
UNDERSTANDING THE INTERPLAY: ANALYZING INTELLECTUAL PROPERTY RIGHTS' ROLE IN CLIMATE CHANGE MITIGATION AND THE TRIPS AGREEMENT FOR TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGIES

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ABSTRACT

The multidisciplinary field of Intellectual Property Rights (IPRs) encompasses legal frameworks that grants exclusive rights to creators over their technologies which fosters innovation. International Intellectual Property laws play a critical role in the management of climate change and IPRs have been identified as the major cause for incentivising green technologies and a rudiment for the development and transfer of environmentally sound technologies by developed countries. The link between IPR and climate change mitigation lies in the interface that patented technologies play in providing effective means to reduce greenhouse gas emissions, enhance energy efficiency, and adapt to changing environmental conditions.

The WTO agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS),1994, mandates strong patent protections for nearly all environmentally sound technologies and the effective distribution of patented technologies is becoming apparent with the rising nature of climate change. The global transfer of green technologies from industrialized to developing countries is hindered by the intellectual property regime. Article 7 of the TRIPS states that, “Intellectual Property rights should contribute to the technological innovation and its dissemination for the social welfare.

This paper underscores the need for a balanced approach that upholds the value of intellectual property while ensuring equitable access to environmentally sound technologies and to navigate the dynamics of IPR. Further, this paper critically provides an overview of IPR, its link to climate change through patented technologies, and explores the mechanisms for transferring environmentally sound technology from patent-holding countries to developing nations under existing agreements. The paper

concludes by proposing the need for a new mechanism that facilitates equitable distribution of technologies between developed countries.

Keywords: Climate Change, Patents, Intellectual Property Rights, Green Technologies, Environmental Preservation

Introduction

International Legal Framework Governing IPRs and Transfer of Technologies Including ESTs

IPR regimes have long been seen as “the classical policy instrument” to make an impact on the diffusion and transfer of technology¹ which further helps in climate change mitigation. The extent to which IPR may contribute to technological innovation and transfer depends on how it address the issues between the strong IP Protection and availability of technology.

With the end of Uruguay Round of Negotiations, the countries realised that major global environmental challenges such as climate change and global warming cannot be tackled down by action within national boundaries alone instead developed countries needed the developing countries to cooperate, and thus “EST Transfer became the proverbial carrot that would have to assure this cooperation.”²

Rights arising out of Patent and trademarks are governed by the principle of territoriality³ and with the rise of free trade and globalisation, “the prevalent system of bilateral treaties based on the principle of material reciprocity soon became impractical.”⁴

As a result of such unrest, the Paris Convention for the Protection of Industrial Property was adopted in 1883 and it sought to provide the stimulus for individuals to develop new technologies with others. This Convention further establishes rules and regulations and allows the contracting State to also grant compulsory licenses which are subjected to certain terms and conditions. At the present, Convention has 176 Contracting Parties. The important point of discussion was the Article 5A of the Paris Convention which dealt with abuses of patents as developed countries and developing countries have contrasting demands regards compulsory licensing. As Sell (1998) observed, “developing countries favour strong state intervention in

¹ UNCTAD, *Transfer of Technology, UNCTAD Series on issues in International Investment Agreements*, New York and Geneva : United Nations, p.18.

² Gaëtan Verhoosel, “*Beyond the Unsustainable Rhetoric of Sustainable Development: Transferring Environmentally Sound Technologies*”, 11 *Geo. Int'l Envtl. L. Rev.* 49, 1998, p. 62.

³ WIPO, *Introduction to Intellectual Property: theories and Practice*, Kluwer Law International, at p.175

⁴ Martin Pfluger (2008), *Paris Convention for the Protection of Industrial Property*, in Cottier and Veron, *Concise International and European IP Law*, at p.175.

order to enhance their bargaining power and rectify past injustices while developed nations favour market mechanisms for technology transfer, depending on minimal state interference for smooth functioning.”⁵

Transfer of Technology and Intellectual Property Rights in International Climate Framework

With the growing concerns of environmental protection across the globe, the major issue of protection of green technology and ESTs have become a constant concern of majority of the countries. Most of them have "adopted an aid-based approach for the supply of sector-specific environment-related technologies to developing countries with the aim of ensuring developing states' compliance with their obligations."⁶

The most common difficulty lies in the fact that such green technologies are handled by the private companies and they have IPR protection to prevent their abuse.

