



Note

Towards Effective Protection of Traditional Knowledge: Resolving Conflicts between TRIPS and CBD

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Summary

The WTO's agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) remains one of the most important yet controversial agreements on Intellectual Property. Perhaps its most controversial issue is its conflict with the Convention on Biological Diversity (CBD) regarding the protection of traditional knowledge. This note outlines relevant TRIPS issues in relation to traditional knowledge and highlights the need to continue rethinking discussions and agendas on TRIPS so that its benefits are maximized for all countries.

Introduction

The WTO's agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) remains one of the most important yet controversial agreements on Intellectual Property. Important because of its international jurisdiction and enforceability on WTO member states, but controversial, particularly in the context of development, due to the criticism that the agreement does not effectively reflect interests of the developing, and least developed countries (LDCs). This paper discusses one such issue: the lack of protection of traditional knowledge, in the context of TRIPS conflict with the Convention on Biological Diversity (CBD). In doing so, the paper aims to outline issue areas of TRIPS in relation to traditional knowledge and highlights the need to continue rethinking discussions and agendas on TRIPS so that its benefits are maximised for all countries.

The paper begins by first expounding on the value of traditional knowledge and subsequently biodiversity, it then explores the threats to this knowledge. Upon establishing the backdrop of the paper, a discussion on the conflict between Article 27.3(b) of TRIPS and CBD follows. The paper finds that despite CBD's efforts in providing developing countries with a legal basis to prevent biopiracy, TRIPS does not seem to support this legal authority, though the TRIPS Council has made some effort to recognise the need to examine CBD in relation to TRIPS. Next, a discussion on the current status of TRIPS and CBD follows where outcomes of the Doha WTO Ministerial Declaration and the 2008

review of Article 27.3(b) are explored. The paper finds that since 2011, the TRIPS Council has not taken the TRIPS-CBD issue forward and this is problematic for the developing world. Indeed, there is a need for TRIPS and CBD to be harmonised at some level to prevent the misappropriation of traditional knowledge. However, because this issue of harmonisation is a complex one, for now, this brief makes some points to consider moving forward in the discourse on TRIPS and CBD, to facilitate the protection of traditional knowledge.

Understanding the Value of Traditional Knowledge and Biodiversity

According to the World Intellectual Property Organization (WIPO), traditional knowledge is the knowledge, skills, practices and know-hows that are discovered, developed, sustained and passed on within a community from generation to generation.¹ Because of the communal transfer of this knowledge, traditional knowledge often forms part of a community's culture, spiritual or symbolic identity. Traditional knowledge is also greatly relied on for basic human needs by all parts of society. In fact, up to 80% of the world's population depends on products and services derived from traditional knowledge, innovation and practices to meet everyday health and food needs.² However, if traditional knowledge is not protected and instead remains open to exploitation, in the next 100 years, up to 90% of the world's traditional knowledge and cultures

¹ WIPO on Traditional Knowledge, available at: <https://www.wipo.int/tk/en/> (accessed 24 June 2019).

² Research by Kasturi Mukhopadhyaya for UNCTAD cited in Veena Jha, *India and the Doha Work Programme* (2006, UNCTAD and Macmillan) 307.

could disappear.³ These statistics are alarming because traditional knowledge is vital to the sustainable development of the developing world.

Traditional knowledge is often linked to biodiversity — the variety of plant and animal life in the world that are highly important to our existence — as both issues are complementary. The richer a country's biodiversity is, the greater the forms of traditional knowledge. India's rich biodiversity according to the United Nations Development Programme (UNDP), for instance, houses 47,000 plant species amongst which a minimum of 8,000 species are used for medical purposes.⁴ Though indigenous medicine derived from plants may not be as effective as antibiotics, traditional methods of healing are more holistic, and the continued use of indigenous medication is said to not only ensure that diseases are cured but also prevented.⁵ In India, plants like turmeric and neem have been extensively used as a form of *Ayurvedic* medication⁶ and the traditional knowledge obtained in due course has helped modern medication thrive. Like India, Brazil, the country with the world's largest tropical forest and inland wetland is argued to be the world's most biologically diverse country with a rich ecosystem. Many species in Brazil, found in coral reefs, lagoons and dunes are so unique that they are endemic to Brazil and some are on the verge of extinction. Due to its colourful ecosystem, the country is not only rich in organisms that are heavily used in the

pharmaceutical and cosmetics industry for research but also in raw materials such as wood and rubber.

In both India and Brazil, humans' interaction with their ecosystem has developed centuries of traditional knowledge that has greatly contributed to the modern economy, especially for the agriculture and medicines. Considering the wealth of knowledge in both countries, it is also unsurprising that there is a growing demand to commercialise this knowledge. However, it is because of the amount of knowledge and species in these countries that they must be urgently protected to sustain global biodiversity and valuable traditional knowledge.

