Legal Protection of Traditional Agricultural Knowledge Relating to Genetic Resources

Ochrona prawna tradycyjnej wiedzy rolniczej dotyczącej zasobów genetycznych

SUMMARY

Traditional knowledge, including genetic resources of living organisms, especially plants, plays an extremely important role also in the development of modern science and present-day industry. This prompts us to consider the need, scope, and model of legal protection for such knowledge, both for the needs of the communities that create and cultivate it and for the wider public good. The present article includes an analysis of international legal regulations concerning the protection of traditional knowledge, with particular emphasis on the knowledge related to genetic resources, as well as legal works in this field. The considerations cover issues related to the development of the conceptual framework of such legal norms and the foundations of the legal protection of traditional knowledge, in particular the arguments concerning the need for such protection. The article also presents the basic types of intellectual property rights that can be the basis for legal protection of traditional knowledge.

Keywords: traditional knowledge; plant genetic resources; intellectual property rights; legal protection of plant varieties

INTRODUCTION

Local and indigenous communities, living in a specific social, geographical, and natural environment, have for generations acquired, consolidated, used, and passed on specific knowledge to their successors. This knowledge made easier to exist in given conditions and was often necessary for this purpose. Nowadays, it is
commonly referred to as traditional\textsuperscript{1}, although knowledge also plays an important role in many societies, especially in developing countries, in crucial areas of life, such as food safety, agriculture, or treatment.

Until recently, Western civilizations did not see any value in traditional knowledge. In these civilizations it was dominated by the achievements of modern science and technology. If, however, the representatives of developed countries had already decided to use the achievements of traditional knowledge to some extent, they did not feel that they had any obligations towards its creators, or communities that developed, used, cultivated, and finally improved such knowledge. Moreover, the development of modern civilization has very often contributed to the loss of traditional knowledge, whether through its superseding, or passive consent to its disappearance as a result of environmental, cultural, or social changes.

Gradually, however, the Western world’s interest in traditional knowledge began to grow. This was thanks to scientists and entrepreneurs who recognized that elements of traditional knowledge combined with modern science and technology are able to solve contemporary problems also in developed countries\textsuperscript{2}. In this way, it has begun to be perceived as a valuable source of information. Even then, however, in the circle of Western culture, traditional knowledge was classified as a public domain\textsuperscript{3}, it means as freely available to everyone without any obligation to bear any burdens or commitments towards its creators. Such an approach had to lead to undertake actions that also included the appropriation of the achievements of traditional knowledge for commercial purposes.

This practice has met with opposition from both indigenous communities and developing countries where traditional knowledge was created, is maintained, and of significant social and economic importance. Such communities have increasingly called, in particular for international organizations, for recognition of their rights to traditional knowledge, respect for these rights, and the creation of mechanisms to protect them.

\begin{footnotesize}
\footnote{C.M. Correa, \textit{Traditional Knowledge and Intellectual Property: Issues and Options Surrounding the Protection of Traditional Knowledge}, Geneva 2001, p. 3.}
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INTERNATIONAL LAW IN THE PROTECTION OF TRADITIONAL KNOWLEDGE

The first attempt to develop and implement international legal regulations concerning the protection of traditional knowledge was made by World Intellectual Property Organization (WIPO)⁴. In 1978 at the session of WIPO managing board argued that, despite developing countries’ concerns about the need to protect folklore, no real actions had yet been taken to formulate any legal standards in this area⁵. Following the above conclusion, WIPO and UNESCO⁶ established a working group which developed and submitted to the Committee of Governmental Experts the so-called model regulations concerning national regulations in respect of the protection of folklore against illegal exploitation and other forms of violation. The Committee adopted the above-mentioned study in Geneva in 1982 and this proposal was to become the basis for the formulation of an international convention in terms of the protection of folklore⁷. This document provided for the introduction of a procedure for authorising the use of folklore heritage for market purposes by entities not belonging to the local community, as well as an obligation to indicate the sources of folklore heritage used for profit-making purposes by such entities. At the same time, it assumed the adoption of legal regulations aimed at protection against misleading the public opinion by allowing trade in counterfeit objects as folklore works and through public use of distorted or mutilated folklore works in a manner that would violate the cultural interests of a given community. However, this project did not receive support at the general UNESCO/WIPO forum and was rejected in December 1984, mainly as a result of the intervention of the representatives of the highly developed countries. When interrupting works aimed at establishing an international convention on the protection of folklore, it was pointed out that it is technically impossible to identify sources of folklore and

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that there are disputes about these sources between individual communities and sometimes even countries.

