeavour to create conditions to *facilitate access* to genetic resources."¹⁵⁷ and "with the *aim of sharing* in a *fair and equitable* way the results of the research and development."¹⁵⁸ Article 16 of the CBD states,

[a]ccess to and transfer of technology shall be provided and/or *facilitated* under fair and most favourable terms, including on *concessional and preferential terms* where mutually agreed. . . . In the case of technology subject to intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights.¹⁵⁹

155. See *supra* notes 127-38 and accompanying text. At Article 15(7), the CBD states,

[e]ach contracting party shall take legislative, administrative, or policy measures, as appropriate. . . . with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms.

CBD, *supra* note 52, at art. 16.

Article 16(2) states, "[a]ccess to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed." CBD, *supra* note 52, at art. 16.

156. See Verhoosel, *supra* note 144, at 49 (stating with regard to transfer of environmentally sound technology, "[t]hese clauses, generally, provide for some sort of commitment on the part of the developed contracting parties to promote, facilitate or finance the transfer of environmentally sound technology to their developing counterparts").

157. CBD, *supra* note 52, at art. 15(2) (emphasis added).

158. *Id.* at art. 15(7) (emphasis added).

159. *Id.* at art. 16(2) (emphasis added).

Another failure of the compulsory licensing agreement provision in TRIPs is that the compulsory license provision does not specifically provide for the circumstances in which transfer of technology is appropriate. Although TRIPs provides that compulsory licensing would be appropriate in circumstances of extreme emergency or for non-public use,¹⁶⁰ the term "extreme emergency" is vague, and could be interpreted to exclude the right to grant a compulsory license for environmentally sound technology. The CBD provides the necessary specificity by including language providing for the transfer of biological resources and environmentally sound technology in Articles 15 & 16.

Specifically providing for the transfer of environmentally sound technology is a good idea because it highlights the importance of providing environmentally sound technology to everyone. Requiring its transfer recognizes that some resources are so crucial for the general good that we should make these resources available to all who need them, regardless of who can pay. For example, it is now fairly well established that damage to the environment anywhere in the world eventually hurts everyone. A more specific example is the resulting economic losses from deforestation. Deforestation results in decreasing the number of discoverable genetic varieties and endangers the preservation of unique ecosystems.¹⁶¹ It is estimated that only one percent of tropical forest species have been surveyed for potential beneficial uses.¹⁶² The vast majority of tropical forests are located in developing countries, and in an attempt to provide for these countries' growing populations and to pay back their foreign debts, developing countries are clearing away the forests for timber and other capital gain ventures.¹⁶³

In the words of one scholar regarding environmental concerns, "the industrialized world realized that they had messed up the house and that they could not clean it up by simply keeping their own bedroom tidy."¹⁶⁴ Therefore, making an exception for the transfer of environmentally sound technology and making it available to all that need it at costs they can afford benefits everyone. The initial profit for inventing these technologies may not exist to the same extent, but the

160. See TRIPs Agreement, *supra* note 6, at art. 31(b).

161. See Bosselman, *supra* note 49, at 113.

162. See *id.*

163. See *id.*

164. Verhoosel, *supra* note 144, at 53.

overall benefit of protecting the natural environment should outweigh the temporary loss of profit. As the example of the deforestation of tropical forests demonstrates, the dangers of irreplaceable, permanent loss due to environmental damage may be so detrimental that any short run gain is outweighed by long term harm.

It may be argued that the partial removal of environmentally sound technology from market forces will reduce incentives to create environmentally sound technology.¹⁶⁵ But developed and developing countries can still create other incentives to promote the creation of environmentally sound technologies.¹⁶⁶ Further, if India's proposal for harmonizing TRIPs and the CBD is written only to require "fair and most favorable" terms to states that are obligated to adopt the technologies by international law, these terms do not require a gift. Terminology such as "fair and most favorable" gives countries sovereignty to bargain over the conditions of transferring technology in or out of a country. There is still a trade for the technology, which may not be equal to "reasonable commercial terms," but is still giving one party remuneration for the development of the technology, and allowing the other side use of the technology if the technology's use is prescribed by law.

