

A dark, atmospheric forest scene with a path leading towards a bright light at the end of the tunnel. The trees are tall and thin, with bare branches, creating a dense canopy. The light at the end of the path is a bright, glowing yellow-green, casting a long shadow on the path. The overall mood is mysterious and ethereal.

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CLIMATE CHANGE AND THE ROLE OF PATENT ACT, 1970

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ABSTRACT

Climate change is an unfortunate reality and its effects are visible, not just from the Science fiction Hollywood movies, but in real life. Change in monsoon months, unprecedented floods, increase in the frequency of heat waves and cold waves, global warming are some of its visible examples. The International community has recognized the importance of addressing the issue and Paris Agreement adopted by the Conference of Parties in 2015 was a positive step towards it²³³. India, as a signatory to the Paris Agreement and a country with rich and vulnerable biodiversity and ecosystem, has a great stake in controlling climate change. North East India, which is one among the most ecologically fragile regions of India are already under the threat of climate change. The mean temperature of the North East region has increased by 0.8-degree Celsius in winter and 1.09 degree Celsius during monsoons²³⁴. This has led to the increase in drought as well as floods in the region thereby resulting in the loss of lives and livelihood of the people and the scientific studies have already projected that the frequency of droughts and floods are likely

²³³ Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104

²³⁴ Roy, Aniruddha & Kolady, D. & Paudel, Bindu & Yumnam, Anjoo & Mridha, Nilimesh & Chakraborty, Debasish & Singh, Nongmaithem. (2021). Recent trends and impacts of climate change in North-Eastern region of India-A review. *Journal of Environmental Biology*. 42. 1415-1424. 10.22438/jeb/42/6/MRN-170

to increase in the future²³⁵. Patent Act, 1970, even if it is not a statute addressing environmental issues has a role to play in this age of technology. This paper analyses the provisions in the Patent Act, 1970 that could have an impact in fighting climate change.

1. CLIMATE CHANGE AND PATENT LAW: AN UNLIKELY PAIR

The United Nations Framework Convention on Climate Change has defined climate change as the change in climatic conditions due to the alteration of global atmosphere caused by direct or indirect human activities²³⁶. Since climate change is an environment issue, solutions are usually sought through statutes that focus on environment laws. Unlike the Climate Change Act, 2008 of the UK, there is no single statute that addresses the issue of climate change in India. But the policy is spread across 8 Missions through the National Action Plan on Climate Change (NAPCC), 2008²³⁷. An acceleration in getting positive results in controlling climate change can be achieved through the use of patent law in addition to NAPCC. The Paris Agreement aims to reduce the increase in Global temperature by 2.0°C, preferably 1.5°C²³⁸. This cannot be achieved without the help of technological innovations. Green technologies that can replace or improve upon the existing technologies need to be developed at faster rate, without compromising the economic development of the country. Where there is a chance for development in technology, there is a scope for patent laws too.

Patent law can tackle the issues of climate change in 2 ways. 1) Promotion of green technologies – Since the primary aim of patent

²³⁵ *Id.* at p 1421.

²³⁶ United Nations Framework Convention on Climate Change, May 9, 1992 1771 U.N.T.S. 107, 165; S. Treaty Doc No. 102-38 (1992); U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 I.L.M. 849 (1992)

²³⁷ National Solar Mission, National Mission for Enhanced Energy Efficiency, National Mission on Sustainable Habitat, National Water Mission, National Mission for sustaining the Himalayan Ecosystem, National Mission for a Green India, National Mission for sustainable Agriculture, National Mission on Strategic Knowledge for Climate Change.

