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<cn>4. <ct>Sustainable development and equity in biodiversity conservation

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<a>**Abstract**

<abstract>Modern biodiversity law emerged in the era of sustainable development. The widespread diffusion of this concept in international environmental discourse has contributed to re-shifting the balance of nature protection approaches from preservationist and intrinsic value philosophies to a renewed clearly anthropocentric centre of gravity. It has also helped transform a compartmentalised law of natural resources and nature conservation into a more holistic law of biodiversity. This contribution reviews how sustainable development has impacted the law of natural resources and nature protection. It then explores the practical reflection of sustainable development and its equitable dimensions in modern biodiversity law. It concludes with a brief assessment of the effectiveness of the biodiversity regime for achieving equity and sustainable development and identifies challenges yet to be resolved.

<a>**Key words**

<keywords>Sustainable development, integration, intra-generational equity, inter-generational equity, sustainable use, common but differentiated responsibilities, benefit-sharing.

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Modern biodiversity law emerged in the era of sustainable development. Coined as development that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’ in the Brundtland Report,<sup>1</sup> it is intrinsically premised on the integration of both inter- and intra-generational equity and the interdependence of economic, social and environmental considerations. Its widespread diffusion in international environmental discourse<sup>2</sup> has arguably contributed to re-shifting the balance of nature protection approaches from preservationist and intrinsic value philosophies<sup>3</sup> to a renewed clearly anthropocentric centre of gravity allowing for the incorporation of developmental issues in the notion of conservation.<sup>4</sup> Yet the *erga omnes* nature of the objective of sustainable development<sup>5</sup> has also helped transform a compartmentalised law of natural resources and nature conservation into a more holistic law of biodiversity. This contribution reviews how sustainable development has impacted the law of natural resources and nature protection, assisted the emergence of biodiversity law, and highlights the conceptual grounding of the Convention on Biological Diversity and related international instruments in the logic of sustainable development. It then explores in further detail the practical reflection of sustainable development and its equitable dimensions in modern biodiversity law. It concludes with a brief assessment of the effectiveness of the biodiversity regime for achieving equity and sustainable development and identifies challenges yet to be resolved.

#### **4.1 The impact of sustainable development on nature protection approaches**

The adoption by the international community, at UNCED, of sustainable development as the new overarching paradigm for international environmental relations has had a trickle-down effect on regulatory regimes concerned with natural resources and wildlife preservation

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<sup>1</sup> WCED (1987) 51

<sup>2</sup> It has been incorporated into more than 300 treaties. See Barral (2015) 124.

<sup>3</sup> Rayfuse (2007) 367-370.

<sup>4</sup> Birnie and others (2009) 589-590.

<sup>5</sup> Barral (2015) 402.

(4.1.1). It has also laid the foundations for the adoption of the Convention on Biological Diversity and related biodiversity instruments (4.1.2).

#### **<b>4.1.1 The impact of sustainable development on natural resources and wildlife preservation regulatory systems**

The logic of sustainable development and its call to integrate social, economic and environmental considerations has undeniably coloured natural resources regimes initially primarily aimed at regulating the exploitation of biological resources or commodities. Sustainable development has played in this respect a greening effect on these treaties where the language of exploitation has been changed to reflect conservation concerns.<sup>6</sup> This is the case, for example as noted by French, of the 1995 Straddling Fish Stocks Agreement which incorporates the language of conservation in its objective<sup>7</sup> and of the 1946 International Convention for the Regulation of Whaling which has evolved from an instrument to regulate overfishing to one primarily concerned with conservation.<sup>8</sup> While this author views these changes primarily ‘as a consequence of development at around the time of the 1992 Rio Conference’<sup>9</sup> and concludes that natural resources treaties are since taking greater account of conservation concerns, he argues that the reverse has not necessarily been true for nature preservation treaties.<sup>10</sup> An example of the reluctance of conservationist treaties to integrate economic and social considerations provided is that of the limited success of African countries within CITES to use the rhetoric of sustainable development to secure greater utilisation of biodiversity.<sup>11</sup> Yet, the language of sustainable development has undoubtedly also permeated the law of nature protection. Reference to this objective can be found for example in the 2003 African Convention on the Conservation of Nature and Natural Resources, the 1999 SADC Protocol on Wildlife Conservation and Law Enforcement, or the 1994 Lusaka Agreement on Co-operative Enforcement Operations directed at Illegal Trade in Wild Fauna and Flora.<sup>12</sup> And it is not just the case of post-UNCED instruments. The Conference of the Parties to the 1971 Ramsar Convention on Wetlands, a conservation treaty concluded before the full realisation of environmental, economic and social

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<sup>6</sup> French (2005) 126.

