

Intellectual Property Rights and Grassroots Innovations: A Perspective Paper

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Abstract

It may be hypothetical to say but it is true that India was a giant in the field of innovations since ancient time. The innovation and use of trademark to differentiate the products from one another was used from the time of Indus valley civilization. The constitution of India inherited the Intellectual property within the “Right to Property” which was a fundamental right earlier (Article 19 {1} f) but now comes under Article 300A. The grassroots innovators are the tribes, farmers, artisans, traditional healers, fishermen, inhabitants of marginalized area and so on. For this purpose, an interdisciplinary approach is required where the involvement of scientists and IPR expert could protect the IPR of the indigenous knowledge holder which may be an individual or an entire community. The development of National policies for the protection of IPR for the Grassroots and providing them proper intellectual and financial support could serve in the economic development of the nation and also improve the socioeconomic conditions of these inventors and associated people.

Keywords: Bioprospecting, Grassroots, Innovation

1. History and Background

It may be hypothetical to say but it is true that India was a giant in the field of innovations since ancient time. Several eminent Indian scholars told that the “*Shastra*” (compendium, book or treatise of technical or specialized knowledge) were available in India for everything present on the earth. Some of the examples are *Vaimānika Śāstra* (Science of Aeronautics), *Arthshastra* (Economy), *Vastushastra* (Architecture), *Natyashastra* (Dance), *Khagol Shastra* (Astronomy), *Jyotish Shastra* (Astrology) etc. The father of surgery *Maharishi Susruta* developed the surgical procedures at the time (5th Century BC) when the western world even not in the position to think

of that. The specialized grafting techniques told and experimented by *Susruta* cannot even challenged today by the modern medical scientists.

The innovation and use of trademark to differentiate the products from one another was used from the time of Indus valley civilization. The constitution of India inherited the Intellectual property within the “Right to Property” which was a fundamental right earlier (Article 19 {1} f) but now comes under Article 300A [1]. However, in constitution of the United States, Intellectual Property is specifically protecting by Article 1(8) of the U.S. Constitutions which states “To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries” [2], such statements are missing in the constitution of India, still the Intellectual Property Right (IPR) are protected by Indian Patents Act 1970 [3]. More importantly, the Universal declaration of Human rights of 1948 in its Article 27 give every person the right to: “freely participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits; and the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author” [4].

The grassroots innovators are the tribes, farmers, artisans, traditional healers, fishermen, inhabitants of marginalized area and so on. It is a well-known phrase that “Necessity is the mother of invention” and “Problem always comes with a solution”. In India the people specifically from the rural India faces lot of challenges and problems and they solve their problems in their own way which sometimes generate important inventions that are not in public domain [5].

Importance of IPR for grassroots

The Intellectual Property Right (IPR) protection for grassroot inventors is of paramount importance not only for the inventor but also for the larger populations who will benefit from the invention. This may be well understood by an example of a locally developed water pump which the author had encountered in an *Ashram* located in a village of the Himalayan region few years back. The pump was developed by some local people/inhabitants of the area and was utilized to supply/convey water from the river to the temple and adjoining area which was located at certain height from the river. The most interesting thing about that pump was the working ability of the pump without light or battery. The pump was generating its energy from the velocity of river water. If such technologies become patented in the name of the grassroot inventor, it could become a valuable economic source for the grassroot inventor and also can be very beneficial for people of the rural areas at large. Another such example is a traditional salt (*Pahadi namak*) which is prepared from some of the important medicinal and aromatic plants and used from a long time in the Kumaun region of the Uttarakhand Himalaya. This salt is becoming very popular internationally as several International tourists come for their visits in the Himalayan region and took this salt with them. The salt is now being prepared by some self-help group of women and they are generating economic benefits from that as well.

There are certain challenges for the grassroot inventors like lack of IPR knowledge (even the IPR knowledge of young technologists and researchers is very limited), social and scientific connections, stringent laws etc. The smuggling of *Ophiocordyceps sinensis* is a prominent example of the stringent and not people centric laws [7]. During my research work in the field of “Ethnopharmacology” I came across to the “*Bhotia*” tribes of western Himalaya, the people of the study area were very much concerned about the collection of *O. sinensis* due to its very high cost. At the same time, inhabitants of the area were not much satisfied with the government policy for

the exploitation of this traditionally used drug and they believed that the government should increase the trade rate for this (*O. sinensis* is a very high prized caterpillar found beneath the snow in the high-altitude area and used for diverse therapeutic indication in Traditional Chinese Medicine and is smuggled to China).

The indigenous knowledge is like the cultural legacy of a nation. Most of the traditional or indigenous knowledge transforms from generation to generation. However, the depletion of traditional or folklore knowledge in general and in the field of folklore use of medicinal plants (ethnobotany) in particular has been reported from worldwide including our study in the field of Ethnopharmacology of western Himalayan region. Therefore, it is necessary to document and protect the fragile indigenous knowledge and innovations done by the grassroots inventors by developing national policies and providing them international recognition through IPR. This will also lead in the generation of interest in the younger generation for this knowledge.

