

University of Edinburgh

School of Law

Research Paper Series

No 2015/36

Forest Biodiversity

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Forthcoming in J Razzaque and E Morgera (eds), Encyclopedia of Environmental Law: Biodiversity and Nature Protection Law (Edward Elgar, 2016)



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Edinburgh School of Law Research Paper Series
University of Edinburgh

Abstract

This entry reviews the composite international legal landscape addressing forest biodiversity. It analyses the treatment of biodiversity in international instruments concerning forests, and the treatment of forests in international instruments concerning species, habitats and biodiversity. The conclusions reflect on the complex picture emerging from the interplay of these sources, shortcomings in their implementation and challenges to future action, including future legal research.

Keywords

forest, forestry, plant species, forest habitats.

Forest Biodiversity

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Introduction

In spite of recent improvements, the world's forest cover decreases of millions of hectares each year¹ and forest loss has been described as one of the most significant instances of human-induced environmental change.² Modern forest loss is caused by a complex combination of market drivers and policy and governance failures that at present predominantly affect developing countries, largely due to the global trade in timber and agricultural products,³ as well as to dynamics associated with economic development and population growth.⁴

As a result, the world's most biodiverse forests, and the irreplaceable ecosystem services they provide, are being rapidly depleted⁵ In this connection, deforestation and biodiversity loss are indissolubly linked in terms of their causes, consequences and remedies. Forests host the vast majority of the planet's terrestrial biodiversity, and the loss, alteration, and fragmentation of habitat associated with deforestation and forest degradation are leading causes of species declines.⁶ These matters are not just of concern for countries that presently harbour forests. Awareness of the links between deforestation, the loss of biodiversity and climate change has led to a long strife to address these challenges jointly through international law. To date, however, no comprehensive international treaty on forests exists, and forest biodiversity is addressed in a fragmented and uncoordinated manner by a large number of international instruments and institutions.⁷

This entry reviews the highly fragmented body of law concerning the protection of forest biodiversity. It departs from the treatment of biodiversity in forest instruments, to then analyze developments concerning forests in biodiversity instruments. The conclusions reflect on the complex picture emerging from the interplay of these international law instruments,

¹ FAO Global Forest Resources Assessment 2010, 3.

² Williams (2006) xvii.

³ Mayer (2005) 359.

⁴ Mather and Needle (1998) 117.

⁵ See chapter 6 in this volume.

⁶ Millennium Ecosystem Assessment (2005) v-vi.

⁷ Lipschutz (2001) 153; Dimitrov (2005) 1; and MacKenzie (2012) 114.

shortcomings in their implementation and challenges for future action including future legal research.

1. Biodiversity in international law on forests

States have cyclically rejected proposals to negotiate an all-encompassing international treaty on forests and, ultimately, to subject themselves to greater international scrutiny on how they manage their forests. Rather tellingly, there is no internationally agreed definition of what a forest is, and the understanding of this term is context-specific.⁸

The international legal landscape concerning forests is highly fragmented and consists of a heterogeneous set of hard- and soft-law instruments. The foundations for the treatment of forests in international law are laid out in the Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (Forest Principles), adopted at the 1992 United Nations Conference on the Environment and Development (UNCED); and the Non-legally Binding Instrument on Sustainable Forest Management of all Types of Forests (NLBI), adopted by the UN General Assembly in 2007. As their names suggest, these instruments are characterised by general vagueness and lack of legally binding obligations.

Both the Forest Principles and the NLBI treat forests as natural resources, unreservedly recognizing States' sovereignty on how to manage them. While the notion of common concern is embedded in international treaties that were adopted at UNCED, the Forest Principles make no mention of it. The negotiations of the Forest Principles were characterized by a conceptual divide between those advocating that the world's forest are an issue of common concern, justifying a '*droit d'ingérence écologique*', and those defending unabated national sovereignty over highly profitable natural resources, which neatly fall within the geographical boundaries of States.⁹ This chasm has since characterized the debate concerning international forest governance.

The Forest Principles tried to strike a balance between these two opposing views, and center around two key notions: that of States' sovereign right to exploit their forest resources; and that of sustainable forest management. As far as the first is concerned, the Forest

⁸ CBD SBSTTA, Background Report on Improving Forest Biodiversity Monitoring and Reporting, UN Doc UNEP/CBD/SBSTTA/16/INF/25, 5.

