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**02
TRADE AND INVESTMENT
IMPLICATIONS OF CARBON TRADING
FOR SUSTAINABLE DEVELOPMENT**

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TRADE AND INVESTMENT IMPLICATIONS OF CARBON TRADING FOR SUSTAINABLE DEVELOPMENT

Marie-Claire Cordonier Segger and Markus Gehring¹

1. Introduction

A complex matrix of international rules has emerged to guide policies to prevent climate change, encouraging the development of more sustainable global energy, forestry, transportation, agriculture, housing, and other systems. However, a great deal remains to be done.² Both developed and developing countries are considering new regulatory measures to reduce the greenhouse gas emissions which cause climate change, as part of a broader commitment to adopt new laws to promote more sustainable development.³

Evolving international economic regimes are an important piece of this puzzle. To date, multilateral efforts to liberalize trade and investment and to reduce global greenhouse gas emissions have proceeded largely along separate tracks.⁴ One system is defined by the treaties establishing the World Trade Organization (WTO) and their annexes, along with over 3,000 regional and bi-lateral trade and investment treaties. The other is shaped by the UN Framework Convention on Climate Change, its Kyoto Protocol, and many related international arrangements. Though both systems of international rules share a common sustainable development objective, the relationship between the two is complex. As many have noted, these regimes 'are likely to come into closer contact as climate policies lead to significant economic effects.'⁵ International trade and investment treaty

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² United Nations Environment Programme, *10 Years After Rio: The UNEP Assessment* (UNEP: New York, 2002).

³ N Stern, *Stern Review on the Economics of Climate Change* (Report) (Cambridge University Press: Cambridge, 2007).

⁴ S Charnovitz, 'Trade and Climate: Potential Conflicts and Synergies' in *Beyond Kyoto: Advancing the International Effort Against Climate Change* (Pew Center: Arlington, 2003) at 141.

⁵ *Ibid.* at 141.

rules may also affect the viability and effectiveness of new regulations to address climate change.⁶ Essentially, just as trade and investment rules can and should shape climate policy, so climate rules can and do shape trade and investment policy. While climate laws and policies might restrict or constrain certain kinds of economic development, they can also provide incentives for new kinds of development. Indeed, many climate change measures can even be characterized as trade and investment rules themselves.

New policies and regulations are being set in place to establish Emissions Trading Schemes (ETS) which aim to reduce greenhouse gas emissions, and to stimulate investment in more sustainable, low-carbon development. There are important differences between international disciplines that govern the use of trade and investment related barriers by States, international rules that encourage States to trade emission certificates and investment in low-carbon development, and domestic measures that encourage firms to trade ERUs or develop renewable energy technologies. But the legal rules that govern international emissions trading and investment in clean development can—and should—be considered part of the wider body of evolving trade and investment law. Just as many trade provisions in the WTO Agreements contribute to the WTO’s sustainable development objective, so do the *lex specialis* trade and investment provisions in the 1992 UN Framework Convention on Climate Change (UNFCCC) contribute to the sustainable development objective of the global climate regime. For instance, an ETS can provide financial incentives for firms and others to develop and adopt innovative new technologies by capping emissions and creating a market for emission reduction units.⁷ In certain circumstances, an ETS may even provide incentives for the transfer of new sustainable development technologies to developing countries, if an Emission Rights Purchase Agreement (ERPA) provides for such transfer in relation to Clean Development Mechanism (CDM) certificates. More generally, the innovative and coherent design of future trade, investment, and climate change rules—building international cooperation on careful legal analysis—can make an important contribution to sustainable development.

This chapter briefly examines, based on recent legal analysis and scholarship in the field of sustainable development, the trade and investment implications of carbon trading. First, we consider how trade regimes, investment rules and emissions trading schemes can serve as tools for sustainable development. Then, we examine the trade and investment implications of new emissions trading regulations, suggesting ways to minimize overlaps with trade and investment disciplines when drafting carbon-related regulations, and addressing issues related to technology transfer. Next, we consider how trade and investment regimes might be refined to complement and support climate change related measures. We conclude with a call for integration and, at a minimum,

⁶ C Voigt, *Sustainable Development as a Principle of International Law—Resolving Conflicts between Climate Measures and WTO Law* (Martinus Nijhoff: Leiden, 2009).

⁷ D Freestone and C Streck (eds), *Legal Aspects of Implementing the Kyoto Protocol Mechanisms: Making Kyoto Work* (OUP: Oxford, 2005) Section VII.

coherence among trade, investment, and climate change regimes that share common sustainable development objectives.