There are problems with India's proposals for transferring technologies. The first involves defining the legal obligations under the current language of the CBD.¹⁶⁷ For example, the CBD requires members to "provide and/or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of

165. See *id.* at 67.

[I]t is no longer seriously questioned that the enhanced protection of these IPRs [intellectual property rights] in developing countries is an important tool to increase the influx of new technologies and that the option of granting compulsory licenses to EST [environmentally sound technologies] is outright simplistic and counterproductive. Any solution for enhanced EST transfer will, therefore, have to be consistent with the protection of IPRs.

Id.

166. See Sykes, *supra* note 101, at 6 (arguing that while environmental regulations disguised as regulatory protectionism are not permissible under the treaty created the WTO, regulations which are "nondiscriminatory and necessary to the attainment of legitimate, nonprotectionist regulatory objectives will not be prohibited in politically savvy trade agreements").

167. See Verhoosel, *supra* note 144, at 62-63 (arguing that a legal obligation is difficult to implement when it is unclear exactly what and how much has to be transferred).

biological diversity. . .”¹⁶⁸ The issue here is defining exactly what “facilitation” requires.¹⁶⁹ The language is ambiguous as to whether “facilitation” means enforcing transfer agreements or just encouraging them to occur. Any language incorporating or allowing transfer agreements should be clear as to what type of action countries are required to take with regard to transfer agreements. If an obligation to create transfer agreements exists, the obligation should be clearly stated in the text. Also, some argue it would be impossible to enforce a uniform definition of what it means to “transfer” technology to each country.¹⁷⁰ The argument would then turn to defining transfer in a functional manner rather than a formal manner.¹⁷¹ A transfer of technology agreement substantively should be the same —meaning that the country receiving the technology gains an understanding of how and why the technology works.¹⁷² Therefore, the manner in which the transfer of technology occurs may be different depending on the country’s ability to handle the information. The key would be that the substantive foundation, i.e. understanding and ability to use the technology, would be the same, although the form of the transfer may look different in each country.¹⁷³

B. THE APPLICATION PROCESS

In addition to transfer agreements, India proposes that patent applications include a statement as to the biological source of the material and the country of its origin, and that the application should be open to public scrutiny before approval.¹⁷⁴ Essentially these two requirements accomplish the same objective, they require notice to be given to people who may have some reason to object to the granting of the intellectual property right. The suggestion of opening up the application to public scrutiny, while it may have helped prevent an incident like the neem tree, would not benefit developing or developed

168. CBD, *supra* note 52, at art. 16, para. 1.

169. See Verhoosel, *supra* note 144, at 58-59 (discussing the importance of defining the word ‘facilitating’ so as to determine the scope of the obligation).

170. See *id.* at 61.

171. See *id.* at 64 (quoting David M. Haug, *The International Transfer of Technology: Lessons that East Europe can Learn from the Failed Third World Experience*, 5 HARV. J.L. & TECH. 209, 211 (1992)).

172. See *id.*

173. See *id.*

174. See *supra* note 46 and accompanying text.

countries. One of the main problems for developing countries in patent recognition cases is that developing countries do not have the internal bureaucracies and staff necessary to support the patent application process.¹⁷⁵ Opening up the patent process to public scrutiny would only be another step for a patentor to go through in the patent process, and would just be another step the patenting country must facilitate. It also could lead to industrial sabotage or the needless use of trade secrets in place of patent protection. If protection of indigenous cultures is the purpose of this portion of India's proposal, creating greater barriers which depend on the vigilance of people that may or may not have access to the necessary information, may not be the best way to accomplish this goal.

A better way to address the problem of exploiting indigenous cultures and traditional knowledge is through the dispute resolution system built in as a part of the TRIPs Agreement.¹⁷⁶ The dispute resolution mechanism would allow complaints such as the neem tree to be heard and resolved by the country granting the patent.¹⁷⁷ Because a dispute mechanism is already built into the TRIPs Agreement, it should not be necessary to add extra dispute avoiding mechanisms which possibly could slow down the patent granting system and make the administration even more difficult for the already overburdened patent administration of developing countries.