²³⁸ Paris Agreement Under the United Nations Framework Convention on Climate Change art. 2(1)(a), opened for signature Dec. 12, 2015, T.I.A.S. No. 16-1104

law is to foster innovations by encouraging the creators through monopoly, individual inventors and corporations can be persuaded into investing in green technology through the temptation of patent reward. For example, new methods of using renewable sources of energy that replaces the fossil fuels can be patented, if they satisfy the standards of patentability. 2) Patent exclusions – Excluding the technologies or innovations that causes environmental pollutions of any form, from patent eligibility. Technologies that make use of fossil fuels, or products that runs on non-renewable sources of energy could be kept out of the patent limits to discourage investment in the area or divert the investment to green technologies. Since the cost of production in green technologies is higher and its return on investment is much lower compared to the traditional technologies, companies are generally not interested in R&D investment in green technologies²³⁹. Using the above mentioned scope in the patent law can pressurize the industries join the green technology band wagon. But the use of patent as a tool to promote the development of green technologies comes with its own share of problems. Since green technologies or technologies that aims to reduce the emission of green house gases are much more research oriented, they involve large capital investment. This will result in the concentration of technologies with bigger corporations rather than start ups or domestic companies. The technology has the chance of being priced higher, which causes the problem of unaffordability to the large section of society who might then return to the cheaper alternatives. Refusal of the Corporations to grant licenses to domestic players or making restrictive licensing terms can also result in the technology being unaccessible or unaffordable²⁴⁰. Therefore, if not used wisely the patent regime can become counterproductive

²³⁹ Ofer Tur-Sinai, Patents and Climate Change: A Skeptic's View, 48 ENV'T L. 211, 213–17 (2018).

²⁴⁰ Joshua D. Sarnoff, The Patent System and Climate Change, 16 VA. J.L. & TECH. 301 (2011)

and hinder the use of technology to fight climate change

2. SCOPE OF THE PATENT ACT, 1970

As the advantages and disadvantages of using patent system in fighting climate change is already established, whether the Patent Act, 1970 can be used for the same needs to be analysed. Since India is a party to the TRIPS Agreement, it cannot discriminate between technologies when granting patents²⁴¹. Therefore, inventions based on any technologies needs to be granted patent if they satisfy the 3 standards of patentability, novelty²⁴², inventive step²⁴³ and capable of industrial application²⁴⁴. Which means that the innovations based on green technologies and traditional technologies that result in the emission of green house gases can be patented if they satisfy the standards. In surface, this could mean that an inventor will continue with his traditional technology because there is no additional benefits given by the patent law even if he replaces his technology with a green technology. However, the patent ineligibility provisions of the Act can be used to turn the tables²⁴⁵. Even though TRIPS calls for a non discriminatory principles in regards to patent eligibility, it gives flexibility to the member countries in excluding certain types of inventions from patent eligibility²⁴⁶. According to the Agreement, the member countries have the freedom to exclude an invention from patent eligibility if it causes serious prejudice to the environment²⁴⁷. India has used this flexibility in s.3(b) of the Patent Act, 1970. According to the section an invention that can cause serious prejudice to the environment or plant, animal or human life can

²⁴¹ Article 27.1, TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994)

²⁴² Patent Act 1970, s.2(1)(j), (39 of 1970)

²⁴³ *Id.* at s. 2(1)(ja).

²⁴⁴ *Id.* at s.2(1)(ac).

²⁴⁵ *Id.* at s.3.

²⁴⁶ Article 27.2 and 27.3, TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994)

²⁴⁷ *Id.* at Art 27.2

be excluded from patentability²⁴⁸. Prejudice to the environment does not just mean air pollution or deforestation but also includes any activity that has the possibility of breaking the stability of environment. Emission of green house gases is therefore causing prejudice to the environment as there is no greater threat to it than climate change. Technologies or inventions that emits greenhouse gases can therefore be brought under this provision and denied patent protection. Thus, the inventor choosing to use traditional technologies owing to the higher cost-profit ratio can be forced to invest in green technologies.

The threat of overbroad monopoly on the green technologies thereby causing unaffordability of the technology can also be addressed by the Patent Act, 1970 in three ways i) stricter interpretation of patentability standards, ii) Compulsory licenses and iii) Government use.