2. Trade Regimes, Investment Rules and Emissions Trading Schemes: Tools for Sustainable Development?

2.1. International trade law obligations

Benefits of trade liberalization are not available to States and their citizens by right—governments negotiate treaties to secure them. In the WTO and many regional trade agreements, States have committed to lower tariffs and to secure non-discrimination and most favoured nation (MFN) status for trading partners. Briefly, four main obligations provide the foundations of world trade law.⁸ These treaty rules aim to secure stability and lower costs for firms from all State Parties to trade agreements. They may also affect the design of new laws to reduce greenhouse gas (GHG) emissions and encourage low carbon investments.

First, States have committed to convert many non-tariff barriers to trade, such as quotas, into more easily measured tariffs. They have reciprocally agreed to be bound by schedules of specific tariff rates, and to continue negotiating reductions of these rates. The main commitments of WTO members are contained in individual detailed Country Schedules attached to the General Agreement on Tariffs and Trade (GATT)⁹ for goods, and the General Agreement on Trade in Services (GATS)¹⁰ which lists services. GATT rules apply to all goods unless they are reserved or excepted. GATS rules use a 'positive-list' approach whereby only services listed by WTO Members are covered. These schedules provide comprehensive listings of all the products for which a WTO member has accepted a commitment to a binding tariff at a particular level. Each WTO member maintains a 'schedule of concessions', which is essentially a list of the tariff rates that it imposes on imported goods. When members 'bind' a certain tariff in their schedule, they guarantee that their customs tariff on the product in question will not be higher than the bound rate. Members have no obligation under WTO law to lower their bound tariff rates, but they do commit to continue negotiations to bind more product lines and to lower the tariffs on product lines already bound.¹¹ The WTO Committee on Trade in Goods and Committee on Trade in Services monitors implementation of these rules. This commitment to provide market access on a non-discriminatory basis can curtail the type of rules that States adopt, affecting a State's ability to selectively restrict certain imports.¹² Article

⁸ M Gehring, J Hepburn and MC Cordonier Segger, *World Trade Law in Practice* (Globe Law & Business: New York, 2006) 17.

⁹ General Agreement on Tariffs and Trade (adopted 30 October 1947, provisionally entered into force 1 January 1948) 55 UNTS 194, CTS No 31 (1948) (GATT).

¹⁰ General Agreement on Trade in Services (adopted 15 April 1994, entered into force 1 January 1995) 1869 UNTS 183.

¹¹ Gehring, Hepburn and Cordonier Segger (*supra* note 8) at 97.

¹² *Ibid.*; M Trebilcock and R Howse, *Regulation of International Trade* (Routledge: New York, 2005) 336.

XI:1 of the GATT, the provision that prohibits quantitative restrictions, has been used to evaluate the GATT-consistency of natural resource and environment related bans, for example in the *US-Tuna Case*¹³ and *US-Shrimp Case*.¹⁴

Second, Members commit to extend MFN status¹⁵ to each other, precluding discrimination between the ways goods, services, and investments from different economic partners are treated. Third, Members also commit to extend 'national treatment' to other Members for goods, certain services and other aspects of their trade policy.¹⁶ This prevents WTO members from treating the 'like products' of other members differently,¹⁷ and prevents like products from being distinguished on the basis of the process and production methods (PPMs) used to make them. These rules discipline the types of health, environmental, natural resource management, consumer safety and other standards that WTO members can apply to products if exceptions are not secured.¹⁸ MFN and national treatment commitments are implemented through the WTO Agreement on Technical Barriers to Trade (TBT Agreement)¹⁹ which addresses technical regulations and standards and the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)²⁰ which addresses health and plant safety regulations and standards. The TBT Agreement and the SPS Agreement define when certain restrictions on trade are allowed to limit protectionism (the use of regulations to unfairly privilege domestic firms *vis-à-vis* the firms of trading partners).²¹ As such, for instance, the SPS Agreement essentially provides specific restrictions on the types of phyto-sanitary standards governments should adopt, conditioning the relevant GATT rules and exceptions.²² WTO TBT and WTO SPS Committees study and debate these issues, and can grant time-limited exceptions to developing countries in light of their particular financial, trade, and development needs.²³ WTO Members also commit to protect intellectual property rights through the WTO Agreement on Trade Related Aspects of Intellectual Property Rights²⁴ (TRIPs Agreement), to

¹³ *United States-Restrictions on the import of Tuna* (1991) GATT BISD 39S/155, (1991) 30 ILM 1594.

