

A New Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge

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Among the most contentious practices within a globalized and corporatized economy is allegations of so-called 'biopiracy'. This refers to the taking of genetic resources and associated traditional knowledge without either free, prior and informed consent or any mechanisms for benefit-sharing with the community that provided the resource. Attempts to revise the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights) to bring it more in compliance with the Convention on Biological Diversity (CBD) have not led to concrete results. The article analyzes CBD provisions, binding protocols and non-binding guiding documents, and two less known treaties of the United Nations. The World Intellectual Property Organization (WIPO), that joined the United Nations in 1974, has – after negotiating for almost 15 years – adopted the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge. The article demonstrates how this WIPO Treaty is embedded in the 'defensive strategy' of traditional knowledge protection, enabling patent examiners to reject a patent as the alleged invention does not represent new and applicable knowledge. The alternative, termed 'positive strategy', is witnessed primarily in India's Plant Variety and Farmers' Rights Act, which has resulted in more grants of certificates for so-called 'farmers' varieties' compared to all other varieties together. Other United Nations treaties include elements of such protection, but not on the level of specify and subsequent implementation as found in India. The negotiations of what became the WIPO Treaty has generated increased awareness of indigenous peoples' traditional knowledge and should be easy to ratify as it aligns with existing legislation.

Keywords: India's Plant Variety and Farmers' Rights Act, traditional knowledge, TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights), WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge

Introduction

Several stories have been told about how Western people and corporations have exploited traditional knowledge in Africa, Asia and South America to obtain

patents and other forms of intellectual property (IP) protection in Western states. Three parallel developments are of crucial importance to understanding this.

First, patent offices started to grant patents on biotechnological inventions from the 1980s, applying the standard requirements of novelty, inventive step and industrial applicability, often without adequate attention to co-called «prior art».

Second, the mandate for starting new negotiations within then GATT, the so-called Uruguay Round, ended with the coming into being of the World Trade Organization (WTO) and its Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement; Annex 1C to the Agreement establishing the WTO) in 1994, which entered into force in 1995. Its Article 27.1 reads (extract): “patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application”.

Third, a less known intellectual property system being included in article 27.3(b) of TRIPS is the so-called plant breeders’ rights or plant varieties protection – a variety defined as a taxonomic rank below that of species. It is relevant that this protection system, applying the criteria of distinct, uniform, and stable (DUS), in addition to novelty, was developed as the patent system was found not to be suitable for organisms with the ability to reproduce. This system, known for its French acronym UPOV (International Convention for the Protection of New Varieties of Plants) has undergone revisions, and the last Act of the UPOV Convention (UPOV, 1991) is more ‘patent’-like than the earlier Acts; it specifies in Article 37 that earlier Acts will be closed for accession for states wanting to join UPOV.

Following these developments in the 1990s, the last three decades have seen increased recognition of indigenous peoples’ traditional knowledge applying to genetic resources. Traditional knowledge can be studied from an environmental perspective, emphasizing the relationship between traditional *ecological* knowledge and the maintenance of distinct cultures. This holistic approach is less controversial as compared to the focus of this article, discussing traditional knowledge in the context of IP protection. The article will not, however, discuss traditional knowledge in the context of geographical indications (Haugen, forthcoming), specified in Article 22.1 of the TRIPS Agreement as “indications to identify a good ... where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin.”

This article starts with explaining the global patent system, before providing two opposing rationales of protection of indigenous peoples’ traditional knowledge. Then the article identifies legislative amendments in four states: the USA, South Africa, Norway, and India, followed by relevant provisions of the Convention on Biological Diversity (CBD), including relevant binding protocols and non-binding guidelines adopted by the Conference of the Parties (CoP) to the CBD. International – not regional (Haugen, forthcoming) – treaties’ recognition of traditional knowledge is outlined. This is followed by a brief review of seven recently adopted EU instruments: regulations and directives, as well as three free-trade treaties involving Canada, generally known for strong policies for indigenous peoples.¹ Then, the 2024 Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (WIPO [World Intellectual Property Organization Treaty], 2024) is analyzed. Finally, the concluding discussion summarizes traditional knowledge on genetic resources.

The research question reads: *Acknowledging the efforts for recognition of traditional knowledge since the 1992 Convention on Biological Diversity, what has been achieved on national, EU, and international levels; and what is the core of the first global treaty on traditional knowledge, adopted in 2024?*

Methods applied include identifying and explaining the most relevant provisions from the most specific national laws, EU instruments, selected free trade agreements, and global treaties in a manner that is comprehensive for non-lawyers. The article will identify the important linking of traditional knowledge and cultural rights of indigenous peoples and local communities. The term ‘traditional knowledge’ has a wider scope than the term ‘indigenous knowledge’ by also including non-indigenous communities. Moreover, the term ‘traditional’ must be understood to refer to the *societal context* where new knowledge emerges; it must not be read as to imply that the knowledge cannot be new or innovative.

