

CBD Article 16(1) ensures parties' obligation to provide and facilitate access to and transfer of relevant technologies. According to Article 16(2), this obligation should be fulfilled "under fair and most favourable terms, including on concessional and preferential terms when mutually agreed."<sup>46</sup> Article 16(3) bridges the CBD with TRIPS by stating that parties shall not provide compulsory licenses "under conditions which would contravene the provision of Art. 31 of the TRIPS Agreement."<sup>47</sup> Article 16(5) obliges parties to "cooperate .... subject to national legislation and international law .... to ensure that [IP rights] are supportive of and do not run counter to its objective."<sup>48</sup> In addition, the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization<sup>49</sup> were published in 2001 to serve a balanced operation of the CBD framework.<sup>50</sup>

#### 4. UN Framework Convention on Climate Change (1994)

A major achievement of the Rio Summit is the UN Framework Convention on Climate Change.<sup>51</sup> The goal of the UNFCCC is "the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."<sup>52</sup> Since 1995, the parties to the UNFCCC have met regularly in Conferences of the Parties (COP) to assess progress. In 1997, the Kyoto Protocol established binding targets and obligations for reducing greenhouse gas emissions, as further discussed below.

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46 *Id.* at art. 16(2).

47 *Id.* at art. 16(3).

48 *Id.* at art. 16(5).

49 CBD, THE BONN GUIDELINES ON ACCESS TO GENETIC RESOURCES AND FAIR AND EQUITABLE SHARING OF THE BENEFITS ARISING OUT OF THEIR UTILIZATION (2002) (following CBD Article 15 on the terms and conditions for access to genetic resources and benefit sharing, the Bonn Guidelines (i) set up steps for access and benefit-sharing stressing users' obligation to seek the prior informed consent of providers; (ii) provide for basic requirements for mutually agreed terms and identify the rights and obligations of users and providers; and (iii) contain elements on incentives, accountability, dispute settlement and verification and elements of material transfer agreement with a non-exhaustive list of monetary and non-monetary benefits.

50 Joseph Straus, *Patents on Biomaterial – A New Colonialism or a Means for Technology Transfer and Benefit-Sharing?* in *BIOETHICS IN A SMALL WORLD* 45-72 (Felix Thiele and Richard E. Ashcroft eds. 2005).

51 UN Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S 108, *reprinted* in 31 I.L.M. 849 (1992) [hereinafter UNFCCC].

52 *Id.* at art. 2.

## a) *Responsibility for Vulnerable Countries*

Under the UNFCCC, industrialized countries are to support climate-change activities in developing countries by providing financial support and sharing technology.<sup>53</sup> Parties to the UNFCCC are divided into Annex I countries, Annex II, and others. The Annex I group consists of industrialized nations and so-called 'economies in transition'. Annex II is a sub-group of the Annex I countries, with more developed economies.<sup>54</sup> Annex II countries support climate-change activities in developing countries by providing financial and technical support.<sup>55</sup>

## b) *Push Factors*

Hutchison notes that the climate change regime, consistent with other MEAs, takes two complementary approaches in dealing with technology transfer: "push factors" and "pull factors".<sup>56</sup> Push factors are active technology transfer initiatives by governments of developed countries, whereas pull factors are the creation of favourable conditions in developing countries to attract technology through trade and investment.<sup>57</sup> The UNFCCC contains a number of 'push' provisions. UNFCCC Article 4.1 imposes on all parties an obligation to encourage and collaborate in the development and transfer of technologies in relevant sectors.<sup>58</sup> UNFCCC Article 4.7 points out that the implementation of commitments made by developing countries would largely depend on the commitments of developed countries.<sup>59</sup> To this end, UNFCCC Article 4.3 obliges developed countries to provide financial resources to meet the incremental costs of ESTs<sup>60</sup> and UNFCCC Article 4.5 mandates that developed countries shall take all practicable steps to promote the transfer of, or access to, ESTs and know-how to developing countries.<sup>61</sup>

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53 UNFCCC, *Feeling the Heat*, [http://unfccc.int/essential\\_background/feeling\\_the\\_heat/items/2914.php](http://unfccc.int/essential_background/feeling_the_heat/items/2914.php) (last visited July 18, 2010).

54 In fact, all of the current Annex II countries are OECD members. Cf. Turkey had been deleted from Annex II by an amendment that entered into force on June 28, 2001, pursuant to decision 26/CP.7 adopted at the COP 7.

55 *Supra* note 52.

56 Cameron Hutchison, *Does TRIPS Facilitate or Impede Climate Change Technology Transfer into Developing Countries?*, 3 UNIVERSITY OF OTTAWA LAW & TECHNOLOGY JOURNAL 519, 519-537 (2006).