<sup>7</sup> See article 2.

<sup>8</sup> French (2005) 126. **See chapter 9 in this volume.**

<sup>9</sup> Ibid.

<sup>10</sup> Ibid, 126-127. See also ILA Toronto Conference (2006) 18.

<sup>11</sup> Ibid, 127. **See also chapter 7 in this volume.**

<sup>12</sup> See respectively Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (adopted 8 September 1994, entered into force 10 December 1996) 1950 UNTS 35art 14, preamble para 3, and preamble para 1.

interdependencies, has been at pains to integrate economic and social considerations into a primarily environmental treaty.<sup>13</sup> If the adaptation of, especially pre-UNCED, nature protection regimes to sustainable development remains patchy, its logic has certainly assisted a convergence of different approaches to nature conservation and exploitation with an attempt to balance both concerns. The recognition of sustainable development is also arguably more than just concomitant with the emergence of a more holistic vision of nature conservation and the birth of the law on biodiversity.

#### **4.1.2 The grounding of biodiversity law in sustainable development**

The need to approach nature protection in an integrated way, by thinking more holistically about environmental issues called for by sustainable development has arguably played a role in the birth of the concept of biodiversity. Biodiversity, which is understood to describe ‘the degree of nature’s variety’,<sup>14</sup> itself calls for a holistic conception of nature encompassing the diversity of ecosystems, species, and genetic diversity within species.<sup>15</sup> Bowman, assessing the birth of the biodiversity concept in international law, reasons that it is with the underlying theme of sustainable development of the 1980 World Conservation Strategy that the ‘real foundations for the concept of biodiversity were laid’.<sup>16</sup> This convergence of nature protection approaches towards a holistic conception of biodiversity culminated in the adoption of the Convention on Biological Diversity (CBD) in 1992 at the outcome of the Rio Conference on Environment and Development. There is ample recognition of the interdependence between the achievement of sustainable development and the long term conservation and sustainable use of biological diversity. The underlying assumption of the 1980 World Conservation Strategy mentioned above was that nature conservation is a prerequisite for economic development.<sup>17</sup> Agenda 21 for its part notes that ‘The current decline in biodiversity is largely the result of human activity and represents a serious threat to human development’.<sup>18</sup> Whilst the CBD’s 2002 Strategic Plan underlines that biodiversity provides goods and services that underpin sustainable development in important ways such as supporting the ecosystem functions essential for life on Earth, the production of food,

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<sup>13</sup> See Ramsar Resolution VIII.4 (2002), Resolution IX.1 (2005), Resolution XI.21 (2012). For an analysis see Barral (2015) 294-295. For a critique of this broadening of the convention’s scope see Earth Negotiation Bulletin, *Summary of the Eighth Meeting of the Conference of the Contracting Parties to the Ramsar Convention*, Vol. 17 No. 18 (2002) 15.

<sup>14</sup> McNeely (1990) 17.

<sup>15</sup> *Ibid.*

<sup>16</sup> Bowman (1996) 8.

<sup>17</sup> Redgwell (2006) 63.

<sup>18</sup> Agenda 21, A/CONF.151/26/Rev.1 (Vol. I) (1992) para 15.2.

medicine and material for industry, and being at the heart of many cultural values.<sup>19</sup> Despite its unique reference to the concept,<sup>20</sup> the CBD and other related instruments such as the Cartagena Protocol on Biosafety, the Nagoya Protocol on Access and Benefit Sharing, as well as the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)<sup>21</sup> can safely be coined sustainable development treaties. This is because their conceptual grounding together with the structure and nature of the legal regimes they establish are themselves infused with the logic of sustainable development.

## **4.2 Sustainable development and its reflection in modern biodiversity law**

### **4.2.1 A conceptual content premised on equity**

Despite uncertainty over the precise definition and implications of sustainable development<sup>22</sup> and contestation over its meaning<sup>23</sup> there is broad consensus that the discourse of sustainable development is based on the realisation of the close interdependence and interconnectedness between economic factors, the state of the environment, and social considerations. As such it advocates for a dissolution of the clash between environment and economy<sup>24</sup> and sets itself as an ineluctable, but also acceptable,<sup>25</sup> route to ensure humanity's survival on Earth. Its achievement presupposes some profound policy shifts and the respect of a number of new or renewed legal standards. The precise list of these standards is itself variable because of the intrinsically evolutive character of the concept.<sup>26</sup> But an analysis of both foundational texts and literature in the field suggests that some core features making up the fabric of sustainable development may still be identified.<sup>27</sup> In fact, sustainable development is premised on a twin

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<sup>19</sup> CBD Decision VI/26 (2002) annex para 3.