Technology Transfer Under the UNFCCC Agreements

United Nations Framework Convention on Climate Change is the basic treaty laying down the international climate negotiations from when it was established, which includes formation of Kyoto Protocol (1997) and the Paris Agreement (2015). Countries who ratify the convention have to compulsorily act on climate change and prepare a report every year.

The Convention mandates EST transfer from developed to developing countries on the principle of Common but differentiated responsibilities (CBDR).⁷

Principle of Common but Differentiated Responsibilities- With passage of time, this principle has been recognised in International regime and UNFCCC is the first treaty to refer to CBDR as a principle. According to this principle, " problems are a Common concern of Humankind", such as climate change affects all the people and that for Equity reasons, the resulting responsibilities ought to be differentiated.⁸ The principle of CBDR includes two related elements: "the Common responsibility of all the States for certain international issues" and

⁵ Susan K. Sell, *Power and Ideas: North - South Politics of Intellectual Property and Antitrust*, State University of New York Press, p.140 (1998)

⁶ Abdulqawi A.Yusuf, *Technology Transfer in the Global Environmental Agreements : A New Twist to the North-South Debate*, (2001)

⁷ *Rio Declaration on Environment and Development*, UN General Assembly, (VOL 1), (1992)

⁸ Farhana Yamin and Joanna Depledge, *The International Climate Change Regime : A Guide to Rules, Institutions and Procedures*, Cambridge University Press, p.69 , (2004)

"differences in the extent of their national obligations to respond to their issues."⁹

The Second dimension of the CBDR principle, differentiated responsibilities, emphasis a direct response to country differences in their contributions to environmental degradation and their capacity to prevent the threat.

In practical terms, the principle of CBDR has been translated into "specific commitments " Under the UNFCCC and the Kyoto protocol on the mitigation of climate change, but only for developed country parties.¹⁰

EST transfer commitments under the UNFCCC

The most important provisions on transfer of technology in the UNFCCC Convention are Articles 4.1(c), 4.3 and 4.5. Article 4.1(c) requires all parties to " promote and cooperate in the development, application and diffusion, including transfer of technologies, practises and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases" and it also takes into account their CBDR and individual objectives of nations.¹¹

Article 4.5 of the UNFCCC mandates developed countries to transfer ESTs to other countries and help them mitigate climate change. It means that all the developed countries should take all practical steps to promote, facilitate and finance the transfer of, or access to ESTs and know - how to developing countries.¹²

Article 4.7 states some obligations to be fulfilled by the developed parties under the Convention for effective implementation of financial help by the developed countries. The said Article reinforces "the compact between developing and developed countries" with respect to international climate protection, the Convention is legally binding for all the states that ratified it,¹³ but many believe that majority of the developing countries do not have enough capacity and resources to meet the commitments, but in many cases financial resources and ESTs to provide financial resources forms part of the terms of the rights and obligations. This nexus of

⁹ Philippe Sands, *International Law in the field of Sustainable Development*, British Yearbook of International Law, Vol 65 (1995)

¹⁰ Philippe Sands, *The "Greening" of International Law: Emerging Principles and Rules*, Global Legal Studies Journal, Vol 1, p.311, (1994)

¹¹ UNFCCC, <https://unfccc.int/parties-observers> , (last visited Sep 13 ,2023)

¹² International Council on Human Rights Policy, *Beyond Technology Transfer : Protecting Human Rights in a Climate-Constrained World*, International Council on Human Rights,p.37, (2011)

¹³ Mark.A. Drumbl, *Poverty, Wealth, and Obligation in International Environmental Law*, Tulane Law Review, vol 76, p.947, (2002)

the UNFCCC creates a lacunae because breach of such provisions will not lead to sanctions in the International law and many parties might not help other countries.

Kyoto protocol

The main principle to the UNFCCC was adopted at COP -3 in the year 1997 and it legally binds the developed countries for emission reduction obligation and further encourages parties to make advancement in the technologies.