The article will not include discussions on relevant binding instruments adopted by UNESCO (UN Educational, Scientific and Cultural Organization), most notably the 2005 Convention on the Protection and the Promotion of the Diversity of Cultural Expressions – whose preamble reads: “Recognizing the importance of intellectual property rights in sustaining those involved in cultural creativity” – and the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage, that clarifies its relationships to treaties on IP and on biological and ecological resources in Article 3.2. Moreover, the article will not discuss traditional cultural expressions, which are subject to ongoing negotiations in WIPO’s Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (WIPO Secretariat, 2024).

The global patent system

Patent protection can be traced back to the Venetian Patent Statute of 1474, when ‘ingenious contrivance’ was given 10 years’ protection, specified as “being forbidden to any other in any territory and place of ours to make any other contrivance in the form and resemblance thereof, without the consent and license of the author...”.

Patents have an overall rationale of providing certainty for inventors, to develop the invention into a marketable product. Hence, the first period leading up to publishing the invention by the patent application – the Latin term *pateō* means ‘open’, ‘accessible’ – is followed by a period of testing, approvals and preparation for commercialization. A patent holder can sell a granted patent to others, who might be better positioned to develop the invention into a marketable product. In addition to the patent application fees, there are annual fees to uphold the patent, which is valid for 20 years from the date the patent application was filed, that is, received by the patent office.

Except for regional patent systems – which allow for patents to apply in all member states – a patent is valid in one country. WIPO’s Patent Cooperation Treaty (PCT, WIPO (2001[1970])) permits the patent applicant to file a patent application in several countries, obtaining early priority dates, but the application is assessed independently in each of these countries. Hence, there is no ‘world patent’. The proposed Substantive Patent Law Treaty was launched in 2000 and brought to an end by WIPO’s Standing Committee on the Law of Patents (SCP) in 2006.

However, the entry into force of the TRIPS Agreement in 1995 standardized patent systems. Several states did not have process patents in 1995, and some states exempted patents on pharmaceutical products. The Least-Developed WTO member states are not obliged to comply with the substantive parts of the TRIPS Agreement until 2034 (Council on TRIPS, 2021, paragraph 1; three TRIPS provisions apply for all WTO states: Article 3 [National Treatment], Article 4 [Most-Favoured-Nation Treatment], and Article 5 [WIPO Agreements]).

Two other provisions of the TRIPS Agreement are relevant for the purpose of this analysis. First, Article 27.3(b) specifies what can be excluded from patentability, specifically “plants and animals ... and essentially biological processes for the production of plants or animals”. It ends with the wording: “The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement”. As the four years came and passed there was disagreement between most developing states and most developed states on whether the wording allowed for a substantive revision of the provision or whether it only allowed for a review of domestic implementation. The 2001 WTO Ministerial Declaration, that launched the so-called ‘Doha Development Round’, instructed the Council on TRIPS “to examine, inter alia, the relationship between the TRIPS Agreement and the [CBD], the protection of traditional knowledge and folklore, and other relevant new developments...” (WTO 2001, paragraph 19). Hence, traditional knowledge was now formally on the WTO agenda.

Second, Article 29.1 (Conditions on Patent Applicants) reads (extract): “Members shall require that an applicant for a patent shall disclose the invention in a manner sufficiently clear and complete ...”. Article 29, being about disclosure of information related to the invention, was proposed to be amended by Norway (2006; Article 4.1(c)): “If the applicant is unable or refuses to give information despite having had an opportunity to do so, the application should not be allowed to proceed”. The wording “not ... allowed to proceed” differs substantively from the revised Norwegian Patent Act (see below). One year later, Norway (2007, p. 4) clarified: “If the [patent] applicant is unable to provide this information for reasons beyond his control, Norway’s proposal provides for the application to proceed, and the sanction would not apply”.

Subsequent Ministerial Conferences referred to a “strong commitment ... to advance negotiations on the remaining Doha issues...”, including TRIPS (WTO, 2015, paragraph 31); ‘advance negotiations’ was specified also in 2017 (WTO Chairperson for the eleventh session of the Ministerial Conference, 2017, p. 2). India (2017), being the Chair of the Ministerial Conference, did also propose two different wordings on CBD-TRIPS relationships, both on “legally binding outcome by the twelfth ministerial conference...”. This conference was delayed until 2022, and vaccines for Covid-19 was the dominant TRIPS topic (Haugen, 2023; 2021), sidelining other topics.