⁹ Sand (1992) 9.

Principles recognise States' right to utilize forests in accordance with their environmental policies, development needs and level of socio-economic development.¹⁰ This principle has been reproduced with little alterations in all major international and regional hard and soft instruments on forests, and may be regarded as the cornerstone for the treatment of forests in international law. The axiom that States enjoy sovereign rights over the natural resources falling within their jurisdiction is a reminder that although in some areas of international law States have accepted obligations to cooperate in the conservation and sustainable use of shared or common resources, comparable obligations cannot be assumed for resources falling wholly within national boundaries.¹¹ As a result, the Forest Principles contemplate the conversion of forest areas for other uses, such as, for example, cattle ranching and agriculture.¹²

Nevertheless, the Forest Principles also draw attention to the need to integrate the use of forest resources with the conservation of biodiversity, by recognizing that national policies should be consistent with sustainable development.¹³ In this regard, the Forest Principles draw attention to the role of forests in maintaining crucial ecosystem services; to the need to protect old-growth and unique forests; and to the "environmentally sound development of forests in all countries".¹⁴ The conservation of biodiversity does therefore pose limits to States' discretion in the exercise of sovereignty over their forests.

The Forest Principles identify the notion of sustainable forest management as a fundamental paradigm in this respect.¹⁵ The NLBI defines sustainable forest management as a "dynamic and evolving concept" aimed to maintain and enhance the economic, social and environmental value of all types of forests for the benefit of present and future generations.¹⁶ Generally, the NLBI calls on States to reverse forest cover loss through sustainable forest management, protection, restoration, afforestation and reforestation, and by preventing forest degradation.¹⁷ More specifically, the NLBI includes the objective to "increase significantly" the area of protected forests and sustainably managed forests worldwide, as well as the

¹⁰ Forest Principles, 1.a and 2.a.

¹¹ Birnie, Boyle and Redgwell (2009) 200.

¹² Forest Principles, para 2.a.

¹³ Ibid.

¹⁴ Forest Principles paras 4, 8f and 7.

¹⁵ Forest Principles para 2.b.

¹⁶ NLBI para 4.

¹⁷ NLBI, Global objective 1.

proportion of forest products from sustainably managed forests¹⁸ and biodiversity has been recognised as one of the thematic elements of sustainable forest management.¹⁹ Nevertheless, this is to be reconciled with the other elements of sustainable forest management, which include also the productive, protective and socio-economic functions of forests.²⁰ The notion of sustainable forest management, therefore, has from the beginning meant to integrate the commercial exploitation of forest resources with the conservation of biodiversity. Achieving this objective has, nevertheless, proven difficult.

Over the years, an array of instruments adopted in the context of various international and regional intergovernmental initiatives have provided further guidance on what sustainable forest management may entail. This guidance is dispersed in a myriad of soft and/or informal documents,²¹ which significantly differ in scale, emphasis and level of detail.²² As a result of the lack of legal force of these instruments, and of their fragmented nature, the substantive content of the notion of sustainable forest management has remained largely elusive and seems to lie in the eye of the beholder.²³

The notion of sustainable forest management, however, is also the cornerstone of the main hard international law instrument specifically concerning forests, the International Tropical Timber Agreement (ITTA).²⁴ The ITTA is a commodity agreement focused on tropical timber trade, with the objective to promote sustainable forest management by, *inter alia*, encouraging its Parties to develop national policies aimed at the “sustainable utilization and conservation of timber producing forests, and maintaining ecological balance”.²⁵ The understanding of sustainable forest management elaborated in the context of the ITTA is

¹⁸ NLBI, Global objective 3.

¹⁹ United Nations Forum on Forests Resolution 4/3 (2004), para 6.

²⁰ *Ibid.*

²¹ These include: the various editions of International Tropical Timber Organization (ITTO) Criteria & Indicators (C&I) for sustainable management of natural tropical forests; the African Timber Organization/ITTO principles, C&I for the sustainable management of African natural tropical forests; the Tarapoto Process on C&I for sustainability of Amazonian forests; Pan-European C&I for SFM, coordinated by Forest Europe; Montreal Process Working Group on C&I for the conservation and sustainable management of temperate and boreal forests.