Article 3.14 of the Kyoto Protocol identifies the transfer of technology as an essential action to minimise the adverse effects of climate change.¹⁴ IPCC observed that governments transfer the patents arising out of publicity funded research to private sectors as part of their industrial policy, then to be transferred to privately owned technologies.¹⁵

It is perceived by some commentators that the EST transfer provisions of the protocol have shifted the principal burden of " Promoting, facilitating and financing" the transfer of ESTs from developed countries onto all the parties of the convention including the privately owned technologies.¹⁶

After the Kyoto Proccotol and despite the commitments established under the various protocols, most of the industrialized countries failed to effectively implement and enforce EST transfer. The four pillars were laid down in COP-13 that are Mitigation, Adaptation, technology development and transfer, and finance are dependent on each other and technology plays important role in all of them.¹⁷

Group on Technology Transfer (EGTT) was established to advance the technology transfer activities under the Convention.¹⁸ This group identifies various strategies to facilitate transfer of technology and advises the Subsidiary Body for Scientific and Technological Advice(SBSTA).

The Paris Agreement, passed on 12 December 2015, and built on the foundation of the UNFCCC and the Copenhagen and Cancun Agreements had set a target to hold the global

¹⁴ *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, Article 3.14 (1998)

¹⁵ IPCC, *Mitigation, Contribution of Working Group III to the Fourth Assessment Report of the IPCC*, Cambridge University Press (2007)

¹⁶ International Council on Human Rights Policy, *Beyond Technology Transfer : Protecting Human Rights in a Climate-Constrained World*, International Council on Human Rights (2011)

¹⁷ South Centre and CIEL, *The Technology Transfer Debate in the UNFCCC Politics, Patents and Confusion*, IP Quarterly Update, p.2 (2008)

¹⁸ Earth Negotiations Bulletin, *Summary of the Twelfth Conference of the Parties to the UN Framework Convention on Climate Change and Second Meeting of the Parties to the Kyoto Protocol*, p.6 (2006)

temperature increase to well below 2 degrees above pre-industrial levels and with efforts to limit the increase to 1.5 degrees.¹⁹ It was highlighted in the Conference that there is an urgent need to enhance the provision of finance, technology and support for all the developed countries. It contains a provision which mandates developed countries to provide financial help and address the issues created by IPR's in line with Article 4.5 of the Convention.²⁰

Intellectual Property Rights in the International Climate Change Regime-

The main sector which plays a important role in the innovation and transfer of ESTs are the Private Sector Industries and they rely heavily on strong and predictable IP protection. Many key ESTs are subject to certain conditions of Patents and other IPRs such as trademark and copyright. In the 1992 Rio Summit, the Group 77 countries argued that "IPRs had to be relaxed in the case of ESTs, for otherwise IPRs would hinder the developing countries access to such technology" whereas developed countries agreed that "concessional terms should be encouraged for the Transfer of ESTs but an exception should be made in the IPR regimes on such technologies."²¹

In developing countries, like India and China, firms from such countries found it extremely difficult to acquire substitute technologies because such technologies are covered by IPRs or are inaccessible either due to high prices or due to the rules and regulations of the IPR.²²

Emerging countries, assembled in the group called BASIC Group (Brazil, South Africa, India and China) have acknowledged that " Innovation plays a key role in addressing climate change while emphasizing the need for a balanced intellectual property system which is capable of meeting the challenge on a global scale."²³ Developing countries also stressed on the importance of their sovereign rights to take steps to reduce climate change. They proposed the creation of a Global Technology IPR pool for mitigating Climate Change and the use of TRIPS flexibilities, including compulsory licensing and to reduce the patent term. A number of

¹⁹ UNFCCC, *Paris Agreement*, Article 2, p.2, (2016), https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf?gclid=CjwKCAjwu4WoBhBkEiwAojNdXhGUpUMzOx0bD9-IRRiml0VymaoJiHJuU31nrFnlvyrnVvRE64R40xoCDDwQAvD_BwE

²⁰ UNFCCC, *Paris Agreement*, Article 4.5, (2016), https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf?gclid=CjwKCAjwu4WoBhBkEiwAojNdXhGUpUMzOx0bD9-IRRiml0VymaoJiHJuU31nrFnlvyrnVvRE64R40xoCDDwQAvD_BwE

²¹ Martin Khor, *IPRs, Technology Transfer and Climate Change*, Third World Network, (2008)

²² Jayashree Watal, India : *The issue of Technology Transfer in the Context of the Montreal Protocol : A package of Trade Measures and Positive Measures*, UNCTAD, p.45 (2000)

²³ Brasilia Declaration, *India-Brasil-Soth Africa Dialogue Forum, Fourth Summit of Heads of State/Government*, (2010), <https://www.ibsa-trilateral.org/>

developing countries advocated for the Paris Agreement discussions to have a specific reference to IPRs. They suggested, among other things, setting up a worldwide IPR framework to facilitate the adoption of clean technologies by developing countries.