Two rationales of protecting indigenous peoples’ traditional knowledge

Two positions exist regarding intellectual property (IP) and traditional knowledge: First, to enable patent examiners to reject patent applications based on lack of novelty of patents, as they become aware of applicable traditional knowledge associated with genetic resources. Hence, the inventions described in the patent claims are not new, as the knowledge is already in use. WIPO (2024) applies this

‘defensive strategy’. Patent examiners must use databases or digital libraries listing traditional knowledge associated with genetic resources as specified by the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) Article 18.16.3(c) (via Australia, 2023), to avoid ‘biopiracy’ (Amusan, 2017). A similar approach can be applied to the ‘originality’ of cultural expressions.

A problem with this approach is that all traditional knowledge must be made public, even what is understood as sacred knowledge. How a patent examiner should relate to this knowledge cannot be answered generally. The indigenous peoples are interested in public recognition of their traditional knowledge and cultural heritage, but not to reveal any sacred or otherwise well-kept knowledge.

The second approach is a legal recognition of indigenous peoples’ or local communities’ intellectual and creative efforts; termed ‘positive strategy’ (Haugen, 2012, 101-123; 2005). One inter-governmental text that was intended to inspire legislation is the (now) African Union (2000) Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources (AU Model Law). Article 23 is titled “Recognition of Community Intellectual Rights”, reading in Article 23(3): “Non-registration of any community innovations, practices, knowledge or technologies, is not to mean that these are not protected by Community Intellectual Rights”. The term ‘Community Intellectual Rights’ is not found in any other international instrument. With the exception of Ethiopia (2006), particularly Section 10 titled ‘Protection of Community Rights’, the AU Model Law has not directly inspired any African states’ legislation; rather they have chosen high standards of IP protection, particularly for plant varieties (Haugen, 2015).

Moreover, Article 25(2) of the AU Model Law, “Application of the Law on Farmers’ Varieties”, reads (extract): “A variety with specific attributes identified by a community shall be granted intellectual protection through a variety certificate which does not have to meet the criteria of [DUS]”. The DUS criteria are commonly applied in legislation on plant varieties. However, the TRIPS Agreement Article 27.3(b) specifies that states “shall provide for the protection of plant varieties...” and this can be done by “an effective *sui generis* system...”. The meaning of *sui generis* is ‘of its own kind’, which gives flexibility. One state that has applied this flexibility is India, as will be addressed below.

Amending patent and plant breeders’ rights legislation in four states: the USA, South Africa, Norway, and India

Patents have been granted without recognition of the fact that the alleged new knowledge that is expressed in the patent application represents widely shared traditional knowledge. Most often, these patents have been revoked,² some after more than a decade. It is relevant that the *previous* wording of the U.S. Patent Act required that the applicable knowledge originating from outside the U.S. had to be *published* to defeat the patent criteria of novelty.³

Sometimes this traditional knowledge has been held by indigenous peoples⁴ – one example being the appetite-curbing effect by the chewing of hoodia/xhoba, a cactus-type plant from the Kalahari Desert, subject to research by the South African Council for Scientific and Industrial Research (CSIR) (Amusan, 2017; Mukua, 2010, p. 56-65; WIPO [World Intellectual Property Organization] Secretariat 2010; Wynberg, 2004). The research led to the identification of a molecule, more

specifically oxypregnane steroidal glycoside, termed P57, and the subsequent patent was sold to UK Phytopharm, which in turn sold it to Unilever. Payment from CSIR to the San in the respective countries was done via the San Hoodia Benefit Sharing Trust, but a commercial product has so far not been developed.

It is relevant that the South African Biodiversity Act of 2003 specifies procedural requirements to be undertaken before the actual bioprospecting takes place. Moreover, the South African Patents Amendment Act of 2005 – which added Section 3A to Section 30 of the 1978 Patent Act – specifies that a patent applicant:

shall, before acceptance of the application, lodge with the registrar a statement in the prescribed manner stating whether or not the invention for which protection is claimed is based on or derived from an indigenous biological resource, genetic resource, or traditional knowledge or use.

We see that this is a ‘shall’ requirement, but it does not specify any consequences for non-compliance. Neither is this specified in the 2019 Protection, Promotion, Development and Management of Indigenous Knowledge Act, which builds on a ‘positive strategy’.

Another example of an early legislation is the revision of the Norwegian Patent Act to include Section 8b, adopted in 2003:

If an invention concerns or uses biological material or traditional knowledge, the patent application shall include information on the country from which the inventor collected or received the material or the knowledge (the providing country). If it follows from the national law in the providing country that access to biological material or use of traditional knowledge shall be subject to prior consent, the application shall state whether such consent has been obtained. [...] Breach of the duty to disclose information is subject to penalty in accordance with the General Civil Penal Code § 221 [False statement; prison term not exceeding 2 years]. The duty to disclose information is without prejudice to the processing of patent applications or the validity of rights arising from granted patents.