<sup>20</sup> Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79 (CBD) art 8(e).

<sup>21</sup> Cartagena Protocol on Biosafety to the Convention on Biological Diversity (adopted 29 January 2000, entered into force 11 September 2003) 2226 UNTS 208 (Cartagena Protocol) preamble para 9; Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (adopted 29 October 2010, entered into force 12 October 2014) (Nagoya Protocol) preamble para 5; International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) (adopted 3 November 2001, entered into force 29 June 2004) 2400 UNTS 303 (ITPGRFA) art6(2)(f). **See chapters 16-18 in this volume.**

<sup>22</sup> For an overview of differences in approaches see Barral (2015) 22-25, and (2012) 378.

<sup>23</sup> Dryzek (2007) 56.

<sup>24</sup> Ibid, 49.

<sup>25</sup> As a non-radical theory it allows for a compromise between competing considerations and is also famous for having helped bring the 'South' on board in global environmental negotiations. **See chapter 3 in this volume.**

<sup>26</sup> Barral (2015) 375-385, (2012) 382. Koester notes that the list of components identified as key to sustainable development varies among core international environmental texts, yet some overlap is clearly identifiable, see Koester (2016) 278.

<sup>27</sup> For an analysis of key foundational texts see Barral (2015) 35-109, and for a summary of core academic texts findings see Koester (2016) 278.

conception of equity: inter-generational and intra-generational equity. *Inter-generational equity* refers to the environmental pillar of sustainable development and relates to the adjective ‘sustainable’ in the proposition.<sup>28</sup> It posits that in their development choices states must preserve the environmental capital they hold in trust for future generations and ensure it is transmitted in conditions equivalent to those in which it was received. Environmental preservation is thus envisaged as a prerequisite to equity between generations without which the sustainability of development cannot be ensured. *Intra-generational equity*, the twin equitable dimension of sustainable development, relates to the ‘development’ portion of the expression and requires equity in the distribution of the outcomes of development within one generation at both inter and intra state level. It thus aims to achieve the economic and social fairness required by sustainable development. The recognised interdependence between environmental preservation and fair economic and social development however means that it is only when the core components of inter- and intra-generational equity are mutually guaranteed that they are conducive to development that is sustainable, and this is to be achieved through their integration. The principle of integration, defined at principle 4 of the Rio Declaration as requiring that environmental protection constitutes an integral part of the development process,<sup>29</sup> is commonly seen as the core philosophy underlying the concept<sup>30</sup> and has even been equated with sustainable development itself.<sup>31</sup> Ultimately then, the achievement of development that is sustainable, and thus able to ensure humanity’s survival, is dependent on the realisation of inter- and intra-generational equity and on the integration, in policy and decision-making, of both sets of concerns that flow from these principles.

This relatively abstract conceptual architecture has however inspired the development or evolution of a range of legal principles aimed at operationalising the philosophical foundations of sustainable development. Some derive from inter-generational equity and others from intra-generational equity. Attainment of inter-generational equity is thus to be achieved through, *inter alia*, adherence to the principles of sustainable use of natural resources,<sup>32</sup> prevention,<sup>33</sup> and precaution,<sup>34</sup> the setting-up of environmental impact assessments, and the provision of access to information and participation in the decision-

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<sup>28</sup> On inter-generational equity see Brown Weiss (1989) and (2010).

<sup>29</sup> See Rio Declaration on Environment and Development, A/CONF.151/26/Rev.1 (Vol. I) (1992). On the principle of integration see Barral and Dupuy (2015) 157.

<sup>30</sup> Boyle and Freestone (1999) 10-12.

<sup>31</sup> Fitzmaurice (2001) 52, ILA Toronto Conference (2006) 2.

<sup>32</sup> See chapter 2 in this volume.

<sup>33</sup> See Duvic-Paoli and Viñuales (2015) 107.

