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The evolution of benefit-sharing: linking biodiversity and community livelihoods

Elisa Morgera and Elsa Tsioumani

This article traces the evolution of the use of the legal concept of benefit-sharing in the context of the Convention on Biological Diversity (CBD), with a view to highlighting its contribution to indigenous and local communities' livelihoods. To this end, the article proposes a distinction between inter-State benefit-sharing (as identified in the third CBD objective and as usually linked to access to genetic resources), and notably lesser known State-to-community benefit-sharing (in relation to the conservation and sustainable use of biodiversity). The article highlights the different legal connotations of the two dimensions of this legal concept, while supporting an integrated interpretation of the CBD by pointing to a wide array of benefit-sharing related tools under the Convention that can be used to support indigenous and local communities' livelihoods in pursuing the Convention's three objectives. The article also identifies other international processes – in the areas of intellectual property, health and climate change – in which, these conceptual developments may have a significant influence.

INTRODUCTION

There has been a significant evolution of the use of the legal concept of benefit-sharing in the context of the Convention on Biological Diversity (CBD) and its contribution to indigenous and local communities' livelihoods. In particular, according to the text of the Convention and the decisions of its Conference of the Parties (COP),¹ the concept of benefit-sharing has been evolving not only in relation to the use of genetic resources, but also, with remarkably different legal connotations, to the conservation and sustainable use of biodiversity. Accordingly, this leads to distinguishing inter-State benefit-sharing² from State-to-community benefit-sharing.

The text of the CBD refers prominently to benefit-sharing as its third objective in Article 1 (Objectives): 'the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.' In this instance, benefit-sharing is tied to the use of genetic resources and embodies an inter-State approach to achieve sustainable development and equity.³ The first part of this

¹ Convention on Biological Diversity (Rio de Janeiro, 5 June 1992). On the question of the legal significance of COP decisions, see J. Brunnée, 'COPing with Consent: Law-making under Multilateral Environmental Agreements' 15:1 *Leiden Journal of International Law* (2002) 1; and T. Gehring, 'Treaty-making and Treaty Evolution', in D. Bodanski, J. Brunnée and E. Hey (eds), *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2007), 467, at 491-495.

² The inter-State dimension was stressed in D. Shelton, 'Fair Play, Fair Pay: Preserving Traditional Knowledge and Biological Resources' 5 *Yearbook of International Environmental Law* (1994), 76, at 83.

³ For a discussion of the legal concept of equity and its specific application in the context of the fair and equitable benefit-sharing, see F. Francioni, 'Equity' in R. Wolfrum (ed.), *Max Planck Encyclopedia of Public International Law* (Oxford University Press, 2010).

article will discuss the extent to which inter-State benefit-sharing can contribute to communities' livelihoods, exploring relevant discussions in the context of negotiations on access and benefit-sharing (ABS) under the CBD, and addressing also the relevant provisions of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGR).⁴

On the other hand, another key provision of the CBD envisages a qualitatively different concept of benefit-sharing as a State-to-community contribution to sustainable development and equity. CBD Article 8(j), with a significantly qualified formulation, calls on Parties to encourage the equitable sharing of the benefits arising from the utilization of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity (thus, with a specific reference to the first and second objectives of the Convention).⁵ In this case, benefit-sharing envisages the establishment of a relationship between the community and the State in which the community resides, on the basis of national legislation.⁶

Interestingly, the implications of Article 8(j) have so far been mostly discussed in the context of the use of genetic resources and/or associated traditional knowledge, and specifically the negotiations on an international ABS regime.⁷ Thus, it is common usage to refer to benefit-sharing almost exclusively in the context of 'ABS' and the third objective of the Convention. Such common usage, however, does not take into account the fact that significant developments under the CBD specifically related to the conservation and sustainable use of biodiversity have made recourse to the concept of benefit-sharing without any connection to access to or use of genetic resources. These developments embody specific applications of State-to-community benefit-sharing, rather than the inter-State concept of benefit-sharing used in the ABS context. The second part of this article will thus analyze the references to benefit-sharing in a multitude of decisions adopted by the COP in the context of the CBD's first and second objectives, with a view to elucidating its State-to-community dimension.

⁴ International Treaty on Plant Genetic Resources for Food and Agriculture (Rome, 3 November 2001).

⁵ CBD Article 1 refers to 'the conservation of biological diversity and the sustainable use of its components.' It should be noted, however, that the text of the Convention refers inconsistently to the sustainable use of 'biodiversity' or of 'biological resources': see S. Johnston, 'Sustainability, Biodiversity and International Law', in M Bowman and C Redgwell, *International Law and the Conservation of Biological Diversity* (Kluwer Law International, 1996) 51-70, at 56.

⁶ Subjecting compliance with international law as expressed in the CBD to national law was considered unusual at the time of the Convention's adoption but has become a common feature in the development of soft law under the CBD. This type of reference to national law seems to point to the need to preserve the legal relationship between a State and the indigenous peoples within its territory based on pre-existing, but possibly also future, national law. See L. Glowka *et al.*, *A Guide to the Convention on Biological Diversity*, IUCN Environmental Policy and Law Paper No. 30 (IUCN, 1994).

⁷ Following the call of the UN World Summit on Sustainable Development to negotiate, within the CBD framework, an international regime to promote and safeguard the fair and equitable sharing of benefits arising out of the utilization of genetic resources (Johannesburg Plan of Implementation (UN Doc. A/CONF.199/20, 4 September 2002), Resolution 2, Annex, para 44(o) (JPOI)), the seventh Conference of the Parties to the CBD mandated the CBD Working Group on ABS to negotiate an international regime on ABS. Discussions on the international ABS regime also dominated negotiations at the CBD Working Group on Article 8(j) and related provisions. See recently, C. Chiarolla, *et al.*, 'Summary of the sixth meeting of the *Ad Hoc* Open-ended Intersessional Working Group on Article 8(j) and Related Provisions of the CBD, 2-6 November 2009', 9:482 *Earth Negotiations Bulletin* (9 November 2009).

Both Parts II and III of the article will also cursorily refer to relevant national legislation reflecting the two dimensions of benefit-sharing. Although a thorough analysis of State practice in this respect is beyond the scope of this article, it seems particularly relevant to point to the need to assess the impacts of these developments at the national level, with a view to assessing the effective contribution of the CBD to communities' livelihoods.⁸

Furthermore, this article aims to highlight that benefit-sharing is also relevant in the context of other international instruments. Even before the adoption of the Convention on Biological Diversity, for instance, the Declaration on the Right to Development recognized that States have 'the right and the duty to formulate appropriate national development policies that aim at the constant improvement of the well-being of the entire population and of all individuals, on the basis of their active, free and meaningful participation in development and in the *fair distribution of the benefits resulting therefrom*.'⁹ Since then, and mostly prompted by developments in the context of the CBD, several other international instruments and processes have resorted to this concept. The third part of this article will therefore identify ongoing international efforts in this direction, in the areas of intellectual property, health and climate change. Within these related international processes, benefit-sharing may play a significant role either as an inter-State or State-to-community instrument for sustainable development and equity, particularly as a contribution to communities' livelihoods.

In its conclusions, this article will provide an initial assessment of the evolution of the concept of benefit-sharing *vis-à-vis* the global goal of significantly reducing biodiversity loss as a contribution to poverty alleviation and to the benefit of all life on Earth, that the Parties to the CBD¹⁰ and the broader international community¹¹ had set for themselves for 2010. It will also highlight the importance of a holistic approach to the legal interpretation and implementation of the different concepts of benefit-sharing under the Convention.

II. INTER-STATE BENEFIT-SHARING

In addressing inter-State benefit-sharing, the evolution of principles of ownership of genetic resources and particularly the principle of national sovereignty, as enshrined in the CBD, will be discussed first. Following a brief review of regulatory developments regarding several CBD provisions linked to inter-State benefit-sharing, attention will be focused on benefit-sharing tied to the use of genetic resources as in Article 15, to examine whether, under which conditions and to what extent such benefits can be realized, reach communities and contribute to their livelihoods. This

⁸ See discussion on the need to assess the effective contribution of the CBD against implementation in P. Birnie, A. Boyle and C. Redgwell, *International Law and the Environment* (Oxford University Press, 2009), at 617.

⁹ UN General Assembly, Declaration on the Right to Development (A/RES/41/128, 4 December 1986), Article 2(3) [emphasis added].

¹⁰ CBD COP 6 Decision VI/26, Strategic Plan for the Convention on Biological Diversity (27 May 2002) para. 11.

¹¹ This target was subsequently endorsed by the World Summit on Sustainable Development (Johannesburg Plan of Implementation, n. 7 above, para. 44), and the United Nations General Assembly (2005 World Summit Outcome (A/RES/60.1, 24 October 2005), para. 56).

will be then compared with the Multilateral System of the International Treaty on Plant Genetic Resources for Food and Agriculture as a multilateral approach to inter-State benefit-sharing in the specific domain of agricultural biodiversity.

The evolution of principles of ownership of genetic resources

Until negotiation and entry into force of the CBD, an arguable application of the concept of common heritage of mankind¹² over natural/biological resources had resulted in an almost free flow of genetic resources across boundaries.¹³ Access to *in situ* resources was legitimately free and unconditional, and the results of research on such resources were expected to benefit future generations. Accordingly, the non-binding International Undertaking on Plant Genetic Resources for Food and Agriculture was adopted by the FAO Conference in 1983¹⁴ to ensure that ‘plant genetic resources of economic and/or social interest, particularly for agriculture, will be explored, preserved, evaluated and made available for plant breeding and scientific purposes,’ based on the ‘universally accepted principle that plant genetic resources are a heritage of mankind and consequently should be available without restriction.’¹⁵

Already at the time of adoption of the International Undertaking, some developed countries were reluctant to allow the principle of common heritage to apply to their modern crop varieties, due to possible implications for intellectual property protection.¹⁶ Dating from 1961, the International Convention for the Protection of New Varieties of Plants (UPOV Convention) has been promoting a system of private ownership over new plant varieties through *sui generis* intellectual property rights (plant breeders’ rights) ‘with the aim of encouraging the development of new varieties

¹² This understanding should be compared with the common heritage regime, as provided for in Article 140(2) of the UN Convention on the Law of the Sea (UNCLOS) (Montego Bay, 10 December 1982), which has been described as encompassing four basic elements: resources that cannot be appropriated to the exclusive sovereignty of States; resources that must be conserved and exploited for the benefit of mankind, without discrimination; an international institution to manage and regulate these activities; and the peaceful purposes of these activities. The second element basically provides for all States to share rewards, even if they are unable to participate in the actual process of extraction, in the framework of international regulation of access and benefit-sharing. See P. Birnie, A. Boyle and C. Redgwell, n. 8 above, at 128-130 and 197.

¹³ See M.W. Tvedt and T. Young, *Beyond Access: Exploring Implementation of the Fair and Equitable Sharing Commitment in the CBD*, IUCN ABS Series No. 2 (IUCN, 2007), at 1.

¹⁴ In general, international instruments have employed the term ‘common heritage’ to non-living resources, with two apparent exceptions: the FAO International Undertaking on Plant Genetic Resources (FAO Resolution 8/83, 23 November 1983) and the African Charter on Human and Peoples’ Rights (OAU Doc. CAB/LEG/67/3 rev. 5, 27 June 1981), which proclaims, in Article 22, that ‘All people shall have the right to their economic, social and cultural development ... and in the equal enjoyment of the common heritage of mankind,’ without providing further details. See G. Maggio and O. J. Lynch, *Human Rights, Environment and Economic Development: Existing and Emerging Standards in International Law and Global Society* (Center for International Environmental Law, 15 November 1997), at Part IV, found at <<http://www.ciel.org/Publications/olpaper3.html>>.

¹⁵ International Undertaking on Plant Genetic Resources for Food and Agriculture, *ibid.*, Article 1. ‘Agreed interpretation of the International Undertaking’ (FAO Resolution 4/89, 29 November 1989) clarified that ‘plant genetic resources are a common heritage of mankind to be preserved, and to be freely available for use, for the benefit of present and future generations.’ See E. Tsioumani ‘International Treaty on Plant Genetic Resources for Food and Agriculture: Legal and Policy Questions from Adoption to Implementation’, 14 *Yearbook of International Environmental Law* (2004), 121.

¹⁶ Canada, France, Germany, Japan, New Zealand, Switzerland, the United Kingdom and the United States signed the Undertaking with reservations.

of plants for the benefit of society.¹⁷ The combination of genetic resources and biotechnology has led to growing expectations of benefits from the commercial value of biodiversity from the part of developing nations, the main holders of the planet's biodiversity. At the same time, intellectual property protection has led to asymmetries, and a sense of unfairness among developing countries. For instance, as a result of the novelty requirement of intellectual property protection, traditional and farmers' crop varieties have been regarded as 'prior art' within the public domain, while modern varieties are often patentable. Developing countries realized that their germplasm could be acquired and shared freely to be used in the development of modern varieties, which would then be protected by exclusive property rights, raising concern regarding the implications for their development opportunities and a strong interest to gain recognition and share in commercial and other benefits.

Against this background, the principle of national sovereignty over genetic resources as enshrined in the CBD has replaced the International Undertaking's statements regarding common heritage concepts. Aiming to correct prior asymmetries by subjecting access to genetic resources to the prior informed consent of the State party providing those resources and to the sharing of the benefits arising from their commercial or other utilization, the principle of national sovereignty provided a clear legal basis for inter-State benefit-sharing as enshrined in the third CBD objective. At the same time, the Convention reflected and encouraged expectations that 'there would soon be a substantial market for biodiversity, the benefits of which would flow to developing countries.'¹⁸

Inter-State benefit-sharing in the CBD

Against this background, the third CBD objective was shaped, with benefit-sharing at the heart of the political agreement being conceived both as an economic incentive for the developing world to conserve biodiversity,¹⁹ as well as a means to correct injustices by promoting equity.²⁰ Placing an obligation on developed countries to share the benefits arising from genetic resource utilization made the CBD not only a conservation agreement, but also one targeting sustainable development and justice. It has been argued that benefits from biodiversity use were expected not simply to finance conservation objectives; they would also contribute to the sustainable development of countries of origin in general, and eventually to the livelihoods of indigenous and local communities traditionally holding the resources and associated knowledge.²¹

The language of the third CBD objective seems to point to three means of sharing

¹⁷ International Convention for the Protection of New Varieties of Plants (Paris, 2 December 1961), Mission Statement.