C. GEOGRAPHICAL DISTINCTIONS

India's proposal to include more foods and products under the geographical indication requirement may have prevented the neem tree incident, but the provision of including more foods and products under the geographical distinction provision may not be practical. One of the difficulties in extending the coverage of geographical indication requirements lies in knowing where to draw the line between a product deserving strong geographical indication protection and products which do not require as much protection. Article 22 does provide geographical distinction protections for all products, but Article 23 provides a

175. See Sherwood, *supra* note 1, at 478-82 (discussing patent examination application procedures and how they can be improved); see also Narsalay, *supra* note 44, at *4 (suggesting that the Indian legislature should "demand the creation of a team that could provide technical and financial assistance to set up patent offices" in order to aid India's compliance with TRIPs).

176. See TRIPs Agreement, *supra* note 6, at art. 64.

177. See *id.* at art. 41, paras. 1 & 2.

greater amount of protection for wines and spirits.¹⁷⁸ Article 23 requires countries to provide mechanisms for other countries and individuals to object to the product receiving a wine or spirit geographical indication, whereas Article 22 only allows it.¹⁷⁹ Further, Article 23 sets up a multilateral system of notification and registration which does not occur under the more general protection of Article 22.¹⁸⁰

The issue is whether Article 22 provides an adequate amount of protection for general geographical indications and if greater geographical protection will really help developing countries compete with developed countries in patented areas. Developing countries could argue that mandatory protection limited to wines and spirits is a way for developed countries to continue to protect their products while not granting similar protection to products of developing countries. Developing countries could further argue that there is nothing more unique about the location of a wine or spirit than the location of a tea or herb. But even if there are inconsistencies in the amount of protection given to similar, or indistinguishable, products, it does not necessarily mean the best way to fix the inconsistencies is to grant protection for all products. The burdens on the patent system should be weighed with the benefits of increased protection. If it is agreed that the inconsistencies in Articles 22 and 23 must be resolved, even though geographical indication is already a part of the intellectual property application, then making another geographical indication hoop for inventors to jump through might unduly burden the system, slow down the process, and hamper its effectiveness.

IV. EXAMINING TRIPS IN LIGHT OF INDIA'S PROPOSAL

Although developing countries may feel that developed countries have coerced them into recognizing intellectual property rights which unfairly benefit the developed countries,¹⁸¹ in the long run greater intellectual property

178. See *supra* notes 85-91 and accompanying text (discussing the provisions of TRIPs Articles 22 & 23).

179. See TRIPs Agreement, *supra* note 6, at art. 23, para. 1; see also *supra* notes 88-91 and accompanying text.

180. See *id.* at art. 23, para. 4 & art. 24.

181. See *supra* notes 79-83 and accompanying text (discussing developed countries use of GATT to enact an intellectual property agreement even though such an agreement could have been created through the United Nations' WIPO in which developing countries have a greater voice).

protection will better protect all parties.¹⁸² Patent protection can be used by developing countries to build their own industries upon the production of patented materials and can be further used to protect their biological resources from foreign exploitation.¹⁸³

Even though greater patent protection *can* protect everyone more effectively, not all patent protection plans will. Just as an effectively implemented plan can lead to intellectual property rights being beneficial to all countries, an intellectual property rights plan which is not effectively implemented can lead to the continued economic domination of developed countries over developing countries.¹⁸⁴ A plan that provides greater patent protection and benefits for all must be implemented properly to ensure equal protection.¹⁸⁵ A plan which ensures equal protection means creating a patent protection system which recognizes that some countries are more adept at creating patentable rights and that there are certain areas independent states should be allowed to maintain control over without having to worry about foreign penetration. It also means developing a plan that weighs and examines the enforcement and administrative burdens in the accomplishment of its goal.

TRIPS is one method of creating, implementing, and

182. See McCabe, *supra* note 11, at 47 (citing Robert M. Sherwood, *The TRIPS Agreement: Implications for Developing Countries*, 37 IDEA 491, 492-93 (1997) for the proposition that developed countries believe greater intellectual property protection stimulates economic growth and enhances social welfare, and that developing countries have agreed intellectual property protection is not limited to benefiting developed countries).

A consensus is developing among scientists, world bodies, anthropologists, and conservationists, that the best way for developing countries to capture the benefits of biodiversity is through a system of intellectual property, environmental and contractual protection designed to harmonize the goals of development and conservation by building an international framework for sustainable biodiversity prospecting.