Another, this time, successful international initiative to protect traditional knowledge was the revision of the International Agreement on Plant Genetic Resources of 1983, adopted in 1989. Food and Agriculture Organization of the United Nations (FAO), by Resolution No. 5/89, introduced an appendix to the above-mentioned agreement concerning the so-called “farmers’ rights”. The farmers’ rights included provisions to ensure farmers and farming communities in all regions of the world, but particularly in areas of origin of diversity of plant genetic resources, the assistance in protection and conservation of plant genetic resources and the natural biosphere, they were also to provide to farmers, their communities and developing countries, in all regions, with full participation in benefits, currently and in the future, from the improved use of plant genetic resources through plant breeding and other scientific methods.

However, the most important aspect in terms of legal protection of traditional knowledge can be found in the provisions of two other instruments of international law. The first one is the Convention on Biological Diversity of 5 June 1992, which in Article 8 (j) indicates that each Contracting Party, to the extent of its capabilities and needs, shall “respect, protect and maintain, in compliance with its national legislation, the knowledge, innovations, and practices applied by indigenous and local communities that lead traditional lifestyles favourable to the conservation and sustainable use of biodiversity and promote their wider application with the consent and involvement of the persons who possess such knowledge, apply innovations and practices, and encourage the equitable sharing of the benefits from using such knowledge, innovations, and practices”.

The second document, adopted on 3 November 2001, the International Treaty on Plant Genetic Resources for Agriculture and Food, in Article 9 (1) underlines that: “The Contracting Parties recognize the vital contribution made by local and indigenous in all regions of the world, and in particular in regions of origin and

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9 Food and Agriculture Organization of the United Nations (FAO) – one of the specialized organizations of the United Nations, dedicated to fight poverty and hunger as well as to increase prosperity through food redistribution and rural development. See A short history of FAO, www.fao.org/about/en [access: 12.02.2020].
centers of crop diversity to the conservation and creation of plant genetic resources that constitute the basis for food and agricultural production worldwide”.

At the same time, Article 9 (2) of the said Treaty indicates that: “The Contracting Parties approves that the responsibility for implementing the Rights of Farmers relating to plant genetic resources for food and agriculture shall be borne by governments of the States. According to the needs and priorities and national legislation, each of the Contracting Parties shall take appropriate measures to protect and promote the rights of farmers, which include: a) the protection of traditional knowledge relating to plant genetic resources for food and agriculture, b) the right to equal sparing of benefits arising from the use of plant genetic resources for food and agriculture, and c) the right to participate in decision-making, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture”.

The above regulations have created an international legal framework for the protection of traditional knowledge, including plant genetic resources.

Regardless of the arrangements made for the adoption of the above-mentioned legal provisions, the WIPO forum is still working intensively to develop a separate international agreement on the protection of traditional knowledge. From 17 up to 21 June 2019, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore met in Geneva (as a part of its 40th session). The draft of the International Convention on Intellectual Property, Genetic Resources and Traditional Knowledge Related to Genetic Resources was presented at the debate. The draft proposed the introduction of legal instruments at the international level for the specialised conservation of genetic resources and traditional knowledge relating to them. In principle, these instruments compromise two groups of regulation. Firstly, the regulations requiring applicants for granting a patent for an invention based on traditional knowledge to disclose its source of origin. Secondly, regulations providing for the possibility for the signatories of a future convention to adopt solutions as a basis for establishing information systems (databases) containing complete data on genetic resources and traditional knowledge associated with them. Such databases would provide the basis for the patent office to determine the patentability of traditional knowledge-based inventions.

