

A STUDY ON THE INTERPLAY BETWEEN INTELLECTUAL PROPERTY, CLIMATE CHANGE AND ENVIRONMENTAL LAW

Mrs. Anchal Mittal Aggarwal¹

Abstract: *The law relating to intellectual property promotes innovation and other human creations. Concomitantly, environmental law aims to protect the environment. Even though intellectual property rights are temporary grants given to the owner, IP has made a noteworthy contribution to addressing environmental issues. Erstwhile, the awareness of the environmental harm caused by a lot of the technology used in manufacturing, agriculture, and transportation has gained impetus, especially in the last twenty years. Other forms of technology, however, can lessen resource waste and reduce pollution. Therefore, the fundamental motto of intellectual property becomes extremely significant in attaining sustainable development. Sustainable development (SD) has environmental sustainability among the four of its pillar, which can be synergized through intellectual property. The relationship between the TRIPS agreement pertaining to intellectual property and environmental law is complex, but there are still deliberations over it. Simultaneously, the relationship among the WTO's IP agreement and the (CBD) Convention on Biological Diversity has its focal point of in the Committee on Trade and Environment (CTE).*

One fundamental principle of our economic system is that technological advancement is required to uphold and raise our standard of living, which involves the role of intellectual property and environmental law. Utilizing intellectual property to combat climate change is an area which needs to be promoted to achieve sustainable development. In this patents contribution is quintessential because more innovation will lead to saving resources and reduce pollution, though the issue of increased pollution levels due to innovation can't be denied.

Use of intellectual property to enhance environmental protection, necessitates study into the connections between these two legal disciplines. This paper intends to identify the linkages, relationships, and lacuna between intellectual property and environmental law by adopting normative method of study.

INTRODUCTION

Modernization's scope is all-encompassing. It has evolved from a personal experience to a society-wide and national phenomenon that affects all aspects of life on a daily basis. Humanity's expanding needs put a great deal of strain on the planet. Consumption has consumed humanity, as if there were another planet to colonise. Hence, legal guidelines are

¹ Associate Professor, SGT University, Gurugram, MBA, LL.M, Ph.D (Law).

in place in the form of environmental law which not only intends to protect our environment but preserve it from *inter alia*, pollution and abuse by human race. To achieve and maintain this objective contribution from intellectual property law cannot be omitted.

The intellectual property system is intended to promote and spread emerging technologies that might lessen damage to environment. Particularly important in the development of climate solutions, patent protection is frequently subject to more scrutiny than other Intellectual rights. However, in order to be properly commercialised, technologies often attract a web of various IP protections and ask for a variety of licence agreements.

The patenting system is effectively crafted to promote the advancement of cutting-edge technologies. Innovative works must be unique, involve a technological advancement in their field, and have an industrial application in order to qualify for patent protection. The applicant should be in a position to explain the use of the invention in practise by knowledgeable reader and must agree to publicly disclose their work as part of the application. As a result, after the exclusive rights time has passed, society will be exposed to the information, and technology will be more generally available.

The private interests of those who are funding and developing new technology, forms the basis of the patent system (through a period of exclusivity) is the key of theory of balancing interests.

The Trade and Environment Committee (TEC) that works on the premise of Convention on Biological Diversity (CBD) simultaneously the World Trade Organizations Trade Related Aspects of Intellectual Property Right agreement and the per say, deals with patents. Likewise, patents are essential when it comes to combating climate change. This has laid emphasis on *Green Technology* or the *Green Patents* that deals with innovative technology which ultimately benefits the environment. Nonetheless, blind and unregulated innovation leads to increase pollution as green and recycled waste and emission of innovation had cost advantage to business. The need to reduce pollution generated by innovation and promotion of innovation to reduce climate change cannot be denied. The ultimate outcome will be attainment of sustainable development goals.

METHODOLOGY

The study employs the doctrinal method of research since it has relied on secondary sources to gather the literature and necessary information.