¹⁸ M. Petit *et al.*, *Why Governments Can't Make Policy: The Case of Plant Genetic Resources in the International Arena* (International Potato Center, 2001), at 8.

¹⁹ G. Verhoosel, 'Prospective for Marine and Coastal Biodiversity: International Law in Deep Water' 13:1 *International Journal of Marine and Coastal Law* (1998), 91, at 97.

²⁰ See M.W. Tvedt and T. Young, n. 13 above, at 75-98.

²¹ For discussion of the potential contribution of ABS to development, see W. Reid *et al.*, *Biodiversity Prospecting: Using Genetic Resources for Sustainable Development* (World Resources Institute, 1993); and R. Wynberg and S. Laird, 'Bioprospecting, Access and Benefit Sharing: Revisiting the 'Grand Bargain'' in R. Wynberg *et al.* (eds) *Indigenous Peoples, Consent and Benefit-Sharing: Lessons from the San Hoodia Case* (Springer, 2009), 69.

benefits,²² each underpinned by specific provisions of the Convention: appropriate access to genetic resources (addressed in Article 15); appropriate transfer of relevant technologies (Article 16), including biotechnology (addressed in Article 19); and appropriate funding (addressed in Articles 20 and 21). Although deliberations regarding the implementation challenges tied to these provisions have taken different tracks under the Convention, they all refer to inter-State benefit-sharing, generally leaving considerable discretion to the Party concerned.

As an important means to meet the third CBD objective, Article 16 defines the basic obligations of each Party regarding technology transfer, the basis of transfer to developing countries and what measures are to be taken to institute the transfers contemplated.²³ This complex article makes particular reference to access to and transfer of technology that uses genetic resources to the developing countries which have provided such genetic resources.²⁴ In addition, according to Article 19, Parties should promote and advance priority access to the results and benefits arising from modern biotechnologies to, and ensure participation in biotechnological research by, Parties that provide the genetic resources for such research. A programme of work on technology transfer and scientific and technological cooperation was adopted in 2004, providing concrete guidance on activities needed, including on the establishment of enabling environments for technology transfer in providing and receiving countries.²⁵ It provides a specific example of work towards achieving inter-State benefit-sharing, despite the fact that technologies to be transferred may be owned by the private sector and its collaboration is required: governments are called upon to create an institutional, administrative, legislative and policy environment conducive to private and public sector technology transfer and to the adaptation of transferred technology, or to remove barriers to technology transfer inconsistent with international law.

Article 20 considers national and international responsibilities for financing action mandated by the Convention, including the obligation of developed countries to provide new and additional financial resources to developing countries, while Article 21 establishes a financial mechanism for the provision of financial resources to developing country Parties. While similar provisions can be found in other multilateral environmental agreements,²⁶ it should be noted that in the context of the CBD, their implementation has specifically targeted objectives related to benefit-sharing, among others. In fact, the Biodiversity focal area strategy and strategic programming for the fourth replenishment of the Global Environment Facility (GEF), which is the Convention's financial mechanism,²⁷ includes a strategic objective on building capacity on ABS, supporting governments in meeting their obligations under

²² See L. Glowka *et al.*, n. 6 above, at 15. It should be noted that the text of CBD Article 1 does not include the cross-references to specific CBD Articles.

²³ *Ibid.*, at 84.

²⁴ See CBD, n. 1 above, Article 16(3).

²⁵ Transfer of technology and technology cooperation (Articles 16 to 19) (CBD COP 7 Decision VII/29, 13 April 2004).

²⁶ See, for instance, Article 4(3) of the UN Framework Convention on Climate Change (New York, 9 May 1992).

²⁷ Mentioned as part of an interim financial arrangement in CBD Article 39, GEF has become the designated institutional structure operating the financial mechanism of the Convention through adoption of a Memorandum of Understanding at CBD COP 3. See Memorandum of understanding between the Conference of the Parties to the Convention on Biological Diversity and the Council of the Global Environment Facility (CBD Decision III/8, 11 February 1997).

CBD Article 15. The objective includes a specific goal on ensuring fair and equitable benefit-sharing, while indicators include the amount of monetary and non-monetary benefits effectively shared with countries providing genetic resources, including countries of origin, and countries that have acquired the genetic resources in accordance with the Convention.²⁸ Furthermore, the recently adopted Strategy for Resource Mobilization²⁹ includes a goal on enhancing implementation of ABS initiatives, considering them a tool for generating financial returns to support conservation and sustainable use initiatives in provider countries. In finance-related soft law, therefore, inter-State benefit-sharing is seen as an objective to be achieved through implementing and funding ABS initiatives.

Through years of CBD deliberations, the third CBD objective (benefit-sharing from the use of genetic resources) has been firmly linked in negotiations and academic literature with access to genetic resources, as ensuring access was generally seen as the pre-condition for continuing research and potentially realizing the benefits to be shared. However, it should be noted that the Convention language places greater emphasis on benefit-sharing, while access is presented as a subordinate concept. In that regard, it should be recalled that Article 1 refers to access to genetic resources as one potential means towards achieving benefit-sharing. Furthermore, and using clearly legally binding language, Article 15(7) deals specifically with inter-State benefit-sharing, calling upon Parties to take legislative, administrative or policy measures aiming to share the results of research and development, and the benefits arising from the commercial and other utilization of genetic resources with the provider country, underscoring that such sharing of benefits must be based on mutually agreed terms (MAT).³⁰ Notably, this requirement for national benefit-sharing measures is not linked to access. The provisions of Article 15 do not include reference to access-related ‘measures’, with Article 15(2) stating, using less binding language, that Parties ‘shall endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses ... and not to impose restrictions that run counter to the objectives of this Convention’.

Parties’ rights and obligations with regard to access are set out in Article 15(1-2) and 15(4-5) reiterating the principle of national sovereignty over natural resources. They recognize that the authority to determine access to genetic resources rests with the national governments of provider countries, subject to national legislation, and provide that access, as well as benefit-sharing, must be based on MAT.³¹ Article 15 further establishes a number of pre-conditions for access to become operational in inter-State relations on the basis of national legislation, including the prior informed

²⁸ See GEF, ‘Biodiversity focal area strategy and strategic programming for GEF-4’, (GEF brochure, no document number, October 2007). However, few projects have been submitted under the strategic objective on capacity building on ABS. See the Intersessional work program submitted for GEF Council approval (GEF/IS/23, June 2010), at 1.

²⁹ Review of implementation of Articles 20 and 21 (CBD Decision IX/11, 9 October 2008).

³⁰ CBD, n. 1 above, Article 15(7) reads: ‘Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, 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.’

³¹ The Convention therefore establishes a contractual mechanism to facilitate the achievement of ABS obligations and objectives. See M.W. Tvedt and T. Young, n. 13 above, at 18.

consent (PIC) of the Party providing genetic resources.

According to Article 15(7), benefits to be shared on MAT are not only research and development results, but also the commercial or other benefits derived from the utilization of the genetic resources provided. These benefits are recognized to also be governed by Articles 16 and 19 to include: access to and transfer of technology using the genetic resources; participation in biotechnological research activities; and priority access to the results and benefits arising from biotechnological use of the genetic resources. As a specific form of benefit-sharing and paralleling Article 18 on scientific and technical cooperation, Article 15(6) requires Parties to promote collaborative scientific research between provider and user Parties.³²

To implement the benefit-sharing requirement, countries that have or may have users within their respective jurisdictions need to adopt legislative, administrative or policy measures.³³ As noted by Tvedt and Young, this means that there are at least two distinct national legislative components to every ABS situation: source-country measures, including provisions clarifying each country's sovereign rights over genetic resources, and the identification of access procedures and requirements; and user-country measures, by which each country addresses the responsibility of users under their jurisdiction who are utilizing genetic resources from other countries.³⁴ Following the generally accepted understanding that all countries are both users and providers of genetic resources, which is particularly true in the field of crop genetic resources development, all countries are required to adopt national legislation to implement the CBD benefit-sharing requirement in inter-State relations. This is especially vital for those developed and developing countries engaged in intense research and sophisticated uses of genetic resources.

The Bonn Guidelines³⁵ were adopted in order to assist governments in establishing legislative, administrative or policy measures on ABS. However, they provide limited guidance with regard to implementation of the benefit-sharing requirements as set in CBD Article 15(7). The Guidelines provide that 'Contracting Parties with users of genetic resources under their jurisdiction should take appropriate legal, administrative or policy measures, as appropriate, to support compliance with prior informed consent of the Contracting Party providing such resources and mutually agreed terms on which access was granted.'³⁶ The Guidelines further provide a list of measures that countries with users in their jurisdiction could consider, including mechanisms to provide information to potential users on their obligations; measures to encourage disclosure of the country of origin of genetic resources and traditional knowledge in applications for intellectual property rights; measures to prevent the use of genetic resources obtained without the prior informed consent of the provider Party; cooperation between Parties to address alleged infringements of ABS agreements; voluntary certification schemes; measures discouraging unfair trade practices; and

³² *Ibid.*, Article 15(6) reads: 'Each Contracting Party 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.'

³³ See M.W. Tvedt and T. Young, n. 13 above, at 8.

³⁴ *Ibid.*, at 3.

³⁵ Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization (Bonn Guidelines), adopted in Access and benefit-sharing as related to genetic resources (CBD Decision VI/24, 27 May 2002).

³⁶ *Ibid.*, sub-para. 16(d).

other measures to encourage users to comply with the Guidelines' provision on users' obligations for implementation of MAT.³⁷ This provision states, *inter alia*, that users should 'as much as possible endeavour to carry out their use of the genetic resources in, and with the participation of, the providing country' and should also ensure the fair and equitable sharing of benefits arising from the commercialization or other use of genetic resources, including technology transfer to providing countries, in conformity with MAT. The Guidelines further provide some guidance with regard to the types, timing and distribution of benefits, and mechanisms for benefit-sharing, in order to assist Parties and stakeholders in the development of MAT to ensure fair and equitable sharing of benefits, as well as a list of examples of monetary and non-monetary benefits.³⁸ Reflecting the voluntary nature of the guidelines, no specific requirements are provided. On the contrary, it is acknowledged that the benefit-sharing mechanism may vary depending upon the type of benefits, the specific conditions in the country and the stakeholders involved, and that it should be flexible, being determined by the partners involved in benefit-sharing and varying on a case-by-case basis.³⁹

Against this background, it is notable that the Bonn Guidelines place greater emphasis on the benefit-sharing obligations of private-party users as part of their contractual obligations,⁴⁰ rather than on the inter-State dimension of the CBD benefit-sharing requirement. This is combined with the Guidelines' focus on the need for providing countries' legislation on access, which seems to underestimate the fact that access legislation in providing countries is not sufficient to achieve fair and equitable benefit-sharing. Achieving benefit-sharing would further require enactment of supportive legislation in countries with users in their jurisdiction, in order to secure their compliance.⁴¹ Negotiations on an ABS protocol currently undertaken in the CBD framework are expected to clarify the benefit-sharing requirement, ensure compliance and drive the development of mutually supportive national legislation.⁴²

Benefit-sharing reaching the community level

While Articles 1 and 15 do not explicitly mention traditional knowledge, this is addressed in the context of *in situ* conservation in Article 8(j) with regard to the

³⁷ *Ibid.*, sub-para. 6(b). See C. V. Barber, S. Johnston and B. Tobin, 'User measures: options for developing measures in user countries to implement the access and benefit-sharing provisions of the Convention on Biological Diversity' (UNU-IAS, 2003).

³⁸ See Bonn Guidelines, n. 36 above, Section D, paras 45-50, and Appendix II.

³⁹ *Ibid.*, para. 49.

⁴⁰ It should be reiterated that a specific ABS agreement would be negotiated and agreed upon for each individual case. Parties to the ABS agreement could be the States (government entities) providing and requiring access, but also the State providing access and a private entity (i.e. a company or university) requiring access and having to share the benefits. Depending on the individual agreement reached on the basis of national legislation of the country providing access, benefits would be shared with the providing country and/or the community concerned.

⁴¹ See M.W. Tvedt and T. Young, n. 13 above, at 18.

⁴² At the time of writing, a resumed session of the ninth meeting of the ABS Working Group is scheduled to be held in July 2010, in Montreal, Canada, with the aim of finalizing negotiations for possible adoption of an ABS protocol at COP 10, to be held in October 2010, in Nagoya, Japan. For the state of play in the ABS negotiations, see J. Gnann, *et al.*, 9:503 *Earth Negotiations Bulletin* (31 March 2010). For the protocol text under consideration and Parties' views, see the Report of the First Part of the Ninth Meeting of the *Ad Hoc* Open-ended Working Group on Access and Benefit-Sharing (UNEP/CBD/WG-ABS/9/3, 26 April 2010).

conservation and sustainable use of biodiversity, thereby including traditional knowledge associated with genetic resources, as well as the equitable sharing of benefits arising out of the utilization of such knowledge. On this basis, notwithstanding the fact that Articles 1 and 15 refer to inter-State relations, while Article 8(j) refers to Parties' domestic policies with respect to traditional knowledge of indigenous and local communities living in their territory (as discussed in detail in part III), Article 8(j) has been mostly discussed in the context of ABS in the CBD framework,⁴³ and traditional knowledge is being addressed in the current negotiations for an international ABS regime⁴⁴ on the basis of a combined reading of Articles 15 and 8(j). This interpretation beyond the letter of the Convention may be explained by the fact that on many occasions, genetic resources attract the interest of bioprospectors and gain value because of the traditional knowledge associated with them. In other words, it is traditional knowledge that sparks the utilization process or provides the lead to the potentially useful properties of a genetic resource.⁴⁵ It has thus been argued that in these cases, genetic resources and traditional knowledge are inseparable.⁴⁶ Furthermore, several high-profile controversial patent cases have involved the misappropriation and patenting of traditional knowledge associated with genetic resources.⁴⁷

While genetic resources belong to States in accordance with the principle of national sovereignty, traditional knowledge is held by a particular culture or people: it is created in a cultural context and is local in nature.⁴⁸ In that regard, measures at the local level, including benefit-sharing, are needed for traditional knowledge to be nurtured and the associated genetic resources to be protected. While enactment of national legislation is a necessary precondition for the implementation of, and compliance with, the benefit-sharing requirement, specifically targeted policy and legal measures are therefore further needed for the benefits to reach the community level in the provider country, in order to both reward the custodians of biodiversity and holders of traditional knowledge, and assist in poverty alleviation and sustainable development in the provider country.