²² ITTO, Uses and Impacts of Criteria & Indicators for Sustainable Forest Management at the Field/FMU Level and Other Operational Levels, ITTC-JC (XLVI)/2, 2012.

²³ See for example, Davenport (2011), 87.

²⁴ To date three iterations of the ITTA have been adopted. The International Tropical Timber Agreement of 1983, into force 1 April 1985, UNTS, vol. 1393, p. 67, was terminated on 31 March 1994 and replaced by the International Tropical Timber Agreement of 1994 into force 1 January 1997, UNTS, vol. 1955, p. 81. The latter was replaced by the International Tropical Timber Agreement of 2006, UNTS, vol. 2797, p. 46, into force 7 December 2011 (ITTA, 2006).

²⁵ ITTA, 2006, Article 1m.

characterized by a focus on the production of “a continuous flow of desired forest products and services, without undue reduction in the forest’s inherent values.”²⁶ This guidance is not formulated for application in protected areas, where forest products are not usually extracted. Nevertheless, it underscores the need to conserve and use forests “in ways that maintain ecological resilience” and “emphasize biodiversity in all aspects of the management of natural tropical production forests.”²⁷ To be sure, the criteria and indicators for sustainable forest management adopted under the ITTA specifically encompass ecosystem, species and genetic diversity.²⁸

In order to engender better forest governance and law enforcement, cross-sectoral policy coordination and implementation, and elimination of market distortions,²⁹ international forest instruments have increasingly promoted legality verification and forest product certification.³⁰ Indeed, these two policy tools have been used to address the shortcomings of international forest governance.

Legality verification has been at the center of a series of initiatives encouraging the enforcement of forest laws in tropical countries and the eradication of illegal timber from the domestic markets of importing countries, also known with the acronym Forest Law Enforcement and Governance (FLEG).³¹ The European Union is a particularly significant example, as it has entered in a series of bilateral agreements with some tropical forest countries to facilitate the creation of legality verification mechanisms,³² coupled with a licensing scheme for the import of timber products;³³ and imposed a due diligence obligation on operators introducing timber and timber products to the European market.³⁴ While FLEG

²⁶ ITTO Criteria for the Sustainable Management of Natural Tropical Forests, 1992.

²⁷ ITTO Voluntary Guidelines for the Sustainable Management of Natural Tropical Forests, Decision.4 [XLIX], Principles 3.2 and 4.3

²⁸ Revised ITTO criteria and indicators for the sustainable management of tropical forests including reporting format, 2005, Criterion 5.

²⁹ United Nations Forum on Forests, Forests and biodiversity conservation, including protected areas, UN Doc E/CN.18/2009/6, 39.

³⁰ E.g. NLBI, at 7j, 6n, and 6x; and ITTA, Article 1n.

³¹ <<http://go.worldbank.org/32M8CUBPN0>>.

³² Six countries have signed voluntary partnership agreements with the EU and are currently developing the systems needed to control, verify and license legal timber. The agreements are available at: <http://www.euflegt.efi.int/vpa-countries>

³³ Council Regulation (EC) No 2173/2005 of 20 December 2005 on the establishment of a FLEGT licensing scheme for imports of timber into the European Community (2005) OJ L347/1.

³⁴ Regulation (EU) No 995/2010 of the European Parliament and the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (2010) OJ L295/23.

processes do not directly address biodiversity, their successful implementation is likely to support forest conservation.³⁵

Analogous considerations apply to forest certification schemes developed at the behest of non-state actors. Two main approaches to forest certification have emerged. First, the Forest Stewardship Council was launched in 1993 by a coalition of business and non-governmental organizations (including the World Wildlife Fund and Greenpeace) to coordinate an array of independent certification activities to trace and ensure the sustainability of forest products.³⁶ A second approach to certification emerged with the development of country-level certification schemes promoted by forest companies. Some of these country-level initiatives were consolidated with the establishment of the Pan-European Forest Certification in 2002.³⁷ Both of these certification schemes are meant to promote sustainable forest management, by enabling consumers to tell apart sustainably produced forest products from those that are not.³⁸ Forest certification has, nevertheless, in and of itself also contributed to fragmentation, due to overall lack of coordination amongst various schemes.³⁹