¹⁴ WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products—Report of the Panel* (15 May 1998) WT/DS58/R; See also WTO, *United States: Import Prohibition of Certain Shrimp and Shrimp Products—Report of the Appellate Body* (6 November 1998) Doc WT/DS58/AB/R.

¹⁵ GATT art I:1, General Agreement on Trade in Services (adopted 15 April 1994, entered into force 1 January 1995) 1869 UNTS 183., 44 art II:2, Agreement on Trade-Related Aspects of Intellectual Property Rights (adopted 15 April 1994, entered into force 1 January 1995) 1869 UNTS 299, art 4.

¹⁶ GATT art III, GATS (n 15) art XVII, TRIPs (*supra* note 15) art 3.

¹⁷ Likeness is determined by the dispute settlement mechanism in the WTO on a case-by-case basis, taking into account criteria such as 'the product's end-uses in a given market; consumers' tastes and habits, which change from country to country; the product's properties, nature and quality' (Report of the Working Party on Border Tax Adjustments, BISD 18S/97, para 18).

¹⁸ There is a growing opinion which argues that in the GATT the same rules as in the TBT should be in force permitting PPMs to be taken into account under certain conditions.

¹⁹ Agreement on Technical Barriers to Trade (adopted 15 April 1994, entered into force 1 January 1995) 1868 UNTS 120.

²⁰ Agreement on the Application of Sanitary and Phytosanitary Measures (adopted 15 April 1994, entered into force 1 January 1995) 1867 UNTS 493.

²¹ M Echols, *Food Safety and the WTO: The Interplay of Science, Culture and Technology* (Kluwer Law Int: The Hague, 2001), C Button, *The Power to Protect: Trade, Health and Uncertainty in the WTO* (Hart Publishing: Oxford, 2004) 43–90.

²² Button, *ibid.*, 10–11.

²³ See WTO's Documents Online database (<<http://docsonline.wto.org>>) using document symbol G/SPS/GEN for all documents of the SPS Committee, including those related to exceptions for developing countries.

²⁴ TRIPs (*supra* note 15).

discipline subsidies in the WTO Agreement on Subsidies and Countervailing Measures²⁵ (Subsidies Agreement), to discipline government procurement through the WTO Agreement on Government Procurement,²⁶ and to discipline investment measures related to trade in goods in the Agreement on Trade-Related Investment Measures²⁷ (TRIMs). Such obligations might affect government attempts to regulate in relation to climate change. The TRIPs Agreement obliges WTO Members to set laws in place to protect intellectual property rights, potentially affecting technology transfer. The Subsidies Agreement disciplines the types of subsidies WTO members can provide, potentially affecting emission reduction incentives. The WTO Government Procurement Agreement and the TRIMs are minimalist accords, as governments were unwilling take on significant restrictions in these areas.²⁸ For instance, the TRIMs apply only to measures that affect trade in goods, committing to notify certain specific trade-related investment measures that discriminate against foreigners or foreign products.²⁹ However, if more stringent disciplines are adopted on government procurement or investment, they might constrain schemes for public purchasing of lower-carbon products, or climate regulations affecting foreign investors.

Fourth, Members agreed to transparency and notification obligations, as well as binding, peaceful settlement of trade disputes.³⁰ The WTO's Dispute Settlement Understanding (DSU) aims to provide 'security and predictability to the multilateral trading system'.³¹ WTO members settle disputes through consultation and other mechanisms, but if attempts fail to defuse a trade-related conflict, members can submit the disagreement to adjudication by a Panel, with appeals to an Appellate Body. If a decision is not implemented by the losing party, the Dispute Settlement Body can authorize retaliation (eg. suspension of trade concessions such as preferential tariffs).

The WTO Agreements are not without exceptions for measures related to sustainable development. First, Article XX of the GATT allows WTO members to violate WTO disciplines in certain circumstances, such as for the protection of health, the environment or conservation of exhaustible natural resources. Article XX reads, in relevant part:

Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement

²⁵ Agreement on Subsidies and Countervailing Measures (adopted 15 April 1994, entered into force 1 January 1995) 1867 UNTS 14.

²⁶ Agreement on Government Procurement (adopted 15 April 1994, entered into force 1 January 1995) 1867 UNTS 194.