IPRs, however, are not included in the agreement's final text on the transfer of technology development because industrialised countries vehemently resisted these ideas.

IPR and Technology Transfer Under the TRIPS Agreement

The TRIPS Agreement attempts to strike a balance between creating incentives for innovation and ensuring equitable access to technologies all over the world. It lays down a set of minimum standards governing the scope, availability and use of IPRs with the aim of contributing to technological innovation and transfer of technology in a manner that benefits both producers and users.²⁴

Article 13,27,29,30,31,40 and 66.2 of the TRIPS addresses the developing countries concerns, allowing them to balance private rights with public interest.

It covers most forms of IPRs, including patents, copy-rights and related rights, trademarks, geographical indications, industrial designs, and undisclosed information including trade secrets and test data.²⁵ The TRIPS Agreement specifies the duration, scope, and exclusive rights granted under patents while allowing IPR protection exceptions in a few specific situations. Shorter terms may be granted for some categories of patents, but twenty-year terms are the norm. Owners of the rights may stop unauthorised third parties from using or selling the protected material.

In order to fulfill their treaty obligations, most WTO members had to undertake extensive revisions of the domestic IP law and judicial as well as administrative systems, thereby incurring significant economic and social costs, in particular for developing countries.²⁶ The Council for TRIPS was established to monitor Member's compliance with the obligations and reviewing their national laws and regulations.²⁷

²⁴ Laurence R.Helfter, Regime Shifting : *The Trips Agreement and New Dynamics of International Intellectual Property Lawmaking*, The Yale Journal of International Law, vol 29, p.20 (2004)

²⁵ Daniel J Gervais, *Intellectual Property Trade and Development : The State of Play*, Fordham Law Review, vol 74, p.508 (2005)

²⁶ Laurence R, Helfer , *Regime Shifting : The TRIPS Agreement and the New Dynamics of International Intellectual Property Law-making*, Yale Journal Of International Law, vol 29, p.23 (2004)

²⁷ World Trade Organisation, *TRIPS , Article 63 and 68* , https://www.wto.org/english/docs_e/legal_e/27-trips.pdf

The fact that the TRIPS Agreement not only defines basic requirements for IP protection but also includes some flexibility, allowing nations to position IP rights in the context of their public policy aims and objectives, is a key feature of the agreement. As an illustration, the TRIPS Agreement permits country assessment of the most suitable mode of implementation as well as a number of restrictions and exceptions to the protection of IP rights.²⁸ The term "TRIPS flexibilities" refers to these clauses.

Patentability exceptions. The term "patentability" refers to the limitations placed on the kind of inventions that may be protected by a patent, which are often goods or procedures that provide a novel technical solution to a challenge.²⁹ Prior to the TRIPS Agreement, countries had the option of excluding from patentability certain inventions of a certain type or in specific technological fields, such as pharmaceuticals and agricultural processes, based on their development priorities and strategies. WTO Members are currently required by Article 27.1 of the TRIPS Agreement to grant patents to all varieties of inventions in all technological domains, provided that these inventions satisfy certain fundamental requirements. Nevertheless, because the TRIPS Agreement does not define the patentability requirements (primarily novelty, inventive step, and industrial applicability), some crucial policy space remains in relation to the scope of patentability in each nation.³⁰

Compulsory licences. There are further instances when the TRIPS Agreement permits the use of a patented good or method without the rights holder's consent. The issuing of mandatory permits is one of the most significant—and possibly most contentious—of these. These non-voluntary licences are given to a third party by a judicial or administrative authority, enabling the exploitation of the patented innovation without the patent owner's approval.³¹

The members from developing nations see this opportunity as crucial to their ability to implement the TRIPS Agreement in a way that responds to more comprehensive public policies.