McManis, *supra* note 24, at 270

183. See *supra* note 12. Mexico and Malaysia are examples of countries that have instituted an intellectual property protection system and prospered economically from its implementation. The implementation of the intellectual property protection systems in these countries demonstrated to the rest of the world that these countries could create a stable and predictable intellectual property environment and thereby Mexico and Malaysia attracted more foreign investment capital. See Caviedes, *supra* note 79, at 189.

184. See *supra* notes 8-11 and accompanying text.

185. See Reichman, *supra* note 7, at 273 (arguing that if appropriate strategies are adopted, "any competitive efforts that yield a foothold in the world market, and any effective transfer of technology achieved in the process, should yield greater potential returns than at present").

enforcing greater patent protection. The CBD is another plan, but with several different provisions and a different system for implementation and enforcement. A third plan is India's suggestion for the harmonization of the CBD and TRIPs. TRIPs, even with its positive aspects, still lacks adequate mechanisms to equalize the protection given to developed and developing countries.

A. POSITIVE ASPECTS OF TRIPs

TRIPs gives all countries, industries, and individual inventors, regardless of their level of development, a guaranteed minimum amount of protection for their products and inventions.¹⁸⁶ Once a product is registered, all GATT members must give it protection.¹⁸⁷ Prior to TRIPs, many countries only had limited or non-existent laws to protect intellectual property rights, and a single country's laws were not necessarily honored in another country.¹⁸⁸ For example, India did not grant any patents for pharmaceutical products prior to TRIPs, and Brazil would not grant any patents for pharmaceutical products or processes.¹⁸⁹ A further illustration is the Berne Convention under which inventors were given a one-year grace period with which to register patents in other member countries after the patent had been recognized by one member country. The patent, even if lawfully recognized in one country, was not recognized in another country unless the patent was applied for with that country within a one-year period.¹⁹⁰ But now under TRIPs, members of indigenous cultures or allies of the groups can patent a product of the groups' traditional knowledge in their own country and TRIPs would then protect that product from being taken by another country. A patent such as this could avoid the result as seen in India's neem tree incident. By patenting traditional knowledge, TRIPs gives nations the ability to protect the traditional and communal knowledge of their people and offer them greater protection so that national resources will not be drained from one country by another

186. See *supra* note 62 and accompanying text (quoting the minimal standards agreement language of TRIPs).

187. See *id.* (quoting the language which makes TRIPs apply to all GATT members).

188. See *supra* notes 67-68 and accompanying text (discussing the Berne and Paris Conventions).

189. See Zhou, *supra* note 75, at 414.

190. See Berne Convention, *supra* note 68.

country.¹⁹¹

TRIPs also addresses some of the differences between developing and developed countries by giving developing countries a longer period to enact adequate patent protection as defined by TRIPs.¹⁹² Further, TRIPs gives individual countries control over material that it views as necessary for the *ordre public* or morality and it allows exceptions for diagnostic, therapeutic, and surgical methods, and for plants, animals, and biological processes.¹⁹³ These exceptions are important and should not be seen as weakening TRIPs.¹⁹⁴ TRIPs still gives pharmaceutical and chemical industries the right to patent, while at the same time acknowledging certain products that individual countries should be able to regulate.¹⁹⁵ Without these exceptions, TRIPs could be seen as a way to keep products that are imperative for the general welfare away from those who are unable to pay for them. This could be seen as just another way of keeping the underclass down permanently.¹⁹⁶ While the TRIPs Agreement makes an exception for certain products, it does not allow countries to exploit these exceptions. The *ordre public* and morality exception can only be used if marketing of the product is not allowed in the country at all.¹⁹⁷ It does not allow a country to refuse to acknowledge a patent because there is a local business whose existence depends on the pirating of products that are not patentable in the country.¹⁹⁸

Article 27 of the TRIPs Agreement allows a country to deny intellectual property protection in a few, narrowly defined areas, and in other situations create a unique system in their country for regulating the patentability of certain products.¹⁹⁹ It does not take away the rights of a country to regulate a certain product;

191. See Marden, *supra* note 14, at 286-90 (discussing the need to protect traditional and communal knowledge in a way which does not keep traditional cultures subordinated).

192. See *supra* notes 113-16 and accompanying text (quoting the language of TRIPs which provides for transitional periods).