The draft of the convention described above was submitted by the Committee, which developed it for the General Assembly of WIPO. This Assembly, after summarizing the progress made in the work on the assumptions of regulations, will

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14 Article 3 of the draft of the Convention of WIPO.
15 Article 7 of the draft of the Convention of WIPO.
decide, in particular in view of the level of agreement reached on its objectives, scope, and nature of the legal instruments whether it is possible to convene a diplomatic conference for the adoption of this instrument, or whether it is necessary to continue negotiations on the agreement16.

CONCEPT OF TRADITIONAL KNOWLEDGE

Until today, it has not been possible to define on an international level the concept of traditional knowledge. The regulations presented above, while using this term, do not specify what it means. Also during the work of the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, it has not yet been possible to reach a consensus on this issue, and the Committee points out that until the international definition of traditional knowledge has been agreed, it proposes to leave the definition to national legislation17.

Despite these difficulties, it is stressed that the term “traditional knowledge” can be defined at several levels18. Firstly, by indicating the elements it consists of, such as: information on ways of the use of biological materials in medicine and agriculture; information on the production of traditional products, including both utilitarian and aesthetic ones; literary, artistic and scientific traditions; cultural expressions in the form of music, dance, a song, handicrafts, stories, works of art, symbols, rituals, etc. Secondly, by stressing that such knowledge was developed in the past and has been used for generations, so it is not static, it is constantly evolving and improved due to adaptation and adjustment to the changing circumstances. Thirdly, by defining its forms of expression: sometimes it is codified, written knowledge, but it is largely based on oral tradition. Fourthly, it is owned by specific individuals (shamans, healers), groups of people (farmers, breeders), or entire local communities.

The situation is different with the definition of “genetic resources”. First of all, this definition is contained in Article 2 of the Convention on Biological Diversity, which states that “genetic resources” means genetic material that has actual or potential value. At the same time, the Convention specifies that “genetic material” means any plant, animal, microbiological or other material of other origin con-

taining functional units of heredity. At the same time, the Convention indicates that the category of genetic resources is included in the broader concept of “bio-
logical resources”, which include genetic resources, organisms and parts thereof, populations and any other living components of the ecosystem that are actually or potentially usable or of value to mankind.

The above definitions are also the basis for the proposals of the international legal regulation on the protection of traditional knowledge, including, currently being developed by WIPO and referred to herein above. The definition of genetic resources proposed by the Intergovernmental Committee of WIPO and the definition of genetic material are the same as those given to them by the Convention on Biological Diversity. However, for the purpose of creating functioning mechanisms for the protection of traditional knowledge, including in respect of genetic resources, it is necessary to develop a conceptual framework linking these definitions with terms specifying the mechanisms for the possible deriving benefits from these sources. Therefore, the Convention originated by WIPO also tries to define terms of “direct reliance on genetic resources”, “sources of genetic resources” and “sources of traditional knowledge related to genetic resources”.

The originators assume that the concept of “direct reliance on genetic resources” means that genetic resources and/or traditional knowledge related to them must have been necessary or essential for the development of the proprietary invention and the proprietary invention has to depend on certain characteristics resulting from genetic resources and/or traditional knowledge related to them. A finding that a given invention is thus based on traditional knowledge shall be intended to constitute a premise for the obligation to disclose the source of traditional knowledge in the patent application. At the same time, the Committee of WIPO proposes to define the concept of “sources of genetic resources” broadly and to cover in it any source from which the applicant (patent protection) has acquired genetic resources, such as a research centre, gene bank, Multilateral Access, and Benefit Sharing System, or any other ex situ or depositary collection of such genetic resources. “Sources of traditional knowledge related to genetic resources” means any source from which the applicant has acquired traditional knowledge related to genetic resources, such as scientific literature, publicly accessible databases, patent applications and patent publications.

