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INTELLECTUAL PROPERTY LAW AND SUSTAINABLE DEVELOPMENT- MAPPING THE INTERFACE

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ABSTRACT

The function of intellectual property rights has grown rapidly over time. It highly influences sustainable development. Hence an efficient IP regime is crucial in this regard. Strong IP regime might become a barrier for sustainable development. But on the other hand, low IP protection can also lead to result in violation of inventor's rights which in turn will affect the innovation. UN adopted agenda for Sustainable Development in 2015 and seventeen goals keeping 2030 as target year. The main focus is on eradicating poverty, environment, education, health. IP regime plays an imperative role in almost all fields of knowledge. This research article focuses on the interlink between sustainable development and intellectual property and discuss various International instruments that highlights the nexus between IP and sustainable development. Further it analyses the provisions of TRIPS agreement which aids in sustainable development. It gives an overview as to how technology transfer aids in attaining sustainable development and briefly discuss the concept of green technology and its significance. The paper also sheds light WIPO's endeavour to achieve sustainable development goals.

KEYWORDS: sustainable development, intellectual property, green technology, technology transfer, benefit sharing.

Intellectual property rights are interlinked with various field of knowledge such as health care, agriculture, education so on and so forth. Intellectual property rights are specific abilities, granted by law to right holders, for the control of intellectual property.¹ The function of intellectual property has grown rapidly over time. It is not an overstatement to say that intellectual property

¹ <https://www.journalijar.com/article/31473/role-and-performance-of-ipr-in-protecting-invention-&-innovations--its-sustainable-development-goals/> -last visited on 24-2-24

rights highly influence sustainable development. Sustainable development and an efficient Intellectual property regime are an important agenda for many countries around the world. But more often than not IP regime fails to promote sustainable development especially in developing countries. Sustainable development is allied with wide range of economic, environmental and social issues. Brundtland report of 1987 gives widely accepted definition of sustainable definition. According to which a country's growth should not compromise the ability of future generation.² Environmental and social resources should be utilised in a balanced way to achieve economic growth. Sustainable development has become paramount global agenda. In many ways IP laws are closely connected with sustainable development. IP regime tussles with range of legal issues and policies connected to bio diversity, agriculture, climate change, food security etc for implementation of sustainable development goals.

INTERFACE BETWEEN INTELLECTUAL PROPERTY RIGHTS AND SUSTAINABLE DEVELOPMENT

Neither IPR nor sustainable development are a novel concept. But the interface between both became a topic for discussion in late sixties. United Nations questioned the efficiency of existing international IP regime to achieve sustainable development goals in various instances. But the discussion became a heated argument after the emergence of TRIPs agreement. Public health was widely debated in Doha declaration in 2001. Doha declaration advocated for compulsory licensing of medicines for securing public health at time of emergencies.³ Thus making medicines accessible and affordable. Role of IP on a country's development is the focal point of WIPO Development agenda of 2007. With the emergence of new international regime on bio diversity, food security, climate change etc international trade and intellectual property happened to collide with the newly emerged system.

Earth Summit of 1992 held in Rio de Janeiro paved way for adoption Rio declaration and agenda 21 whose main focus is on sustainable development and environment. Following the Earth summit, convention on biological diversity and the United Nations Framework Convention on Climate Change shed light on transferring environmentally sound inventions to developing countries, that are available in public domain and inventions that are patented, by granting compulsory license. Convention on bio diversity provides that IP regime of member countries

² <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf> - last visited 24-2-24

³ <https://www.kashishworld.com/blog/intellectual-property-and-sustainable-development-goals/> - last visited 24-2-24

should not override its objectives.⁴ UN adopted agenda for Sustainable Development in 2015 and seventeen goals keeping 2030 as target year.⁵ These goals are broader than the Millennium development goals. The goals focus on various issues from poverty to gender equality, green technology, partnership goals etc. although the SDG do not expressly emphasise the significance of IP regime in achieving the target, World intellectual property organisation has stepped forward by aiding the member country in promoting innovation and competitiveness. The regime is more supportive to developing countries by providing them more flexibility for technology transfer and IP system supports sustainable practices in various field such as health care, renewable energy, education, agriculture, climate change etc by incentivising the inventor. But on the other hand, IP system also monopolises technologies which makes accessibility and affordability an issue. The Intergovernmental Panel on Climate Change (IPCC) has questioned the efficiency of current patent system in technology transfer and dissemination of knowledge.⁶