The Threat to Traditional Knowledge and Biodiversity

The threat to biodiversity and traditional knowledge is only increasing and this threat is directly affecting the developing world and preservation of its tradition knowledge due to two main reasons. Firstly, because IPRs generally confer monopoly power, the appropriation of traditional knowledge on plants and animal variety by foreign companies or non-indigenous people for commercial gains can be potentially made easier by TRIPS.⁷ The idea of granting a creation or an invention a monopoly is argued to be an interventionist instrument of the state designed to encourage economic growth and progress through innovation, reaping socio-economic benefits in

³ Ibid.

⁴ UNDP on India Biodiversity Awards, 2018, available at: <http://www.in.undp.org/content/india/en/home/climate-and-disaster-resilience/successstories/IBA2018.html> (accessed 16 June 2019).

⁵ WNN Editors Team, 'India's ancient indigenous medicine lays path for modern healthcare' (6 June 2013) available

at: <https://womennewsnetwork.net/2013/06/06/indias-indigenous-medicine/> (accessed 16 June 2019).

⁶ Ayurvedic medication is herbal medication historically rooted in and derived from the Indian subcontinent.

⁷ IPRs are notably also granted to research institutions.

the process. In line with this thinking on the role of Intellectual Property Rights (IPRs), TRIPS was devised in the Uruguay Round and then adopted as a multilateral agreement under the World Trade Organisation (WTO).

Amongst the various IPRs discussed in TRIPS, patent protection is perhaps the most controversial because of the potential jurisdiction to patent life forms conferred upon states by Article 27.3(b) of the agreement. Per this article, all biotechnological inventions, such as genetically modified organisms (GMOs) and various plant varieties are patentable provided that they meet the patentability requirement of novelty, non-obviousness, inventive step and industrial application. And because it is well documented that patents enable inventions to be commodified by way of securitising investment,⁸ this article of TRIPS is likely to be in conflict with provisions contained in the CBD, more of which will be discussed later. This monopoly right conferred by TRIPS in turn is held to have increased the already high concentration of economic power of major companies who can then charge high prices on commodities and products, harming consumers and small producers in developing countries.⁹

A key case is that of Turmeric — a tropical herb widely used in India and some South Asian countries for cooking and home remedies. In

1995, the US Patent Office (USPO) awarded patent on turmeric to the University of Mississippi's medical centre. More specifically, the subject matter claimed was the turmeric powder and its administration, both oral as well as topical for its wound healing properties.¹⁰ An exclusive right to sell and distribute turmeric was also granted. The Indian Council for Scientific and Industrial Research (ICSIR) objected to this patent and provided evidence of prior art to the USPO. Though it was initially challenging for the ICSIR to provide documents and credible published information on turmeric powder's use in India for oral and topical route of wound healing, ICSIR ultimately succeeded in its claim. The USPO subsequently revoked the patent, agreeing that turmeric was a form of traditional knowledge that had long been used in Indian communities. Had the ICSIR not spent substantial sums of money to overturn this patent, communities that have long used turmeric may have suffered with an increase in turmeric powder prices.

Similarly, the misappropriation of traditional knowledge and bio-diversity in the form of bio-piracy is increasing. Bio-piracy is the practice of commercially exploiting naturally occurring biochemical or genetic material by obtaining patents that restrict future use of those materials, all the while failing to pay fair compensation to the community from which it originates.¹¹ Here,

⁸ See discussion on patents ability to efficiently facilitate commodification by attracting capital in R.S Crespi, *Patenting in the Biological Sciences* (John Wiley & Sons Ltd 1982); Dan L. Burk, 'Biotechnology and Patent Law: Fitting Innovation to the Procrustean Bed' (1991) 17 Rutgers Computer and Technology Law Journal, 22; Muhammad Zaheer Abbas, 'Pros and Cons of Compulsory Licensing: An Analysis of Arguments' (2013) 3(3) International Journal of Social Science and Humanity, 254.
⁹ Martin Khor, *Intellectual Property, Biodiversity and Sustainable Development* (2002, Third World Network), 4.

¹⁰ See more on the Turmeric Case at: Saipriya Balasubramania, 'India: Traditional Knowledge and Patent Issues: An Overview of Tumeric, Basmati, Neem Cases' (April 2017) Sign and Associates, available at: <http://www.mondaq.com/india/x/586384/Patent/Traditional+Knowledge+And+Patent+Issues+An+Overview+Of+Turmeric+Basmati+Neem+Cases> (accessed 18 June 2019).