As opposed to the silence of the CBD third objective and Article 15 on traditional knowledge, the Bonn Guidelines note that benefits should be shared fairly and equitably with all those who have been identified as having contributed to the resource management, scientific and/or commercial process, including indigenous and local communities, and that benefits should be directed in such a way as to promote

⁴³ Since the launch of the negotiations for an international ABS regime, the CBD Working Group on Article 8(j) has been addressing ABS as a permanent issue in its agenda. See for instance the Report of the fifth meeting of the *Ad Hoc* Open-ended Working Group on Article 8(j) and related provisions of the Convention on Biological Diversity (UNEP/CBD/COP/9/7, 13 November 2007), and Report of the sixth meeting of the *Ad Hoc* Open-ended Inter-sessional Working Group on Article 8(j) and related provisions of the Convention on Biological Diversity (UNEP/CBD/COP/10/2, 21 November 2009), Annex II: International regime on access and benefit-sharing: provision of views to the *Ad Hoc* Working Group on Access and Benefit-sharing.

⁴⁴ See the latest, non-negotiated, draft protocol on ABS, available as Annex I to the Report of the first part of the ninth meeting of the ABS Working Group, n. 43 above, Articles 4, 5bis, and 9.

⁴⁵ See the Report of the sixth meeting of the *Ad Hoc* Open-ended Inter-sessional Working Group on Article 8(j), n. 44 above, at 36.

⁴⁶ *Ibid.*

⁴⁷ See Commission on Intellectual Property Rights, *Integrating Intellectual Property Rights and Development* (Commission on Intellectual Property Rights, 2002), at 76.

⁴⁸ *Ibid.*, at 37.

conservation and sustainable use of biological diversity.’⁴⁹ This express reference to indigenous and local communities as potential beneficiaries in the ABS process can be arguably read in conjunction with references, in the objectives of the Guidelines, to the promotion of technology transfer, contribution to the development by Parties of ABS mechanisms that recognize the protection of traditional knowledge, and contribution to poverty alleviation and realization of food security, health and cultural integrity.⁵⁰

As noted above, the Bonn Guidelines, however, were not considered to be particularly helpful in guiding the drafting of national legislation and enlightening the complexities of implementing ABS at the national level. Few countries have drafted national ABS legislation⁵¹ and many challenges remain. An example of a CBD Party that adopted ABS legislation, and may be the only one that acknowledged the necessity to ensure that users within its jurisdiction comply with the requirements as set by another (provider) country,⁵² is Norway, which made an attempt to cover the entire spectrum of access and benefit-sharing requirements in its recently adopted legislation.⁵³

Norway’s 2009 Nature Diversity Act⁵⁴ sets a number of provisions requiring that users within its jurisdiction comply with prior informed consent as required by the provider country.⁵⁵ These provisions are mirrored in the country’s Patents Act, which further provides for penalties in case of violation.⁵⁶ It should be noted however, that

⁴⁹ See Bonn Guidelines, n. 36 above, para. 48.

⁵⁰ *Ibid.*, para. 11.

⁵¹ An overview of existing instruments, guidelines, codes of conduct and tools addressing ABS is available at CBD, ABS Measures (CBD, undated), found at <<http://www.cbd.int/abs/measures/>>.

⁵² See M.W. Tvedt and T. Young, n. 13 above, at 31-32.

⁵³ A developed country with advanced research and technology sector, Norway has experienced a case frequently cited to exemplify the reasons behind the ABS regimes: back in 1969, a soil fungus found in a sample taken from Hardangervidda National Park by a Swiss tourist who worked for a company now called Novartis, proved to have active compounds that resulted in the development of the best-selling anti-rejection drug Cyclosporin A.

⁵⁴ Act relating to the management of biological, geological and landscape diversity (Nature Diversity Act) - Act 19 No. 100 (June 2009).

⁵⁵ Section 60 of the Nature Diversity Act, *ibid.*, reads: ‘The import for utilization in Norway of genetic material from a state that requires consent for collection or export of such material may only take place in accordance with such consent. The person that has control of the material is bound by the conditions that have been set for consent. The state may enforce the conditions by bringing legal action on behalf of the person that set them.’ To that end, the legislation sets the requirement for the genetic material getting in Norway from another country for research or commercial purposes to be accompanied by information regarding the provider country and fulfillment of its national law requirements regarding consent for the material’s collection. If the provider country is different than the country of origin, the latter should also be stated.

⁵⁶ The Norwegian Patents Act - Act No. 9 of 15 December 1967, as last amended by Act No. 80 of 29 June 2007, Section 8(b), provides for a requirement for disclosure of origin of the biological material used in an invention to be included in the patent application, and of the prior informed consent for access to the material, in case this was required by the national legislation of the provider country. Notably, the duty to disclose such information applies even where the inventor has altered the structure of the received material. Breach of the disclosure requirement is subject to criminal sanctions, in accordance with Norway’s General Civil Penal Code (1902) Section 166, but does not have any patent-related results, with regard to the processing of the application or the validity of rights arising from granted patents, reflecting the provisions of the EU biotech patents directive. See Directive 98/44/EC of the European Parliament and of the Council of 6 July 1998 on the legal protection of biotechnological inventions, [1998] OJ L 213/13.

disclosure requirements during the patent application process do not create any right for the provider country or the country of origin. Notably, the Norwegian legislation makes no specific reference to compliance with benefit-sharing requirements as set by the provider country. The disclosure requirement does not confer any benefit-sharing obligations on the user, nor does it extend to compliance with benefit-sharing obligations set by provider country legislation or MAT. However, as part of its objectives, the legislation specifically acknowledges the importance of ‘appropriate measures for sharing the benefits arising out of the utilization of genetic material in such a way as to safeguard the interests of indigenous peoples and local communities.’⁵⁷ The Nature Diversity Act makes several references to the potential adoption of regulations for implementation, so it could be the case that a more detailed mechanism for benefit-sharing will be established later on.

For the time being, it thus seems that CBD Parties are unwilling (and/or legally unable) to implement benefit-sharing as an inter-State obligation. Even if we assume that the political will exists to achieve such a goal, several challenges and questions remain with regard to the optimal legislative and regulatory approach for user countries to ensure that benefits are fairly and equitably shared with the provider country. In addition, specific tools are required for the benefits to reach the indigenous peoples and local communities and for benefit-sharing as a general concept to contribute to the realization of equity and sustainable development considerations. The need for user country legislation to implement the CBD’s inter-State benefit-sharing requirement would need to be combined with systems of distribution of benefits within the provider country, to fit each country’s specific circumstances and regulatory traditions, in order for the CBD ABS provisions to influence and promote realization of benefit-sharing at the community level. Under South Africa’s legislation, for example, an access permit is granted only if the applicant and a stakeholder have entered into a benefit-sharing agreement approved and overseen by the Environment Ministry. The specific benefits to be shared are agreed upon by the parties to the agreement. The legislation further establishes a bioprospecting trust fund into which all payments are made and from which benefits are distributed.⁵⁸ In the Philippines, to mention another example, national legislation requires the person applying for access to agree to pay royalties or other forms of compensation to the government or to the community concerned. A list of other potential benefit-sharing arrangements are also provided for, including that foreign applicants must agree to conduct research in collaboration with Philippine institutions.⁵⁹

A tool attempting to bridge inter-State benefit-sharing with communities’ needs, aspirations and livelihoods that has been recently proposed is the bio-cultural protocol

⁵⁷ See Nature Diversity Act, n. 57 above, Section 57.

⁵⁸ South Africa’s Biodiversity Act (No. 10, 2004), especially Articles 80-86. See N. R. Crouch *et al.*, ‘South Africa’s bioprospecting, access and benefit-sharing legislation: current realities, future complications, and a proposed alternative’, 104:9 *South African Journal of Science* (2008), 355.

⁵⁹ Philippines’ Executive Order no. 247, 18 May 1995, prescribing guidelines and establishing a regulatory framework for the prospecting of biological and genetic resources, their by-products and derivatives, for scientific and commercial purposes; and for other purposes, as amended by the Wildlife Act (Act providing for the conservation and protection of wildlife resources and their habitats, appropriating funds therefore and for other purposes, Republic Act no. 9147 of 30 July 2001) and its Implementing Rules and Regulations (Joint Administrative Order no. 01, 2004), and the Guidelines for Bioprospecting Activities in the Philippines (Joint Administrative Order no. 1, January 2005).

– a tool promoted by *Natural Justice*, a legal NGO working with communities in southern Africa. Supporting a bottom-up approach, a bio-cultural protocol is a written document developed by a community, following a consultative process, to outline the core ecological, cultural and spiritual values and customary laws relating to the community's traditional knowledge and resources, based on which the community provides clear terms and conditions to regulate access to their knowledge and resources. Examples include protocols developed by the Bushbuckridge traditional healers in South Africa, the Raika pastoralists in India and the Samburu pastoralists in Kenya.⁶⁰

Bio-cultural protocols can have two advantages for communities. From an outward perspective, they provide a specific framework for defining in a participatory manner the types of benefits communities may wish to secure, to support their livelihoods. As such, the process leading to the bio-cultural protocol development allows a community to prepare in advance for negotiations of an ABS arrangement, rather than enter into such negotiations in an *ad hoc* manner, contributing thus to a more level-playing field among the parties. From an inward perspective, the development of bio-cultural protocols allows a community to identify any question related to the governance of future benefit-sharing, thus preventing internal conflicts. Compliance with the provisions of bio-cultural protocols, however, remains voluntary, unless it is secured through national legislation. In addition, bio-cultural protocols would generally require capacity-building and legal assistance, so that community members can better understand the relevant international and national legal regimes, the interests involved and the consequences of their choices.

Multiple regulatory developments are therefore still required for the CBD inter-State benefit-sharing requirement to be implemented, let alone reach the community level in provider countries. Despite certain positive examples to the contrary, including Norway, the majority of countries, in particular countries with users in their jurisdiction, still need to put their national legislation in place in order to ensure compliance with benefit-sharing arrangements in provider countries. In addition, the establishment of specific mechanisms in provider countries is required for benefits to reach the community level. However, emphasis placed under the CBD, in particular in the context of the Bonn Guidelines, on the obligations of private parties to the ABS agreement, has obscured the obligation for enactment of national ABS legislation by State Parties, even if the bilateral nature of inter-State benefit-sharing under the CBD makes the development of national legislation a *conditio sine qua non* for global implementation of the CBD commitments. This creates further uncertainties as to whether and how the benefits may reach communities. Some of these challenges have been addressed in the specific field of plant genetic resources for food and agriculture through the multilateral solutions proposed by the ITPGR.

The Multilateral System of access and benefit-sharing under the ITPGR

One option for achieving inter-State benefit-sharing is the creation of an international system or fund, which would collect benefits from users, in the form of a standard payment, and then allocate them to particular activities designed to promote not only

⁶⁰ See United Nations Environment Programme (UNEP), Community Protocols for ABS (UNEP, undated), available at <<http://www.unep.org/communityprotocols/index.asp>>.

the conservation and sustainable use of biodiversity, but also the livelihoods of rural communities and indigenous peoples.⁶¹ Such a multilateral approach has been adopted and is currently operational in the framework of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGR). The rationale for establishing such a system is to some degree described in the preamble to the Treaty. First, agriculture in all countries depends largely on plant genetic resources that have originated elsewhere. Continued and unrestricted access to plant genetic resources, therefore, is indispensable for the crop improvements that are necessary for sustainable agriculture and food security, in the face of genetic erosion, environmental changes, and future human needs. Furthermore, given the millennia of agricultural history, the geographical origins of plant genetic resources are often impossible to locate, and thus, identification of the country of origin is very difficult. Finally, genebanks all over the world now have collections of all major crops, making the search for genetic resources *in situ* unnecessary. All these considerations advocate a multilateral, rather than bilateral, approach to access to agricultural biodiversity.⁶²

The Treaty's Multilateral System of facilitated access and fair and equitable benefit-sharing,⁶³ which refers to a specified list of plant genetic resources,⁶⁴ aims to facilitate access to, and exchange of, those plant genetic resources that are considered to be vital for agricultural research and food security and to institutionalize the sharing of benefits arising from their use. Its provision on benefit-sharing⁶⁵ recognizes that facilitated access is itself a major benefit of the Multilateral System and that benefits accruing from it will be shared fairly and equitably through a number of inter-State mechanisms, under the guidance of the Treaty's Governing Body, including the exchange of information, access to and transfer of technology, capacity building, and the sharing of the benefits arising from commercialization. Additionally, Parties are to consider the modalities of a strategy of voluntary contributions from food-processing industries.

The ITPGR Governing Body has adopted a 'standard material transfer agreement'⁶⁶ (SMTA) as the standardized contract that will be used in all transactions involving material included in the Multilateral System between providers and users.⁶⁷ Users can include public or private entities. The SMTA includes provisions on a fixed percentage of 1.1% that a user shall pay when a product is commercialized, yet not available without restriction to others for further research and breeding; and a discounted percentage of 0.5% as part of an alternative payments scheme, which entails making payments at a discounted rate on all products belonging to one of the crops under Annex I of the Treaty, irrespective of whether they are available without restriction and whether the product has been developed from material originating from the Multilateral System or from other sources. Payments are made to a trust fund established by the FAO, and benefits should flow to farmers through projects selected and awarded by the Governing Body.

⁶¹ See M.W. Tvedt and T. Young, n. 13 above, at 124.

⁶² See H.D. Cooper 'The International Treaty on Plant Genetic Resources for Food and Agriculture' 11:1 *RECIEL* (2002), 4.

⁶³ See ITPGR, n. 4 above, Articles 10-13.

⁶⁴ *Ibid.*, Annex I.

⁶⁵ *Ibid.*, Article 13.

⁶⁶ *Ibid.*, Article 12(4).

⁶⁷ ITPGR Governing Body Resolution 2/2006 (16 June 2006).