Although there are a few requirements and formalities, Article 31 of the TRIPS Agreement, which deals with compulsory licences, does not specify the grounds on which nations may grant non-voluntary licences. Climate mitigation or adaptation could serve as an acceptable

²⁸ UNCTAD and ICTSD, *Resource book on TRIPS and Development*, Cambridge University Press, p.734, (2005)

²⁹ ICTSD, *Climate Change, Technology Transfer and Intellectual Property Rights* (2008)

³⁰ Zhuang, Wei. 2017. *Intellectual Property Rights and Climate Change: Interpreting the TRIPS Agreement for Environmentally Sound Technologies*. Cambridge: Cambridge University Press.

³¹ Richard P. Rozek, 'The Effects of Compulsory Licensing on Innovation and Access to Health Care', (2000)

justification for compulsory licencing, and it might even be thought of as falling under the broad definition of "public interest" found in the majority of patent laws.

Article 7 makes it clear that the TRIPS negotiators sought to maintain "a balanced perspective on the role of intellectual property in society"³² It also provides flexibilities for members to facilitate innovation of green technologies. Unlike the majority of WTO Agreements, TRIPS is legislatively prescriptive, requiring that governments adopt beneficial measures in order to implement it (rather than merely eliminating tariffs or other trade obstacles). There is a good chance that developed countries may exert pressure on developing nations to tighten their IPR laws beyond the TRIPS standards. This is because developed countries have knowledge of IPR legislation and developing countries may desire assistance.³³

Mandatory Minimum IPR Standards Under TRIPS

Part II of the TRIPS defines the main elements of protection, including the subject matter to be protected, the scope of the rights to be conferred, permissible exceptions to rights conferred, and, where applicable, the minimum term of protection.³⁴

Patents-- The TRIPS Agreement mandates that all inventions, whether processes or products, in all domains of technology be eligible for patent protection, subject to the usual requirements of novelty, creativity, and industrial usefulness. Additionally, it must be possible to obtain patents and enjoy patent rights without regard to the location of the invention or whether the goods are manufactured locally or elsewhere (Article 27.1).³⁵

The exclusive rights that must be conferred by a product patent are the ones of making, using, offering for sale, selling, and importing for these purposes. Process patent protection must give rights not only over use of the process but also over products obtained directly by the process. Patent owners shall also have the right to assign, or transfer by succession, the patent and to conclude licensing contracts.³⁶

³² UNCTAD and ICTSD, *Resource Book on TRIPS and Development*, Cambridge University Press, p. 126 (2005)

³³ Susy Frankel, *The Applicability of GATT Jurisprudence to the Interpretation of the TRIPS Agreement*, Edward Elgar, vol II, at p.4 (2010)

³⁴ Antony Taubman, Hannu Wager and Jayashree Watal, *A Handbook on the WTO TRIPS Agreement*, Cambridge University Press, p.11 (2012)

³⁵ Antony Taubman and Jayashree Watal, *The WTO TRIPS Agreement – A Practical Overview for Climate Change Policymakers*, p.4 (2010) https://www.wto.org/english/tratop_e/trips_e/trips_and_climate_paper_e.pdf

³⁶ Thomas Cottier and Pierre Veron, *Concise International and European IP Law : TRIPS, Paris Convention, European Enforcement and Transfer of Technology*, 2nd edn, Kluwer law International, (2011)

The fundamental principle of patentability has three allowable exceptions. One is for inventions that violate morality or the public order; this expressly includes inventions that are harmful to the health or well-being of people, animals, plants, or the environment.

The TRIPS Agreement significantly increased the level and expanded the scope of patent protection. In time, many countries had to increase the duration of the term of the patent protection under the TRIPS, for example, even the developed countries like Australia increased its standard patent term from 16 to 20 years counting from the date of filing.³⁷

Positive role of Minimum IPR Protection in Innovation and Transfer of ESTs

For the proponents of a patent based innovation system, IPRs are essential incentives for innovation and transfer of ESTs whereas some others are concerned about the exclusive effects of IPRs on innovation and transfer of technologies³⁸, in particular when the technology is essential for promoting public-policy goals, such as mitigating climate change.

1. IP Rights as an Enabling Factor for Innovation of ESTs –

It is generally said that granting IPRs in particularly on patents may contribute to innovation through two ways:-

(a) "incentive to innovate", that is providing a critical incentive for innovation by allowing the right holders to reap the rewards of their investment.