<sup>34</sup> See Cazala (2006).

making process.<sup>35</sup> Important standards for the attainment of intra-generational equity include respect for the principle of common but differentiated responsibilities which postulates that in view of their particular contribution to the degradation of the environment as well as their enhanced capabilities to tackle it, developed countries share a heavier burden in this task.<sup>36</sup> This concretely translates into differential standards including differentiated legal commitments and specific financial, technology and capacity-building obligations in line with the redistributive justice ideal embodied in the notion of intra-generational equity. This framework of standards and principles inspired by notions of equity and sustainable development have exerted an undeniable influence on the conception and evolution of environmental protection regimes following endorsement of the concept at Rio in 1992, and this is unsurprisingly reflected in those concerned with biological diversity.

#### **<b>4.2.2 Reflection of sustainable development and equity in the CBD and related regimes**

Anchorage of essential biodiversity regimes within the premise of sustainable development and equity is detectable first and foremost from the nature of the objectives they set themselves to achieve. Hence, the CBD's objective has been described as an effort to balance equitably the concerns of biodiversity conservation, sustainable use and equitable sharing of the benefits arising out of its utilisation.<sup>37</sup> The ITPGRFA as well as the Nagoya Protocol's objective prolong this logic by clearly linking the attainment of intra-generational equity that represents the fair and equitable sharing of benefits arising from the use of genetic resources to the attainment of inter-generational equity, i.e. the conservation and sustainable use of biodiversity.<sup>38</sup> This has allowed the latter treaty to be coined an 'international agreement that concerns environmental sustainability, other sustainable development issues and justice'.<sup>39</sup>

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<sup>35</sup> See respectively Craik (2015) and Ebbesson (2015).

<sup>36</sup> See Cullet (2010).

<sup>37</sup> Shelton (2007) 659. See CBD art 1.

<sup>38</sup> ITPGRFA art 1(1): 'The objectives of this Treaty are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security'. Nagoya Protocol art 1 reads:

The objective of this Protocol is the fair and equitable sharing of the benefits arising from 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, thereby contributing to the conservation of biological diversity and the sustainable use of its components.

See chapters 17-18 in this volume.

<sup>39</sup> Morgera and Tsioumani (2014) 1.



There is little doubt that beyond a wholehearted adherence to the ‘philosophy’ of sustainable development, these objectives also reflect delicate political compromises designed to accommodate both developed and developing countries’ interests.<sup>40</sup> Yet, legal provisions and constructs reflecting political compromises may well over time build a life of their own, and achieving sustainable development is still very much at the heart of what the biodiversity regime is striving for, as highlighted by the recent adoption of the Chennai Guidance for the Integration of Biodiversity and Poverty Eradication.<sup>41</sup> Sustainable development and equitable principles find further reflection in the structure of biodiversity regimes.

#### **<b>4.2.2.1 Integration**

The principle of integration of environmental considerations into the development process has been expressly incorporated into the CBD regime. Thus parties are required to ‘integrate [...] the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies’<sup>42</sup> and into national decision-making.<sup>43</sup> A similar approach can be found in the ITPGRFA.<sup>44</sup> This objective of mainstreaming biodiversity into other policy areas and highlighting its relevance for social and economic agendas has been reiterated in the 2010 Aichi Biodiversity Targets,<sup>45</sup> thus confirming the continued importance of integration. Another iteration of this principle may also be found in the ecosystem approach embraced by biodiversity law. Whilst it is not in the treaty text of the CBD, the ecosystem approach, as a ‘strategy for the integrated management of land, water and living resources that promote conservation and sustainable use in an equitable way’<sup>46</sup> can nevertheless be said to be at the core of biodiversity law. Enshrined in the regime by a series of decisions of the CBD COP,<sup>47</sup> it reflects a means to integrate different management strategies and thus to move away from pre-existing sectoral and fragmented approaches.<sup>48</sup>

#### **<b>4.2.2.2 Inter-generational equity**

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<sup>40</sup> Boyle (1996) 38; French (2005) 132-134.

<sup>41</sup> CBD decision XII/5 (2014).

<sup>42</sup> CBD art 6(b).

<sup>43</sup> See CBD art 10(a).

<sup>44</sup> See ITPGRFA art 5 in connection with 7(1).

<sup>45</sup> See Koester (2016) 284-285.

<sup>46</sup> Lasen Diaz (2006) 34.

<sup>47</sup> CBD Decision II/8 (1995), V/6 (2000) and VII/II (2004).

<sup>48</sup> See chapter in 5 this volume.