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19 Article 2 of draft of the Convention of WIPO.
20 Multilateral Access and Benefit Sharing System constitutes an international instrument to facilitate the exchange of genetic resources between entities established in countries which are signatories to the International Treaty on Plant Genetic Resources for Agriculture and Food (Article 10 ff. of the Treaty).
21 “Ex situ collection” means (in accordance with Article 2 of the International Treaty on Plant Genetic Resources for Agriculture and Food) the collection of plant genetic resources for agriculture and for food kept outside their natural habitat.
The conceptual network of traditional knowledge, including in respect of genetic resources, built in this way is still incomplete, and moreover it fails outright and directly takes into account the knowledge accumulated in non-formalized sources (oral tradition, shamanic sciences, etc.).

![image description]

REASONS FOR THE PROTECTION OF TRADITIONAL KNOWLEDGE

It is impossible to consider the question referring to the protection of traditional knowledge without answering the fundamental question of the justification for such a need. Also in this aspect, there is no uniform legal doctrine position.22 There are two main groups of views. According to the first one, the concept of protecting traditional knowledge shall be considered in the context of intellectual property rights. Generally speaking, granting protection means the exclusion of the possibility for unauthorised use of such knowledge by third parties and the provision of a monopoly to qualified entities in this respect.23 Proponents of the second concept promote the protection of traditional knowledge against applications that can destroy it or adversely affect the life or culture of communities that developed and cultivate it. In practice, these concepts are combined. However, irrespective of the paradigm adopted, the literature indicates as the main reasons for granting the protection of traditional knowledge: considerations of justice, considerations of protecting broader social objectives, considerations of preserving traditional lifestyles, considerations relating to the prevention of “bio-piracy”, considerations to promote the use of traditional knowledge, non-economic considerations.25

The considerations of justice are based on the principles of equity. It is stressed that, very often, traditional knowledge generates economic values which, in the absence of adequate protection do not accrue to its creators. This illustrates very well the use of plant genetic resources. Traditional farmers protect and use plant genetic resources through continuous seed production, selection of the most suitable plants, exchange with other members of the local community. At the same time, when such genetic materials are acquired by industry, they are used for the creative breeding of new plant varieties and profitable use of them while bypassing traditional farmers.

At viewing the considerations of protecting broader social objectives, it is emphasized that conservation of traditional knowledge such as agricultural knowl-

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22 C.M. Correa, op. cit., p. 5.
edge helps to achieve broader societal objectives in the scope of environmental protection, biodiversity conservation, sustainable agriculture, and food security.

Traditional knowledge is also a central element of the cultural heritage of humanity. Protecting it with intellectual property rights and thus ensuring local communities to derive economic benefits from it can encourage to cultivate traditions and prevent their loss.

Traditional knowledge, including most often the knowledge concerning the way of use of genetic resources, is very often the subject of appropriation, especially by researchers and concerns from developed countries. It shall be used directly or through acquisition of intellectual property rights. If traditional knowledge were protected by intellectual property rights in favour of its original holders, such bio-piracy would not be possible.

The arguments for promoting the use of traditional knowledge through intellectual property rights are based on the assumption that extending legal protection to traditional knowledge can ensure that its use is more widely promoted without fear of appropriation. The inclusion of traditional knowledge in some form of protection can provide the basis for the trust that local communities need to share their knowledge, as it can lead to improve the position of such communities in gaining benefits of its use.

Finally, it is stressed that the legal protection of traditional knowledge may also have non-economic objectives, such as moral recognition of authorship. Authors have the right to both economic and moral rights under intellectual property rights regimes.

WAYS OF PROTECTING TRADITIONAL KNOWLEDGE

Intellectual property rights are seen as one of the instruments that can serve to protect traditional knowledge, including agricultural traditional knowledge on genetic resources. However, even among proponents of using intellectual property rights to protect traditional knowledge, there is no consensus, as to whether a new *sui generis* model of protection needs to be created26.

There are also strong objections in the debate to the inclusion of traditional knowledge intellectual property rights. Opponents of such action point out that the Western concept of intellectual property rights is incompatible with practices and culture of local and indigenous communities and is incomprehensible to them, and the inclusion of traditional knowledge into the market economy system can ultimately overwhelm and destroy it. Furthermore, they point out that the law is only intended to provide opportunities for the development of this knowledge by

guaranteeing the conservation of the habitats of local and indigenous communities (through security of ownership, control of resources, respect for traditional culture) and ensuring the prevention of excessive appropriation of this knowledge.