2.1 Patentability standards

As laid down by TRIPS Agreement, patent needs to be conferred on any inventions, including green technology, if they satisfy the three standards of patentability which are novelty, inventive step and industrial application²⁴⁹. Since these standards are not defined by the Convention member states have the freedom to expand or narrow the scope of each of these standards to determine what kind of technologies needs to be patented in their territory. If an environment friendly technology needs to be widely used for fighting climate change, but is not accessible to the masses, the country can always strictly interpret the standards so that the technology is kept out of the patent protection. This will allow the competitors to produce the same technology which will result in the decrease in prices. Therefore, using the stricter standards of the

Patent Act, 1970 can be used as a tool to promote environment friendly technologies.

2.2 Compulsory License

In India patent is granted subject to certain conditions which the patentee has to follow after its reward. One among the major condition is that the enforcement patent rights must enable the promotion of technological innovation and must also result in the transfer and dissemination technology²⁵⁰. The patent rights should be enjoyed in such a way that both producers and users of technology are at mutual advantage and the invention contributes to the social and economic welfare²⁵¹. Making a technological innovation unaffordable or inaccessible goes against this established principle. The Act has laid down the actions that can be taken in such cases and Compulsory licensing is one among them. On an application by any interested party, the Controller of Patents can grant compulsory license over an invention if, even after 3 years since the patent grant, the reasonable requirement of the public is not met²⁵² or the invention is not available at an affordable price²⁵³ or the invention is not worked in India²⁵⁴. The provision of "reasonable expectation of the public" and "affordability" can be used in the case environment friendly inventions. The reasonable expectation behind granting patents over such green technology is obviously to make a positive impact on the environment. If the invention is not accessible, due to the low production and supply by the inventor, then expectation of the public can be deemed to be not met. Similarly, if the invention is priced at an unreasonably high price, then again the invention cannot be used by large section of the public. compulsory license can be granted over an environment friendly or green technology under both these circumstances.

²⁴⁸ Patent Act 1970, s.3(b), (Act 39 of 1970).

²⁴⁹ Art 27.1, TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197

²⁵⁰ Patent Act 1970, s.83(b), (Act 39 of 1970).

²⁵¹ *Id.*

²⁵² *Id.* s.84(1)(a).

²⁵³ *Id.* s.84(1)(b).

²⁵⁴ *Id.* s.84(1)(c).

2.3 Government Use and Acquisition

The fight against climate change is one among the major public purposes into which any government must put its effort into. Because, unlike any other social or political issues, climate change and environmental degradation can have global effects and can hamper the life and livelihood of millions without any discrimination, particularly of those in ecologically fragile regions. Therefore, using of environment friendly inventions should be the primary aim of the state rather than any private industries. If the state does not have enough resources to invest in developing such inventions, the state can either promote the private players for the same or acquire them. The Indian Patent Act has also exploited this option. Under the Act, the Government can either use a patented invention²⁵⁵ or acquire the patented invention²⁵⁶, if it thinks that the act is necessary for public interest. In order to protect the interest of the inventor, the Act also stipulates that royalty or compensation must be paid to the inventor during such use or acquisition.

3. CONCLUSION

Thus, environmental laws are not the only statutory interventions which the Parliament can make in the case of fulfilling its obligations under the Paris Agreement or protecting the environment in general. As seen above the patent law is also a regime that can create a positive impact on protecting environment or fighting climate change. However, using the above mentioned provisions including compulsory licenses and government use is not an easy task as the State would be under immense pressure from developed countries and industries. This was evident from the public outcry of developed countries and multinational pharmaceutical companies when the

compulsory licensing provision was used for the first time by the Controller of Patent which was upheld by The Bombay High Court in the case of Bayer Corporation vs Union of India²⁵⁷. Both the provisions of Compulsory licensing and government use has not been used ever since in India. Therefore the Patent Act, 197 has enough tools to counter the Climate change and all it needs now is a strong arm to wield the weapon.

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²⁵⁵ *Id.* s.100(1).

²⁵⁶ *Id.* s.102(1).

²⁵⁷ writ petition no. 1323/2013 (Bom. HC).