TRIPS AGREEMENT AND ENVIRONMENT

None of the seven parts of the TRIPS Agreement solely deal with environmental. The seven parts spread across this agreement includes the general provisions under TRIPS agreement in part-I alongwith the basic principles. Part-II of the Trade-Related Aspects of Intellectual Property Rights agreement pertains to “*standards concerning the availability, scope and use of intellectual property rights*”. Further, part-III of the Trade-Related Aspects of Intellectual Property Rights agreement deals with IPRs enforcement. Part-IV of TRIPS agreement relates to maintenance and the acquisition of IPR. This includes the procedure related inter-parties. Part-V of the agreement on TRIPS deals with prevention of dispute and settlement of disputes. Part-VI of the agreement on Trade-Related Aspects of Intellectual Property Rights relates to transitional arrangements. The last part of the TRIP agreement i.e. part-VII is related to institutional arrangements and the final provisions. However, patentability of inventions may be excluded as per Article 27 (2) by members to TRIP agreement. This exclusion is in their territory in case the commercial exploitation is prevented for upholding the morals of the public or ordre public which extends to protection of human, plant life or health or animal or for the prevention of harm of serious nature to the environment. However the exploitation forbidden by their law is not the sole bases of exclusion.² It can be deduced that if serious environmental harm is caused by patentability inventions their commercial exploitation is subjected to restrain.

Beside the aforementioned provision the linkage between intellectual property and environment has revolved around the CBD.³ Even the work of the committee on Trade and Environment revolves around World Trade Organization’s agreement i.e. Trade-Related Aspects of Intellectual Property Rights and the Biological Diversity convention.

The committee on Trade and Environment have heard three primary points of view. A number of developing nations have reaffirmed that Trade-Related Aspects of Intellectual Property Rights needs to be amended for patent applications. This application will reveal the source of any biological elements (and any TK)⁴ that is part of the invention, with broad backing from other developing nations. There are two goals:

- to prevent the issuance of erroneous patents, they are patents for inventions that aren't actually novel,

² *Read*, provision 2 of Article 27 that pertains to Patentable Subject Matter, under Section 5.

³ The Convention on Biological Diversity.

⁴ Traditional knowledge.

- to guarantee that inventors have followed with national laws about obtaining authorization to exploit biological resources and sharing profits with resource owners⁵

TRIPS AGREEMENT AND THE CBD

The aim of CBD⁶ is to "*conserve biological diversity, ensure the sustainable use of its constituent parts, and ensure the fair and equitable distribution of the benefits resulting from the use of genetic resources.*"

It is an international treaty to promote behaviours which will evolve a sustainable future. A common concern of humanity is the preservation of biodiversity.

In order to ensure their mutual support, even the Council on Trade Related Aspects of Intellectual Property is debating the association and link among the agreement on the Trade Related Aspects of Intellectual Property Right and CBD. Simultaneously, few nations aver about the overlap among the two. Therefore, these nations moot that amendments are quintessential to prevent clashes between these two. For this, the agreement on Trade Related Aspects of Intellectual Property needs to include several crucial aspects of CBD. Further, suggestion related to incorporation of a clause that WTO members must demand patent applications to seek certain details as a requirement for earning a patent right. This suggestion is for patent applications covering TK⁷ and/or material of biological nature. These are:

- (i) identification of the source and place of origin of biological resource and the TK utilize in the innovation,
- (ii) the evidence about prior knowledge with permission. This permission must be taken from relevant countries government,
- (iii) the arrangement of fair and equitable benefit-sharing under the regime of specific country along with proof.⁸

⁵ Intellectual property and the environment *available at*: https://www.wto.org/english/tratop_e/envir_e/trips_e.htm (Visited on February 10, 2023).

⁶ CBD is known as Convention on Biological Diversity.

⁷ TK is the acronym for traditional knowledge.

⁸ *Read*, WTO documents IP/C/W/356, IP/C/W/403. In the submission by Bolivia, Brazil, Cuba, Dominican Republic, Ecuador, India, Peru, Thailand and Venezuela, available in WTO document IP/C/W/403, dated 24 June 2003, it is stated that: "Disclosure of the source and the country of origin and evidence of PIC and fair and equitable benefit sharing in a patent application would play a significant role in preventing biopiracy and misappropriation and in some cases, prevent the issue of "bad patents" awarded without due regard to the prior use and knowledge with regard to the resource."

According to a third perspective, the two agreements are not in conflict with each other. However, implementation should be mutually beneficial which must be ensured by national action.⁹

It is necessary to discern Article 27 of the agreement on Trade Related Aspects of Intellectual Property before elucidating Article 27.3(b) of the agreement on Trade Related Aspects of Intellectual Property. Governments must make inventions available for patenting and those that they may exclude from patenting are outlined in Article 27 of the TRIPS Agreement. Patentable inventions can be both process and item that must typically span from every possible technology. Generally, governments are empowered by the agreement on Trade Related Aspects of Intellectual Property to preclude patentability of various inventions. This includes animals, plants, and biological processes.¹⁰ But in order to be protected, a plant variety has to be eligible to get protection under patents or a system designed specifically for that purpose (*sui generis*), or a combination of the two.¹¹

Article 27.3(b), needs to be reviewed since it addresses the inventions relating to animal and plant patentability or lack thereof. Additionally, it deals with plant variety protection.

