

Committee on Trade and Environment

THE CONVENTION ON BIOLOGICAL DIVERSITY AND THE AGREEMENT ON
TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS

Note by the Secretariat

1. The following Note has been prepared by the Secretariat on request by the Committee on Trade and Environment. It is organized in two parts: it presents, first, the provisions of the Convention on Biological Diversity relating to IPR protection and the TRIPS Agreement, and second, provisions of the TRIPS Agreement relating to the Convention on Biological Diversity.

I. THE CONVENTION ON BIOLOGICAL DIVERSITY

A. Introduction

2. The objectives of the Convention on Biological Diversity ("Biodiversity Convention"), stated in Article 1, are: (i) the conservation of biological diversity, (ii) the sustainable use of its components, and (iii) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.¹ The principles of the Convention are that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment" (Article 3).

3. The present Note reviews the main provisions of the Biodiversity Convention which relate, directly or indirectly, to IPR protection and by extension to the TRIPs Agreement.

B. IPR-related provisions of the Biodiversity Convention

4. Intellectual property rights (IPRs) under the Biodiversity Convention have proved to be a sensitive issue in the negotiation of the Convention, and their treatment is still on the agenda of the Parties to the Convention.² The Third Conference of the Parties, which took place in November 1996, recognized in Decision III/17 that "further work is required to help develop a common appreciation of the relationship between intellectual property rights and the relevant provisions of the Agreement on Trade-related Aspects of Intellectual Property Rights and the Convention on Biological Diversity, in particular on issues relating to technology transfer and conservation and sustainable use of biological diversity and the fair and equitable sharing of benefits arising out of the use of genetic resources,

¹For a detailed account of the Biodiversity Convention, see doc. WT/CTE/W/8 (8 June 1995), Section II.

²See doc. WT/CTE/W/8, p. 6-10.

including the protection of knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity".³

(a) Conservation and sustainable use of biological diversity

5. Under Article 10 of the Convention, Parties are required, as far as possible and as appropriate, to "[i]ntegrate consideration of the conservation and sustainable use of biological resources into national decision-making" and to "[a]dopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity".

6. Parties to the Biodiversity Convention have examined the role of IPR protection -both direct and indirect- in the conservation and sustainable use of biological diversity. Views diverge as to whether IPR protection encourages conservation and sustainable use of bio-diversity, for instance by encouraging the development of environmentally friendly new products and technologies, or may represent a threat for biological diversity by favouring monoculture of proprietary crop varieties or the inappropriate use of pesticides.⁴

(b) Sharing benefits from genetic resources

7. Although not explicitly referred to, IPRs are deemed to be relevant for several provisions dealing with the sharing of the benefits resulting from genetic resources.⁵

8. States being recognized sovereign rights over their natural resources, the authorization to determine access to genetic resources rests with national governments and is subject to national legislation (Article 15.1). However, each Party to the Convention shall endeavour to create conditions to facilitate access to genetic resources (Article 15.2). Parties being granted access to genetic resources in accordance with the provisions of Article 15 shall "endeavour to develop and carry out scientific research based on genetic resources provided by other Contracting Parties with the full participation of, and where possible in, such Contracting Parties". The Convention further requires Parties to take appropriate measures "and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms".

9. The last Conference of the Parties has requested the Executive Secretary of the Convention to "cooperate closely with the World Trade Organization through the Committee on Trade and Environment to explore the extent to which there may be linkages between Article 15 and relevant articles of the Agreement on Trade-related Aspects of Intellectual Property Rights".

10. Article 19 addresses handling of biotechnology (including biosafety aspects), access to information and research, and distribution of benefits of biotechnology. Parties must take appropriate measures "to provide for the effective participation in biotechnological research activities by those Contracting Parties, especially developing countries, which provide the genetic resources for such research, and where feasible in such Contracting Parties" (paragraph 1). Parties are further required to "take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting

³The full text of the Decision is reproduced in doc. WT/CTE/W/44.

⁴See for instance doc. UNEP/CBD/COP/3/22.

⁵See for instance Decision III/17 (Intellectual Property Rights), para. 1(b), and doc. UNEP/CBD/COP/3/23.

Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms" (paragraph 2).

(c) Access to and transfer of technology

11. Access to and transfer of technology are seen as playing an important role for the conservation and sustainable use of biological diversity, and to make use of genetic resources.⁶ In addition, technology transfer is linked to access to genetic resources since, pursuant to Article 1, the equitable sharing of the benefits arising out of the utilization of genetic resources includes the "appropriate transfer of relevant technologies". With the exception of biotechnology (Article 19), the Convention does not specify which technologies are relevant to meeting its objectives.

12. Article 16 is the main provision dealing with access to and transfer of technology, and contains various explicit references to IPRs. This provision, which was carefully negotiated, is complex: most of its paragraphs contain cross-references to other paragraphs and/or to other provisions of the Convention. It does not easily lend itself to summary and is therefore quoted *in extenso*:

"1. Each Contracting Party, recognizing that technology includes biotechnology, and that both access to and transfer of technology among Contracting Parties are essential elements for the attainment of the objectives of the Convention, undertakes subject to the provisions of this Article to provide and/or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment.

"2. Access to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism established by Articles 20 and 21. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights. The application of this paragraph shall be consistent with paragraphs 3, 4 and 5 below.

"3. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that Contracting Parties, in particular those that are developing countries, which provide genetic resources are provided access to and transfer of technology which makes use of those resources, on mutually agreed terms, including technology protected by patents and other intellectual property rights, where necessary, through the provisions of Articles 20 and 21 and accordance with international law and consistent with paragraphs 4 and 5 below.

"4. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that the private sector facilitates access to, joint development and transfer of technology referred to in paragraph 1 above for the benefit of both governmental institutions and the private sector of developing countries and in this regard shall abide by the obligations included in paragraphs 1, 2 and 3 above.

⁶See for instance Decision III/16, para. 4, reproduced in doc. WT/CTE/W/44.

"5. The Contracting Parties, recognizing that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives."

13. Decision III/17, adopted at the Third Conference of the Parties notes "the potential mutual benefits of exchanging information related to Article 16 of the Convention on Biological Diversity and the laws and regulations received by the Council on Trade-related Aspects of Intellectual Property Rights pursuant to notification requirement of Article 63 of the Agreement on Trade-Related Aspects of Intellectual Property Rights".⁷

(d) Traditional and indigenous knowledge

14. The Biodiversity Convention emphasises the importance of *in-situ* conservation⁸ and foresees various measures for that purpose (Article 8). Paragraph (j) of Article 8 stipulates that, as far as possible and as appropriate, Parties shall "[s]ubject to [their] national legislation, 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 and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".

15. Underlying this provision is the recognition that indigenous and local communities developed plant and animal species for various purposes, thereby contributing to the world's genetic resources and knowledge of biological resources. Thus, their knowledge is seen as serving two main purposes: it provides scientists with essential information for the subsequent development of products in the agricultural, medicinal and industrial fields, and plays an important role in the conservation of genetic material. The Convention recognizes, therefore, that indigenous and local communities should share in the benefits arising from the use of their knowledge, and should be given incentives to conserve those biological resources. The relationships between IPRs and the implementation of Article 8(j) have been the object of much discussion among Parties to the Convention. The main questions under examination by the Parties to the Convention are whether current IPR systems should be adapted so as to protect and reward traditional and indigenous knowledge, and/or what kind of *sui generis* approaches or alternative systems of protection should be envisaged.⁹

(e) Clearing-house mechanism

16. The clearing-house mechanism was established under Article 18.3 of the Convention in order to promote and facilitate technical and scientific cooperation. The clearing-house mechanism is aimed, in particular, at increasing information exchanges in all areas relevant to the implementation of the Convention, including information relating to IPRs.

⁷See doc. WT/CTE/W/44.

⁸"*In situ* conservation" is defined as the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they developed their distinctive properties. Under the Biodiversity Convention, *in-situ* conservation is complemented by "*ex-situ* conservation", which is defined as the conservation of components of biological diversity outside their natural habitats (Article 9).

⁹See for instance doc. UNEP/CBD/COP/3/19, -3/22 and -3/23. See also Decisions III/14 and III/17, reproduced in doc. WT/CTE/W/44.