Mandatory payments are not expected to take place soon, taking into consideration the time required for research, development, and commercialization. For this reason, the benefit-sharing provisions on information exchange, technology transfer, and capacity building, accompanied by an appropriate use of the Treaty's funding strategy,⁶⁸ may have a more vital role to play in the future. In that regard, however, several countries have made voluntary contributions to the funding strategy's benefit-sharing fund, enabling it to be operational as of 2009. Norway, for example, decided to provide an annual contribution equivalent to 0.1% of the total sales of seeds in the country to the benefit-sharing mechanism.⁶⁹ This could be considered an example of inter-State benefit-sharing directly supporting farmers in developing countries through the ITPGR legal structure. The first round of 11 projects in developing countries – some of them at the community level – was financed in 2009, providing some indications of how inter-State benefit-sharing could contribute to communities' livelihoods. For instance, one of the funded projects seeks to increase the capacity of six communities living in Peru's potato park in the management, conservation and sustainable use of agrobiodiversity, enhance food sovereignty, and promote the development of a creative economy based on the sustainable use of the native crops and traditional knowledge.⁷⁰ It should be further noted that the Treaty contains a provision recognizing farmers' contribution to the conservation and development of plant genetic resources for food and agriculture as well as farmers' rights, including their traditional knowledge and their right to participate in benefit-sharing and in national decision-making processes.⁷¹

The Treaty's contribution to farmers' rights has been acknowledged from a human rights perspective in the 2009 report of the UN Special Rapporteur on the Right to Food.⁷² The Special Rapporteur expressed concerns regarding the consequences of intellectual property rights and protected varieties on farmers' livelihoods and traditional knowledge, and encouraged a shift from bilateral benefit-sharing as envisaged in the CBD towards direct and multilateral support for agrobiodiversity enhancement as provided for by the ITPGR.

While it could be argued that multilateral arrangements such as those provided for by the ITPGR could directly reach the local level through an internationally agreed mechanism, a variety of challenges remain, particularly with regard to which communities or groups will be able to have access to an international mechanism detached from their realities, and under which conditions. Both under the CBD and under the ITPGR, enactment of national legislation remains the only option for inter-State benefit-sharing under international law to reach the community level.

III. STATE-TO-COMMUNITY BENEFIT-SHARING

⁶⁸ See ITPGR, n. 4 above, Article 18.

⁶⁹ See ITPGR Secretariat press release, 'Norway announces annual contribution to the benefit-sharing fund of the International Treaty (3 March 2008), available at <[ftp://ftp.fao.org/ag/agp/planttreaty/news/noti005_en.pdf](http://ftp.fao.org/ag/agp/planttreaty/news/noti005_en.pdf)>.

⁷⁰ See ITPGR Secretariat press release, 'Board of plant treaty announces new benefits for farmers in 11 developing nations, as efforts heat up to protect valuable food crops in face of threatened shortages, climate change' (undated), available at <[ftp://ftp.fao.org/ag/agp/planttreaty/news/news0009_en.pdf](http://ftp.fao.org/ag/agp/planttreaty/news/news0009_en.pdf)>.

⁷¹ See ITPGR, n. 4 above, Article 9. See also E. Tsioumani, n. 15 above, at 120.

⁷² Interim report of the Special Rapporteur on the right to food: Seed policies and the right to food: enhancing agrobiodiversity and encouraging innovation (UN Doc A/64/170, 23 July 2009).

As opposed to the more widely shared understanding of benefit-sharing as an inter-State obligation under the third objective of the CBD, the concept that emerges from CBD Article 8(j) portrays benefit-sharing as recognition of the contribution of indigenous and local communities' traditional knowledge, innovation and practices to the conservation of biodiversity⁷³ and - based on a combined reading with Article 10(c)⁷⁴ - to the sustainable use of biodiversity components, in consideration of the fact that traditional knowledge derives from the customary use of biodiversity components and contributes to ensuring the conservation of biodiversity.⁷⁵ This concept of benefit-sharing seems to differ significantly from that used in the ABS context as discussed above, in that benefits are encouraged to flow from the State to a community within its territory for a different use of biodiversity – its conservation and sustainable use, according to the first and second objectives of the Convention - rather than in relation to the access and use of genetic resources more specifically, under the third objective. In the case benefit-sharing from conservation and sustainable use, therefore, the benefits are expected to flow directly to communities and immediately contribute to their livelihoods as a matter internal to one State.

As opposed to the clearly mandatory language used in Article 15, the text of the Convention with regard to State-to-community benefit-sharing is quite open-ended and controversial. The CBD preamble only stresses the 'desirability' of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biodiversity and the sustainable use of its components.⁷⁶ The language of Article 8(j) itself refers to 'encourage[ing] the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices', and its chapeau is qualified by the phrase 'as far as possible and appropriate',⁷⁷ leading to discussions among CBD Parties as to the legal significance of the provision.⁷⁸ In addition, the reference to traditional knowledge, innovations and practices 'embodying traditional lifestyles' may be interpreted as excluding from benefit-sharing groups that descended from indigenous and local communities but have 'assimilated into mainstream, non-traditional economy and society'.⁷⁹ It can also be generally remarked that the CBD text does not address more in detail the role of indigenous and local communities in *in situ* conservation.⁸⁰

Notwithstanding all these difficulties, a clear trend seems to emerge from the multitude of decisions adopted by the CBD COP referring to the concept of State-to-community benefit-sharing in the context of various programmes of work (the main instrument that CBD Parties have developed for themselves to achieve the

⁷³ D. Schroeder, 'Justice and Benefit Sharing', in R. Wynberg *et al.* (eds.), n. 21 above, 11, at 11 in which benefit-sharing is considered a reward for the custodians of biodiversity.

⁷⁴ CBD Article 10(c) reads as follows: 'Each Contracting Party shall, as far as possible and as appropriate: [...] Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.'

⁷⁵ See L. Glowka, n. 6 above, at 60.

⁷⁶ See P. Birnie, A. Boyle and C. Redgwell, n. 8 above, at 627.

⁷⁷ As is the chapeau of Art. 10(c); see n. 74 above.

⁷⁸ See *Earth Negotiations Bulletin*, n. 7 above, at 7.

⁷⁹ G. Maggio, 'Recognizing the Vital Role of Local Communities in International Legal Instruments for Conserving Biodiversity' 16 *UCLA Journal of Environmental Law and Policy* (1997-1998) 179-226, at 210, citing L. Glowka, n. 6 above.

⁸⁰ See P. Birnie, A. Boyle and C. Redgwell, n. 7 above, at 628.

commitments contained in the Convention) and voluntary guidelines related to the conservation and sustainable use of biodiversity with specific regard to protected areas, forests, mountains, tourism, environmental and socio-cultural impact assessment, and the ecosystem approach. Interestingly, not all these references provide an explicit link to CBD Article 8(j), and in many respects the concept of State-to-community benefit-sharing may not necessarily be directly dependent on the use of traditional knowledge as such, thus seemingly having been developed in a way that goes beyond the letter of Article 8(j). As will be discussed below, the concept may rather operate as a broader incentive to ensure the full and effective participation of indigenous and local communities in decision-making and adaptive management of biodiversity, or as compensation⁸¹ for the costs and negative impacts of biodiversity conservation or sustainable management activities on indigenous and local communities. As such, the concept of State-to-community benefit-sharing becomes an essential tool that underpins and reinforces current efforts to ensure community involvement in decision-making and sustainable management of living resources. The three functions of State-to-community benefit-sharing will be addressed in turn in the following sub-sections.

Benefit sharing and the use of traditional knowledge

The link between benefit-sharing and the use of traditional knowledge as a contribution to the conservation and sustainable use of biodiversity was highlighted in Agenda 21, where governments are called upon to ‘recognize and foster the traditional methods and the knowledge of indigenous people and their communities, emphasizing the particular role of women, relevant to the conservation of biological diversity and the sustainable use of biological resources, and *ensure the opportunity for the participation of those groups in the economic and commercial benefits derived from the use of such traditional methods and knowledge.*’⁸² The Johannesburg Plan of Implementation (JPOI) provides more action-oriented language, calling for the development and implementation of benefit-sharing mechanisms on mutually agreed terms for the use of traditional knowledge, innovations and practices, subject to national legislation and with communities’ approval and involvement.⁸³ Notably, the latter reference highlights a sense of urgency in proceeding with national implementation on State-to-community benefit-sharing and the need to avoid a top-down approach in doing so. In addition, the JPOI moves away from a purely economic view of the benefits linked to traditional knowledge.

The CBD programme of work on Article 8(j) and related provisions may also lead to understanding benefit-sharing as dependent on the use of traditional knowledge, innovations and practices.⁸⁴ According to Task 7 of its programme of work, the CBD Working Group Article 8(j) is to develop guidelines for the development of mechanisms, legislation or other appropriate initiatives to ensure that indigenous and

⁸¹ Benefit-sharing may also be linked to food security. See B. De Jonge and M. Korthals, ‘Vicissitudes of Benefit Sharing of Crop Genetic Resources: Downstream and Upstream’ 6:3 *Developing World Bioethics* (2006), 144, cited in D. Schroeder, ‘Justice and Benefit Sharing’, in R. Wynberg *et al.* (eds), n. 21 above, 11-26, at 21.

⁸² Agenda 21 (in Report of the United Nations Conference on Environment and Development, UN. Doc. A/CONF.151/26, 13 June 1992, Annex II), para. 15(4)(g) (emphasis added).

⁸³ See Johannesburg Plan of Implementation, n. 7 above, paras. 44(j).

⁸⁴ See CBD, n. 1 above, preambular para. 12; and see L. Glowka, n. 6 above, at 11 and 48.

local communities obtain a fair and equitable share of benefits arising from the use and application of their knowledge, innovations and practices, and that private and public institutions interested in using such knowledge, practices and innovations obtain the prior informed approval of these communities.⁸⁵ Expanding upon the text of Article 8(j), therefore, the programme of work specifies the need for a bottom-up approach to State-to-community benefit-sharing, and for communities to be active participants in the development of such benefit-sharing mechanisms. The Working Group accordingly recently produced a draft code of ethical conduct on respect for the cultural and intellectual heritage of indigenous and local communities relevant for the conservation and sustainable use of biological diversity.⁸⁶ The draft code, however, does not provide much clarification on benefit-sharing, as it simply calls in general terms for the distribution of benefits for communities' contribution to activities/interactions related to biodiversity and associated traditional knowledge proposed to take place, or likely to impact on, their sites.⁸⁷

Other areas of work under the CBD have contributed to clarifying in more detail the link between benefit-sharing and the use of traditional knowledge. Building upon the Rio Forest Principles,⁸⁸ the CBD work programme on forest biodiversity explicitly refers to the fair and equitable sharing of the benefits from forest-related traditional knowledge,⁸⁹ emphasizing its link with sustainable use in the context of forest management by indigenous and local communities.⁹⁰ Furthermore, the work programme foresees that at the national level the development of community-based approaches for the conservation and sustainable use of forest biodiversity built upon integrating traditional forest-related knowledge and benefit-sharing considerations, in accordance with Article 8(j) and related CBD provisions.⁹¹ It further links benefit-sharing with the goal of addressing socio-economic failures and distortions that lead to decisions that result in loss of forest biological diversity, by calling for the development of mechanisms to ensure that monetary and non-monetary costs and benefits of forest biodiversity management are equitably shared between stakeholders at all levels. To this end, the work programme makes reference to the use of forest planning and management, stakeholder analysis and mechanisms for transferring costs and benefits, providing market and other incentives for the use of sustainable practices, develop alternative sustainable income-generation programmes and facilitate self-sufficiency programmes of indigenous and local communities.⁹²

⁸⁵ Programme of Work on the Implementation of Article 8(j) and Related Provisions of the Convention on Biological Diversity, adopted in Article 8(j) and related provisions (CBD Decision V/16, 22 June 2000), Annex.

⁸⁶ Draft code of ethical conduct on respect for the cultural and intellectual heritage of indigenous and local communities relevant for the conservation and sustainable use of biological diversity, contained in Report of the Sixth Meeting of the Ad Hoc Open-Ended Inter-Sessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity, UN Doc. UNEP/CBD/COP/10/2 (21 November 2009), section 6/3, . The draft code is expected to be finalized and adopted by CBD COP 10, that will take place in October 2010.

⁸⁷ *Ibid.*, para. 12.

⁸⁸ Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (UN Doc. A/CONF.151/126, 13 June 1992); see also comments by D. Shelton, n. 2 above, at 82.

⁸⁹ Forest biological diversity (CBD Decision VI/22, 27 May 2002), para. 13..

⁹⁰ *Ibid.*, para. 19(h).

⁹¹ *Ibid.*, para. 34.

⁹² Expanded Programme of Work on Forest Biological Diversity, CBD COP Decision VI/22, n. 82 above, Annex, activities (b) and (f) under Objective 1.

The CBD Addis Ababa Principles and Guidelines on the Sustainable Use of Biodiversity⁹³ also link the inclusion of traditional knowledge in biodiversity management planning with benefit-sharing. Principle 4(a) states that adaptive management should be practiced based on science and local and traditional knowledge, according to a rationale underlining that ‘in many societies traditional and local knowledge has led to much use of biological diversity being sustainable over long time-periods without detriment to the environment or the resource’, thus considering the incorporation of such knowledge into modern use systems critical to avoid inappropriate use and enhance sustainable use of biodiversity components. Accordingly, adaptive management plans are to incorporate ‘systems to generate sustainable revenue, where the benefits go to indigenous and local communities and local stakeholders to support successful implementation.’⁹⁴

Other COP decisions also indicated that benefit-sharing may be a means to contribute to the further preservation of traditional knowledge, in addition to rewarding communities for the use of their knowledge. The CBD Working Group on Protected Areas points in this direction, by encouraging ‘the establishment of protected areas that benefit indigenous and local communities, including by respecting, preserving, and maintaining their traditional knowledge in accordance with article 8(j) and related provisions.’⁹⁵ Along the same lines, the CBD Guidelines on Biodiversity and Tourism Development include among the benefits deriving from biodiversity-based tourism activities ‘funds for development or maintenance of sustainable practices,’⁹⁶ arguably including sustainable traditional practices.

The above-mentioned references to benefit-sharing evidence an approach that favours the incorporation of traditional knowledge in living resources management through planning, and provide for rewarding communities that with their knowledge contribute to the adaptive management of biodiversity.