57 *Id.*

58 UNFCCC, *supra* note 51 at art. 4.1.

59 UNFCCC, *supra* note 51 at art. 4.7.

60 UNFCCC, *supra* note 51 at art. 4.3.

61 UNFCCC, *supra* note 51 at art. 4.5.

### c) *Expert Group on Transfer of Technology*

At the COP 7 held in Marrakech in 2001, parties adopted a framework for solutions for the implementation of UNFCCC Article 4.5 and, for this purpose, established an expert group on technology transfer.<sup>62</sup> The stated key elements of the technology transfer framework are: (i) technology needs assessments; (ii) technology information; (iii) an enabling environment; (iv) capacity-building; and (v) mechanisms for technology transfer.<sup>63</sup> For technology information, the UNFCCC Secretariat launched a web-based inventory of technology transfer information called “Technology Transfer Clearing House (TT:CLEAR)”.<sup>64</sup>

### d) *Bali Action Plan and Technology Transfer*

The COP 13 in 2007 adopted the Bali Road Map and its Action Plan that were to culminate in a binding agreement in Copenhagen in 2009. The Bali Action Plan launched a comprehensive process to enable full implementation of the UNFCCC through long-term cooperative action, now, up to and beyond 2012 by addressing, *inter alia*, “enhanced action on technology development and transfer” and “on the provision of financial resources and investment.”<sup>65</sup>

### e) *Ad Hoc Working Group on Long-term Cooperative Action*

The COP 13 also established the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) to conduct the process for implementation of the UNFCCC. In connection with technology development and transfer, the AWG-LCA proposes that a “Technology Mechanism” shall be established to support and accelerate the diffusion of ESTs and that such mechanism will be guided by a “country-driven approach” based on national circumstances and priorities.<sup>66</sup>

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62 Conference of the Parties on its 7th Session, Marrakesh, Morocco, Oct. 29 - Nov. 10, 2001, 4/CP.7 Development and Transfer of Technologies, UNFCCC Doc. FCCC/CP/2001/13/Add.1 (Jan. 21, 2002).

63 UNFCCC, UNFCCC EXPERT GROUP ON TECHNOLOGY TRANSFER, FIVE YEARS OF WORK 3-8 (2007).

64 See its website at <http://unfccc.int/ttclear> (last visited Apr. 20, 2011).

65 Conference of the Parties on its 13th Session, Bali, Indonesia, Dec. 3-14, 2007, Decision 1/CP.13 Bali Action Plan, UNFCCC Doc. FCCC/CP/2007/6/Add.1 (Mar. 14, 2008).

66 Ad Hoc Working Group on Long-term Cooperative Action under the UNFCCC on its 8th Session, Copenhagen, Denmark, Dec. 7-15, 2009, agenda item 3, UNFCCC Doc. FCCC/AWGLCA/2009/17 (Feb. 5, 2010).

During the negotiations preceding the COP 15 in Copenhagen, developing countries proposed a number of options for IP rights, including IP sharing, patent pools, compulsory licensing,<sup>67</sup> placing the outcome of publicly funded research on climate change technology in the public domain, and an international instrument similar to the Doha Declaration on Public Health for climate change.<sup>68</sup> These proposals prompted counteraction from developed countries, such as a bill passed by the US House of Representatives in June 2009 against any international negotiations that may weaken IP protection of green technology.<sup>69</sup> Business communities also called for such protection in climate change negotiations.<sup>70</sup>

Failing to produce a legally binding instrument, the COP 15 concluded the Copenhagen Accord which merely took note of the agreements in the past. Paragraph 11 of this Accord states that a Technology Mechanism for rapid development and

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67 UNFCCC AWG-LCA, Oct. 27, 2008, Proposal by the G77 and China for a Technology Mechanism under the UNFCCC *included in* Ideas and Proposals on the Elements Contained in Paragraph 1 of the Bali Action Plan, Paper No.1: Antigua and Barbuda on behalf of the Group of 77 and China 6-9 UNFCCC Doc. FCCC/AWGLCA/2008/MISC.5 (Oct. 27, 2008) (arguing that the Bali Action Plan will “ensure that privately owned technologies are available on an affordable basis including through measures to resolve the barriers posed by intellectual property rights and addressing compulsory licensing of patented technologies”).

68 *Id.* at Paper No.4: Brazil 29 (proposing new approaches that combine IP protection and technological sharing, “bearing in mind the example set by decisions in other relevant international fora related to intellectual property rights, such as the Doha Declaration on the TRIPS Agreement and Public Health”).