Meticulous balance between inventor's interest and public interest is required. According to report issued by Director General of WIPO in 2019, innovation is key for a nation's development and WIPO endeavours to attain social economic and cultural growth of nations through its committee on development and IP by providing technical assistance.⁷ WIPO has also attempted to implement SDG through public and private partnership.⁸ WIPO established Inter Governmental Committee as a platform for addressing issues regarding traditional knowledge, utilisation of genetic resources, cultural expression and benefit sharing which works towards achieving SDG. WIPO along with UNHRC made a join publication titled "IP and human rights" according to which IP can aid in achieving social economic and cultural development of world's diverse population.⁹ On the whole almost all SDG can be interpreted to be connected with IP. , especially the patent rights which provides the methods for achieving certain goals like food production, access to medicine etc.¹⁰

⁴ Article 16(5) of CBD.

⁵ <https://ip4sustainability.org/2020/07/10/how-can-intellectual-property-contribute-to-the-2030-agenda-for-sustainable-development/>

⁶ World Bank, *Knowledge for Development – World Development Report, 1998/99*, Oxford University Press, 1998, p. 33

⁷ WIPO, *Innovation Driving Human Progress: WIPO and the Sustainable Development Goals (2019)*, https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1061.pdf -last visited 26-02-24

⁸ the cambridge handbook of public-private partnerships, intellectual property governance, and sustainable development (margaret chon, pedro roffe & ahmed abdel-latif eds., 2018)

⁹ https://www.wipo.int/edocs/pubdocs/en/intproperty/762/wipo_pub_762.pdf last visited 26-02-24

¹⁰ https://link.springer.com/chapter/10.1007/978-3-662-68599-0_40 - last visited 27-02-24

TRIPs AGREEMENT AND SUSTAINABLE DEVELOPMENT

TRIPs provide minimum standard protection. It is usually supportive of technology innovation.¹¹ TRIPs requires developed countries to incentivize the institutions for transferring their technology to developing nations.¹² But TRIPs alone is not sufficient for promotion of innovation. Similarly TRIPs agreement's contribution towards dissemination of knowledge is incomprehensible. It is important to note that efficient implementation of TRIPs agreement may improve technology transfer in developing countries.¹³ TRIPs widely affect the technology transfer under multilateral environmental agreement. Both MEA and TRIPs agreement is essential in environment friendly technology transfer. According to research by MEA secretariat, IPR has both positive and negative role on technology transfer.¹⁴ As per trips agreement, member countries can adopt measures for compulsory licenses for protecting public health, nutrition and farmers right.¹⁵ Bio technology patent has become heated topic in the recent past as it involves ethical, legal, economic and environmental dilemma. Ever since the landmark decision in *Diamond v. Anand Chakrabarti*¹⁶, patenting of life forms are promoted in many countries. According to Article 27(3)(b) of TRIPs members can grant patent for micro-organisms and micro biological processes. Article 27(2) excludes any invention that could affect animal and plant life or health and any invention that could affect the environment. This exclusion must be optimally utilised to achieve sustainable development. Members are also encouraged to bring sui generis system for protecting plant varieties.¹⁷ TRIPs agreement is linked with loss of bio diversity. It could aid in tackling the loss of bio diversity by promoting genetically modified organisms (GMO). But bio safety measures is needed to avoid any uncertain hazards. The Cartagena protocol on bio safety was adopted in this regard. It is a supplementary agreement of CBD.

TRIPs also has its influence on Convention on Biological diversity. CBD requires usage of genetic resources and knowledge on genetic resources to achieve sustainable growth. The support of IP regime is imperative in this aspect. Article 8(j) of CBD provides for protection of knowledge

¹¹ Article 7 of TRIPs agreement.