(b) " Incentive to disclose" which means encouraging disclosure of new inventions into the public space for development.³⁹

Without IP protection, IP creators who had invested their time and money in the R&D would tend to lose the economic fruits of labour, thereby discouraging the investment to develop the technology. As Pugatch (2011) observed, " Economists agreed on the importance of IPRs in overcoming the substantial uncertainty of investment in environmental innovation."⁴⁰

Firms tend to emphasize the essentiality of IPRs in overcoming the substantial uncertainty of investment in innovations of ESTs; without IP protection, investment in technology may be

³⁷ Zhuang, Wei. 2017. *Intellectual Property Rights and Climate Change: Interpreting the TRIPS Agreement for Environmentally Sound Technologies*. Cambridge: Cambridge University Press.

³⁸ Nicholas Stern, *The Economics of Climate Change : The Stern Review* ,Cambridge University Press, p.566 (2007)

³⁹ Christine Greenhalgh and Mark Rogers, *Innovation, Intellectual Property and Economic Growth*, Princeton University Press, (2010)

⁴⁰ Nicholas Stern, *The Economics of Climate Change : The Stern Review* ,Cambridge University Press, p.566 (2007)

directed elsewhere.

Article 29.1 of the TRIPS Agreement states that an disclosure of an invention is a mandatory requirement for a patent application and that the required disclosure has to be conducted by a skilled person.

Furthermore, the information disclosed in the patent document is identified by WIPO as

"The single most valuable and comprehensive source of technological information available in the world."⁴¹

Furthermore, access to patent information does not amount to a legal right to use the concerned technology. The patent right holders have exclusive rights to make, sell and use the patented invention during the patent term, which is 20 years in duration.

2. Strong IP Regulations as a condition for IP Owners to Transfer ESTs

Without sufficient defence of Intellectual Property Rights to prevent the leakage of new technology information, right holders may be less willing to transfer their technologies. It has always been observed that the firms often cite weak IP protection in the developed countries as a major cause for their refusal to import their latest machines to certain markets.⁴²

Foreign investors can be drawn in by robust and effectively implemented IPR policies. Investors are more willing to direct foreign direct investment (FDI) to nations with strong IPR protection because it gives them security of mind that their intellectual property assets will be safeguarded from theft or violation. This is vital in fields where intellectual property, like patents, and trademarks, is of utmost importance. Incentives for indigenous innovation, which in turn attracts FDI, can be provided by PR protection. Strong intellectual property rights (IPR) rules in a host nation attract both domestic and outside businesses to invest in Research & Development projects there. To benefit from the innovation ecosystem, FDI may enter these nations. In countries with weak IP protection, foreign investors may prefer to invest in production and distribution outlets and assembly facilities rather than final production or R&D facilities.

⁴¹ WIPO, *The Importance of Technological Information Contained in Patent Documents for Inventions and Industry*, (1999) https://www.wipo.int/edocs/mdocs/sme/en/wipo_ip_cm_99/wipo_ip_cm_99_16.pdf

⁴² Nicholas Stern, *The Economics of Climate Change : The Stern Review* ,Cambridge University Press, p.566 (2007)

Flexibilities relating to Patent in the TRIPS Agreement

The World Trade Organization's TRIPS Agreement established basic norms for conservation that each government must provide to the IP of other WTO members, thereby reducing the former opportunity for adaptable national methods.

This Agreement does include some "flexibilities." These are designed to give under-developed nations the freedom to frame their own laws and policies, whether in specifically defined areas like access to pharmaceuticals or biodiversity protection to support economic development.⁴³ There is no agreed-upon definition of 'TRIPS flexibilities.' In accordance with a WIPO document, the term "flexibilities" are "different options through which TRIPS obligations can be transposed into national law so that national interests are accommodated and yet TRIPS provisions and principles are complied with"⁴⁴

Under - Developed country members are given some extra duration with provisions of the agreement after coming in this body. They are given a term of five years before the regulations come into effect and an another period of 5 years in regard to green technologies that can not be protected by patents.

Trips Agreement provide certain patent related flexibilities which are:-

1. Depletion of rights of Patent - The HLP Report's first workability is related to rights of technologies which are patented, which it called as "parallel imports.", because patent holder's exclusive marketing rights have been exhausted, goods that have been lawfully sold on a different market may be called back from that market without the consent of the holder, according to the HLP Report.⁴⁵ Article 6 allows WTO Members to differ on the idea of patent exhaustion as well as the usage of different forms of rights, does in fact predict this flexibility.