Benefit-sharing and communities’ participation

State-to-community benefit-sharing can also be seen as a tool for reinforcing general principles of public participation in environmental decision-making and management, and particularly as underpinning efforts to ensure the meaningful participation of indigenous and local communities in the conservation and sustainable use of biodiversity.⁹⁷ There is a significant number of explicit references to benefit-sharing

⁹³ Addis Ababa Principles and Guidelines for the Sustainable use of Biodiversity, adopted by CBD COP Decision VII/12, Sustainable Use (Article 10) (13 April 2004), Annex II.

⁹⁴ *Ibid.*, operational guidelines to Principle 4.

⁹⁵ Programme of Work on Protected Areas, adopted by CBD COP Decision VII/28, Protected Areas (Articles 8 (a) to (e)) (13 April 2004), Annex, para. 1.1.7.

⁹⁶ International guidelines for activities related to sustainable tourism development in vulnerable terrestrial, marine and coastal ecosystems and habitats of major importance for biological diversity and protected areas, including fragile riparian and mountain ecosystems, Biological Diversity and tourism (CBD Decision VII/14, 13 April 2004), Annex, para. 43.

⁹⁷ See G. Maggio, n. 83 above, at 181. See also D. Shelton, n. 2 above, at 84-87; and Rio Principle 22, Rio Declaration on Environment and Development’ (UN Doc A/CONF.151/6/Rev.1, 13 June 1992), which reads: ‘States should recognize and duly support the identity, culture and interests [of indigenous and local communities] and enable their effective participation in the achievement of sustainable development.’

in the CBD COP decisions that, going beyond the letter of Article 8(j), point to the use of this concept as expecting States to fully involve communities in the governance of biodiversity conservation and sustainable use, encouraging and rewarding them for their participation in decision-making through legal recognition and promotion of community management systems, provision of capacity-building services, making available employment or other income-generation opportunities, and ultimately sharing economic revenues derived from the conservation and sustainable use of biodiversity (such as park entrance fees, licences fees for wildlife watching or sustainable hunting, etc.) or giving precedence to community-based mechanisms for conservation and sustainable use.

The CBD COP decisions on the ecosystem approach, for instance, indicates that benefit-sharing is expected to target stakeholders responsible for the production and management of the benefits flowing from the multiple functions provided by biodiversity at the ecosystem level, including capacity-building, especially at the level of local communities managing biological diversity in ecosystems and local incentives for good management practices.⁹⁸ This is based on the understanding that where those who control land use do not receive benefits from maintaining natural ecosystems and processes, they are likely to initiate unsustainable practices for short-term benefits.⁹⁹ In line with the ecosystem approach, the CBD work programme on protected areas also clearly links benefit-sharing with communities' participation in biodiversity conservation. Its programme element 2 is tellingly titled 'Governance, participation, equity and benefit-sharing' and links the goal of promoting equity and benefit-sharing with the legal recognition and effective management of indigenous and local community conserved areas in a manner consistent with the goals of conserving both biodiversity and the knowledge, innovations and practices of these communities, using the social and economic benefits generated by protected areas for poverty reduction, consistent with protected-area management objectives. To this end, it stresses the need for engaging indigenous and local communities and relevant stakeholders in participatory planning and governance.¹⁰⁰

The CBD Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity further provide an interesting exemplification of benefit-sharing as an incentive for communities' participation. The rationale is that local people involvement facilitates compliance with legislation on the sustainable use of natural resources, and that management regimes are enhanced when constructive programmes that benefit local communities are implemented, such as training to identify income alternatives, or assistance in diversifying their management capacities.¹⁰¹ On this basis, the operational guidelines to Principle 4 recommend adopting policies and regulations that ensure that indigenous and local communities and local stakeholders who are engaged in the management of a resource for sustainable use receive an equitable share of any benefits derived from that use, and promoting economic incentives that will guarantee additional benefits to those involved in the management

⁹⁸ Principles of the Ecosystem approach, in Ecosystem approach (CBD Decision V/6, 22 June 2000), Annex B, Operational Guidance 2, para. 9.

⁹⁹ Refinement and Elaboration of the Ecosystem Approach, Based on Assessment of Experience of Parties in Implementation, in Ecosystem approach (CBD Decision VII/11, 13 April 2004), Annex I, annotations to rationale to Principle 4.

¹⁰⁰ *Ibid.*, Annex I, paras. 2.1.3-2.1.5.

¹⁰¹ See Addis Ababa Principles and Guidelines, n. 97 above, rationale to Principle 4.

of any biodiversity components, such as job opportunities for local peoples, or equal distribution of returns amongst locals and outside investors, and support for co-management. In addition, the guidelines use benefit-sharing as a means specifically to ensure local stakeholder participation in projects led by foreign investors. In these instances, the link with Article 8(j) is hardly visible. Rather, one can infer that benefit-sharing is used as an incentive to ensure the effective participation of indigenous and local communities in the sustainable use of biodiversity, further contributing to sustainable development, as well as a means to prompt compliance with conservation and sustainable use regulations. Thus, community participation in decision-making and management planning is not considered *per se* a reward for communities, in recognition of the costs and risks that participation may create in practice for communities.

Based on the ecosystem approach, there are quite a few examples of national legislation providing for specific ways in which communities can participate in the conservation and sustainable use of biodiversity, and benefit from it.¹⁰² In the Philippines, protected areas buffer zones may provide regulated benefits and livelihood opportunities to local communities. Among the criteria for selection of buffer zones are the potential capacity of the area to prevent the community from encroaching the protected area through the provision of alternative supplies of resources such as wildlife farms, the potential of the area to enhance local community participation for the purpose of increasing the level of support to, and acceptance of, the principles of buffer zone management, and the existence of traditional practices within the area.¹⁰³ In Vietnam, households and individuals lawfully living in conservation zones have the right to benefit from profits earned from eco-tourism services.¹⁰⁴

In some instances, national laws call for the conclusions of contracts between authorities and communities in order to implement benefit-sharing. In South Africa, the management authority may enter into an agreement with local communities for the co-management of a protected area or the regulation of human activities that affect the environment in the area, which can provide for delegation of powers, benefit-sharing, use of biological resources, development of local management capacity and knowledge exchange.¹⁰⁵ Along similar lines, in Ethiopia, communities may be authorized to administer wildlife habitats under agreements with regions, and regulations should determine mechanisms to share the profits derived from the utilization of wildlife resources between federal government and regions and to benefit communities.¹⁰⁶

In other instances, in line with the Addis Ababa Principles and Guidelines, national legislation requires natural resources management plans to provide for the public to

¹⁰² This information is based on E. Morgera, *Wildlife Law and the Empowerment of the Poor*, FAO Legislative Study (forthcoming in 2010). (It should be noted that the study is limited to national legislation on the conservation and sustainable use of terrestrial and avian wild animals.)

¹⁰³ The Philippines Department of Environment and Natural Resources Memorandum Circular prescribing guidelines for the establishment and management of buffer zones for protected areas, No. 16 (1993).

¹⁰⁴ Vietnam's Biodiversity Law, No. 20/2008/HQ12, 2008, Articles 28-31.

¹⁰⁵ South Africa's National Environmental Management Protected Areas Act (No. 57, 2003), Article 42.

¹⁰⁶ Ethiopia's Proclamation Wildlife Areas and Authority (No. 541, 2007) Articles 7 and 10.

participate in management activities and in benefit-sharing. In the Republic of Congo, local communities must be involved in the preparation and implementation of protected areas management plans and must benefit from revenues generated by activities carried out in protected areas. Minimum contents of plans include specific ways to involve the local population in management.¹⁰⁷ Cameroon's national legislation provides an articulated system of wildlife management planning requirements, in the framework of which *plans de gestion* must set out measures intended to involve local people in all management phases and for the equitable sharing of benefits.¹⁰⁸

One of the CBD decisions on the ecosystem approach also suggests that benefit-sharing could be undertaken by a community organization, in terms of good governance,¹⁰⁹ and decisions about the allocation of benefits between the community should be done by the community itself.¹¹⁰ This concern is also sometimes reflected in national legislation. In Namibia, 'conservancy committees' can be created by any group of persons residing on communal land when the relevant minister is satisfied that the committee has the ability to manage funds and has an appropriate method for the equitable distribution, to members of the community, of benefits derived from the consumptive and non-consumptive use of game in such area.¹¹¹

According to this use of State-to-community benefit-sharing, the concept operates as an indispensable ingredient to guarantee sustainable use, ensuring that local populations receive benefits and thus providing them with a direct stake in conserving biodiversity, a legal market with moderate prices for its sustainable use and an economic incentive to prevent poaching.¹¹² More specifically, the above-mentioned guidance from the CBD COP shows that benefit-sharing implies that the State is expected to couple community participation in decision-making and management planning related to biodiversity with legal recognition and support of communities' sustainable practices, the provision of guidance (such as training or capacity-building) to improve the environmental sustainability of community practices, and the proactive identification of opportunities for better/alternative livelihoods in these endeavours, with a view to facilitating understanding of, and compliance with, the law.

Benefit-sharing as compensation for negative impacts on communities

The CBD Parties have also contributed to a formulation of State-to-community benefit-sharing as a way to compensate indigenous and local communities for negative impacts caused by conservation and sustainable use efforts. The CBD work programme on protected areas, for instance, points to the need to '[a]ssess the economic and socio-cultural costs, benefits and impacts arising from the establishment and maintenance of protected areas, particularly for indigenous and local communities, and adjust policies to avoid and mitigate negative impacts, and

¹⁰⁷ Congo's Wildlife Law (Loi n. 37-2008 sur la faune et les aires protégées), Articles 20-22.

¹⁰⁸ Cameroon's Wildlife and National Parks Act (Décret No 95-466/PM fixant les modalités d'application du régime de la faune) (1995), Article 22.

¹⁰⁹ Refinement and Elaboration of the Ecosystem Approach, Based on Assessment of Experience of Parties in Implementation, n. 103 above, para 18.

¹¹⁰ *Ibid.*, Principle 2, Implementation Guideline 2.1.

¹¹¹ Namibia's Nature Conservation Amendment Act (No. 5, 1996), Article 3.

¹¹² N. Matz-Lück, 'Biological Diversity, International Protection', in R. Wolfrum (ed), *Max Planck Encyclopedia of Public International Law* (Oxford University Press, 2009).

where appropriate compensate costs and equitably share benefits in accordance with the national legislation'.¹¹³ Along similar lines, one of the decisions on the ecosystem approach calls for assessing the costs and benefits of conserving, maintaining, using and restoring ecosystems and for taking into account the interests of all relevant stakeholders for equitably sharing the benefits according to national law.¹¹⁴

The Akwé: Kon Guidelines for the conduct of cultural, environmental and social impact assessment on sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities, provide for a more detailed application of State-to-community benefit-sharing as compensation, in their attempt to support the incorporation of cultural, environmental and social considerations of indigenous and local communities into new or existing impact assessment procedures. The Guidelines contain references to benefit-sharing that seem to be based on an understanding of traditional practices as inherent in the traditional occupation of lands and waters, and seem to suggest that impact assessments can be used as tools that contribute to the equitable sharing of benefits, by identifying and weighting expected cultural, social and environmental costs and impacts of proposed developments, as well as communities' opportunities and traditional contributions to conservation and sustainable use. The Guidelines recommend that the cultural, environmental and social impact assessment reflects 'a balance between economic, social, cultural and environmental concerns, on the one hand, while, on the other hand, maximizing opportunities for the conservation and sustainable use of biological diversity, the access and equitable sharing of benefits and the recognition of traditional knowledge, innovations and practices in accordance with Article 8(j) of the Convention, and should seek to minimize risks to biological diversity.'¹¹⁵ Specifically, they provide that '[p]roposed developments on sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities should ensure that tangible benefits accrue to such communities, such as payment for environmental services, job creation within safe and hazard-free working environments, viable revenue from the levying of appropriate fees, access to markets, and diversification of income-generating (economic) opportunities for small and medium-sized businesses.'¹¹⁶

Along similar lines, the CBD Guidelines on Biodiversity and Tourism seem to imply a concept of benefit-sharing as compensation, by including among their goals the '[f]air and equitable sharing of benefits of tourism activities, with emphasis on the specific needs of the indigenous and local communities concerned,¹¹⁷ and the need for '[p]roviding alternative and supplementary ways for communities to receive revenue from biological diversity.'¹¹⁸ To this end, the Guidelines list a series of possible benefits arising from tourism and the conservation of biodiversity to be shared with indigenous and local communities, including job creation, fostering local

¹¹³ See Programme of Work on Protected Areas, n. 99 above, para. 2(1)(1).

¹¹⁴ See Refinement and Elaboration of the Ecosystem Approach, Based on Assessment of Experience of Parties in Implementation, n. 103 above, para. 12(5).

¹¹⁵ Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment 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, in Article 8(j) and related provisions (CBD COP 7 Decision VII/16F, 13 April 2004), para. 56.

¹¹⁶ *Ibid.*, para. 46.

¹¹⁷ See Guidelines on Biodiversity and Tourism Development, n. 100 above, para. 22.

¹¹⁸ *Ibid.*, para. 43.

enterprises, participation in tourism enterprises and projects, education, direct investment opportunities, economic linkages and ecological services.¹¹⁹

In addition, Principle 12 of the Addis Ababa Principles and Guidelines clearly links benefit-sharing not only with rewards for positive contributions to conservation and sustainable use, but also with some sort of compensation for negative impacts of conservation activities on communities.¹²⁰ Its associated guideline recommends involving local stakeholders, including indigenous and local communities, in the management of any natural resource and providing those involved with equitable compensation for their efforts, taking into account monetary and non-monetary benefits.

It is worth noting that also in the context of the Convention on International Trade in Endangered Species (CITES),¹²¹ recent discussions on the impacts of the CITES-listing decisions on the livelihoods of the poor have made reference to benefit-sharing.¹²² This was based on the understanding that implementation of CITES ‘fails when it is not connected to people’ and that CITES parties should identify ‘positive incentives for people to conserve wild fauna and flora.’ In a proposed resolution,¹²³ principles are set out that CITES Parties should consider in addressing livelihoods issues by developing trade associations with clear obligations for benefit-sharing, recognizing resource tenure for indigenous and tribal communities and the poor, developing market-based incentives to encourage benefit-sharing, with regard to compensatory mechanisms for the shift from *in situ* to *ex situ* production, and developing mitigation strategies for human-wildlife conflicts that provide alternative or compensation schemes, such as payment for ecosystem services, employment opportunities, and development of alternative products.¹²⁴

The relevance of State-to-community benefit-sharing is also reflected in the current debate on the indigenous peoples’ right to provide prior informed consent.¹²⁵ In 2009, the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous peoples, for instance, included an analysis of the duty of States to consult with indigenous peoples on matters affecting them, focusing in particular on

¹¹⁹ Ibid., para. 23.