We see that the term ‘shall’ is applied, and the term applied is ‘prior consent’. A more common wording is ‘free, prior and informed consent’ (FPIC), implying that full information is to be provided and no manipulation exercised. Moreover, Section 8b includes paragraphs on specifying providing country *and* country of origin – if these differ – and on including a so-called ‘material transfer agreement’ with the patent application. Unlike the South African provision, this provision says that false statement shall be liable to criminal proceedings, but there is so far no example of this. The patent application shall not be subject to different treatment than other applications, unlike the content of Norway’s proposals for a new provision in TRIPS (Norway, 2006; 2007).

Norway’s legal measures for implementing the Nagoya Protocol (see below) took ten years (Norwegian Ministry for Environment, 2012; for a criticism, see Norwegian Biotechnology Advisory Board, 2013; Norwegian Ministry for Trade, Industry and Fisheries, 2017; Norway, 2022). The regulation applies to research and commercial exploitation, and it emphasizes the providing of information. Section 3 specifies the duty to provide a declaration on origin in order to be entitled to legal utilization of genetic resources. If the origin is not known, information on

subsequent users of the material or knowledge is to be provided (Section 2(b)(iii)). There is no reference to IP in the Norwegian 2022 regulation.

Turning to plant variety protection, one state stands out: India. First, its 2001 Plant Variety and Farmers' Rights Act (PVFRA; India, 2001) recognizes farmers' varieties on an equal level as plant varieties (see Sections 39-46; the DUV criteria are specified in Article 15). Second, farmers' varieties certificates constitute more than half of the certificates issued by the India Protection of Plant Varieties and Farmers' Rights Authority (2024; the register has restricted access from 2025). It is relevant that India's PVFRA has never been subject to criticism when India has been subject to regular examination by the WTO's Trade Policy Review Board or Council on TRIPS.

Convention on Biological Diversity, Protocols, and Guidelines

CBD is the first recognition of traditional knowledge in an internationally binding treaty. Two provisions of the CBD, which entered into force in 1993, are relevant. First, Article 8(j) reads (extract): "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity...". Article 8(j) of the CBD starts, however, with: "Subject to its national legislation...", implying that such measures are at the discretion of each state. The latter part of the provision is on equitable benefit-sharing "arising from the utilization of such knowledge, innovations and practices". It does not specify that indigenous and local communities are to be prioritized in benefit-sharing, even if the knowledge and innovations are theirs. As specified by CBD Article 3: "States have ... the sovereign right to exploit their own resources...".

Second, Article 10(c) reads (extract): "Each Contracting Party shall, as far as possible and as appropriate ... [p]rotect and encourage customary use of biological resources in accordance with traditional cultural practices...". The term 'protect' can be seen as somewhat stronger than the terms 'respect, preserve and maintain' in CBD Article 8(j). Here we also find an introduction to the operative provision that actually leaves much discretion with the state ('as appropriate').

If there was uncertainty on benefit-sharing with indigenous and local communities in the CBD, this is clearer in Article 5(2) of the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Nagoya Protocol, entered into force 2014). This provision does, however, include the formulations 'as appropriate' and 'in accordance with domestic legislation', which weaken its applicability. Traditional knowledge is explicitly recognized in Articles 7 and 12; both with the formulation "in accordance with domestic law...". The Nagoya Protocol has only one reference to indigenous *peoples* – when referring to the 2007 UN Declaration on the Rights of Indigenous Peoples (UN, 2007) in the preamble – and the substantive provisions refer to 'indigenous and local communities'. Another major shift from the CBD is represented by the two conditions 'prior informed consent' and 'mutually agreed terms' (MTA), which are applied no less than 20 and 25 times, respectively, in the Nagoya Protocol. One MTA provision refers to IP: Article 6(3)(g)(ii). Moreover, 'joint ownership' of IP is included as one example in Nagoya Protocol's Annex on monetary and non-monetary benefits.

Two other protocols to the CBD are relevant. First, the 2000 Cartagena Protocol on Biosafety (Cartagena Protocol), which entered into force in 2003. Its objectives are the safe transfer, handling and use of living modified organisms (LMOs; see Cartagena Protocol Article 3(g)), being genetically modified organisms with the ability to reproduce. Neither IP nor traditional knowledge is addressed in the Cartagena Protocol.

Second, the 2010 Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety (hereafter: Supplementary Protocol). The mandate to start negotiations of the Supplementary Protocol is given in Article 27 of the Cartagena Protocol. The Supplementary Protocol applies to “damage resulting from living modified organisms which find their origin in a transboundary movement” (Article 3(1)). We see that the term is ‘organisms’. As the Supplementary Protocol is mandated by the Cartagena Protocol, the term ‘organisms’ must be understood as LMO. No provisions of the Supplementary Protocol refer to IP or traditional knowledge.