193. See *supra* notes 96-99 and accompanying text (quoting the language of the TRIPs exceptions).

194. See *supra* notes 100-07 and accompanying text (discussing the possible and real effects of the exceptions).

195. See Doane, *supra* note 92, at 275.

196. See *supra* notes 10-11 and accompanying text (referring to Shiva's argument that developed countries create laws such as TRIPs which drain resources from developing countries).

197. See *supra* note 96 and accompanying text (discussing the *ordre public* exception to TRIPs).

198. See *id.*

199. See *supra* notes 100-07 (discussing the limitations of the TRIPs exceptions).

it just recognizes the unique need of certain countries to regulate in a manner most beneficial to their country. This narrow exception does not open up the gates for a country to deny patent recognition for purely economic protectionist reasons. For certain diagnostic, therapeutic, and surgical processes, this may mean no patents are provided at all. These exceptions could be seen as areas that are so imperative to developing countries that developed countries have an obligation to help countries obtain these technologies.²⁰⁰ Finally, the dispute resolution mechanism and the fact that TRIPs is promulgated through GATT gives TRIPs teeth to enforce compliance with its measures.

B. SHORTCOMINGS OF TRIPs

The only groups that are *certain* to benefit from greater intellectual property protection are countries that already are developed and have adequate systems for developing and protecting patentable material.²⁰¹ These detriments of TRIPs to the developing countries should not be ignored just because everyone *could* benefit in the long run.²⁰² The current inequalities need to be addressed; otherwise they could distort the protection that could help everyone in the long run.²⁰³ Two

200. See Verhoosel, *supra* note 144 and accompanying text (discussing the positive commitment of developed countries to transfer technologies to developing countries).

201. See *id.* (noting that strong intellectual property laws benefit those countries which have long-term development strategies to promote sustained technological innovation and effectively transfer research from universities and laboratories to industries); see also Reichman, *supra* note 7, at 272 (recognizing that there is a "delicate balance between the interests of states at different stages of development, and the absorption of intellectual property will have to accommodate these norms and that balance").

202. The United Nations has not ignored the detrimental effects of TRIPs to developing countries. In August of 2000, the Sub-Commission on the Promotion and Protection of Human Rights passed a resolution leading to the indictment of the WTO for its failure to respect international human rights in the creation of TRIPs. See Kanth, *supra* note 2. The Sub-Commission resolution found that "[t]he implementation of the Trips agreement of the WTO did not adequately reflect the fundamental nature and indivisibility of all human rights." *Id.* "Trips compromises the access of poor countries and communities to needed pharmaceuticals," said Miloon Kothari of Habitat International Coalition of India and one of the sponsors of the resolution. *Id.*; see also Shiva, *supra* note 53, at 56 (stating that any instrument addressing issues of trade liberalization and globalization must explicitly include provisions for strong protection of development and environmental issues of third world countries in order to protect third world countries).

203. See *supra* notes 10-11 and accompanying text (referring to Shiva's argument that developed countries create laws which drain resources from

inequalities in the TRIPs Agreement as it stands are the failure to include any type of transfer agreements and the failure to address granting patents to a group of people, such as an indigenous community.

1. *Protection of Indigenous Knowledge*

Intellectual property protection could be used by an indigenous community to patent or copyright a product which is unique to its culture, but currently, TRIPs does not recognize the right of community ownership to an intellectual property right. Although India's proposal does not directly suggest granting intellectual property rights to indigenous communities, this has been a debated issue.²⁰⁴

In general, intellectual property only recognizes the ability of individual people or individual corporations to create a product which warrants a patent.²⁰⁵ The idea that a group of people can take knowledge which evolved in that group over a period of time and has been managed collectively simply is not covered under intellectual property rights.²⁰⁶ Therefore under TRIPs, a patent would not be available to an entire 'community.'²⁰⁷ Further, the requirement of an "inventive step" under TRIPs would more than likely exclude patent protection for any well-known folk remedies or common knowledge of indigenous cultures.²⁰⁸

The idea of making patents available to indigenous communities to patent items they view as "traditional knowledge" raises several issues. One issue is whether it is realistic to expect an indigenous community or member to seek out a patent on something it views as traditional knowledge. This requires the indigenous community to have a certain familiarity with a state's intellectual property recognition

developing countries and thereby keep developing countries as an underclass).