¹¹ The Conversation, 'Biopiracy: when indigenous knowledge is patented for profit' (March 8, 2016), available at: <https://theconversation.com/biopiracy-when-indigenous-knowledge-is-patented-for-profit-55589> (accessed 24 June 2019).

it must also be noted that patenting of life forms would probably have happened in the absence of TRIPS. However, because TRIPS has considerably increased the number of countries which have allowed patenting of biological matters and plant varieties, it has been argued that the agreement potentially facilitates biopiracy.¹²

Although bio-piracy, or its more positive connotation, bioprospecting (the process of discovering and commercialising biological matters), may appear to be necessary for innovation and research, the practice severely harms communities that rely on sources of traditional knowledge to survive and function.¹³ It can also be dangerous for farmers, whose businesses are threatened by large corporations that are reportedly hijacking farmer's crops.¹⁴ When companies patent seeds, farmers often have to resort to purchasing these seeds from corporations that can control the seed's production and distribution.¹⁵ And because biopiracy negatively affects farmers, it also greatly affects agriculture-based economies, which almost always happen to be developing countries and LDC.¹⁶ Moreover, since innovation is the crux of IPRs, it is understandable that TRIPS emphasises and imposes strict requirements on states to prove 'inventive step' to acquire a patent. However, during this process of patent registration, the agreement provides no provision on whether or not the community from which the naturally occurring biochemical or genetic material has been derived from was sufficiently

compensated, regardless of who added the inventive step to the product.

Conflicts Between TRIPS and CBD

Due to the growing patentability of biological materials and the loss of biodiversity, in 1992, the CBD was signed under the Earth Summit with the purpose of conserving biodiversity and recognising the value of traditional knowledge and the rights of local communities. The creation of the CBD was thought to oblige countries to have equitable benefits sharing arrangements in terms of IPRs, but as the paper next demonstrates, the CBD, in terms of its jurisdiction appears to be more as a recommendation to countries rather than enforceable obligation. With the aim to conserve and ensure the sustainable use of biological diversity, article 8(j) of the Convention encourages the equitable sharing of the benefits arising from the utilisation of knowledge, innovations and practices derived from indigenous and local communities embodying traditional lifestyles. Furthermore, article 15, whilst emphasising the benefits sharing of genetic resources, recognises the sovereign rights of nations over their natural resources. Article 14(1) also calls on parties to enter into bilateral, regional and multilateral agreements to further the need of a benefits sharing system.

Nevertheless, despite CBD's attempt to provide a legal basis to demand a share of benefits for developing countries, TRIPS does not seem to

¹² Khor (n9), 4.

¹³ Ibid.

¹⁴ See more: Daniel F. Robinson, 'Biopiracy and the Innovations of Indigenous Peoples and Local Communities' (2012) ANU Press.

¹⁵ See: Ruchi Tripathi, 'Implications of TRIPs on Livelihoods of poor farmers in developing countries' (October 2000) Action Aid UK

¹⁶ Ibid.

support this legal authority. The overarching issue here, that has been emphasised by numerous academics and reports is that of legal enforcement or enforcement of multilateral treaties and conventions. The CBD has been argued to be a powerful covenant by organisations like International Centre for Integrated Mountain Development (ICIMOD) because it has been ratified by almost all the countries in the world (193 ratifications).¹⁷ Furthermore, signatories to CBD are obliged to develop national strategies, plans and programs for the conservation and sustainable use of biological diversity.¹⁸ However, the Convention, governed by the United Nations does not have an effective enforcement mechanism and is only applicable to member states that explicitly sign the Convention. In contrast, TRIPS, under the WTO, has a strong enforcement mechanism in the form of the Dispute Settlement Body (DSB). And because the WTO has teeth, when a member state refuses to comply or do not meet their WTO obligations, DSB can authorise retaliatory trade measures by complaining Member/s (popularly known as “sanctions”) to incentivise compliance by her. Therefore, due to CBD’s lack of enforcement power the responsibility to ensure that CBD is taken seriously and is harmonised in some manner with TRIPS rests upon advocacy by developing countries that are worried for the security of their biodiversity and traditional knowledge. This is greatly important especially considering

that the Convention is a process-oriented instrument that does not include specific targets to meet in its objective. Therefore, its success will largely be contingent on the willingness of Contracting Parties to pursue the Convention’s aims and objectives.¹⁹

Resolution of CBD and TRIPS Conflict - Past and Current Status in the WTO

In the 2001 WTO Doha Ministerial Declaration, the issue of the relationship between TRIPS and CBD was addressed and the TRIPS Council was directed by the Ministerial Conference to examine, inter alia, the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the protection of traditional knowledge while pursuing its work programme including the review of Article 27.3(b).²⁰ The Ministerial Conference specifically highlighted that in doing so, the TRIPS Council should be being guided by the objectives and principles set out in Article 7 and 8 of the TRIPS agreement, and must fully take into account the development dimension of this issue and of TRIPS in general.²¹

Accordingly, from 2001 onwards the TRIPS Council undertook this work. In 2002, the US noted that the most effective means for providing access to genetic resource, whilst ensuring that any benefits that may arise from

¹⁷ ICIMOD, ‘Implementation of the Conservation on Biological Diversity’ (June 2011) available at: <https://www.sai.uni-heidelberg.de/sapol/pdf/Implementation.pdf> (accessed 18 June 2019).