Finally, six non-binding documents adopted by the CBD-CoP are relevant.⁵ For each, it will be specified how they address IP and traditional knowledge.

First, the Kunming-Montreal Global Biodiversity Framework (CBD-CoP, 2022) includes traditional knowledge in 2050 objective C and 2030 targets 13, 21, and 22.

Second, the Rutzolijirisaxik Voluntary Guidelines for the Repatriation of Traditional Knowledge; it specifies respecting the rights of the original holder of traditional knowledge (CBD-CoP, 2018, Annex, paragraph 17(l); see also paragraph 39).

Third, the Mo’otz Kuxta Voluntary Guidelines on FPIC for accessing indigenous peoples and local communities’ knowledge, innovations and practices, and fair and equitable sharing of benefits (the full title is longer; CBD-CoP, 2016, Annex). Paragraph 5 specifies that: “These guidelines do not apply to traditional knowledge associated with genetic resources under the Nagoya Protocol”. While the term ‘rights’ does not appear in the specific context of traditional knowledge, paragraph 10 refers to customary laws, community protocols, practices and customary decision-making processes relating to traditional knowledge; these are further specified under the heading ‘procedural considerations’.

Fourth, Chennai Guidance for the Integration of Biodiversity and Poverty Eradication (CBD-CoP, 2014, Annex); emphasizing traditional knowledge in the context of minimizing adverse impacts and facilitating participation (paragraph 2(d)(iii)); capacity-building (paragraph 3.A(c)(i)); and an enabling environment (paragraph 3.B(b)).

Fifth, the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (CBD-CoP, 2004a, Annex II); traditional knowledge is specified under practical principle 4 on adaptive management and practical principle 6 on interdisciplinary research.

Sixth, the Akwé: Kon Voluntary Guidelines for the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities (Akwé: Kon; CBD-CoP, 2004b, F, Annex). There are numerous references to traditional knowledge, one standing out by specifying indigenous peoples as ‘owners’: “customary laws and intellectual property rights of the indigenous and local communities with respect to their traditional knowledge, innovations and

practices, should be respected” (CBD-CoP, 2004b, F, Annex, para 60). We see that it refers explicitly to indigenous peoples’ IP; with the wording ‘should be respected’.

One other document from the same decision must be noted, namely Development of elements of sui generis systems for the protection of traditional knowledge, innovations and practices (CBD-CoP, 2004, H, Annex), paragraph 6, specifying that what is to be considered includes: “Rights of traditional knowledge holders and conditions for the grant of rights”. This must be understood in the context of WIPO’s efforts on traditional knowledge.

We see that the non-binding guidance documents are specifying CBD paragraphs 8(j) and 10(c); the most explicit provision are from 2004, paragraph 60 of Akwé: Kon and paragraph 6 of the proposal on a sui generis system (CBD-CoP, 2004, F & H).

Other international treaties’ recognition of traditional knowledge

The strongest wording on traditional knowledge in a binding global treaty is found in the 1994 United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD, entered into force 1996). This treaty has 197 parties, including the European Union (EU). It applies wording such as ‘according to their respective capabilities’ and ‘subject to their respective national legislation and/or policies’, wording which differs from the CBD, Nagoya Protocol and International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA, entered into force 2004). Moreover, the formulation ‘traditional and local knowledge’ is applied.

The most interesting provisions for the purpose of this article are found in Section 2, titled ‘Scientific and technical cooperation’. Article 16(g) calls on states to ensure “adequate protection for [local and traditional knowledge]...”. Article 17(1)(c) says that states “shall support research activities that ... protect, integrate, enhance and validate traditional and local knowledge...”, and the wording ‘states shall’ is also applied in Article 18(2), specifying that states have to “protect, promote and use traditional and local knowledge...”.

Moreover, the term ‘benefit’ appears in the same three provisions: “providing appropriate return from the benefits...” (Article 16(g)); “ensuring ... that the owners of that knowledge will directly benefit on an equitable basis and on mutually agreed terms from any commercial utilization...” (Article 17(1)(c)); and “ensure that local populations benefit directly, on an equitable basis and as mutually agreed, from any commercial utilization of them or from any technological development derived therefrom” (Article 18(2)(b)). Finally, Article 16(g) and 18(2)(b) specify beneficiaries to be ‘local populations’; and Article 17(1)(c) specifies them as “owners of that knowledge...”. The term ‘owners’ in the context of knowledge gives connotations to IP rights, but this is not specified.