204. See Coombe, *supra* note 13, at 77-89.

205. See Tejera, *supra* note 49, at 974 n.60 (quoting that "(a) patent gives an inventor the right to exclude others from making, using or selling his or her patented invention." Robert Patrick Merges, PATENT LAW AND POLICY, 35 (Michie 2d ed. 1997)). Although there are many restrictions, co-ownership is allowed in certain situations. See *id.* at 1228.

206. See Coombe, *supra* note 13, at 87; see also Sarma, *supra* note 56, at 117 (stating that "[d]eveloped countries have a eurocentric, individualistic understanding of property that 'ignores the collective labor of generations'") (citations omitted).

207. See Tejera, *supra* note 49, at 974.

208. See Long, *supra* note 12, at 277.

procedure and to have an awareness of a piece of traditional knowledge that could or should be patented.

Another issue is whether it is desirable to have traditional knowledge patented at all. "Perhaps the most prevalent and insidious form of appropriation of indigenous knowledge and resources has been the construction of conceptual and legal categories of valuable knowledge and resources that systematically exclude the knowledge and resources of local communities, farmers, and indigenous people."²⁰⁹ Some argue that patenting of indigenous knowledge could lead to the extinction of such knowledge.²¹⁰ The view is that intellectual property rights stifle creativity by limiting the ability to explore and create, and further by stopping the free exchange of knowledge in between groups.²¹¹ Some scholars warn that the extension of intellectual property rights to indigenous cultures threatens fundamental human rights which are basic to a democratic society by restricting the freedom of speech, the freedom to share information, and the freedom to access vital public domain.²¹² The restriction of knowledge in this form could, instead of protecting that knowledge, in fact restrict knowledge and stop it from growing and developing in the future.²¹³

Any intellectual property agreement which attempts to include recognition of indigenous community rights needs to be drafted carefully because indigenous groups are subject to exploitation by both foreign states and the state in which they

209. Sarma, *supra* note 56, at 115-6 (quoting Naomi Roht-Arriaza, *Of Seeds and Shamans*, 17 MICH J. INT'L L. 919, 929 (1996)).

210. *See id.* at 112 (stating, "[i]ronically, unless land is conserved, not only will indigenous groups suffer, but so will transnational corporations and lesser developed countries because they will not be able to exploit indigenous knowledge, since the knowledge would ultimately become extinct").

211. *See id.* at 108-09.

212. *See* Coombe, *supra* note 13, at 78.

213. *See* Nabhan, *supra* note 4, at 192. The problem arises because

[e]nhancements [that] have occurred largely as a result of cooperative exchanges and the elaboration of plant-specific information over generations. While cases of forced or clandestine transfer of plant germplasm. . . have been widely reported, it is less remembered that tribes such as the Havasupai and Hopi regularly and freely exchanged seeds when one or more of their communities had their fields devastated by floods. To intervene today to protect a 'snapshot' of existing knowledge and evolving seed heritages as one tribe's cultural legacy alone belies this incremental and serendipitous evolutionary process.

Id.

are located.²¹⁴ The desire of the developing countries to profit from intellectual property rights and gain similar economic status to developed countries by patenting indigenous knowledge may lead to the state exploiting its own indigenous community.²¹⁵ Developing countries benefit from indigenous knowledge because it can be an inexpensive source of new ideas and products.²¹⁶ Because both foreign and domestic states can benefit from indigenous knowledge, it also follows that both have an interest in preserving indigenous knowledge.²¹⁷

Allowing communities to own intellectual property rights could reduce the need for making the application process more burdensome. Instead of just having the right to object to a patent, and thereby making the application process more burdensome, a community could own the right itself. If the community owned the patent, there would no need for an extended objection process because the community could protect itself by patenting the knowledge or product.

Certain provisions of the CBD more adequately address this issue. In particular, Article 8 provides for the preservation of biological resources and indigenous knowledge and practices.²¹⁸ Although India's proposal did not contain recommendations on this matter, incorporating language such as this may more effectively prevent some of the problems India was trying to avoid. Particularly, the requirement of opening up patent applications to the public may be more detrimental than beneficial,²¹⁹ but adding a provision such as Article 8 of the CBD to TRIPs would allow a community to protect its cultural

214. See *supra* notes 56-58 and accompanying text.

215. See *id.*

216. See *supra* note 77 and accompanying text (discussing how transnational corporations benefit from indigenous knowledge).