Beyond its mention in the preamble of the CBD,<sup>49</sup> the clearest translation of inter-generational equity concerns in the biodiversity regime can be found in the principles of conservation and sustainable use which find numerous reflections in the text of the CBD and related treaties. The central provision in this respect is CBD Article 6,<sup>50</sup> which requires parties to set up national strategies, plans and programmes on conservation and sustainable use, and ties this back to the principle of integration. Conservation and sustainable use form a central part of the regime and are further elaborated in CBD Articles 7 to 14. This central role is significant since both conservation and sustainable use of biological resources primarily aim at securing environmental protection and as such clearly flow from the notion of inter-generational equity. The notion of sustainability echoes the temporal dimension of inter-generational equity since the ability to use must be made available in the long term, whilst by encompassing uses, the principle reflects particularly well sustainable development concerns as it allows for the embodiment of broader economic and social needs. Efforts to make the principle of sustainable use operational have been ongoing, notably via the adoption of the Addis Ababa principles and guidelines for sustainable use.<sup>51</sup> Aside from sustainable use, procedural principles of environmental protection such as prevention, impact assessments, and public participation are articulated in article 14 of the CBD,<sup>52</sup> while the core objective of the Cartagena Protocol on Biosafety is the realisation of the principle of precaution.<sup>53</sup> The principle of participatory decision-making is further reflected in the role recognised to local and indigenous communities in the protection of biological diversity which can be seen as critical in achieving sustainable development because of the need to involve them in natural resources protection strategies in view of the knowledge they possess from traditional practices.<sup>54</sup> The extent of the involvement of such communities in relevant decision-making<sup>55</sup> has however been,<sup>56</sup> and is still<sup>57</sup> subject to national legislation with the greatly limiting effect that this may entail depending on the content of the legislation at stake. These issues also evidently take on an intra-generational dimension.

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<sup>49</sup> CBD preamble para 23.

<sup>50</sup> See also ITPGRFA art 6.

<sup>51</sup> See CBD Decision VII/12(2004). On sustainable use, see further [chapter 2 in this volume](#).

<sup>52</sup> [See chapter 31 in this volume](#).

<sup>53</sup> Cartagena Protocol art 1.

<sup>54</sup> See Barstow Magraw and Hawke (2007) 629.

<sup>55</sup> See generally [chapter 34 in this volume](#), and especially as far as the sharing of their knowledge is concerned and the extent of the benefit sharing that ensues, [chapter 20 in this volume](#).

<sup>56</sup> See CBD art 8(j).

<sup>57</sup> See Nagoya Protocol art 5(2).

### **<b>4.2.2.3 Intra-generational equity**

In view of states' differing responsibilities in environmental degradation as well of their differing capabilities in tackling such issues, corrective and distributive justice requirements command differential treatment<sup>58</sup> between the wealthy North and the less well endowed South.<sup>59</sup> Best expressed by the principle of common but differentiated responsibilities, these considerations infuse the biodiversity regime in a variety of ways. The CBD has indeed been devised on the basis of differentiation and many of the obligations it contains are designed as contextual norms.<sup>60</sup> Such norms subject the attainment of the objectives laid down in international obligations to the parties' own circumstances, conditions or capabilities, or as far as possible or appropriate. CBD Articles 5 to 11 and 14 are indeed structured according to this type of differentiation. But the redistributive justice dimension that intra-generational equity requires finds further reflection in the elaborate system of capacity building, technology, and financial transfer provisions of the regime.<sup>61</sup> The implementation by developing countries parties of their own commitments is also cleverly subjected to the fulfilment by developed countries parties of their financial transfer obligations.<sup>62</sup> Arguably though, the most innovative translation of intra-generational equity in the biodiversity regime finds expression in the interlinking of the duties to provide access to genetic resources and to share the benefits accruing from their utilisation.<sup>63</sup> Known as access and benefit sharing (ABS), this concept meant to be conducive to justice and equity<sup>64</sup> has been thoroughly elaborated in the Nagoya Protocol whose objective has been described as the realisation of fairness and equity among states, as well as between governments and indigenous communities.<sup>65</sup> It is an equitable mechanism to the extent that developing countries, on the territory of which most biodiversity is located, must facilitate access to genetic resources and thus bio-prospection, generally conducted by corporations or organisations from the developed world. To compensate, the benefits arising from the utilisation and commercialisation of these resources must be shared with countries of origin, and with local

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<sup>58</sup> On differential treatment in international law see Cullet (2003).