¹²⁰ Addis Ababa Principles and Guidelines, n. 97 above, Principle 12 states that ‘the needs of indigenous and local communities who live with and are affected by the use and conservation of biological diversity, along with their contributions to its conservation and sustainable use, should be reflected in the equitable distribution of the benefits from the use of those resources.’

¹²¹ Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington D.C., 3 March 1973).

¹²² See CITES Resolution Conf. 8.3 (Rev. CoP 13), Recognition of the benefits of trade in wildlife, 1992 (12 March 1992, as amended on 14 October 2004); and Decisions 14.3 and 14.4, CITES and livelihoods (15 June 2007).

¹²³ COP working document on CITES and livelihoods, prepared by the Chair of the Standing Committee Working Group on CITES and Livelihoods in consultation with UN Environment Programme World Conservation Monitoring Centre, Annex 2, para. 9 (CoP15 Doc. 14, 5 November 2009). The proposal was not adopted in 2010 and will be reconsidered in 2013, at CITES COP 16.

¹²⁴ At the time of writing, the resolutions and decisions adopted at CITES COP 15, held from 13-25 March 2010, in Doha, Qatar, are not yet available. See the summary record of the second session of Committee II (CITES doc. CoP15 Com. II Rec. 2 (Rev. 1), 15 March 2010), para. 14; and the summary record of the third plenary session (CITES doc. CoP15 Plen. 3 (Rev.1), 24 March 2010).

¹²⁵ For an earlier reflection on benefit-sharing related to traditional knowledge and human rights, see D. Shelton, n. 2 above, at 87-101.

consultations in the context of development and natural resources extraction initiatives affecting indigenous lands. He stressed that indigenous peoples should be provided with ‘full and objective information about all aspects of the project that will affect them, including the impact of the project on their lives and environment.’¹²⁶ To this end, an environmental and social impact study should be carried out and its outcome should be presented to indigenous groups at an early stage of the consultations. In addition, the Special Rapporteur recommended that consensus-driven consultation processes should not only address measures to mitigate or compensate for adverse impacts of projects, but also explore and arrive at means of equitable benefit-sharing in a spirit of true partnership.¹²⁷

State-to-community benefit-sharing as compensation for negative impacts thus represents a practical implication of the principle of intra-generational equity, as taking into account the possible impacts of policies and decisions on the poor.¹²⁸ As the above-cited guidance from the CBD COP shows, State-to-community benefit-sharing not only provides for incentives and rewards when community practices and knowledge contribute to conservation and sustainable use, but also specific measures (payments for ecosystem services, diversification of income-generating opportunities, and other mitigation measures) to address instances in which the interests of biodiversity protection are in an irreconcilable conflict with the legitimate interests of communities, and the former need to prevail. To this end, undertaking cultural, social and environmental impact assessments with the full engagement of relevant communities is an indispensable procedural step.

Private sector-to-community benefit-sharing?

Notwithstanding the examples of national legislation cited in the preceding sections, it seems – as was noted in the case of inter-State benefit-sharing – that CBD Parties are generally quite reluctant to put into operation, and in some instances even recognize, State-to-community benefit-sharing. This is demonstrated by limited progress in the implementation of State-to-community benefit-sharing at the national level.¹²⁹ As a result, the CBD voluntary guidelines cited above – as already noted with regard to the Bonn Guidelines – are also addressed to non-State actors, especially the private sector. This is the case of the Addis Ababa Principles and Guidelines,¹³⁰ the Guidelines on Biodiversity and Tourism Development,¹³¹ the Akwé: Kon

¹²⁶ Report of the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous people (UN Doc. A/HRC/12/34, 15 July 2009), para. 53.

¹²⁷ Ibid.

¹²⁸ D. Bartow Magraw and L. Hawke, ‘Sustainable Development’ in D. Bodanski, J. Brunnée and E. Hey, n. 1 above, 630.

¹²⁹ As documented in 2009 in relation to protected areas (In-depth Review of the Implementation of the Programme of Work on Protected Areas (UN Doc. UNEP/CBD/SABSTTA/14/5, 14 January 2010), at 8-9), for instance.

¹³⁰ Addis Ababa Principles and Guidelines, n. 97 above, para. 1 clarifies that ‘The principles provide a framework for advising Governments, resource managers, indigenous and local communities, the private sector and other stakeholders about how they can ensure that their use of the components of biodiversity will not lead to the long-term decline of biological diversity.’

¹³¹ Guidelines on Biodiversity and Tourism Development, n. 100 above, para. 2 clarifies that the Guidelines provide a framework for addressing what the proponent of new tourism investment or activities should do to seek approval, as well as technical guidance to managers with responsibility concerning tourism and biodiversity.

Guidelines¹³² and the draft ethical code.¹³³ In those instances, references to benefit-sharing may not only refer to the role of the State in directly sharing benefits with communities and developing national legislation to that effect, but also the possibility for the private sector¹³⁴ to share benefits between with relevant indigenous and local communities.

An interesting operationalization of this facet of benefit-sharing can be found in the BioTrade Initiative of the UN Commission on Trade and Development (UNCTAD), which was launched in 1996.¹³⁵ The initiative engages private companies to develop a verification framework that will formally recognise their efforts towards conservation and sustainability, including issues of accountability, social and environmental responsibility, and socio-economic sustainability. To this end, benefit-sharing is considered particularly significant for companies to achieve the verification of their compliance with the BioTrade principles and criteria.¹³⁶ Indeed, Biotrade Principle 3 calls for BioTrade activities to equitably share the benefits derived from the use of biodiversity, including informed, transparent, and inclusive interaction among all actors involved in the production and commercialisation of biodiversity products. In addition, Principle 4 on socio-economic sustainability, refers to the importance of benefits reaching local communities through the generation of employment and the improvement of the standard of living. Principle 7 on the need for clarity about land tenure, use and access to natural resources and knowledge, highlights the need to recognise the rights of actors providing traditional knowledge used in product development, valuing and rewarding them in the appropriate manner.¹³⁷

Another example has been developed in the framework of collaboration between the CBD, the UN Permanent Forum on Indigenous Issues, and an association of private enterprises that elaborated the Natural Resources Stewardship Circle Declaration (NRSCD), to provide guidance to the aromatic, perfume, and cosmetics industry interacting with indigenous peoples.¹³⁸ According to guidance to industry concerning the implementation of commitments contained in the NRSCD, interactions between industry and communities should be based on an equal dialogue between partners, in order to have equitable sharing of benefits and to achieve mutual goals including

¹³² Although they are directed to Parties and governments (Akwé: Kon Voluntary Guidelines, n. 120 above, para. 1), the Guidelines are expected to provide a collaborative framework for Governments, indigenous and local communities, decision makers and managers of developments (para. 3).

¹³³ The draft code is expected to be used as a model to establish or improve national frameworks by governments, academic institutions, private sector developers and other potential stakeholders (see Draft code of ethical conduct n. 90 above, section 6/3).

¹³⁴ For an early reflection on the role of multinational companies in ensuring the protection of traditional knowledge, see Shelton, n. 2 above, at 101-102.

¹³⁵ The term 'biotrade' refers to the 'collection, production, transformation, and commercialisation of goods and services derived from native biodiversity under the criteria of environmental, social and economic sustainability.' See The BioTrade Initiative (Biotrade, undated) found at <<http://www.biotrade.org/Intro/bti.htm>>.

¹³⁶ See BioTrade Principles and Criteria (Biotrade, undated), found at <<http://www.biotrade.org/Intro/Principles/bti-principles.htm>>.

¹³⁷ M.J. Oliva, 'Practical guidelines for equitable sharing of benefits of biological resources in BioTrade activities: Concept note' (Biotrade, June 2006), found at <http://www.biotrade.org/btftp/Legal/Legal_docs/BS_Concept_Note_Draft_en.pdf>.

¹³⁸ See the report of the meeting 'Indigenous and local communities, business and biodiversity consultation', held in New York on 12-13 May 2009 (13 May 2009), available at <http://www.equatorinitiative.org/images/stories/events/2009events/tribal_link_csd/ilcs_business_biodiversity_report_final_iv.pdf>.

conservation and sustainable use.¹³⁹

Finally, the International Finance Corporation, which is the private-sector arm of the World Bank family providing loans to private companies for projects in developing countries,¹⁴⁰ has adopted criteria for the private sector's environmental performance that are clearly based on international environmental law¹⁴¹ and include reference to benefit-sharing in relation to cultural heritage, based on the CBD.¹⁴² The explanatory notes clarify that cultural heritage in this respect includes 'intangible forms of culture, such as cultural knowledge, innovations and practices of communities embodying traditional lifestyles, based on the environmental and social assessment according to the Akwé: Kon Guidelines. The requirements of this Performance Standard apply to cultural heritage regardless of whether or not it has been legally protected or previously disturbed.'¹⁴³

The multiple roles of State-to-community benefit-sharing

It emerges from the above brief excursus that while State-to-community benefit-sharing may be directly linked to the use of traditional knowledge, this is not necessarily its sole purpose. The need to ensure the full involvement of indigenous and local communities in the conservation and sustainable use of biodiversity, possibly based on an implicit understanding that traditional knowledge will be used to this end, and to compensate communities for negative impacts of conservation and sustainable use activities at the local level may also provide a clear justification for State-to-community benefit-sharing. Thus, this concept is based on the expectation that the State (and other non-State actors, in the absence of, or in addition to, relevant State measures) adopt a bottom-up approach to building a true partnership with communities for the conservation and sustainable use of biodiversity by proactively providing for a combination of economic and non-economic benefits.

State-to-community benefit-sharing may thus be based on a human right-based approach to biodiversity conservation and sustainable use. This seems supported by the 2007 decision in the case of the *Saramaka People v. Suriname* of the Inter-American Court of Human Rights,¹⁴⁴ which viewed benefit-sharing as inherent to the

¹³⁹ Ibid., Annex, para. 8.

¹⁴⁰ The IFC represents the largest multilateral source of financing for private sector projects in the developing world. More information on the IFC is available on its website at The International Finance Corporation (IFC, undated), found at <<http://www.ifc.org>>; and see IFC, 'IFC in Brief: Investing in Progress with Experience, Innovation, and Partnership' (IFC, 2006), found at <http://www.wfs.sachsen.de/set/1551/ifc_in_brief.pdf>.

¹⁴¹ See generally E. Morgera, 'Significant Trends in Corporate Environmental Accountability: The New Performance Standards of the International Finance Corporation', 18:1 *Colorado Journal of International Environmental Law and Policy* (2007), 184.

¹⁴² IFC, 'Performance Standards on Social & Environmental Sustainability', Performance Standard 8: Cultural Heritage (IFC, 2006), at 32-34, found at, <<http://www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards>>.

¹⁴³ IFC, 'Guidance Notes: Performance Standards on Social & Environmental Sustainability' (IFC, 2007), at 159-160, found at <<http://www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards>>.

¹⁴⁴ Inter-American Court of Human Rights, *Case of the Saramaka People v. Suriname*, judgment of 28 November 2007.

right of compensation for limitations to the rights to property,¹⁴⁵ depending on the effective participation of the members of the Saramaka people, in conformity with their customs and traditions, regarding any development, investment, exploration or extraction plan within their territory and on the carrying out of a prior environmental and social impact assessment.¹⁴⁶ It has also been noted that the provisions on prior informed consent in the UN Declaration on the Rights of Indigenous Peoples¹⁴⁷ imply the need to undertake a preliminary assessment of the likely economic, social, cultural and environmental impact, including potential risks and fair and equitable benefit-sharing in a context that respects the precautionary principle.¹⁴⁸

State-to-community benefit-sharing may be otherwise explained as a pragmatic approach to ensure good governance and adaptive management for the conservation and sustainable use of biodiversity: ensuring benefit-sharing from the rational use of natural resources to resource-dependent communities may serve as an incentive for communities that in all events utilise resources over which they exercise control.¹⁴⁹ This also serves to facilitate communities' compliance with applicable laws. From that viewpoint, the importance of the State-to-community dimension of benefit-sharing resides in its ability to focus on the local level to ensure effective conservation and sustainable use of biodiversity: it calls upon States to pay attention to local socio-economic needs and interests of long-term occupant communities in their conservation efforts.¹⁵⁰ Overall, States are thus expected to engage with the practical difficulties that communities face in effectively contributing to biodiversity conservation and sustainable use.

What also emerges from the preceding sections is that the CBD Parties have gradually contributed to spell out concrete procedural steps for implementing State-to-community benefit-sharing¹⁵¹ through the use of environmental and social impact assessments, the integration of traditional knowledge and community concerns in management plans, the legal recognition and active support of community-based management arrangements, the setting-up of benefit-sharing mechanisms when revenue generated through conservation and sustainable use activities is accrued by the State or outside investors, the provision of livelihood-based mitigation and compensatory measures, the use of other incentives such as payments for ecosystem services, as well as the re-investment of benefits in the protection of traditional knowledge and traditional sustainable practices.

¹⁴⁵ This is based on Article 21(2) of the Inter-American Convention on Human Rights (San José, 22 November 1969), which reads: 'No one shall be deprived of his property except upon payment of just compensation, for reasons of public utility or social interest, and in the cases and according to the forms established by law.'

¹⁴⁶ See *Saramaka People v. Suriname*, n. 139 above, para. 129. See comments by T. Greiber, *et al.* *Conservation with Justice: A Rights-Based Approach*, IUCN Environmental Policy and Law Paper No. 71 (IUCN, 2009), at 19-20.

¹⁴⁷ UN Declaration on the Rights of Indigenous Peoples (UNGA Res 61/295, 13 September 2007). See Article 19, which reads: 'States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.'

¹⁴⁸ See T. Greiber *et al.*, n. 151 above, at 19-20.

¹⁴⁹ See G. Maggio, n. 83 above, at 180 and 185.

¹⁵⁰ *Ibid.*, at 181.