69 Foreign Relations Authorizations Act Fiscal Years 2010 and 2011, H.R. 2410, 111th Cong. Section 1120A (2009-2010) (stating that it shall be the policy of the US that, with respect to the UNFCCC, the President, the Secretary, and the Permanent Representative to the UN should prevent any weakening of international legal protections of IP rights related to energy or environmental technology; *see also* American Clean Energy and Security Act of 1978 as amended in 2009 (also known as ACES or Waxman-Markey Climate Change Bill), H.R. 2454, 111th Cong. Subtitle D – Exporting Clean Technology (2009-2010); *see also* Department of State, Foreign Operations, and Related Programs Appropriations Act 2010, H.R. 3081, 111th Cong. Section 7089 (2009-2010) (stating that “[p]rior to the obligation of the funds made available in this Act for ‘Contribution to the Clean Technology Fund’ of the World Bank, the Secretary of State shall certify in writing to the Committees on Appropriations that all actions taken during the negotiations of the UNFCCC ensure robust compliance with and enforcement of existing international legal requirements as of the date of the enactment of this Act that respect intellectual property rights and effective intellectual property rights protection and enforcement for energy and environment technology”).

70 INTERNATIONAL CHAMBER OF COMMERCE (ICC), SUBMISSION ON THE REVIEW AND ASSESSMENT OF THE EFFECTIVENESS ON THE IMPLEMENTATION OF ARTICLES 4, PARAGRAPH 1(C) AND 5, OF THE CONVENTION (2009) (emphasizing the correlation between IP protection and foreign direct investment *i.e.*, companies are less willing to invest where IP protection is weak); *see also* Joseph Straus, *The Impact of the New World Order on Economic Development: The Role of the Intellectual Property System*, 6 J. MARSHALL REV. INTELL. PROP. L. 1, 7 (2006) (commenting that foreign companies heavily invested in China because of the new WTO legal system and China’s entrance into WTO, and further development of China’s IP protection played a decisive role, despite all of the still prevalent deficits to TRIPS standards).

transfer of climate change adaptation and mitigation will be “guided by a country-driven approach” and be based on “national circumstances and priorities.”<sup>71</sup>

## 5. UN Convention to Combat Desertification (1996)

Climate change negotiators can also refer to certain provisions of the UN Convention to Combat Desertification (UNCCD).<sup>72</sup> Article 18 of the UNCCD governs obligations regarding transfer, acquisition, adaptation and development of relevant technology and provides for commitments on technology diffusion from developed countries to developing countries. Parties must take into account the need to protect IP under UNCCD Article 18(1)(b) and (e) and take appropriate measures to create domestic market conditions and incentives conducive to development, transfer, acquisition and adaptation of suitable technology, knowledge, know-how and practices. Parties may employ different technology transfer models such as standards or joint ventures (Article 18(1)(d) of the UNCCD). Pursuant to Article 18(2)(a) of the UNCCD, parties shall publish inventories of technology, knowledge, know-how and practices.<sup>73</sup>

## 6. Kyoto Protocol (1997)

The Kyoto Protocol to the UNFCCC,<sup>74</sup> adopted in December 1997 and entered into force in February 2005, imposes binding obligations on Annex I countries to reduce greenhouse gas emissions, whereby the benchmark is the 1990 level of greenhouse gases.<sup>75</sup> The Kyoto Protocol provides for flexible market-based mechanisms including emission trading, a Clean Development Mechanism (CDM) and Joint Implementation (JI) options for greenhouse gas reduction.<sup>76</sup> The CDM allows developed countries to invest in emission reduction projects in developing countries and to receive credit for the emission reduction or removal achieved. The resulting emission allowances can be used by developed countries to meet their emission

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71 Conference of the Parties on its 15th Session, Copenhagen, Denmark, Dec.7-19, 2009, Decision 2/CP.15 Copenhagen Accord, UNFCCC Doc. FCCC/CP/2009/11/Add.1 (Mar. 30, 2010).

72 U.N. Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, June 17, 1994 33 I.L.M. 1328 [hereinafter UNCCD].

73 *Id.* at art. 18.

74 Kyoto Protocol to the UNFCCC, *adopted* Dec. 10, 1997, 37 I.L.M. 22 (*entered into force* Feb. 16, 2005) [hereinafter Kyoto Protocol].

75 Conference of the Parties on its 3rd Session, Kyoto, Japan, Dec. 1-11, 1997, Decision 2/CP.3 Methodological issues related to the Kyoto Protocol, UNFCCC Doc. FCCC/CP/1997/7/Add.1(Mar. 25, 1998).

76 Kyoto Protocol, *supra* note 74 at art. 12.