²⁷ Agreement on Trade-Related Investment Measures (adopted 15 April 1994, entered into force 1 January 1995) 1868 UNTS 186.

²⁸ Gehring, Hepburn and Cordonier Segger (*supra* note 8) at 139.

²⁹ *Ibid.*

³⁰ GATT, art X; GATS (*supra* note 15), art III; TRIPs (*supra* note 15) art 63; Agreement on Technical Barriers to Trade (adopted 15 April 1994, entered into force 1 January 1995) 1868 UNTS 120, art 10; Agreement on the Application of Sanitary and Phytosanitary Measures (adopted 15 April 1994, entered into force 1 January 1995) 1867 UNTS 493 Agreement, art 7.

³¹ Understanding on Rules and Procedures Governing the Settlement of Disputes (adopted 15 April 1994, entered into force 1 January 1995) 1869 UNTS 401, (DSU) art 3.2.

shall be construed to prevent the adoption or enforcement by any contracting party of measures: ...

(b) necessary to protect human, animal or plant life or health;...

(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption;...³²

Similar exceptions were agreed in the GATS and the TRIPs Agreement. As noted by the Retrospective Analysis of the 1994 Canadian Environmental Review of the WTO, GATT Article XX is an important safeguard for a State's ability to regulate for sustainable development.³³ However, once a violation of trade law obligations has been established, the burden to defend environmental and social measures falls upon the WTO Member State invoking the exception.³⁴ Article XX exceptions have been tested in WTO disputes related to several topics highlighted in Agenda 21 and the Johannesburg Plan of Implementation.³⁵ For instance, States have made claims related to the use of genetically modified organisms (*EC – Approval and Marketing of Biotech Products*),³⁶ the enforcement of domestic IP laws (*Denmark – Measures Affecting the Enforcement of Intellectual Property Rights*),³⁷ marine animal protection laws (*US – Shrimp/Turtle*),³⁸ domestic legislation (*US – Section 211 Appropriations Act*),³⁹ the regulation of carcinogenic asbestos (*European Communities – Measures Affecting Asbestos and Products Containing Asbestos*),⁴⁰ and waste management (*Brazil – Measures Affecting Imports of Re-treaded Tyres*).⁴¹ Such cases have been inconclusive, as unsurprisingly, the trade dispute settlement body appears to place highest priority on trade law obligations. A further systemic exception involves the recognition of non-reciprocal special and differential treatment for developing countries,⁴² and at Article XXIV:5 of the GATT, WTO members also exclude customs unions and bilateral or regional free trade areas from compliance with WTO disciplines in certain circumstances.⁴³ These regional agreements are important, establishing both disciplines which might affect the adoption of domestic and international carbon rules, and measures to promote sustainable development and environmental cooperation.

³² GATT, art XX.

³³ DFAIT, Retrospective Analysis of the 1994 Canadian Environmental Review—Uruguay Round of Multilateral Trade Negotiations (DFAIT, Ottawa 1999).

³⁴ V Lowe, *International Law* (OUP: Oxford, 2007) 219–20.

³⁵ Agenda 21; online: <www.un.org/esa/sustdev/agenda21.htm>, [accessed](#) 31 March 2009; Johannesburg Plan of Implementation, Report of the World Summit on Sustainable Development, Johannesburg UN Doc. A/CONF.199/20.

³⁶ WTO, *EC – Approval and Marketing of Biotech Products* (29 September 2006) WT/DS291/R.

³⁷ WTO, *Denmark – Measures Affecting the Enforcement of Intellectual Property Rights* (21 May 1997) WT/DS83/1.

³⁸ WTO, *United States – Import Prohibition of Certain Shrimp and Shrimp Products* (20 September 1999) WT/DS58/AB/R.

³⁹ WTO, *United States – Section 211 Omnibus Appropriations Act of 1998* (1 February 2002) WT/DS17/AB/R.

⁴⁰ *EC–Measures Affecting Asbestos and Asbestos-Containing Products* (12 March 2001) WT/DS135/AB/R.

⁴¹ WTO, *Brazil: Measures affecting Imports of Retreaded Tyres – Report of the Panel* (12 June 2007) WT/DS332/R.

⁴² 1979 'Enabling Clause' decision of the GATT Contracting Parties, see *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries* (7 April 2004) WT/DS246/AB/R.