¹⁸ Laurence Boisson de Chazournes, ‘Convention on Biological Diversity and its Protocol on Biosafety’ (2009) United Nations, available at: <http://legal.un.org/avl/ha/cpbcbd/cpbcbd.html> (accessed 19 June 2019).

¹⁹ Ibid.

²⁰ Paragraph 19 of the 2001 Doha Declaration, available at: https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm#trips (accessed 18 June 2019).

²¹ Articles 7 and 8 deal with the objective and principle of TRIPS respectively. Both articles emphasise that the protection of IPRs must be met with the aim to promote technological innovation whilst keeping in mind the wider public interest agenda behind the TRIPS Agreement.

their use would be fair and equitable, would be by establishing contracts between those granting access to the resources and those to whom access is granted.²² In 2004, India, Brazil and other developing states submitted to the TRIPS Council a need to create a provision on the disclosure of origins of genetic resources and traditional knowledge.²³ In May 2008, various developing countries that had championed the need to reform TRIPS — Brazil, China, Colombia, Cuba, Dominican Republic, Ecuador, India, Indonesia, Pakistan, Paraguay, Peru, Sri Lanka, South Africa, Tanzania, Thailand and Venezuela — agreed that TRIPS should include a mandatory requirement for the disclosure of origin of biological resources and/or associated traditional knowledge in their patent application.²⁴ Few developed countries including Iceland and Switzerland also supported this reform proposal. In April 2011, the aforementioned countries drafted a decision to enhance mutual supportiveness between TRIPS and CBD. Here, countries called for TRIPS to be amended and for a new article on the ‘Disclosure of Origin of Genetic Resources and/or Associate Traditional Knowledge’ (Article 29bis) to be added.²⁵ This article would require member states to:

“disclose the country providing such resources, that is, the country of origin of such resources or a country that has acquired the genetic resources and/or associated traditional knowledge in accordance with the CBD; and, (ii) the source (including details of whom in the providing country such resources were obtained from) in the country providing the genetic resources

and/or associated traditional knowledge. Members shall also require that applicants provide a copy of an Internationally Recognized Certificate of Compliance (IRCC).”²⁶

In effect, the proposed article could help ensure the conservation of traditional knowledge by acknowledging the source of origin of the biological matters, which would help communities from which the matters have been derived to be compensated. Yet, since the year the disclosure proposal was drafted, the TRIPS Council has not been able to make further progress.

Conclusion

Considering how valuable traditional knowledge is to the sustainability of communities and livelihoods, it is worrying to note that traditional knowledge is often used and appropriated without the prior informed consent of the local communities in developing countries, by those who have the capital, technology, and know-how to commodify the knowledge. The benefits of commodification or research rarely return to the local communities who have long developed and sustained themselves on this traditional knowledge. Similarly, it is equally important to understand that the lack of harmonisation between TRIPs and CBD is problematic for the securitisation of traditional knowledge. Although developing countries may have channelled their energy to propose for TRIPS reform, the interest of developing countries to use traditional knowledge in a sustainable manner, and by

²² TRIPS Article 27.3(b) Review documents available at: https://www.wto.org/english/tratop_e/trips_e/art27_3b_e.htm (accessed 18 June 2019).

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

extension the spirit of the CBD, have not been achieved.

For the time being, it would be important to firstly emphasise that future discussion on TRIPS in the context of development should be addressed with the question: how can a stronger IP regime create greater and most importantly equitable benefits and development for all WTO members? For instance, the possibility of introducing a clear and accessible mechanism for benefits sharing in the TRIPS agreement should be explored and negotiated. Secondly, any and all forms of flexibility and benefits that TRIPS provides to developing countries and LDC should be maximised by developing countries to promote the interest of indigenous communities.

Thirdly, developing countries should cooperate amongst one another and resist the imposition of stricter TRIPS standards on both multilateral and bilateral platforms. In terms of cooperation between developing countries, attention should be given to regional integration for it may help developing countries come together to advocate for TRIPS reform in a more harmonised manner. For instance, for South Asia this can be at the South Asian Association for Regional Cooperation (SAARC) level, and for Africa, at the level of the African Union (AU).



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