<sup>59</sup> Barral (forthcoming).

<sup>60</sup> Terminology coined by Magraw (1990) 73.

<sup>61</sup> CBD arts 16 and 20. See chapters 29 and 26 in this volume.

<sup>62</sup> See CBD art 20(4).

<sup>63</sup> Articulated in CBD arts 15 and 19, and ITPGRFA arts 10-13.

<sup>64</sup> Morgera (2015) 17.

<sup>65</sup> See Morgera and others (2014) 14.

and indigenous communities where applicable<sup>66</sup> or possible<sup>67</sup> thereby ensuring fair redistribution both at inter-state and well as intra-state level.<sup>68</sup> This innovative system which has been described as formalising a new conception of equity in international law<sup>69</sup> has certainly inspired a great deal of commentary but it also leaves a number of questions opened as to its capacity to effectively be conducive to equity and sustainable development.

### **<a>4.3 Controversies and future challenges**

The arrangements governing ABS of genetic resources represent a ‘compromise reached within the overall framework of the resource appropriation model’<sup>70</sup> and may well represent only a weak form of equity.<sup>71</sup> There are many arguments why that might be the case: the bilateral nature of the system devised in the Nagoya Protocol<sup>72</sup> may lead to asymmetrical bargaining positions and hence unequal terms, thereby affecting the intended distributive dimension of the system.<sup>73</sup> It has been argued that the bureaucracy associated with the granting of access to genetic resources has in fact driven away corporations from conducting bioprospecting which instead rely on gene banks, thereby annihilating any hope of benefit sharing for developing countries.<sup>74</sup> The persistence of the limits placed by intellectual property rights on benefit sharing also impairs the achievement of effective equity and so does the unresolved issue of the rights of local and indigenous communities.<sup>75</sup> There is a great deal of controversy as to how these issues should be resolved, ranging from the return to a more open access regime,<sup>76</sup> the development of *sui generis* mechanisms<sup>77</sup> or even the creation of ‘protected commons’ with an obligation to share the related benefits.<sup>78</sup> But more significantly, beyond the issue of whether benefit sharing can properly be conducive to intra-generational equity, the focus on genetic resources has been criticised as creating an

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<sup>66</sup> Benefits arising from use of traditional knowledge should be shared with the holders of the knowledge, Nagoya Protocol art 5(5).

<sup>67</sup> As in the CBD, the commitment to channel the benefits arising from resources held by local and indigenous communities to these communities is subject to national legislation, see Nagoya Protocol art 5(2).

<sup>68</sup> Expression coined by Morgera and Tsioumani (2010).

<sup>69</sup> See Cullet (2009) 373.

<sup>70</sup> Dupuy and Vinuales (2015) 195. In so far as developing states have claimed their sovereignty over such resources following the rise of intellectual property rights, thus moving away from the open access/common heritage of mankind system prevailing until the 1980s which in turn led to devising arrangements for both the granting of access and the sharing of the benefits arising from these resources.

<sup>71</sup> See Cullet (2009) 377.

<sup>72</sup> Access and benefit sharing must be devised on mutually agreed terms between the relevant parties.

<sup>73</sup> The ITPGRFA has itself opted for a multilateral system.

<sup>74</sup> See Safrin (2004) 657 and Hermitte (1992) 856.

<sup>75</sup> See **chapter 26 in this volume.**

<sup>76</sup> Safrin (2004) 668-685.

<sup>77</sup> See e.g. Cullet (2009) 377-380. **See also chapter 20 in this volume.**

<sup>78</sup> See Kloppenburg (2010) 374.

imbalance at the expense of inter-generational equity.<sup>79</sup> Despite the efforts of the Nagoya Protocol to link both concerns, whether benefit sharing will be effectively redirected towards sustainable use and thereby properly contributing to the achievement of sustainable development remains to be tested. Admittedly, it might be too early to evaluate this yet, though it should certainly be kept under the researcher's radar. In the meantime, an in depth exploration of the balance between the various components of the CBD's objectives, including through the legislative activity of the COP, would illuminate the delicate questions of the practical adherence to sustainable development and of the efforts made towards its realisation, and would, from this point of view, be well worth carrying out. In addition, other key elements of sustainable development, such as access to information and access to justice in particular, have been consistently underexplored in the biodiversity context and would greatly deserve to be the object of further research.

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<sup>79</sup> See Rayfuse (2007) 378; Iles (2003).

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