

Preservation of traditional knowledge related to plant biodiversity

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Introduction

The Convention on Biological Diversity (CBD) is a major international instrument that explicitly recognizes the role of traditional knowledge, innovations and practices of indigenous and local communities, traditional life, biodiversity conservation styles and sustainable development. Pursuant to Article 8 of this Convention, each Contracting Party subject to its national law is required to respect, protect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities, relevant material or visible lifestyles for the preservation and sustainable use of biological resources and promoting the wider application and sharing of the benefits arising from the utilization of such knowledge, innovations and practices (Barataa et al., 2006).

Discussion

Biological resources and related traditional knowledge from many business corporations are noted as a value, very important in the development of commercial products. Corporations often want to acquire intellectual property rights related to biological resources and traditional knowledge in order to maximize revenue generation. Very often different industries freely use traditional knowledge to develop commercial products, without consent, without recognition of the original knowledge holders. The conflict goes so far as to equate intellectual property rights with exclusive rights over such resources/knowledge, and the original holders of biological resources and related traditional knowledge do not participate in the profits made from the commercialization of products based on their resources/knowledge (Kannaiyan, 2007).

Biopiracy is a violation of the rights of traditional communities (their way of life has been shaped by generations of their ancestors, where cultural, environmental, economic and family customs are based on traditional knowledge, values and social hierarchies) over their biological resources and related knowledge. The holder of IPR (Intellectual Property Rights) dictates the terms of use of the protected knowledge resource, which practically means that traditional communities as original holders may lose access to and control over their resource/knowledge. Realistically, the implications of biopiracy are both economic and ethical (Sharma et al. 2012). Namely, the research of plant biological resources for new commercial purposes is part of the global economic and social development. On the other hand, such commercial exploitation is perceived by many traditional communities as an insult, because the traditional knowledge of them is sacred and supports life. Indicators on the international market for herbal medicines note - the annual global sales of medical products derived from genetic resources amounted to 700 billion \$, for herbal medicines alone the amount was 438 billion \$. China, a leader in this field, generated about 5 billion \$ in international market revenue in 1999 and about 10 billion \$ in global exports, meaning that China accounted for about 50% of global exports. According to WHO (World Health Organization) estimates, the European market in 1999 weighed in at 11.9 billion \$ of which 38% was for Germany, 21% for France and 12% for the United Kingdom. The World Statistics Fund shows that in the European Union in 1990, more than 100.000 tons of plant material were imported, 12% of which were from India. A large global study in 1985 identified a total of 122 pure compounds from only 94 plant species. Medical use of 80% of these compounds correlates with traditional knowledge. Given the fact that

relevant scientific indicators point to a figure of about 250.000 higher plant species, the most effective and reliable way to detect the medicinal use of plants is to display them based on traditional knowledge. Assessment of the so - called a „hit rate” (80% or more) in the development of medicinal drugs can be achieved if plant screening is limited to plant species used by indigenous communities (Marshal, 2011). It is the responsibility of the international community to create an equitable system for accessing, acquiring, maintaining and enforcing intellectual property rights, namely an international regime to enable holders of traditional knowledge to control their use. The protection of traditional knowledge is central to the conservation and preservation of plant genetic and other bioresources. Namely, most of the traditional communities live in areas where the vast majority of the world's plant genetic resources are located. In reality, there is a danger that biological resources will be increasingly subject to intellectual property rights and patents in order to be allegedly extinct. But this practice raises concerns about their exhaustion and loss of habitat, the loss of lifestyles and livelihoods of indigenous communities that have nurtured and used these resources for generations. International recognition and protection of traditional knowledge would help to protect and preserve the environment and biodiversity management. E. g. during an ethno - botanical expedition to the Western Ghats region of Kerala (India), a team of scientists came across the Kani tribe to eat the seeds of the wild plant *Trichopus zeylanicus*, locally called „Arogyapacha”, whose consumption increases endurance in periods of increased physical exertion. „Arogyapacha” was tested and standardized as a drug based on traditional knowledge of it in the Kani tribe. The drug called „Jeevani” was released into commercial production in 1995. A pharmaceutical company (technology transfer company for the production of this drug), a tropical botanical garden and a research institute have agreed to share the license fee on a 50:50 basis. In addition, 2% of the author's sales revenue should go to the tribal community. About 60% of the 2000 Kani families became signatories to the agreement. The license fee and royalties received at the expense of the drug „Jeevani” were fixed assets, and the interest from this amount could be used by the Kani tribe for social activities (Mukhopadhyay and Bhattacharjee, 2016). Apart from legal regulations, international agreements, etc. a very important element is the involvement of people in the so - called „participatory regime” (tribal people, farmers, environmentalists), in order to gain more knowledge for the conservation of biodiversity and conservation of bioresources. The very participation of the locals and their motivation are very important for

saving biodiversity as a national treasure (Sthapit et al., 2012).

Conclusion

Given the goal - to enable less developed countries to benefit more from their resources and traditional knowledge, The Convention on Biological Diversity (CBD) prescribes bioprotection (discovery and commercialization of new products based on biological resources) to be possible only with the consent obtained for access to those resources and the obligation to share any benefits with the country rich in those resources.

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