⁴³ Bartels and Ortino, *Regional Trade Agreements and the WTO Legal System* (OUP: Oxford, 2007) 3.

2.2. Regional Trade and Investment Law Obligations

Nearly all States today participate in bilateral or regional free trade arrangements (RTAs). These treaties are discriminatory by nature, designed to grant certain trade preferences to the Parties. They can be agreed between developed States, developing States, or among both a developed and a developing State.⁴⁴ As of July 2007, 380 regional trade agreements had been notified to the WTO, with over 400 expected to be in operation by 2010.⁴⁵ Concerns have been raised, including by the WTO, about this proliferation of regional accords.⁴⁶ Furthermore, depending on their specific provisions, regional trade agreements might encourage growth in unsustainable industries or unsustainable levels of resource exploitation leading to related physical impacts, and might also constrain the adoption or implementation of new standards. However, small-scale regional trade agreements may also provide a useful testing ground for trade policy innovations, including for the sustainable development of low-carbon economies.⁴⁷

Of perhaps greatest relevance to new laws related to emissions trading schemes and more sustainable, low-carbon economic development, in recent decades more than three thousand International Investment Agreements (IIAs) have been negotiated,⁴⁸ supplemented internationally by rules and dispute settlement procedures developed through the United Nations Commission on International Trade Law (UNCITRAL) and the International Centre for Settlement of Investment Disputes (ICSID). Private sector investment could help to finance the adoption of low-carbon technologies.⁴⁹ Some even argue that 'private finance [is] now the biggest show in town.'⁵⁰ These IIAs seek to create favourable conditions and stable frameworks for the treatment of foreign investors and investments, encouraging private sector investment in developing countries. The IIAs obligations normally guarantee a minimum standard of treatment, or 'fair and equitable treatment' toward the foreign investor in 'like circumstances'. Some IIAs commit to 'stabilization clauses' which can exclude IIA-covered investments from changes in the law of host States. Such clauses may be important to future attempts to develop domestic climate rules. The 'legitimate expectations' of the investor regarding a regulatory framework may become grounds for a potential challenge by a foreign investor toward an (unfavourable) change in circumstances due to new climate change regulations, including emissions trading schemes that

⁴⁴ CA Cooper and BF Massell, 'Toward a General Theory of Customs Unions for Developing Countries' (1965) *The Journal of Political Economy* 461.

⁴⁵ WTO, 'Regional Trade Agreements Gateway' <http://www.wto.org/english/tratop_e/region_e/region_e.htm>; WTO, 'WTO launches new database on regional trade agreements' WTO Doc Press/548, 14 January 2009.

⁴⁶ WTO, 'Regional Trade Agreements: Scope of RTAs', online: <http://www.wto.org/english/tratop_e/region_e/scope_rta_e.htm> accessed 31 March 2009.

⁴⁷ MC Cordonier Segger, 'The WTO, Regional Trade Agreements and Sustainable Development' in Bartels and Ortino (*supra* note 43).

⁴⁸ A Newcombe and L Paradell, *Law and Practice of Investment Treaties: Standards of Treatment* (Kluwer Law International: Leiden, 2009) 57–64; UNCTAD Secretariat, 'International Investment Rulemaking' 22 May 2007 TD/B/COM.2/EM.21/2; UNCTAD, Latest Developments in Investor-State Dispute Settlement, IIAS Monitor No 1 (2008) UNCTAD/WEB/ITE.IIA/2008/3.

⁴⁹ D Murphy, 'Technology in a Post 2012 Climate Regime', paper presented to 'A Way Forward: Canadian & International Perspectives on Post 2012 Climate Policy', 4 March 2008, Ottawa, Canada.

⁵⁰ M Klein and T Harford, 'The Market for Aid' (World Bank Publications, Washington DC, 2005) at 51.

impose significant new costs on private firms.⁵¹ By December 2007, there were 280 known IIA arbitrations, in which foreign investors challenged governments in confidential 'investor-State' dispute settlement proceedings by invoking investment agreement clauses.⁵² Potentially, these IIAs, measures and rule-making bodies are more likely than trade law to constrain carbon trading and related regulatory measures. However, it may be possible to design emissions trading systems carefully, to avoid becoming embroiled in disputes of this kind. It is also possible to design international investment agreements and trade agreements to ensure that legitimate new energy, transportation, forestry, waste management and other measures are—at a minimum—not frustrated, and perhaps even promoted.

