ROLE OF IPR IN BIO- RESOURCE CONSERVATION

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Abstract: The biological diversity has provided food security and sustenance to the mankind. The developing world acknowledged the benefits of biotechnology for its food security but worried about the manipulation of its bio-wealth by technologically advanced developed countries. The main issues are regarding the biological resources (bio-resources) because of the so- called 'bio-piracy' and 'bio-colonialism'. The resource poor developed countries are trying to get the advantage of un-explored or less explored bio-wealth of technologically poor developing countries. The IPR is the legal right of the inventor and granted to him to claim the exclusivity over the innovation over a period of time to get economic benefit from commercial application and widely recognized. Not initially, but bio-resources also came under current IPR regime with chemical and mechanical innovations. Most of the countries in the world are provided with strong IPR protection. The vast genetic resources of India require a great effort for its conservation, evaluation, characterization, prevention and maintenance.

***Index Terms* – Bio-resources, Biotechnology, Conservation, IPR.**

1. Introduction

The biological resources (bio-resources) have been the source of sustenance for basic needs such as food, fiber, fodder, fuel, timber, shelter and medicines. India is provided with favourable environment to harbour this flux of genetic material. These vast genetic resources of a developing country like India played a major role in increasing agricultural productivity level. Intellectual Property Rights (IPR's) are legal rights governing the use of creations of human mind. IPR's gives the rights to thoughts, information of new processes, novel ideas and inventions. It makes inventors safe and protected from someone stealing or using their work or invention without taking prior permission (Joseph, 2004) The main objective in establishing IPRs was to protect the interest of inventor and to exclude imitators from the market for a specified period, although there are several categories of such rights, the most commonly known include copyrights, trademarks and patents (Acharya, 1996; Subbagao, 1996). The term patent in broad sense is applied to refer and official declaration granting exclusive right, privilege to produce, sell or to get profit from an invention process etc. In technological patents-process and product patents are described (Weiner, 1987; WIPO, 1988). Initially the IPR regime develop to reward for his innovative step (novelty) in the field of mechanical and chemical innovation to act as driving force towards rapid industrial growth. Afterwards, the living organism also came under the current IPR regime and in the context of living organism it failed to provide the reward to public domain (Ghosh, 2000).

IPRs and Patenters Premise

The IPRs and patenting system are based on the following premise:

i) They would provide recognition to the invention and inventor.
ii) The royalty and economic return will serve as award to innovator or inventor.
iii) IPRs would encourage governments, business houses and research and developments (R & D) establishments to invest in research, which would lead to development.
iv) Patenting will encourage disclosure and dissemination of otherwise restrictive knowledge or information and foster technological development.
v) Availability of vast spectrum of technological know-how through IPRs and patents will lead to greater equity and equality.

There are divergent views on these points and in some cases even reflect hidden biases, and exploitative mentality of the patenters. Nevertheless, it must be accepted that intentions of advocates of patenting were pious (Sahai, 1999).

2. Needs of IPRs Coverage in Bio-resource Conservation

The developing world acknowledged the benefits of biotechnology for its food security in the new millennium but worried about the manipulation of its bio- wealth by technological advanced developed countries. The developed countries are able to sequence the genomes cost effectively and quickly, which is leading bio-piracy because patents are based on DNA sequences. On the contrary, using novelty and uniqueness as the requirement and patenting they claimed them as first to specify these characteristics and awarded with patents. The resource poor developed nations are trying to get the advantage of unexplored bio-wealth of technologically poor developing countries with the help of modern sophisticated technology which is intern putting forth the bio-colonialism (Ghosh, 2000). Likewise the traditional and wild varieties, which are replaced gradually by the new high yielding varieties, are also of this concern. Although the wild varieties are not too important as cultivated crops but they are very valuable for future crop improvement programme. For all of these reasons the traditional users of any useful plant or animal species must be aware about IPRs patent, therefore the he can save his valuable indigenous knowledge, invention or traditions. The cases of obtaining patents on Turmeric, Neem, and Fenugreek etc. by foreigners are sufficient to open our eyes.

Case of Turmeric-Patent

In 1995, two US based Indians were granted US patents (5, 401, 504) on use of turmeric in wound healing (Anuradha, 2001) but turmeric has been traditionally used in India for its many special properties in wound healing. For example, it is used as a blood purifier, in treating common cold, as an anti-parasitic for many skin infection. It is also used in cooking many Indian dishes. Thus, how could others obtain a patent- was a disturbing question for whole country. The CSIR claimed for re-examination of patents at the United States Patent and Trademark Office (USPTO). As per the US law, it was necessary to find adequate evidence in the form of printed and published information. It was a very difficult task for our scientists and planners, but fortunately, thirty-two references were located in ancient literature of Sanskrit, Urdu and Hindi. Finally, the USPTO revoked the patent stating that claims made in the patent were obvious and anticipated and agreeing that the use of turmeric was an old art of healing wounds.

Other Important Cases Patent

1. Rice Tec. Inc., USA, patented the traditionally grown Basmati rice of India and Pakistan.
2. Various products obtained from Neem were patented by W.R. Grace & Co.
3. Patents were also granted over Indian Blackberry, Fenugreek, Black Cumin seeds.

3. Indian view for Bio-resource Conservation

Most of the countries in the world today are provided with strong IPR protection; even China without being a member of WTO. India is a member of the agreement on Trade related aspects of IPRs (TRIPS) of WTO and Biodiversity convention (Cullet, 2001). According to the TRIPS, all the 130 member countries are compelled to develop both product and process patent protection for domestic as well as foreign innovation in the field of food, health and environmental management. So our national effort is obvious to accept the IPR framework to provide safeguard to our resources and to promote traditional knowledge of biodiversity. As legally binding treaty, the convention on biological diversity (CBD, 1992) can be expected to have some influence on conservation, sustainable use of biodiversity and equitable sharing of benefits arising from the use of biodiversity. For this purpose our government has introduced two Bills - the Protection of Plant Varieties and Farmers Rights Bill and the Patent Bill (2nd amendment) (Cullet, 2001).

4. Conclusion and future perspective

The vast genetic resources of India require a great effort for its conservation_ evaluation, characterization, preservation and maintenance. The recent tools of science and technology open the new avenues to make use of the bio-wealth without depleting. For example- in conventional breeding the reproductive barrier limits the use of diversity for improvement whereas the genetic manipulation (Transgenic) tools allow the transfer of gene irrespective of the reproduction and species barriers. Biotechnological processes use life forms or derivatives thereof', to make or modify products or processes for specific use. Microorganism, plants and animals can be patented under IPRs and become our exclusive property. The developed places has always used third world germ-plasma as a freely available resource and modified it. By simply manipulating the life forms one does not acquires the patent or property right, because the modified life forms do not arise from nothing but from existing life forms which belonging to others (Agrawal, 2001). But in the absence of proper biotech base and awareness about their traditional/ indigenous knowledge a developing country cannot match a developed one although, being richer in biodiversity. However, the Convention on Biological Diversity (CBD), helped to place the subject matter of technology transfer and IPRs on the top of the agenda and policy and decision makers. Furthermore, access to genetic resources and transfer of technology is treated on the same plan.

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