¹² Article 66(2) of TRIPs agreement.

¹³ Walker, Simon. 2001. *The TRIPs Agreement, Sustainable Development and the Public Interest: Discussion Paper*. IUCN, Gland, Switzerland and Cambridge, UK and CIEL, Geneva, Switzerland. xiv + 60pp.

¹⁴ Intergovernmental Panel on Forests, *Transfer of Environmentally-sound Technologies to Support Sustainable Forest Management: Report of the Secretary General*, Program Element II. c of the Program of Work of the Intergovernmental Panel on Forests, Advanced Unedited Text, 1998

¹⁵ Article 31 of TRIPs agreement.

¹⁶ *Diamond v. Chakrabarty* 477 US 303 (1980).

¹⁷ Article 27(3)(b) of TRIPs.

and innovation of indigenous people. But the complexity of IP regime such as high expenses, complicated procedure, delayed process makes it difficult to implement article 8(j) of CBD. Member countries must seek to balance CBD and TRIPS in order to achieve SDG. CBD mandates the benefit sharing which could be achieved through royalty agreements. Biological Diversity Act 2002 contains legal frame work for implementing benefit sharing in India.

The potential impact of TRIPs on health care cannot be ignored. But it should be pointed out that TRIPs agreement does not always have positive impact over public health. As far as India is concerned, pharmaceutical patents were not granted at initial stages. As the result India had plethora of generic drug manufacturers and drugs were access at affordable price.¹⁸ But then after implementing TRIPs, India had to grant pharmaceutical patents. But competition among pharmaceutical companies and government regulations helps in keeping the price point at low. Currently countries are venturing in to digital health technologies as a result of which IP regime is faced with dual challenge of protecting the innovation as well as protecting the patient's privacy.

TECHNOLOGY TRANSFER AND DEVELOPMENT GOALS

Technology transfer is the process of delivering the outcome of a scientific research to the society through disclosures, joint ventures, licensing agreements.¹⁹ These technologies are generally protected by patents, trademark, designs or any other form of IPR.²⁰ It helps to bridge the gap between developed and developing countries. It helps to bridge the gap between developed and developing countries. Technology transfer could be categorized into vertical transfer and horizontal transfer. Vertical transfer refers to growth from basic level to the advanced level. Horizontal transfer refers to dissemination of well-known technology from entity to another. As per technology transfer and commercialization Rules 2020, it can be done by licensing, joint ventures etc. Inter National Technology Transfer Programme under the department of Scientific & Industrial Research aids in technology transfer with India as its focus.²¹ **Technology Export Development Organization (TEDO) has been established in the year 2000 to facilitate export of technology. it is stated in** The United Nations Conference on Trade and

¹⁸ Alam, G., *Impact of the Proposed Changes of IPR on India's Pharmaceutical Industry*, Centre for Technology Studies, paper prepared for the Indian Council for Research on International Economic Relations and the United Nations Development Programme, India, December 1996

¹⁹ https://knowledge4policy.ec.europa.eu/technology-transfer/what-technology-transfer_en - last visited 2-3-24

²⁰ <https://enterslice.com/learning/what-is-the-significance-of-technology-transfer-in-ipr/> - last visited 2-3-24

²¹ <https://www.dsir.gov.in/index.php/international-technology-transfer-programme-ittp> - last visited 3-3-24

Development's (UNCTAD) that licensing activity is dominated few only developed countries.

The concept of technology transfer was adopted by the United States through Bayh-Dole Act 1980. This act facilitated research organisations to license their inventions to private sectors. This paved way for the creation of technology transfer offices around United States and Europe.²² As of 2020, Bayh-Dole Act has been estimated to have contributed 1.3 trillion USD to the US economy and have created 4.3 million employment opportunities and created thousands and thousands of startups throughout the US. Section 83(c) of Indian patent act states that protection and enforcement of patent leads to innovation and technology transfer. Technology transfer is regulated by Indian patent office. UN has established Technology Facilitation Mechanism (TFM) in 2015 to aid in transferring environment friendly inventions to developing countries as a result of Rio+20.²³ It aids in implementing SDG. It facilitates multi stake holder collaboration and partnership among nations, private sectors and scientific research organisations.²⁴ TFM trust fund is established to support capacity building.