Other international law instruments that do not specifically focus on forests have also addressed the matter of forest management. The most prominent examples include the 1994 United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, which addresses the role of forests in preventing land erosion;⁴⁰ and the 1992 United Nations Framework Convention on Climate Change (UNFCCC), which addresses the role of forests as carbon sinks and forest activities as a means to secure climate change mitigation.⁴¹ Under the UNFCCC, concerns about protecting biodiversity while securing forest carbon sequestration have attracted much attention, chiefly in relation to the management of tropical forests.⁴² Potential tensions between forest carbon sequestration and the protection of biodiversity do not exclusively arise in the tropics and indeed, the most stringent international obligations concerning the

³⁵ See for example references to the biodiversity conservation in the Voluntary Partnership Agreement between the European Union and the Central African Republic, 2011, p. 44.

³⁶ Forest Stewardship Council Principles & Criteria, available at: <https://us.fsc.org/mission-and-vision.187.htm>

³⁷ See PEFC International Sustainability Benchmark, available at: <http://www.pefc.org/standards/overview>

³⁸ Levin, Cashore and Koppell (2009); Guéneau (2009); McDermott (2010).

³⁹ Humphreys 2006.

⁴⁰ UNCCD, Article 8.3.

⁴¹ UNFCCC Article 4.1.

⁴² See chapter 26 in this volume.

maintenance of forest carbon stocks presently encumber developed - and not developing - country Parties to the UNFCCC.⁴³ Yet, the climate regime has only addressed the biodiversity implications of forest carbon stocks management activities in connection with tropical forests, adopting a series of rather generic safeguards.⁴⁴

Beyond this specific case, the interplay between the sources of international law concerning forests and biodiversity has been left to the autonomous interpretation of States. The fragmentation of the sources of international law concerning forests has long been an issue for intense debate. A 2014 review concluded that the remarkable number of instruments dealing with forests in international economic, environmental and development law has led to confusion, overlaps and duplication of efforts concerning the ways in which forests are to be conserved, managed and used.⁴⁵

The rethinking of international forest governance was specifically considered at the latest session of the United Nations Forum on Forests (UNFF) in 2015.⁴⁶ The UNFF is the last in a series of institutional arrangements with the mandate to promote “the management, conservation and sustainable development of all types of forests and to strengthen long-term political commitment to this end.”⁴⁷ The establishment of the UNFF was accompanied by the launch the Collaborative Partnership on Forests (CPF), a knowledge-exchange forum gathering various international organisations with a mandate on forests.⁴⁸ The UNFF and the CPF are the main constitutive elements of the so-called International Arrangement on Forests. The 11th session of the UNFF agreed to strengthen the International Arrangement, with the objective to promote the implementation of sustainable management of all types of forests; enhance cooperation, coordination, coherence and synergies on forest-related issues at all levels; and foster international cooperation,⁴⁹ including by means of liaising with the

⁴³ The content and scope of the obligations in Kyoto Protocol, Article 3.3 and 3.4 have been elaborated in a series of decisions of the conference of the parties serving as meeting of the Parties to the Kyoto Protocol: Decision 16/CMP.1; Decision 17/CMP.1; Decision 18/CMP.1; Decision 6/CMP.3; Decision 2/CMP.6; Decision 2/CMP.7; Decision 6/CMP.9; and Decision 13/CP.9

⁴⁴ See chapter 26 in this volume.

⁴⁵ Blaser and others (2014) 103.

⁴⁶ Draft resolution submitted by the Chair of the United Nations Forum on Forests at its eleventh session, Noel Nelson Messone (Gabon) on the basis of informal consultations International arrangement on forests beyond 2015, 18 May 2015, E/CN.18/2015/L.2/Rev.1.

⁴⁷ Economic and Social Council of the United Nations, Resolution 2000/35 Report on the Fourth Session of the Intergovernmental Forum on Forests, 18 October 2000, at 1.

⁴⁸ Ibid.

⁴⁹ United Nations Forum on Forests, International arrangement on forests beyond 2015, 2015, yet to be reported, at 1(d).

secretariats of the Rio Conventions.⁵⁰ Time will tell whether this renewed mandate for the International Arrangement will significantly alter the rather dysfunctional dynamics that have so far affected international forest governance.