Traditional knowledge can be protected by using the existing intellectual property rights systems, for example with the use of copyright, in particular in the aspect of traditional knowledge manifested in literary works, stories, legends, myths, rituals, textiles, paintings, ceramics, sculpture, etc. Related rights can be used to protect the rights of dancers, singers, puppeteers, actors. To a limited extent, such knowledge may be patentable. Patents can only concern technical solutions that are industrially applicable, innovative, and inventive in relation to traditional knowledge. Patents can be used to patent isolated products synthesized from genetic resources. In the case of plant genetic resources constituting traditional knowledge, they may be covered by the protection of an exclusive plant variety right. Protection rights relating to industrial designs can provide the basis for protection of craft products, furniture, dishes and clothing. Regulations on geographical indications and designations of origin can be a promising source of rules to protect traditional knowledge – in this way, if their origin can be linked to a specific geographical area, food products and even also handicraft products, which form an element of traditional knowledge, can be protected. Then again, some elements of traditional knowledge are kept secret, for example by shamans or healers, their knowledge for example in the field of genetic resources use in therapeutics can be protected under the rules on commercial confidentiality.

However, the protection of traditional knowledge, including agricultural knowledge relating to plant genetic resources, by means of traditional intellectual property rights systems can be hampered in practice by numerous obstacles, such as: the lack of novelty value for the intellectual property that needs to be protected; the impossibility of granting protection to collective persons such as entire local or indigenous communities; the impossibility of protecting innovative ideas developed by local communities; or, lastly, the excessive costs and formalism of the acquisition and the protection of intellectual property rights.

CONCLUSIONS

Currently, the legal protection of traditional knowledge, including agricultural knowledge on genetic resources is at an initial stage. It is necessary to overcome some conceptual issues related to its implementation: a coherent definition of traditional knowledge is needed; protection of traditional knowledge cannot be

considered without resolving ethical, environmental, and socio-economic issues; the circle of beneficiaries of such protection shall be defined. Besides, it also seems that the existing intellectual property rights systems can only be one of the tools for such protection, but they will be insufficient in themselves. It may also be insufficient to establish a *sui generis* model for the protection of traditional knowledge.

In addition to taking into account the legal postulates for the protection of traditional knowledge, it also seems necessary to implement mechanisms guaranteeing the survival and improvement of living conditions of indigenous communities in their natural and cultural environment. This is the place where traditional knowledge was created, continues to develop and evolve, and is cultivated.

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**Literature**


**Legal acts**


**STRESZCZENIE**

Tradycyjna wiedza, w tym dotycząca zasobów genetycznych żywych organizmów, w szczególności roślin, odgrywa niezwykle istotną rolę także w rozwoju współczesnej nauki i współczesnego przemysłu. Skłania to do podjęcia rozważań dotyczących potrzeby, zakresu oraz modelu ochrony prawnej takiej wiedzy, zarówno dla potrzeb społeczności, które wiedzę taką tworzą i kultytują, jak i dla szeroko pojmowanego dobra ogólna. artykuł obejmuje analizę międzynarodowych regulacji prawnych poświęconych problematyce ochrony tradycyjnej wiedzy, ze szczególnym uwzględnieniem wiedzy związanej z zasobami genetycznymi, a także prac prawotwórczych w tej dziedzinie. Rozważania dotyczą kwestii kształtowania się siatki pojęciowej takich norm prawa oraz fundamentów ochrony prawnej tradycyjnej wiedzy, zwłaszcza argumentacji dotyczącej potrzeby takiej ochrony. Przedstawiono też podstawowe rodzaje praw własności intelektualnej, które mogą stanowić podstawę ochrony prawnej tradycyjnej wiedzy.

**Słowa kluczowe:** tradycyjna wiedza; zasoby genetyczne roślin; prawa własności intelektualnej; ochrona prawna odmian roślin