Parallel importation cannot be stopped in a nation that allows for worldwide patent exhaustion since the rights and obligations of the owner of the patent were thought to have ended when the technology was legitimately traded-off in the first nation.

In contrast, IP exhaustion only takes into account domestic sales of the goods and can disregard the first legal sale made outside. The cause to offer this flexibility was even

⁴³ Zhuang, Wei. 2017. *Intellectual Property Rights and Climate Change: Interpreting the TRIPS Agreement for Environmentally Sound Technologies*. Cambridge: Cambridge University Press.

⁴⁴ Antony Taubman, Hannu Wager and Jayashree Watal, *A Handbook on the WTO TRIPS Agreement*, Cambridge University Press (2012)

⁴⁵ Webb, R. (2016). *Protecting Intellectual Property While Mitigating Climate Change: Can We Do Both?* Bogota: Columbia Center on Sustainable Investment.

surprising given the challenges in defining where IP terminates after the initial selling, even within the members with a greater experience of Intellectual rights.

2. Compulsory licensing - At the same time that the agreement established the least possible rules for patent, it “strengthened rather than weakened the compulsory licensing regime” by explaining the regime for procedure.⁴⁶

Compulsory licensing refers to the state “allowing for other use of the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government.”⁴⁷

The convention recognizes the flexibilities of the agreement, and on the obligation to give licenses, Members have “the freedom to determine the grounds upon which such licenses are granted and this naturally includes public health in many national laws.”⁴⁸

This is by far the most comprehensive list of particular causes for any restriction on core rights under landmark agreement. As a result, even if obligatory licences are expressly given green light, members who use them must adhere to the particular regulations laid down in Article 31.

Conclusion

The reasons for compulsory protection of Intellectual rights as a promoter of technology must be carefully positioned with the rising demand for transferring innovation relevant to climate change to poor countries. Despite the TRIPS Agreement's language favouring sustainable development, IPR rights have taken precedence over the goals of poorer countries for economic growth. The TRIPS Agreement should attempt to develop an IPR framework that promotes technological innovation, as well as its widespread adoption and use, rather than focusing solely on IPR protection. At a time when the problem of climate may soon reach the level of a global emergency, analogous to current epidemics, IPR protections must not be permitted to unnecessarily obstruct the transmission of technologies helpful in environment protection..

Poor nations will be disproportionately effected by the negative implications of climate change because of their severe vulnerability to natural disasters. Long-term, there are serious concerns

⁴⁶Omar Serrano & Mira Burri, *Making use of TRIPS flexibilities: Implementation and diffusion of compulsory licensing regimes in Brazil and India*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2748447

⁴⁷ WTO, *Agreement on Trade Related Aspects of Intellectual Property Rights*, (1995) https://www.wto.org/english/docs_e/legal_e/27-trips.pdf

⁴⁸ South Centre, *The Doha Declaration on TRIPS and Public Health Ten Years Later: The State of Implementation*, Issue brief No. 7, (2011)

that sustained environmental problems may undermine the prospects for economic growth in developing countries and aggravate the issues caused by ecosystem fragility. Consequently, a rapid technological revolution and the implementation of complementary policies are needed to reduce the effects on the world.

Many IP-related subjects are not covered by the TRIPS Agreement, either because there was no agreement reached when the Agreement was negotiated, the subjects in question had not yet developed, or the TRIPS Agreement's negotiators did not believe there would be problems with trade barriers in those subjects. Some of these subjects, such as handicrafts, traditional knowledge, and utility models, are particularly pertinent to developing countries.

Contrary to the previously mentioned "upward" levels of protection, these variabilities are not covered by the agreement. As a result, nations that establish legislation on certain subjects are exempt from the Agreement's guidelines and requirements. Therefore, a rewritten "Declaration on TRIPS and Climate Change" can define the existing flexibilities while offering new motives for transfer. Small island LDCs in particular may ask for exclusions since their trade flows are less sensitive to protections there and because the adverse effects presented by global climate are greater. As was indicated before, such a shift would have to take into consideration both adaptation or mitigation technologies in addition to the ambiguous and strong effects of the climate challenge.