Within scholarly debates, this state of affairs has induced some observers to argue that, due to the lack of a structured form of governance built around a single treaty or institution, it is not possible to talk about an international forest regime.⁵¹ While not all agree with this view,⁵² the literature largely concurs that international forest governance is affected by significant institutional and normative fragmentation.⁵³ States have struggled to integrate the commercial exploitation of forest resources with the conservation of biodiversity, and so far the first has largely prevailed over the latter.⁵⁴ Rather recently, however, much attention has focused on the need to give greater prominence to forest biodiversity considerations in the implementation of all forest related instruments.

2. Forests in international biodiversity law

Some international environmental instruments treat forests as habitats and some tree varieties as endangered species. Instruments focusing on the conservation of species, like the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), include some plant species within the scope of their regulated trade regime.⁵⁵ Conversely, instruments focusing on the conservation of habitats, like the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, focus on the role of specific kinds of forests (e.g. mangroves) for the achievement of their objectives.⁵⁶ Others, like the Convention Concerning the Protection of the World Cultural and Natural Heritage, include amongst protected sites forests of exceptional natural beauty and aesthetic importance; or that are particularly important and significant habitats. These instruments, therefore, do not deal with the conservation of forest biodiversity *ex se*. Rather, under these instruments the protection of forests is instrumental and limited to specific sites and species that are of importance to achieve the objectives of the treaties at hand.

⁵⁰ Ibid, at 17(b)(iii).

⁵¹ See e.g. Dimitrov (2007) 242-5.

⁵² See e.g. Smouts (2008) 429; and Angelsen and others (2010) 37.

⁵³ See for example Lipschutz (2001); and Humphreys and others (2010).

⁵⁴ Gulbrandsen (2004) 80.

⁵⁵ CITES Resolution Conf. 16.5 (2014). See chapter 7 in this volume.

⁵⁶ Ramsar Convention, Resolution VIII.32 (2002).

A more holistic approach to the protection of forest biodiversity has been elaborated in the context of the Convention on Biological Diversity (CBD). The CBD does not make any textual reference to forests. Forests are nevertheless particularly important for the achievement of the objectives of the CBD. From the perspective of the CBD forests are both habitats for the in situ conservation of biodiversity, as well as an important source for multiple sustainable uses of biodiversity.⁵⁷

As an acknowledgement of the role of forests, CBD Parties have established a dedicated Programme of Work on Forest Biodiversity.⁵⁸ CBD programmes typically establish a vision for, and basic principles to guide future work under the Convention. They set out key issues for consideration, identify potential outputs, and suggest a timetable and means for achieving these. As such, documents and activities produced in the context of the CBD programmes of work can be viewed as means to operationalize and interpret Parties' obligations under the Convention.

Measures listed in the Programme of Work on Forest Biodiversity are clustered in three elements: the conservation and sustainable use of forest resources and the equitable sharing of the benefits deriving from it; the development of institutional and socio-economic conditions enabling forest conservation and sustainable use; and scientific and technical measures to improve the knowledge, assessment and monitoring of forest trends. The scope of the programme is therefore rather broad and encompasses a host of elements, which are inherently linked to other cross-cutting themes under the CBD, such as that on Climate Change and Biodiversity⁵⁹ and the Global Strategy for Plant Conservation.⁶⁰

Under the CBD, sustainable forest management has been acknowledged as a “means of applying” the ecosystem approach to forests.⁶¹ Both concepts imply the integration of social and environmental objectives in forest governance, but are not identical.⁶² The Programme of Work on Forest Biodiversity has recognized the criteria and indicators on sustainable forest management prepared under international forest instruments, without attempting to develop a separate understanding of the notion of sustainable development

⁵⁷ CBD, Article 1.

⁵⁸ CBD Decision III/12 (1996) and Decision VI/22 (2002).

⁵⁹ CBD Decision XI/19 (2012).

⁶⁰ CBD Decision X/17 (2010).