¹⁵¹ This is quite significant, given the silence of the Convention on this aspect, as remarked by D. Shelton, n. 2 above, at 80.

These linkages are well illustrated by the CBD work programme on mountain biodiversity, whereby local capacity for sustainable tourism management should be strengthened to ensure that benefits derived from tourism activities are shared by indigenous and local communities, while preserving natural and cultural heritage values¹⁵² In this relation, the work programme also foresees the promotion of sustainable land-use practices, techniques and technologies of indigenous and local communities and community-based management systems, for the conservation and sustainable use (including pastoralism, hunting and fishing) of wild flora and fauna and agro-biodiversity in mountain ecosystems, as well as support for activities of indigenous and local communities involved in the use of traditional mountain-related knowledge, in particular concerning sustainable management of biodiversity, soil, water resources and slope.¹⁵³ In addition the work programme provides for encouraging the implementation of environmental and social impact assessments at sectoral, programme and project levels, taking into account specificities of indigenous and local communities depending upon mountain ecosystems, by observing the Akwé: Kon voluntary guidelines.¹⁵⁴ What the mountain biodiversity work programme also shows is how the multiple functions of State-to-community benefit-sharing may be difficult to distinguish in practice, and should be mutually reinforcing.

Better understanding of the emerging multi-faceted role of State-to-community benefit-sharing can be an important component of the upcoming in-depth review of the programme of work of Article 8(j) and related CBD provisions with the purpose of continuing the Working Group on Article 8(j). The review is scheduled for COP 10 in Nagoya, Japan, in October 2010, and is expected to place greater focus on the interlinkages between the protection of traditional knowledge, innovations and practices and the conservation and sustainable use of biological diversity and, the fair and equitable sharing of the benefits arising from the utilization of traditional knowledge, innovations and practices.¹⁵⁵ In addition, this conceptual work may also play a significant role in other international processes in which benefit-sharing is discussed, as will be highlighted in the following section.

IV. BENEFIT-SHARING OUTSIDE THE CBD PROCESS

The legal concept of benefit-sharing is relevant in other international processes, outside the framework of the CBD and other biodiversity-related conventions. These include negotiations on the relationship between the CBD and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)¹⁵⁶ of the World Trade Organization (WTO); the protection of genetic resources, traditional knowledge and traditional cultural expressions in the framework of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) of the World Intellectual Property Organization (WIPO); the framework for sharing influenza viruses and access to vaccines and other benefits under the World

¹⁵² Work Programme on Mountain Biodiversity, in Mountain Biological Diversity (CBD decision VII/27, 13 April 2004), Annex, para. 1.3.7.

¹⁵³ *Ibid.*, paras. 1.3.2-1.3.4.

¹⁵⁴ *Ibid.*, para 219.

¹⁵⁵ Article 8(j) and related provisions (CBD Decision IX/13A, 9 October 2008), para. 11.

¹⁵⁶ World Trade Organization Agreement on Trade-related Aspects of Intellectual Property Rights (Marrakesh, 15 April 1994).

Health Organization (WHO);¹⁵⁷ and reducing emissions from deforestation, forest degradation, sustainable forest management, forest conservation and enhancement of carbon stocks (REDD-plus) under the UN Framework Convention on Climate Change (UNFCCC).¹⁵⁸ The following overview will contribute to identify instances in which the concepts of benefit-sharing elaborated under the biodiversity-related conventions may influence negotiations.

Intellectual property governance: TRIPS and WIPO IGC

The intellectual property governance structure provides a clear example of how several negotiators, particularly from developing countries, have been attempting to use principles enshrined in the CBD in other fora to achieve inter-State benefit-sharing and promote equity and sustainable development objectives. Following several high-profile controversial patent cases involving genetic resources and traditional knowledge, including turmeric, neem, ayahuasca and hoodia,¹⁵⁹ many analysts realized that the intellectual property structures and officers lack the norms and tools to prevent ‘wrong’ patents based on prior art, let alone to take into account the CBD objectives. It was argued that unless the TRIPS Agreement is amended to ensure respect for the CBD principles also in the intellectual property field, implementation and enforceability of such principles will be lacking.¹⁶⁰ While patenting based on the use of genetic resources is allowed under TRIPS, subject to meeting patentability criteria, the CBD objectives are currently not supported because the patentability requirements do not require evidence of prior informed consent or MAT for benefit-sharing. Furthermore, there is nothing in TRIPS to provide support for the CBD’s principle of national sovereignty so foreign companies may obtain private rights derived from national resources without having to adhere to CBD principles.¹⁶¹ Although it can be argued that access to resources in violation of the CBD principles of prior informed consent and benefit-sharing may not be legitimate, in the absence of national legislation implementing such principles, enforceability is weak, if existent at all.

Therefore, several developing countries have been calling for an amendment to TRIPS to bring it in line with the CBD by introducing requirements to disclose the origin of genetic material and evidence of prior informed consent and benefit-sharing in patent applications. The original proposal, submitted by a group of developing countries led by India and Brazil,¹⁶² was eventually supported by a coalition of 110 WTO members by 2008, when a strategic alliance was made with the EU and Switzerland calling for a procedural decision to negotiate in parallel the biodiversity

¹⁵⁷ It should be noted that discussions on benefit-sharing are also occurring in the area of transboundary freshwaters, but this is not addressed in this article. See, for instance, H. Qaddumi, *Practical approaches to transboundary water benefit sharing*, Overseas Development Institute Working Paper 292 (July 2008), found at: <<http://www.odi.org.uk/resources/download/1929.pdf>>.

¹⁵⁸ United Nations Framework Convention on Climate Change (New York, 26 May 1992) (UNFCCC).

¹⁵⁹ See, for instance, Commission on Intellectual Property Rights, *Integrating Intellectual Property Rights and Development* (Commission on Intellectual Property Rights, 2002), at 76.

¹⁶⁰ Ibid. See also M. Chouchena-Rojas, M. Ruiz Muller, D. Vivas and S. Winkler, *Disclosure Requirements: Ensuring mutual supportiveness between the WTO TRIPS Agreement and the CBD* (IUCN and ICTSD, November 2005).

¹⁶¹ See Commission on Intellectual Property Rights, n. 159 above, at 84.

¹⁶² Documents circulated under the 2001 mandate of the Doha Development Agenda are available at: Article 27.3b, traditional knowledge, biodiversity’ (WTO, undated), found at: <http://www.wto.org/english/tratop_e/trips_e/art27_3b_e.htm>.

amendment and geographical indications, another issue under discussion in the TRIPS Council.¹⁶³

While certain developed countries prefer the issue of disclosure to be addressed in the WIPO IGC, as reviewed below, an amendment of the TRIPS Agreement incorporating disclosure requirements would strengthen implementation and enforcement, as it would be linked to the WTO dispute settlement system. Therefore, requiring patent applicants to disclose the source of the genetic resource and traditional knowledge used in their inventions – as well as evidence of prior informed consent and benefit-sharing – has been raised as a possible mechanism for using the intellectual property system to ensure legal access and benefit-sharing. A multilateral obligation to implement disclosure requirements, if incorporated in the TRIPS Agreement, would trigger the required national legislative action. It would contribute towards addressing misappropriation of genetic resources and traditional knowledge and eventually to improved inter-State benefit-sharing in accordance with the CBD principles. Such proposals, however, remain controversial, and it remains to be seen whether negotiations will achieve any progress. Work and analysis achieved in the CBD framework, particularly regarding user country measures and tools, can be vital in that regard.

At the same time, certain developed countries have been calling for disclosure requirements and mechanisms to be addressed in the framework of negotiations held in WIPO IGC. Established in 2001, the IGC received a renewed mandate by the 2009 session of WIPO General Assemblies¹⁶⁴ to continue its work and undertake text-based negotiations towards international legal instrument(s) which will ensure effective protection of genetic resources, traditional knowledge and traditional cultural expressions, ‘without prejudice to the work pursued in other fora’¹⁶⁵ – such fora including in particular the TRIPS Council, other WIPO committees and bodies such as the Working Group on the Patent Cooperation Treaty,¹⁶⁶ and arguably the CBD with regard to its ABS negotiations. It should be noted that the establishment of the IGC was a result of the influence of the CBD principles, as well as of developing countries’ concerns regarding the consequences of patents over their genetic resources and traditional knowledge, and inherent injustices enshrined in the intellectual property system.¹⁶⁷

The question of how to establish mechanisms or obligations that can capture ABS-relevant benefits from the patent systems and channel them back to the country providing genetic resources and/or traditional knowledge thus remains open in various fora.¹⁶⁸ Achieving consistency and mutual supportiveness across these different fora would ensure the effectiveness of benefit-sharing among States. For

¹⁶³ Ibid.

¹⁶⁴ Report of the 38th (19th Ordinary) session of the WIPO General Assembly (Geneva, 22 September – 1 October 2009, doc. WO/GA/38/20, 1 October 2009), para. 217.

¹⁶⁵ Ibid., para. 217.

¹⁶⁶ See the Swiss proposal for amending the PCT ‘Declaration of the source of genetic resources and traditional knowledge in patent applications. Proposals submitted by Switzerland’, submitted at the ninth session of the Working Group on Reform of the Patent Cooperation Treaty (Geneva, 23-27 April 2007, doc. PCT/R/WG/9/5, 7 March 2007).

¹⁶⁷ WIPO Secretariat, *Matters concerning intellectual property and genetic resources, traditional knowledge and folklore* (WO/GA/26/6, 25 August 2000), paras 1-2.

¹⁶⁸ R. Andersen *et al.*, ‘International Agreements and processes affecting an international regime on ABS under CBD’, FNI Report 3.2010 (March 2010) at 34.

instance, while a stand-alone disclosure requirement in the future ABS regime might not be sufficient to achieve the inter-State benefit-sharing obligation, a more complete enforcement system making use also of the intellectual property system could assist in resolving the difficult technical and legal issues of the cross-border use of genetic resources.¹⁶⁹

WHO negotiations on viruses and vaccines

WHO negotiations to increase equitable access to vaccines for highly pathogenic avian influenza A and pandemic 2009 influenza A over the past five years have evolved into a highly controversial area of global health diplomacy.¹⁷⁰ In this context, vaccines are the benefits to be shared in return for access to viruses, to facilitate medical research. The debate has mirrored difficulties encountered in the CBD framework, as developing countries are concerned that their populations would not have access to influenza vaccines. Such concerns, and the lack of any mechanism to ensure equitable access to other benefits from research on influenza viruses, prompted Indonesia to refuse to share its H5N1 virus samples with the WHO.¹⁷¹

The question of whether and to what extent the CBD applies to pathogens, and therefore whether the principle of national sovereignty should apply, remains open.¹⁷² While application of the principle of national sovereignty in this case is generally not regarded as conducive to facilitating timely sharing of virus samples required to improve global health governance,¹⁷³ pathogens used to develop vaccines and medicines are economic resources and could be covered by the commercial dimension of ABS. The issue was addressed in the CBD during deliberations on the scope of the international regime when developing countries sought to ensure that viruses and other pathogenic material would be covered by a future ABS framework, without reaching a solution.¹⁷⁴

The discontent of developing countries with the traditional global influenza strategy¹⁷⁵ has led to a reform process under the WHO on the sharing of influenza viruses and on access to vaccines and other benefits. In 2007, a resolution was adopted¹⁷⁶ which, using language clearly reflecting the influence of the CBD, urges

¹⁶⁹ *Ibid.*, at 48.

¹⁷⁰ D. P. Fidler 'Negotiating Equitable Access to Influenza Vaccines: Global Health Diplomacy and the Controversies Surrounding Avian Influenza H5N1 and Pandemic Influenza H1N1' 7:5:1000247 *PLoS Med* (4 May 2010).

¹⁷¹ Indonesia's refusal to share its virus samples was based on CBD principles: it was argued that it had the right not to share the samples because it controlled access on samples collected in its territory, other Parties could not use them without their prior informed consent, and their use should result in benefits for Indonesia. See D. P. Fidler 'Influenza virus samples, international and global health diplomacy' 14:1 *Emerging Infectious Diseases*, 2008, cited at R. Andersen *et al.*, n. 168 above, at 40.

¹⁷² R. Andersen *et al.*, *ibid.*, at 37.

¹⁷³ *Ibid.*, at 37.

¹⁷⁴ C. Chiarolla, *et al.*, 'Summary of the seventh meeting of the Working Group on Access and Benefit-sharing of the CBD, 2-8 April 2009', 9:465 *Earth Negotiations Bulletin* (2009).

¹⁷⁵ Global influenza governance has operated in basically the same way for the past 50 years. Samples of new influenza viruses are analyzed by WHO laboratories, a WHO committee determines which strains are most likely to affect human beings, and manufacturers start making vaccines. Most of the 250–300 million doses of vaccine made each year are used to vaccinate people in developed countries, even though the new influenza viruses often originate in developing countries, primarily in Asia. See R. Andersen *et al.*, n. 168 above, at 38.

¹⁷⁶ See WHO resolution 60.28 (May 2007) on Pandemic Influenza Preparedness: sharing of influenza viruses and access to vaccines and other benefits.

WHO member States to ensure and promote ‘transparent, fair and equitable sharing of the benefits arising from the generation of information, diagnostics, medicines, vaccines and other technologies.’ Subsequent intergovernmental meetings¹⁷⁷ have worked on drafting a pandemic influenza preparedness framework for the sharing of viruses and access to vaccines, although significant areas remained unresolved.

A clear case of inter-State benefit-sharing, the WHO debates see developed countries generally preferring voluntary benefit-sharing without links to the sharing of viruses and favouring the possibility of allowing patents to be claimed on material shared through the WHO and the resulting products.¹⁷⁸ Most developing countries stress that those entities receiving material through the WHO should commit to benefit-sharing through a standard material transfer agreement, and do not wish to allow granting of intellectual property rights on the shared material itself, arguing that this should be allowed on the resulting product only if it is licensed to developing countries free of royalties.¹⁷⁹ The latter argument clearly links granting of intellectual property rights to sharing of benefits. Furthermore, one can observe parallels with the ITPGR particularly with regard to the overall objectives pursued by each instrument – global health governance in one case, global food security in the other. The existence of such parallels indicates the potential usefulness for WHO of solutions adopted in the ITPGR framework.¹⁸⁰

REDD-plus

Consideration of REDD-plus under the UNFCCC opens the door to possible international legal provisions on forest conservation and sustainable use with a view to mitigating climate change, as well as a Pandora’s Box of concerns to ensure that the other multiple values of forests are not overlooked, particularly those related to biodiversity and the livelihoods of forest-dependent indigenous and local communities.