The UNCCD has a Committee on Science and Technology. A review of its decisions does not find that they bring clarity or implementation guidance for traditional knowledge.⁶

We have seen that India’s PVFRA demonstrates that farmers can enjoy positive protection, and this is also recognized in a UN Food and Agricultural Organization (FAO) treaty. As a background, during the 1980s there was an increased recognition that the IP protection system was biased in favor of commercial breeding companies, to the detriment of farmers. This culminated at the 1989 FAO

Conference, which adopted two resolutions: one in which states “recognize the enormous contribution that farmers of all regions have made to the conservation and development of plant genetic resources...”, and one affirming that the “majority of these plant genetic resources come from developing countries, the contribution of whose farmers has not been sufficiently recognized or rewarded” (FAO 1989a, Section V.E., para 108). The terms ‘development’, ‘recognized’ and ‘rewarded’ are too vague to imply some form of IP recognition, and the operationalization of the term ‘farmers’ rights’ – being the title of the second resolution – did not include IP-related aspects. The mandate to negotiate a treaty was given by the UN Conference that adopted the CBD (UN, 1992).

The 2001 ITPGRFA recognizes farmers’ rights. After recognizing “the enormous contribution that the local and indigenous communities and farmers ... have made and will continue to make for the conservation and development of plant genetic resources”, four rights are outlined in Article 9(2)-(3); on decision-making, benefit-sharing, protection of traditional knowledge, and continuing to exchange and sell farm-saved seeds; these provisions include formulations on ‘subject to national law’ and ‘as appropriate’. Several other provisions of the ITPGRFA outline particularly benefit-sharing in greater detail, and when the Benefit-sharing Fund was established in 2009, a target of collecting and distributing US\$ 116 million by 2014 was set (ITPGRFA Governing Body, 2009, paragraph 4). This target was not reached, but as of 2025, more than 100 projects have received funding (ITPGRFA Secretariat, undated). Farming communities are the recipients of these funds. More comprehensive monetary – or any other form of – benefit-sharing with indigenous peoples and local communities is regulated by national legislation.

The content of ITPGRFA Article 9 is brought further in a non-binding UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDRIP; UN, 2019, Article 19). Moreover, Article 26(3) specifies:

States shall ... recognize and protect the rights of peasants and other people working in rural areas relating to their traditional knowledge and eliminate discrimination against the traditional knowledge, practices and technologies of peasants and other people working in rural areas.

Particularly the ‘eliminate discrimination’ specification must be noted; the UN Human Rights Council (2023) has established a Working Group on the rights of peasants and other people working in rural areas.

In summary, none of these international instruments specify an IP protection *system* for traditional knowledge but nevertheless they endorse positive protection of such traditional knowledge. They also emphasize respecting existing IP rights (CBD Article 16; ITPGRFA Article 13.2(b)(iii); UNCCD Article 18(1)). As regards the sharing of benefits potentially arising from the utilization of this traditional knowledge, it seems increasingly difficult to fulfill earlier expectations that traditional knowledge applying to genetic resources will result in substantive payments by corporations entering into benefit-sharing agreements with indigenous peoples and local communities.

Free-trade agreements involving Canada, and recent EU instruments

Traditional knowledge is outlined in detail in *one* (of three) large regional trade agreements:⁷ the 2018 CPTPP,⁸ which incorporates the 2016 Trans-Pacific Partnership (TPP) after the U.S. withdrew from the TPP. Its Article 18.16.3 refers to traditional knowledge in four subparagraphs on ‘quality patent examination’, but the provision is weakened by the term ‘may’ in its introductory part.

The Canada-United States-Mexico Agreement (CUSMA), which entered into force 1 July 2020, reads in Article 32.5 (extract): “...this Agreement does not preclude a Party from adopting or maintaining a measure it deems necessary to fulfill its legal obligations to indigenous peoples.”

Parallel to a strengthened emphasis on corporate social responsibility (CSR), recently termed ‘corporate sustainability’,⁹ the strongest regional economic union of states, the EU, has the strongest mechanisms to ensure compliance with its standards. Therefore, it is relevant to review recent (2022-2024) EU directives and regulations on corporate sustainability to identify whether they specify traditional knowledge associated with genetic resources and benefit-sharing.¹⁰ The review included seven directives and regulations – one approved by the European Parliament (2024) and analyzed by the European Food Safety Authority (2025) – on corporate conduct in relation to utilization of natural resources (EU, 2024a; 2024b; 2023a, 2023b; 2023c; 2022). Only *one* refers to traditional knowledge – not in a substantive provision: the Deforestation Regulation (EU, 2023b, recital 57).¹¹ As regards benefit-sharing, this is included in one regulation: the Delegated Regulation on European Sustainability Reporting Standards (ESRS; EU, 2023a, 146 & 148). Substantive amendments to EU CSR instruments were announced by the co-called Omnibus I (European Commission, 2025). The unique contributions by indigenous peoples and local communities are inadequately recognized in EU standards.

WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge

The mandate to start negotiations on international instrument(s) was given by the WIPO General Assembly (WIPO, 2009, paragraph 217). The eight years preceding this was guided by the mandate given in 2000, on ‘discussions’ (WIPO Secretariat 2000a, paragraph 13; see also WIPO 2000, paragraph 71).

The 2024 Treaty has two objectives, both applying to genetic resources and traditional knowledge associated with genetic resources: (i) to enhance the efficacy, transparency and quality of the patent system; and (ii) prevent patents from being granted erroneously for inventions that are not novel or inventive. It also specifies that domestic legislation on the disclosure of genetic resources and traditional knowledge associated with genetic resources must be complied with when registering a patent application in accordance with the PCT (WIPO, 2001[1970]). Hence, the WIPO Treaty expresses a ‘defensive strategy’.

Article 3.2 is the most specific provision of the 2024 Treaty, specifying that applicants *shall* disclose either “the Indigenous Peoples or local community ... who provided the traditional knowledge associated with genetic resources” or the “source of the traditional knowledge associated with genetic resources”. Article 3.1 requires that also the country of origin is to be given in the patent application, and if the patent applicant knows neither of these, Article 3.3 on giving a ‘declaration’ applies.

Article 5 is a rather comprehensive provision on sanctions and remedies, referring to failure to provide information in accordance with Article 3. It applies the formulations ‘legal, administrative, and/or policy measures’ (5.1); ‘opportunity to rectify a failure’ (5.2); which does not apply for ‘fraudulent conduct or intent’ (5.2*bis*). Moreover, whereas states cannot “revoke, invalidate, or render unenforceable the conferred patent rights” (5.3) resulting from such failure, they can “provide for post grant sanctions or remedies where there has been fraudulent intent” (5.4). Hence, we see that the term ‘penal’ is not applied, and ‘national law’ is referred to twice (5.2*bis* and 5.4). This enables a large variety of national legal and administrative measures.

Even more interesting is Article 8 on Review; it comes in addition to Article 14 on revision, and Article 8 reads in full:

The Contracting Parties commit to a review of the scope and contents of this Treaty, addressing issues such as the possible extension of the disclosure requirement in Article 3 to other areas of intellectual property and to derivatives and addressing other issues arising from new and emerging technologies that are relevant for the application of this Treaty, four years after the entry into force of this Treaty.

Several aspects of this provision are interesting. First, the term ‘review’ gives connotations to seemingly limited measures, but the term ‘contents’ and formulation “possible extension ... to other areas of intellectual property” might actually require a revision, in accordance with Article 14. Second, the term ‘derivatives’ is not defined; within IP it is a term that is applied in the context of copyright law,¹² and plant variety law,¹³ not patent law. Third, ‘new and emerging technologies’ is a wide term. It is not obvious what it refers to, but it can encompass both so-called CRISPR (Clustered Regularly Interspaced Short Palendromic Repeats, ‘gene editing’) technology and generative artificial intelligence.

The WIPO Treaty will create higher awareness about traditional knowledge and the importance of including indigenous peoples and local communities in decision-making. Their participation in decision-making is most specified in Article 10.1(c) on the modalities of the Assembly of the WIPO Treaty. In accordance with Article 10.4 it is scheduled to meet during the same period and at the same place as WIPO’s General Assembly.

Concluding discussion

The efforts to implement the CBD have resulted in binding protocols and non-binding guidance documents on traditional knowledge for indigenous peoples and local communities. These include what has been termed positive strategy (CBD-CoP, 2004) and defensive strategy (CBD-CoP, 2018). There can be no doubt that the CBD-CoP is instrumental in gaining enhanced knowledge of traditional knowledge. Even if the Nagoya Protocol has stronger wording than the CBD, the Nagoya Protocol’s strong ‘deference formulations’ implies that states choose their legislation. With Norway as an example, we see that domestic processes to enact legislation or regulations to implement the Nagoya Protocol take time.

UNCCD includes relatively strong wording on traditional knowledge and on benefit-sharing but has no subsequent decision specifying further measures, legal or non-legal.

As the WIPO Treaty specifies measures within a defensive strategy, it includes no provisions on benefit-sharing. Its most important provision is Article 3 on information to be provided together with the patent application. We saw above that the 2003 amendment to the Norwegian Patent Act – as Section 8b, first part – specifies that the patent applicant “shall include information” and shall also include ‘consent’ if domestic law so requires. Neither Section 8b nor the Norwegian Regulation to implement the Nagoya Protocol (Norway, 2022; Section 2.b.3 refers to ‘source’) explicitly refer to indigenous peoples or local communities. There are, however, two reasons for why indigenous peoples and local communities should be seen as implicitly recognized by this provision. First, indigenous peoples and local communities’ consent is specified by the Nagoya Protocol Article 6.2, 6.3(f), 7, 16.1 and 17.4(e). Second, any actor bringing genetic material to Norway must comply with domestic law in the relevant state. This legislation might specify consent by indigenous peoples or local communities.