⁶¹ CBD SBSTTA Recommendation IX/6 (2008), Annex II. See chapter 5 in this volume

⁶² *Ibid*, at 2.

under the CBD.⁶³ Instead, the programme has tried to engender synergistic action with international instruments and processes dealing with forests,⁶⁴ like the ITTO and the UNFF.⁶⁵ The CBD Programme of Work on Forest Biodiversity has thus tried to work towards a common understanding on the notion of sustainable forests management, in keeping with a holistic understanding of biodiversity under the CBD. Yet CBD guidance elaborated on forest biodiversity has largely focused on research and exchange of information, rather than on the development of forest policy commitments.⁶⁶

One of the key activities included in the scope of the Programme of Work on Forest Biodiversity is the development of methods, guidelines, indicators and strategies to apply the ecosystem approach to forests both inside and outside protected areas. More specifically, CBD efforts have concentrated on the elaboration of “a harmonized global to regional forest classification system, based on harmonized and accepted forest definitions and addressing key forest biological diversity elements”.⁶⁷ This task preliminarily required clarifying the definitions of forest and forest types for reporting and monitoring the status of forest biodiversity, building on existing concepts and definitions.⁶⁸ The achievement of this objective, nevertheless, has been elusive. Currently, no definition of forest enjoys universal intergovernmental approval. Equally, no universally accepted forest classification system has emerged and no consensus exists on a common basis to develop one.⁶⁹ This is in spite of convergence on the need to coordinate and adopt widely used and accepted definitions across international processes. In this regard, a review of the CBD Programme of Work on Forest Biodiversity found that, while some progress had been made in providing guidance on forest management and policy development, lack of a harmonized system of forest classification, including a universally accepted definition of forest, had been a major hindrance to effective reporting on forest biodiversity.⁷⁰

More generally, CBD efforts to address the problem of the loss of forest biodiversity have been met with significant setbacks. In 2010 CBD Parties admitted to having missed

⁶³ CBD Decision VI/22 (2002), para 34.

⁶⁴ Decision VI/22, Element 2, Goal 1, Objective 2 (h).

⁶⁵ CBD Decision X/36 (2010).

⁶⁶ Gulbrandsen (2004) 79.

⁶⁷ CBD Decision VI/22, Element 3, Goal 1, Objective 1.

⁶⁸ CBD Decision IX/5 (2008), para 3g.

⁶⁹ Yamasaki and Tyrrell (2012) 17.

⁷⁰ Background Document for the Review of Implementation of the Expanded Programme of Work on Forest Biological Diversity, UN Doc UNEP/CBD/SBSTTA/13/INF/5, 363.

targets concerning the reduction of biodiversity loss, which included specific targets concerning plant conservation.⁷¹ The CBD Parties have since adopted new targets to reduce, and eventually halt, the loss of all biodiversity by 2050.⁷² Some of the 2050 targets directly address forests: by 2020, the rate of loss of all natural habitats, including forests, is to be at least halved and, where feasible, brought close to zero, whereas degradation and fragmentation is to be significantly reduced (Aichi Target 5). Furthermore, areas under forestry are to be managed sustainably, ensuring biodiversity conservation (Aichi Target 7). Finally, by 2020 at least 17 per cent of terrestrial and inland water areas are to be conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other conservation measures, and integrated into the wider landscapes and seascapes (Aichi Target 11).

Whether and how these targets will be met remains to be seen. Nevertheless, much emphasis has been placed on the potential to meet these targets by working in synergy with other international instruments and bureaucracies, most saliently with the UNFCCC. Another international instrument with great potential for concerted action are the Sustainable Development Goals to be adopted by the UN General Assembly in 2015. The goals specifically mention sustainable forest management together with the protection, restoration and promotion of the sustainable use of terrestrial ecosystems, and halting biodiversity loss.⁷³

So far, even though its scope is such that it could encompass most, if not all, issues relating to the conservation and sustainable use of forests,⁷⁴ the CBD has hardly emerged as the driving force in international forest governance.⁷⁵ The fragmentation of international forest governance and lack of supporting political have been the main obstacles to harnessing the CBD potential in this regard. In spite of specific suggestions,⁷⁶ CBD Parties have never undertaken the negotiation of a protocol to the CBD on forests. The adoption of one legally binding instrument specifically addressing forests from the viewpoint of biodiversity could have perhaps helped to address the very fragmented nature of states' reporting, monitoring obligations, and heightened their commitment to addressing the matter of global forest loss.