The discussion has expanded thanks to Doha Declaration paragraph 19 from 2001. According to this, the TRIPS Council should also consider how both the CBD and Trade Related Aspects of Intellectual Property relate to each other and, how to protect folklore and traditional knowledge.

The aforementioned convention pertains to linkage between TRIPS Agreement and an area of Environment. The succeeding part delves into use of IP in handling climate change. Environment and climate are related to each other, the later comes with in the umbrella of Environment. While environmental change also incorporates other elements, such as biological (*related to living organisms*) and geological (*related to the study of the physical structure and substance of earth*) factors, which do not always entail atmospheric processes, climate change primarily relates to changes in atmospheric conditions.

⁹ The WIPO Seminar on Intellectual Property and Development, Convention On Biological Diversity, *available at*: https://www.wipo.int/edocs/mdocs/mdocs/en/isipd_05/isipd_05_www_103974.pdf (Visited on February 10, 2023).

¹⁰ The micro-organisms and non-biological and microbiological processes have to be eligible for patents.

¹¹ TRIPS: Reviews, Article 27.3(B) and Related Issues, *available at*: https://www.wto.org/english/tratop_e/trips_e/art27_3b_background_e.htm (Visited on February 10, 2023).

IP and CLIMATE CHANGE

A greater emphasis is being laid on green technology to combat climate change challenges. Many industrialised nations have seen the development of green technology's new forms, and to safeguard this new technology, they have enlisted the aid of intellectual property rights. So-called "*Green Patents*" refer to the *Green Technology*¹² covered by patents. It is the innovative technology, which has several advantages for the environment and is patented and protected.

Applications of green technology are crucial, and they can only have a beneficial effect if they are dispensed in the general public. The creation of appropriate rules, the World Intellectual Property Organization and IP Laws may play a significant part in the globalisation of technology. Additionally, IP laws make sure that these essential applications are authenticated and receive the proper recognition. There are instances that determine sustainable innovations that are deployed to achieve sustainable modern living. Concomitantly, these examples are environment friendly. These examples are:-

- *Substitution of Plastic Spoons by Edible Spoons*-They were introduced to substitute plastic spoons. To reduce the production and use of plastic edible spoons were made out of wheat, rice, and sorghum flour. More information on the design of which may be discovered via Li Yubao's registered publication number CN107581860A.
- *System to Monitor and Manage Floods*- In order to forecast and deliver a projected recovery formulation based on a hydraulic model, this system combines technology and weather forecasts. The mechanism protects the surrounding areas against unattended flood-like conditions. One Concern Inc. (US) has patented this system under the designation WO2019204254A1.
- *Smog Free Tower*- An invention designed to reduce smog uses a tower-shaped piece of machinery with an air inlet cover that draws in outside air, cleans it, and then releases the purified air through an exhaust. The Henan Network Tech Co. Ltd. has this patent on file with publication number CN109821331A.
- *Environment-friendly energy material preparation flow*- It is the method for central processing of starch from waste collected from households. The process helps produce a substitute to plastic for solving the waste management problems that

¹² The use of latest technology to save and protect the environment is known as Green Technology.

surround most communities. This Hefei Hanpeng New Energy Co. Ltd has this patent registered under publication number CN10905108A.

- *Biodegradable Bags for Food Packaging*- In this by avoiding the use of petroleum materials; biodegradable bags are constructed from layers of biodegradable polymer that are heat-sealed to resist oxygen and vapour and easily broken down by microorganisms in soil or water. The biodegradable bags are identified as belonging to Ishida Seisakusho Co. Ltd. by the patent publication number EP1369227B1.

It is evident that these can be used all over the world, and this is only feasible because they are patented. While these apps are being distributed globally for the greater good, IP laws ensure that they are safeguarded from theft, copying, and sub-standardization. Additionally, IP laws make guarantee that the correct product is delivered to the right person at the right time and support initiatives aimed at reducing climate change.