(f) Relationship with other international agreements

17. Article 22 of the Biodiversity Convention states that "[t]he provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity". The concept of "serious damage or threat to biological diversity" has not been defined yet.

II. THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS

A. Introduction

18. The TRIPS Agreement covers the main areas of intellectual property: copyrights and related rights, trademarks, geographical indications (including appellation of origin), industrial designs, patents (including the protection of new varieties of plants), layout-designs (topographies) of integrated circuits, and undisclosed information (including trade secrets). The Agreement sets minimum IPR standards and leaves Members free to determine the appropriate method of implementing them in their own legal system and practice (Article 1). Members can implement more extensive IPR protection, as long as it remains compatible with the Agreement.

19. The enforcement provisions of the TRIPS Agreement (Articles 42 to 49) require Members to provide domestic procedures and remedies so that rights holders can effectively enforce their rights; they also aim at ensuring that enforcement procedures are applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide safeguards against their abuse. Article 65 provides developing countries with a grace period, generally of five years, to apply the provisions of the Agreement, and the least-developed countries benefit from a longer grace period, generally of eleven years (Article 66).

20. The main provisions of the TRIPS Agreement which have arisen in discussions of environmental matters, and more particularly of the Biodiversity Convention, are highlighted below.

B. Provisions of the TRIPs Agreement Which are Relevant to Matters Raised in the Biodiversity Convention

(a) Promotion of, access to and transfer of technology¹⁰

21. Two previous Secretariat notes have discussed this matter in some detail (WT/CTE/W/8, paragraphs 49-65 and WT/CTE/W/22). Rather than repeat the full discussion in those documents, this note summarizes the main points. Readers interested in more detail should refer to the earlier documents.

¹⁰The following observations are useful to keep in mind when discussing access to and transfer of technology (see WT/CTE/W/8, para. 56):

- Most technology is in the public domain either because protection was never sought in the first place or because any term of protection granted has expired;
- When technology, whether patented or not, is in the control of a government, that government is of course free to transfer it on concessional terms if it so wished;
- There is nothing in the TRIPS Agreement that would prevent a government or an international financial mechanism from providing financial assistance to enable the voluntary transfer of privately-held technology on concessional terms.

22. In both documents it is stressed that an important aspect to bear in mind is the role of IPRs in promoting the generation of new technology. Technology can only be transferred after it has been created. This function of the TRIPS Agreement is recognized in Article 7, which states that "[t]he protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations".

23. These papers also point out that the public policy rationale for systems of protection for intellectual property lies in striking a balance between the producers and users of technology which provides incentives for the generation of new technology. Where technology is easily copiable, intellectual property protection may mean that users will have to obtain authorization for its use, usually in return for a consideration, when otherwise it could be used freely. However, much technology is not easy to copy and its effective use requires the cooperation of the persons who have developed it. In these situations, the likelihood of such technology being transferred on reasonable terms or being made available at all is greater where adequate intellectual property protection is provided. The reasons for this are set out in paragraphs 20-22 of document WT/CTE/W/22.

24. In addition, it should be recalled that a basic purpose of the patents system is to encourage generators of new technology to make that technology public rather than keep it secret. Hence, the TRIPS Agreement requires applicants for a patent to disclose their inventions. This disclosure requirement, as embodied in Article 29 of the TRIPS Agreement, and the exceptions to patent rights for non-commercial experimental use, as permitted under the "limited exceptions" provisions of Article 30 of the TRIPS Agreement, are designed to maximize the degree to which knowledge of new technology becomes publicly available and can be immediately used as an input into further technological development and, after the expiry of the patent, falls into the public domain. These aspects are discussed in paragraphs 57-59 of document WT/CTE/W/8.

25. Tensions can arise between the objectives of technology innovations and the transfer of technology, in particular where the right holder abuses his rights. With the aim of securing the objectives of Article 7, the TRIPS Agreement contains a number of provisions, in particular on compulsory licensing and control of anti-competitive practices, to establish an appropriate balance between these two objectives, and thus between the interests of producers and users of technological knowledge. These provisions, principally Articles 8, 31 and 40, are discussed in paragraphs 61-65 of document WT/CTE/W/8.