⁷¹ CBD Decision VI/9 (2002).

⁷² CBD Decision X/2 (2010).

⁷³ Sustainable Development Goals (2015, yet to be reported), Goal 15.

⁷⁴ Khalastchi and Mackenzie (1999) 40.

⁷⁵ Gulbrandsen (2004) 80; and MacKenzie (2012) 122.

⁷⁶ See, for example, the proposal by the German Advisory Council on Global Change in 1995. A discussion of states suggestions in this regard is reported in Humphreys (2006) 191.

Rebus sic stantibus, instead, CBD guidance on forests has just been but one of the numerous elements composing the very fragmented picture of international law on forests. It seems, however, beyond dispute that the CBD has been the main intergovernmental forum to discuss questions concerning forest biodiversity, where States have taken some action to build bridges and address cross-cutting issues with other international law- and policy-making processes.⁷⁷

One of the most significant examples of these developments is the CBD guidance concerning forest biodiversity in activities carried out within the scope of the climate regime. In this context, the CBD has attempted to promote a mutually supportive interpretation of States' obligations under the UNFCCC, integrating forest biodiversity considerations in the implementation of climate change response measures.⁷⁸ Furthermore CBD guidance provides concrete paradigms to protect and promote the traditional knowledge of indigenous and local communities for the sustainable use of biodiversity, which are especially relevant in connection with forests.⁷⁹

3. Conclusions

Since the Rio Conference in 1992, international efforts to promote sustainable forest management and halt global forest loss have achieved little in the way of concrete results. In spite of the widespread acknowledgement of the need for cross-sectoral policy harmonization that takes into account the transboundary, regional and global dimensions of forest biodiversity, international forest governance has hardly been up to this task. And yet, forests need to be managed in a way that is consistent with international obligations on issues regarded as a common concern of all states, like biodiversity protection⁸⁰ and climate change mitigation.⁸¹

Whilst the debate on action to address the significant gap in international forest governance remains ongoing at the time of writing, new avenues have emerged to address the complex matter of forest biodiversity, especially by exploiting synergies between forest-related instruments. These new avenues have progressively blurred the conceptualization of

⁷⁷ See, for example, CBD Decision IX/5 (2008) para 1i.

⁷⁸ CBD Decision X/36 (2010). Savaresi (2011) and Savaresi (2013a) and (2013b).

⁷⁹ CBD Decision X/42 (2010).

⁸⁰ CBD, preambular para 3.

⁸¹ UNFCCC, preambular para 1.

forests in international law as mere natural resources, prompting their rethinking as sources of global public goods.⁸² As a result of their obligations under the international climate regime, States have recently subjected themselves to unprecedented international scrutiny over the management of forest resources that neatly fall within their geographical boundaries.⁸³ With time, this may become an avenue to progressively justify a ‘droit d’ingérence écologique’ in the management of States’ forests.

For such an evolution to take place, nevertheless, greater coordination between international objectives and processes concerning forests seems indispensable. The multifarious intergovernmental initiatives on forests have engendered significant confusion and perceived differences. This normative and institutional fragmentation is the result of the fact that international instruments largely address forests and forest management from different angles. There is an obvious need for orchestration to enable the joint pursuit of the various objectives that intersect in forest governance, such as the fight against climate change, biodiversity conservation, food security, sustainable water use, energy generation, poverty alleviation and trade liberalization. In this connection, greater coordination among the various international forest law and policy-making bodies and a mutually supportive interpretation of States’ extant obligations are important means to minimize overlaps and set a common global framework for sustainable forest management.

Legal scholarship can contribute to this endeavor, by enhancing the understanding of the fragmented international law landscape on forests, highlighting gaps and areas for mutually supportive interpretation. So far, little literature has focused on international forest law and its interplay with other areas of international law. Much more systemic thinking is needed to understand how the various elements constituting the fragmented universe of international law on forests can work together and simultaneously address the vexed problems of biodiversity and forest loss.

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⁸² Cf. for example, UNFCCC SBSTA, Issues relating to reducing emissions from deforestation in developing countries and recommendations on any further process. Submissions from Parties. Submission by: Bolivia Costa Rica Nicaragua Papua New Guinea (2006) 27.

⁸³ Savaresi (2015).

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