The nexus between IPR and technology transfer is imperative for economic development.²⁵ High protection of intellectual property might become an obstacle for innovations and hinders technology transfer. On the other hand, weaker IP regime creates imitators and these imitators becomes the source of technological development. Finding a right balance between both and balance between technology transfer and IPR is a challenging task for the policy makers.²⁶ IPR can facilitate technology transfer through Inter National trade, foreign direct investment, joint ventures and licensing.²⁷ Technology transfer also creates employment opportunity and stimulates economic growth. It aids in cost cutting by facilitating small scale companies in manufacturing a technology by disseminating knowledge regarding their research. These companies need to start from the scratch.²⁸

²² <https://www.iam-media.com/article/why-technology-transfer-leads-innovation-success> -last visited 4-3-24

²³ <https://sdg.iisd.org/commentary/policy-briefs/the-technology-facilitation-mechanism-tfm-conceived-in-rio-born-in-addis/> -last visited 4-3-24

²⁴ <https://sdgs.un.org/sites/default/files/2023-01/TFM%20informal%20note%20by%20the%20Secretariat%20-17Oct2022%20rev.pdf> – last visited 5-3-24

²⁵ https://www.wto.org/english/tratop_e/trips_e/techtransfer_e.htm - last visited 6-3-24

²⁶ <https://enterslice.com/learning/what-is-the-significance-of-technology-transfer-in-ipr/> - last visited 5-3-24

²⁷ <https://www.linkedin.com/pulse/role-intellectual-property-technology-transfer-karan-bhutani/> - last visited 5-3-24

²⁸ https://www.oecd-ilibrary.org/trade/technology-transfer-and-the-economic-implications-of-the-strengthening-of-intellectual-property-rights-in-developing-countries_244764462745 - last visited 5-3-24

GREEN INTELLECTUAL PROPERTY AND SUSTAINABLE DEVELOPMENT

Environmental degradation is the top concern globally. Green technology plays a vital role in tackling the problem. Every industry out there should find an alternative for production that is more sustainable. United Nations Development Programme has highlighted the significance of low carbon innovation for environmentally safe development.²⁹ Investments should be made on those lines. Innovation sets a new trend on production and consumption. But whether IP regime supports such transition is a debatable topic. International patent classification committee has established IPC green inventory, which provides information regarding green technology patents. WIPO GREEN is an initiative taken by WIPO to facilitate technology transfer. It is an online platform which connects the stakeholders of green technology. Patent is essential in green technology. To have a speedy procedure, UK came up with fast-track green patent application in 2009. As of 2023 there are 10 countries which has fast-track green patent application including China, Brazil, Australia etc.³⁰ India has shown tremendous growth in green patenting. Majority of these patented inventions are related to alternative energy production. Policy makers should come up with more strategies to develop green IP. Green IP also encourages developing countries to contribute for development of sustainable technology.

CONCLUSION

It is clear that the IP regime plays a crucial role in achieving sustainable development goals. In recent past many countries have realised that and have come up with various strategies to aid in sustainable development. But developing countries still have a long way to go. Various economic, political, social reasons contribute to such delay. UN has taken various measures to achieve the goals. Though IP regime does not have express mentioning on achieving sustainable development, it is undeniable that IP protection is vital in encouraging sustainable technology. Many Nations have established IP Regime that favours technology transfer, sustainable usage of resources, speedy application process for better protection. But implementation of such measures remains a challenge especially in developing countries. It is also imperative to note that very strong IP regime could become a barrier to achieve the goals, as it monopolises the innovations. Finding a right balance is a complicated task for the policy makers.

²⁹ <https://www.ashurst.com/en/news-and-insights/legal-updates/a-look-at-how-sustainability-influences-ip-and-how-ip-can-help-in-achieving-sustainability/> - last visited 6-3-24

³⁰ <https://www.lexology.com/library/detail.aspx?g=3c268d28-aed7-475a-b3d8-85341bf78787> last visited 7-3-24