In 2007, this item was formally included in the UNFCCC negotiations by the Bali Action Plan, as consideration of ‘policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests

¹⁷⁷ Intergovernmental Meeting on Pandemic Influenza Preparedness: Sharing of Influenza Viruses and Access to Vaccines and Other Benefits, 20-23 November 2007, resumed in 15-16 May 2009. An intersessional working group met in April and December 2008. See the report by the WHO Secretariat to the 124th session of the WHO Executive Board ‘Pandemic influenza preparedness: sharing of influenza viruses and access to vaccines and other benefits’ (27 November 2008, EB124/4) and the report by the WHO Secretariat to the 126th session of the WHO Executive Board ‘Pandemic influenza preparedness: sharing of influenza viruses and access to vaccines and other benefits: outcome of the process to finalize remaining elements under the pandemic influenza preparedness framework for the sharing of influenza viruses and access to vaccines and other benefits’ (10 December 2009, EB126/4).

¹⁷⁸ See the Intellectual Property Quarterly Update (South Centre and CIEL, Third Quarter 2009), at 10 and the WHO Secretariat 2009 report, *ibid.*, at 6.

¹⁷⁹ See Andersen *et al.*, n. 168 above, at 40. For outstanding items, see WHO ‘Proposals to finalize remaining elements of the Pandemic Influenza Preparedness Framework for sharing influenza viruses and access to vaccines and other benefits’ (doc. WHO/HSE/GIP/PIP/2009.1, October 2009) and the WHO Secretariat 2009 report, n. 181 above.

¹⁸⁰ See in particular the report by the WHO Director-General, ‘Pandemic Influenza Preparedness: Sharing of influenza viruses and access to vaccines and other benefits’ (A/PIP/IGM/13, 30 April 2009).

and enhancement of forest carbon stocks in developing countries.’¹⁸¹ In addition, parties were encouraged to explore a range of actions, including demonstration activities, to address deforestation and forest degradation.¹⁸²

A link between CBD Article 8(j) and forest biodiversity has already been highlighted in the previous section, and its relevance for the international negotiations on REDD-plus was specifically addressed by the CBD COP in 2008, which invited governments and international organizations to ensure that possible actions do not run counter to the CBD objectives, but provide benefits for forest biodiversity and to indigenous and local communities.¹⁸³

Negotiations on REDD-plus under the UNFCCC may concern both inter-State benefit-sharing, with regards to the question of whether public funding or market-based mechanisms or a combination of both may be used to reward developing countries for their emission reductions,¹⁸⁴ and State-to-community benefit-sharing, in so far as negotiations have focused on safeguards. While negotiations are mainly concerned with the former at this stage, it is worth remarking that questions of respect for traditional knowledge and participation of indigenous and local communities in REDD-plus have been mainly discussed in the context of social safeguards,¹⁸⁵ without any specific reference to (State-to-community) benefit-sharing. Nonetheless, the close links between traditional knowledge, communities’ effective participation and possibly compensation for negative impacts deriving from REDD-plus actions may point in the direction of State-to-community benefit-sharing. And indeed legal literature anticipates that benefit-sharing will be part, or a result of, a future REDD-plus international framework.¹⁸⁶

In this respect it is instructive that the pilot initiatives on REDD led by the UN System and the World Bank have already addressed benefit-sharing. The UN-REDD

¹⁸¹ Bali Action Plan, Decision 1/CP.13 in Report of the Conference of the Parties on its thirteenth session: Decisions adopted by the Conference of the Parties (FCCC/CP/2007/6/Add.1, 14 March 2008), para. 1(b)(iii).

¹⁸² Reducing emissions from deforestation in developing countries: approaches to stimulate action, Decision 2/CP.13, in Report of the Conference of the Parties on its thirteenth session: Decisions adopted by the Conference of the Parties, *ibid.*, para. 3.

¹⁸³ Incentive Measures (Article 11), CBD COP 9 Decision IX/6 (9 October 2008), para. 5.

¹⁸⁴ See, for instance, I. Fry, ‘Reducing Emissions from Deforestation and Forest Degradation: Opportunities and Pitfalls in Developing a New Legal Regime’, 17:2 *RECIEL* (2008), 166.

¹⁸⁵ The text resulting from negotiations in the Working Group on Long-Term Cooperative Action (Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its eighth session (FCCC/AWGLCA/2009/17, 5 February 2010), section G) at the Copenhagen Climate Change Conference in December 2009 contains language on respecting the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws; full and effective participation of relevant stakeholders, including in particular indigenous peoples and local communities in REDD actions; and ensuring that REDD actions are used to enhance social and environmental benefits. Another portion of text provides that developing countries developing and implementing their national strategy or action plan on REDD ensure the full and effective participation of indigenous peoples and local communities in addressing drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and safeguards.

¹⁸⁶ See, for instance, K. Graham and A. Thorpe, ‘Community-based Monitoring, Reporting and Verification of REDD Projects: Innovative Potentials for Benefit-Sharing’ 3:3 *Climate and Carbon Law Review* (2009), 303; and J. Costenbader, ‘Benefit-sharing’, in J. Costenbader (ed.) *Legal Frameworks for REDD: Design and Implementation at the National Level*, IUCN Environmental Policy and Law Paper No. 77 (IUCN, 2010), at 57-80.

Programme, the United Nations Collaborative initiative on Reducing Emissions from Deforestation and forest Degradation in developing countries,¹⁸⁷ adopted in 2009 its ‘Operational Guidance: Engagement of Indigenous Peoples and Other Forest Dependent Communities’,¹⁸⁸ which refers to the obligations stemming from CBD Article 8(j) as providing guidance and overarching principles for engagement with indigenous peoples based on a human rights-based approach.¹⁸⁹ It further identifies relevant provisions of the UN Declaration on the Rights of Indigenous Peoples in the context of REDD and provides a detailed discussion of how free prior informed consent relates to REDD activities, including the need for ‘a preliminary assessment of likely economic, social, cultural and environmental impacts, including potential risks and fair and equitable benefit-sharing in a context that respects the precautionary principle,’ based on the CBD Akwé: Kon voluntary guidelines.¹⁹⁰ It is also noted that failure to use these guidelines could raise ‘serious questions as to [whether the] environmental and social impact assessment conforms to international best practice and standards.’¹⁹¹ Finally, the guidelines call for participation also in benefit-sharing and in the establishment of REDD payment distribution.¹⁹²

The World Bank’s ‘Forest Carbon Partnership Facility’ published in 2009 a guidance document on ‘National Consultations and Participation for REDD’,¹⁹³ which adopts pragmatic – rather than human rights-based – language, calling for prior informed ‘consultation and participation’ in order to elaborate more effective and more sustainable policies and programmes.¹⁹⁴ This terminology is based on the Bank’s Operational Guidelines (OP) 4.10 on Indigenous Peoples,¹⁹⁵ which require ‘prior, informed consultation’ as a fundamental step in the planning and implementation of projects financed by the World Bank that may affect indigenous peoples, as well as that ‘Indigenous Peoples receive social and economic benefits that are culturally appropriate and gender and inter-generationally inclusive.’¹⁹⁶ For present purposes, it should be noted that the guidance document refers both to the ‘equitable and effective distribution of REDD revenues’,¹⁹⁷ and to guaranteeing the equitable share of REDD *benefits* with stakeholders affected *vis-à-vis* REDD strategies, particularly poor and

¹⁸⁷ The Programme was launched in 2008 to assist developing countries prepare and implement national REDD+ strategies by the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP). See ‘About the UN-REDD Programme’ (undated) found at <<http://www.un-redd.org/AboutUNREDDProgramme/tabid/583/language/en-US/Default.aspx>>.

¹⁸⁸ UN REDD Programme, Operational Guidance: Engagement of Indigenous Peoples and Other Forest Dependent Communities (UN REDD Programme, March 2009), found at <<http://www.un-redd.org/Portals/15/documents/events/20090309Panama/Documents/UN%20REDD%20IP%20Guidelines%2023Mar09.pdf>>.

¹⁸⁹ *Ibid.*, at 5.

¹⁹⁰ *Ibid.*, at 7.

¹⁹¹ *Ibid.*, at 14.

¹⁹² *Ibid.*, at 12.

¹⁹³ Forest Carbon Partnership Facility, National Consultations and Participation for REDD (Note FMT 2009-2, 6 May 2009), found at <http://www.forestcarbonpartnership.org/fcp/sites/forestcarbonpartnership.org/files/Documents/PDF/CPF_FMT_Note_2009-2_Consult_Particip_Guidance_05-06-09_0.pdf>.

¹⁹⁴ *Ibid.*, at 2-3.

¹⁹⁵ World Bank, Operational Policies (OP) 4.10 – Indigenous Peoples (July 2005), found at <<http://go.worldbank.org/UBJJIRUDP0>>.

¹⁹⁶ *Ibid.*, para. 1.

¹⁹⁷ See Forest Carbon Partnership Facility, n. 193 above, at 7 [(emphasis added)].

marginalized groups.¹⁹⁸ This ambiguous choice of terms seems to leave open the question of whether non-economic benefits arising from REDD activities will also come into play.

It remains to be seen, therefore, whether State-to-community benefit-sharing will play a significant role in international or national law on REDD-plus, as a reward for forest-related traditional knowledge, as an incentive for communities' participation in REDD+ activities, or as compensation for negative impacts of REDD-plus activities on forest-dependent indigenous and local communities, building on the guidance and tools developed under the CBD.

CONCLUSIONS

The developments under the CBD have progressively clarified that inter-State and State-to-community benefit-sharing may contribute in different ways and under different conditions to communities' livelihoods, as well as have a bearing on other global processes. Given the fact that the CBD Secretariat and CBD Parties are becoming more and more aware of the need to demonstrate the relevance of the Convention to global development and human well-being,¹⁹⁹ efforts are now needed to fully implement benefit-sharing with a view to effectively supporting sustainable development and equity.

With specific regard to inter-State benefit-sharing related to access to genetic resources and traditional knowledge, enactment of national legislation should be accompanied by a system involving an international ABS regime and an amendment to the intellectual property rights architecture, in combination with a compliance and enforcement system, to deal with cross-border movements of genetic resources and development of products based on genetic resources and traditional knowledge. Consistency among the different international fora working in the field is thus critical. Against this background, specific legal tools are needed to ensure that benefits reach the community level and reward indigenous peoples and local communities for their stewardship.

Work on State-to-community benefit-sharing with regard to the CBD conservation and sustainable use objectives also needs to be intensified. The overall picture of procedural requirements that emerges from various COP decisions must be reflected systematically in national legislation, to ensure that benefits arising from the conservation and sustainable use of biodiversity reach indigenous and local communities in recognition of their traditional knowledge contributions, as an incentive for their participation in decision-making and as compensation for negative impacts arising from priority conservation measures, ultimately facilitating compliance with the law.

¹⁹⁸ *Ibid.*, at 8.

¹⁹⁹ On the links between biodiversity and human wellbeing, see Millennium Ecosystem Assessment, *Ecosystems and Human Well-being: Biodiversity synthesis* (World Resources Institute, 2005). Following the Millennium Ecosystem Assessment report, work on biodiversity and development has intensified in the CBD framework, *inter alia* with the launch of the Biodiversity for Development Initiative in 2008, which focuses on the role biodiversity can play for poverty alleviation and development. It should also be noted that the theme of the 2010 International Biodiversity Day is 'Biodiversity for Development and Poverty Alleviation.' See CBD Secretariat, *Biodiversity, Development and Poverty Alleviation: Recognizing the role of biodiversity for human well-being* (CBD, 2009).

The fragmentation of the CBD processes, resulting in a myriad of overlapping COP decisions, however, may have obscured the significant evolution of benefit-sharing and its overall coherence. This is not only an obstacle for law-makers involved in the implementation of the Convention at the national level, but also for negotiators willing to ensure mutual supportiveness with the Convention in other international processes. It may also be a hindrance to private sector entities involved in the conservation and sustainable use of biodiversity on the ground, and to international and national adjudicators willing to uphold a community human rights-based approach to environmental protection.²⁰⁰

Furthermore, notwithstanding the legal and conceptual differences between inter-State and State-to-community dimension of benefit-sharing, the urgent need for an integrative interpretation and application of the text of the Convention and its COP decisions cannot be over-estimated to achieving the CBD's three objectives in a mutually reinforcing way. The conservation and sustainable use of biodiversity are essential to preserve the genetic variability that serves to address new and pressing human needs, while the economic revenue generated by the access to and development of genetic resources can significantly contribute to conservation objectives. These reciprocal linkages appear even more evident in the light of the every-day interactions of local and indigenous communities with biodiversity in its genetic, species and ecosystem dimensions, and the inter-dependence between communities' socio-cultural diversity and biodiversity.²⁰¹

At the time of concluding this article, the third edition of the Global Biodiversity Outlook²⁰² confirmed the failure of the international community to reach the target to reduce significantly the rate of biodiversity loss by 2010.²⁰³ The report acknowledges, not surprisingly, that effectively addressing biodiversity loss depends on tackling the underlying causes or indirect drivers of that decline, including 'ensuring that the benefits arising from use of and access to genetic resources and associated traditional knowledge, for example through the development of drugs and cosmetics, are equitably shared with the countries and cultures from which they are obtained.'²⁰⁴ Now that the target has been missed, empowering indigenous peoples and local communities to effectively contribute to the implementation of the Convention on Biodiversity in a true partnership with States and private entities is more urgently needed than ever.

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²⁰⁰ As opposed to an individualistic human rights-based approach, see F. Francioni, 'International Human Rights in an Environmental Horizon', 21:1 *European Journal of International Law* (2010), 41.

²⁰¹ See generally R. Jayakumar Nayar and D Ong, 'Developing Countries, 'Development' and the Conservation of Biological Diversity', in Bowman and Redgwell, n. 5 above, 235-254.

²⁰² CBD Secretariat, *Global Biodiversity Outlook 3* (CBD, 2010).

²⁰³ *Ibid.*, at 9.

²⁰⁴ *Ibid.*, at 12.

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