Norwegian Patent Act Section 8b, second part specifies (extract): “If the information according to this subsection is not known, the applicant must state this”. This wording is similar to WIPO Treaty Article 3.3 on giving a ‘declaration’. Hence, it is reasonable to conclude that Norway already in 2003 had legislation that 21 years later can be said to be in conformity with the WIPO Treaty.

Summing up, the recent decades have seen considerably greater awareness of the contributions from and traditional knowledge of indigenous peoples and local communities, including local farming communities. CBD was the first treaty that recognized traditional knowledge held by these communities, but the UNCCD recognized traditional knowledge in more explicit terms. Both emphasize the respect for existing IP rights. Recent EU standards on corporate sustainability do not bring additional clarification but they do specify stronger documentation requirements.

No international treaty provides for a protection system for traditional knowledge applying to genetic resources. However, the Indian PVFRA, originally adopted in 2001 and revised in 2021, stands out by applying a positive strategy. First, its specific wording on farmers’ rights. Second, the number of farmers’ varieties being granted a certificate.

More efforts are required for indigenous peoples’ and local communities’ traditional knowledge base and relationship to what sustains life to be adequately recognized – to facilitate a much-needed transformation when faced with over-exploitation of natural resources.

Notes

¹ Canada is not a party to the International Labour Organization (ILO) Convention 169 on Indigenous Peoples. Canada voted against the UN Declaration on the Rights of Indigenous Peoples (UNDRIP; UN, 2007), together with Australia, New Zealand, and USA. All four later did express support of UNDRIP. Canada’s measures after its Truth and Reconciliation Commission reports do explicitly build on UNDRIP; see Canadian Government, 2023; 2015.

² Examples are turmeric (U.S. patent 5,401,504), enola bean (U.S. patent 5,894,079), and teff flour (European patent EP-B-1 646 287).

³ 35 U.S.C. 102(a) used to read: “A person shall be entitled to a patent unless ... the publication the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country...”. The

new wording – amended in accordance with the 2011 America Invents Act (AIA) – reads: “A person shall be entitled to a patent unless ... the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public...”.

⁴ In other situations, it is more difficult to specify that the knowledge originates from indigenous peoples, even if the Malagassy rosy periwinkle – used as a basis by U.S. Eli Lilly to develop two cancer drugs: vinblastine and vincristine – is described by Reid (2009, p. 89) by the wording “long-established familiarity with its benefits”.

⁵ The non-binding 2002 Bonn Guidelines on access and benefit-sharing are included in and specified by the 2010 binding Nagoya Protocol. The list does not include two Article 8(j) decisions; CBD-CoP, 2024a; 2024b.

⁶ The most comprehensive document is UNCCD Bureaux of the Committee for the Review of the Implementation of the Convention and the Committee on Science and Technology (2013).

⁷ Traditional knowledge is neither included in the 2016 Canada-EU Comprehensive Economic and Trade Agreement (CETA) nor in the Canada-United States-Mexico Agreement (CUSMA); see Canada (2020) for an overview on Canada’s approach as regards trade agreements and indigenous peoples; note that the proposed Transatlantic Trade and Investment Partnership negotiations between the EU and the USA was brought to an end in 2019.

⁸ The easiest access to read the CPTPP and the TPP is Australia (2023).

⁹ 2011 saw the adoption of the UN Guiding Principles on Business and Human Rights (UNGPs; UN Human Rights Council, 2011) and the updating of the OECD (Organization for Economic Cooperation and Development) Guidelines for Multinational Enterprises; subject to another revision in 2023; see OECD (2023).

¹⁰ Regulations require more uniform national implementation (less deference) in comparison with directives.

¹¹ Moreover, ESRS S3 on affected communities reads: “affects or exploits their cultural, intellectual, religious and spiritual property” (EU, 2023a, p. 226); such property can be relevant for expressing traditional knowledge, but this term is not used.

¹² Black’s Law Dictionary (2009) defines derivative as “a work that is taken from, translated from, adapted from, or in some way further develops a previous work”. The most comprehensive document is UNCCD Bureaux of the Committee for the Review of the Implementation of the Convention and the Committee on Science and Technology (2013).

¹³ The term derived variety is found in Article 14 of UPOV 1991 (see also Article 16.1) and ‘act of derivation’ is applied in Article 14.5(b)(iii) of UPOV 1991.

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