For this purpose, an interdisciplinary approach is required where the involvement of scientists and IPR expert could protect the IPR of the indigenous knowledge holder which may be an individual or an entire community. For instance, the development of “*Jeevani*” immunomodulator from the plant *Trichopus zeylanicus* Gaertn. locally known as “*Arogya pacha*” which was indigenously used by the “*Kani*” tribes of Western Ghats of Kerala. An agreement was done between the tribes and one of the reputed Ayurvedic manufacturing company for the sharing of net benefits (2%). This tribe is again come to limelight recently when a new species of tree crab was identified in 2017 from the forest regions of the “*Kani*” tribes and the species was named after the tribes as *Kani maranjandu*. This is because the people from *Kani* tribe reported sightings of a ‘long legged’ tree crabs in the area. Such benefit sharing is required at a larger extent to develop

the products and their commercialization to improve the socio-economic conditions of the grassroots innovators and also for the advancement of Scientific knowledge [6].

The traditional and cultural knowledge of a nation is the backbone of the economy of that Nation and transforming this traditional knowledge into economic knowledge (wealth) can prosper the country in every aspect. Despite of tremendous knowledge, it is difficult for the grassroot innovators to protect their innovations due to several reasons like financial reasons to pay the licence fee or lack of knowledge regarding IPR. Thus, it is the need of the hour to promote such grassroot innovators and protect their intellectual properties.

Major cases related to IPR faced by India

Some of the milestone cases has been reported in the patent infringement and in certain cases India has won its fight against developed countries like USA. For instance, the US patent for wound healing properties of turmeric was granted by USA (US patent no. 54015041) in 1997 and later on by the opposition from the Government of India which was leaded by the outstanding Scientist of this era Prof. R.A. Mashelker (the than Director General of CSIR), the patent was revoked by the US patent office after the confirmation that turmeric is being used in India from ancient time for wound healing purposes and the patent has no novelty. Another such case was the patent granted on the Neem oil as a fungicide by the European Patent Office to the United States Department of Agriculture and the chemical multinational, W.R. Grace, in 1995. Later on in 8th March 2005, the Munich based European Patent Office dismissed an appeal against revoking a patent granted by it due to well established traditional use of Neem oil as fungicide in plants by the farmers of India. Similarly, another patent was withdrew (USP 5,663,48) on basmati rice lines and grains granted by USPTO to Ricetec company from Texas after it was challenged by India [8, 9, 10]. These cases are some examples from which we can learn the importance of patenting and

protecting our traditional knowledge and preserving our intellectual property rights. Otherwise, we have to fight with giant companies and different developed or developing countries for our own right which may take significant amount of money and time and also not certainty that we will win. We should take lesson from these cases and must protect our priceless indigenous knowledge through IPR.

Importance of IPR and Ethnomedicine

It was also mentioned by “*Charak*” that “knowledge of medicinal plants and their identification should be gained with the help of cowherds, hermits, hunters, forest-dwellers and those who gather plants of the forest for food” (Grassroots). The use of traditional medicine is gained through experiments and it is necessary to gain maximum benefit from this knowledge which is still present in many parts of the globe, as such knowledge is diminishing rapidly. Although, the traditional healers were much sentient of the occurrence of inequitable bioprospecting practices from different pharmaceutical companies and other institutions, however, they were not much aware about their legal protection of their intellectual properties and therefore to provide intellectual support to them should be our prime focus.

Conclusion

The development of National policies for the protection of IPR for the Grassroots and providing them proper intellectual and financial support could serve in the economic development of the nation and also improve the socioeconomic conditions of these inventors and associated people. The IPR protection of these grassroots inventors will also avoid the unwanted interruptions

of outsiders and also a pride moment for the people/community who are isolated from the mainstream.

India has the largest work force in the world. We often consider Indian population as the biggest problem for the prosperity of the nation as 1.25 billion mouths are there to be feed. Sometimes the biggest problems results into the biggest solution and the bigger the problem the greater will be the answer. As mentioned by Dr. R.A. Mashelker and Prof. Anil Gupta at various platforms that we should consider the 1.25 billion population of India as 1.25 billion minds and I think that we are also 2.50 billion hands to turn our dream (innovation) into reality through hard work, sweat and perseverance. Therefore, the idea of Prof. Mashelkar to harness the “entire Nation as a laboratory” is something which can transform India not only as a developed country but also as greatest country in the field of Research and development and Innovation. Finally I want to conclude from the words of great visionary and our 11th President Dr. A.P.J. Abdul Kalam: “India is truly blessed with a real, though latent, abundance. Scarcity of resources is not the cause of our problem. Our problems originate in our approach towards them. We are spreading our resources too wide and too thin. I don’t think the American, Japanese or Singaporean solutions will work for us. Knocking at others’ door will be futile. Instead of searching for answers outside we will have to look within for them”.

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