26. It should also be noted that the TRIPS Agreement does not stand in the way of governments providing incentives for the transfer of technology, for example through a mechanism that provides financial assistance. Moreover, Article 66.2 of the TRIPS Agreement requires that "[d]eveloped country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base".

(b) Technology that may adversely affect the environment

27. The TRIPS Agreement does not prevent Members from restricting research and development in, or use of, technology that may adversely affect the environment. For instance, a patent grants its owner the right to prevent others from using the patented invention, but does not guarantee the patent owner the rights to exploit the technology in question.

28. Article 8.1 states that "Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in

sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement”.

29. Article 27.2 enables a Member to exclude from patentability inventions whose use would seriously prejudice the environment. This provision reads as follows: "Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law".¹¹

(c) Patentability of genetic material and life forms

30. The patentability of genetic material and life forms has been controversial. It is directly linked to biotechnology and its possible effects on biodiversity.

31. Article 27.1 establishes the criteria for patentability: to be patentable, an invention must be new, it must involve an inventive step, it must be capable of industrial application. A country can thus refuse a patent for biological or genetic material which has been merely discovered or whose use is already known.

32. Moreover, Article 27.3(b) allows Members to exclude from patentability: "... (b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and micro-biological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement".

33. Article 27.3(b) is the only provision of the TRIPS Agreement explicitly referring to the protection of plant varieties. It stipulates that new plants varieties do not need to be protected by patent, but Members who choose to exclude them from patent protection are required to provide for an "effective *sui generis* system", i.e. an effective special form of protection. *Sui generis* protection gives Members more flexibility to adapt to particular circumstances arising from the technical characteristics of inventions in the field of plant varieties, such as novelty and disclosure. Most countries who have opted for special systems of protection have joined the International Union for the Protection of New Varieties of Plants (UPOV) and apply the minimum standards of protection contained in the International Conventions for the Protection of New Varieties of Plants. However, since the TRIPs Agreement does not specifically refer to the UPOV Conventions, countries have been left greater flexibility in meeting their obligations in this area, than would have been entailed by a specific reference to UPOV.¹²

34. An invention meeting the criteria for patentability and not falling within Article 27.3(b) may still be refused a patent under Article 27.2 if it is offensive to *ordre public* or morality, including to human, animal or plant life or health or to avoid serious prejudice to the environment (see above para. 28).

¹¹Also relevant in this context is Article 39.3 on the protection of undisclosed test or other data submitted in order to obtain marketing approval for pharmaceutical and agricultural products which utilize new chemical entities.

¹²For more details, see doc. WT/CTE/W/8, Annex 1.

(d) Traditional and indigenous knowledge

35. As mentioned above (see above para. 15), traditional and indigenous knowledge serves two main purposes: it provides scientists with essential information for the subsequent development of products in the agricultural, medicinal and industrial fields, and plays an important role in the conservation of genetic material.

36. As to the recognition of the intellectual contribution made by indigenous peoples and communities through their traditional knowledge and practices to the development of new products, the question of new forms of protection was not raised during the TRIPs negotiations.

37. Regarding the role played by these countries and communities in the conservation of genetic resources, the TRIPs Agreement does not address the question of the participation of these countries and communities in the benefits arising from the use of the genetic resources they have conserved. However, nothing in the TRIPs Agreement stands in the way of contractual arrangements between countries and companies seeking to use genetic resources from those countries, public transfers of funds or any other mechanism compatible with its provisions.¹³

(e) Council for TRIPs

38. Under Article 63, Members are required to notify the Council for TRIPs of the laws and regulations pertaining to the availability, scope, acquisition, enforcement and prevention of the abuse of IPRs. This obligation may be waived if consultations with WIPO on the establishment of a common register containing these national measures are successful.

39. Pursuant to Article 68, the TRIPs Council monitors the operation of the Agreement and affords Members the opportunity of consulting on matters relating to the trade-related aspects of intellectual property rights. In carrying out its functions, it "may consult with and seek information from any source it deems appropriate".

¹³See doc. WT/CTE/W/8, p. 23.