217. See Sarma, *supra* note 56, at 112.

218. See CBD, *supra* note 52, at art. 8. The exact language reads,

[e]ach Contracting Party shall, as far as possible and as appropriate. . . (j) Subject to its national legislation, 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 promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.

Id.

219. See *supra* notes 174-78 and accompanying text (discussing the possibility of opening up the patent application to public scrutiny).

knowledge before it is patented by an outsider, not by objecting to the outsider's patent, but by protecting the product with a patent of its own.

2. *Transfer Agreements*

One of the biggest areas of inequality is the failure of TRIPs to include any transfer agreements on biological resources or environmentally sound technology. These agreements are essential to the continued dissemination of knowledge necessary for development and to the fair treatment of biological resources from one country to the next. The compulsory license provision in TRIPs, while it allows for the suspension of patent rights, is not explicit enough concerning the appropriate and desirable area to use compulsory licenses. Further, compulsory licenses do not create an affirmative obligation to transfer knowledge that is desirable for developing countries to have in their own development process.²²⁰ The transfer agreements in the CBD provide the specificity and affirmative obligation that TRIPs is lacking in these areas. Since developed countries were able to develop without the restrictions international patent rights create, developing countries should not be denied the same opportunity.²²¹ India's proposal and the CBD provide good starting points for consideration of this type of amendment, but both should be improved upon before either is added to TRIPs.

220. See *supra* notes 149-60 and accompanying text (comparing the compulsory license provision of TRIPs to the transfer agreement provisions of the CBD).

221. See generally Brenner-Beck, *supra* note 9 (enumerating the threshold that a country must obtain before it can effectively benefit from strong intellectual property right protection). India's Commerce Minister also shares the opinion that developed countries took advantage of being able to develop in a time without strict intellectual property right regulations and currently developing countries are without such opportunities. See Nanda, *supra* note 10 (quoting the Commerce Minister as stating that "[t]he industrialized nations extensively used reverse engineering and other methods of imitative innovations during their own process of industrialization. After having fully used that, they closed the door to developing countries by restricting them, thereby making technological catching up more difficult than before"). India's Commerce Minister will concede that the intent of the WTO may not be to hold developing countries as a permanent underclass, but he still believes the advantages of developed countries still should be addressed as many of the conflicts between developed and developing countries arise because developing countries perceive the WTO as trying to keep them a permanent underclass. See *id.* (quoting Maran as saying "there is today mismatch between what is being intended in all sincerity and what is being perceived, especially by developing and least-developed nations. The controversies that have affected the WTO are symptomatic of this mismatch").

One area for improvement is a reduction in the ambiguous terms. As argued earlier, what it means to "transfer" these technologies should be defined in functional terms.²²² A functional definition of transfer involves determining what it takes to get the resource to the transferee. This could be different depending upon each transferee's abilities. Also, the obligation of countries in the transfer process should be clear.²²³

V. CONCLUSION

In conclusion, changes need to be made to the TRIPs Agreement in order to protect all countries, developing and developed, equally. Although there are many positives and negatives in granting communities intellectual property rights, TRIPs needs to at least address the issue of protecting communal knowledge from external and internal exploitation. Whether it be through granting communities intellectual property rights, strengthening geographical indications, or making the opportunity to object to patents more available to all, TRIPs should not condone or promote exploitation of indigenous cultures but attempt to stop any type of cultural imperialism. Further, TRIPs needs to be amended to allow for transfer agreements for biological resources and environmentally sound technology. As long as developing countries lag behind developed countries, TRIPs should recognize these inequalities and attempt to put all countries on an equal playing field. TRIPs should ensure that developing countries are not left without access to technologies that are imperative to development and biologies that are unique to its environment. Patent right protections should work to protect individuals, not allow a more powerful individual to exploit a less powerful individual.

222. See *supra* notes 170-73 and accompanying text (defining a functional definition of transfer).

223. See *supra* notes 169-70 and accompanying text (discussing the ambiguities of the CBD with regard to transfer agreements).