Despite the obvious advantages of green technology, very few patents are filed, which means that many discoveries taking place all around us go unrecognised. The main causes of the low frequency of patent applications include “*ignorance, lack of access to accurate information on intellectual property rights, & theft.*” Seeing one's life's *labour go unappreciated* and unappreciated is quite depressing. Although people and nations as a whole concentrate on incorporating sustainability into daily activities, there should be a coordinated effort to support researchers and inventors in obtaining patents and accelerating the rate of advancement and progress towards environmental preservation.

There have been instances where monopoly and false information caused inventions and patent claims to be invalidated. A grant can now be obtained in just one year thanks to changes made to the patent rules by the Indian Patent Office (IPO). The IPO is the world's quickest patent office. Public access to e-filing and e-certificate provisions is a significant step towards raising awareness among innovators. People will be encouraged to make the extra effort to put their original ideas into practise and to guard them against idea scavengers as awareness grows. There are conversations about exempting concepts for public benefits from patents from time to time, however it's important to realise that once an idea is protected, it becomes.

In order for the common causes of environmental protection, achieving UN sustainable development objectives, and balancing climate change to be served in the interest of

humanity, protecting and deploying ideas must be part of the greater culture in society as well as individual responsibility.¹³

Green technology in various nations: In nations including Brazil, Spain, Canada, Japan, Australia, Korea, U.K., and U.S., Green Patents is widely utilised and promoted. The registration of inventions by the (NTTPB) National Institute of Industrial Property of Brazil augmented using the Green Patent Program. The project has had 844 requests since 2012, and 294 letters patent have been granted as of February 2020. Green technology provided numerous benefits to Brazil's agriculture industry.

A multinational corporation (MNC) by the name of AGCO concentrated its Farm Solutions initiative on Brazilian agriculture.¹⁴ By digitalization, these programmes aim to reduce the overuse of pesticides and save natural resources like water. Additionally, TECAM in Spain offer solutions that are oriented towards green technology and are environment friendly.¹⁵

Green technology in India: Per say, India does have green technology, but it is extremely antiquated and only used limitedly. One can find solar power, hydropower, wind turbines, etc. in India. Only in a few locations in India, not the entire nation, have access to this technology. Also, India has an expanding number of industries, which inevitably leads to air, and water pollution, that in turn causes global warming and other environmental issues. Air pollution is greatly exacerbated by vehicles, burning of crops, and the firing of fireworks during festivals. So, the Green Patents can be very helpful in addressing these issues and resolving these environmental-related issues.

India can launch schemes to expedite the examination of green technology applications, similar to the UK and the USA. Further, by providing an excellent incentive to inspire people to develop green technology inventions. The use of green patents should be encouraged by introducing projects on green technology invention in the field of law and science. India should establish additional organisations, similar to those in Spain and Brazil, to solve the nation's problems with agriculture, unemployment, and better environmental legislation implementation.

¹³Amit Koshal and Prayank Khandelwal, India: Climate Change and Intellectual Property, *available at:* <https://www.mondaq.com/india/patent/1204204/climate-change-and-intellectual-property> (Visited on February 16, 2023).

¹⁴ Green technologies gain ground in rural Brazil, *available at:* <https://anba.com.br/en/green-technologies-gain-ground-in-rural-brazil/>, (Visited on February 18, 2023).

¹⁵ 10 Examples of Green Technology, *available at:* <https://tecamgroup.com/10-examples-of-green-technology/>, (Visited on February 18, 2023).

To reduce the environmental pollution created by numerous companies and industries in India, it is important to encourage different groups, particularly corporations, to work together and develop technology-driven, environmentally friendly solutions.

CONCLUSION

In industrialised nations, the use of green patents is encouraged and widespread. They are utilising every part of it to boost the economy, deal with their problems, and improve the environment. India has its own concerns with environmental issues that can be solved by employing green patents as an innovation tool.

The patenting system has certainly played a significant part in promoting the development of green technologies, but it has also benefited some of the worst offenders in society.

Even, though patenting system has contributed in advancement of humanity and technology it has accelerated green-house effect. The industrial revolution that sparked and resulted in novel industrial pollutants contaminated our environment. There is a need to use the same structure to create the essential green technologies in order to mitigate from this damage and pollutants.

This requires spreading awareness about green technology and its advantage is the need of the hour. Green patents needs to be promoted by governments of various jurisdictions. The role and contribution of patents in achieving sustainable development goals is significant however, balancing interest of innovators, businesses and environment must be accounted by Governments.

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