3. Designing New GHG Regulatory Measures: Trade and Investment Considerations

3.1. Sustainable Development Objectives of the Global Climate Regime

In the 1992 UNFCCC and its 1997 Kyoto Protocol, States commit to both environmental protection *and* sustainable development objectives. The treaties repeatedly emphasize the importance of sustainable economic development, especially for over 140 developing country Parties. As noted at Article 3(4) of the UNFCCC, each Party, when considering which policies would be appropriate for protecting the climate system, should 'tak[e] into account that economic development is essential for adopting measures to address climate change'.⁵³ Trade and investment liberalization is significant in this regard, providing both constraints and opportunities for developing countries. In the UNFCCC, Parties optimistically agreed to 'cooperate to promote a supportive and open international economic system' which, it was believed, would 'lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change'.⁵⁴ It was essentially hoped that in accordance with the now-discredited 'Environmental Kuznets Curve' theory,⁵⁵ trade liberalization would lead to higher incomes which would consequently lead to sustainable development in developing countries. However, by 1997, States had recognized the more complex series of linkages between climate change, policies to address it, and international trade.⁵⁶ In Article

⁵¹ K Miles, 'International Investment Law and Climate Change: Issues in the Transition to a Low Carbon World' (2008). Society of International Economic Law, Inaugural Conference 2008 at 19.

⁵² A Newcombe & L Paradell, *Law and Practice of Investment Treaties* (Kluwer Law Int: Alphen, 2009) 59.

⁵³ United Nations Framework Convention on Climate Change (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107 (UNFCCC), art 3(4).

⁵⁴ UNFCCC, art 3(5).

⁵⁵ This theory proposed that as economic wealth increases, populations will demand higher environmental standards and environmental quality will automatically improve, without taking into account that certain environmental damage is irreversible, that many environmental problems are cumulative and global, or that the beneficiaries of economic growth do not necessarily live or vote where damage is done. See H Nordstrom and S Vaughan, 'Trade and Environment' (1999) WTO Special Studies 4, Geneva.

⁵⁶ M Dowden, *Climate Change & Sustainable Development; Law, Policy and Practice* (EG Books: London, 2008) at 56.

2(3), Annex I Parties agreed to 'strive to implement policies and measures ... in such a way as to minimize adverse effects, including the adverse effects of climate change, effects on international trade, and social, environmental and economic impacts on other Parties, especially developing country Parties'.⁵⁷ This recognized that States may need to balance adverse effects of climate change with the adverse effects of measures on international trade, in order to minimize both.

3.2. Trading for GHG Emissions Reductions

There are important differences between world trade rules and international emissions trading rules, though both function by encouraging exchanges. Most trade and investment is carried out by private firms exchanging goods and services, with international trade and investment treaties to discipline the types of measures States may adopt, *inter alia* through schedules of 'bound' tariff rates and investor protection commitments. In contrast, international emissions trading is carried out by States themselves, with climate change treaties to facilitate exchanges among States of their 'rights to emit GHGs' and encourage investment in low-carbon development. According to Article 2 of the UNFCCC, the Parties seek to 'achieve ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'.⁵⁸ The Kyoto Protocol, in Articles 2 and 3, provides flexibility for Annex I Parties (from developed countries and economies in transition) to achieve their assigned emissions limitations.⁵⁹ Emissions trading, governed by Article 17 of the Protocol, is seen as an important instrument to achieve Annex 1 Parties' GHG emissions reduction commitments. As noted by Robinson et al, for the regulator, the 'cost of complying with an emissions trading scheme as a whole are typically less than under traditional command and control regimes, as the trading aspect ensures that reductions take place where they can be achieved most cost-effectively'.⁶⁰ The trading may also play a useful role by providing incentives for firms to innovate, advancing the development and deployment of more environmentally sound technologies. If the carbon-trading regime established by the Kyoto Protocol did overlap with other international trade and investment liberalization commitments, a trade tribunal could conclude that the emissions trading among States is governed by the *lex specialis* of the climate treaties.

Given the Kyoto Protocol's general openness to 'sovereign' emission trading, many countries have adopted climate change strategies that establish domestic emissions trading systems, often making use of the Protocol's Clean Development Mechanism (CDM). Several leading developed countries have moved forward to pilot domestic emissions trading schemes, both for greenhouse gases and other significant

⁵⁷ Kyoto Protocol to the UNFCCC (adopted 10 December 1997, entered into force 16 February 2005) 37 ILM 22 (Kyoto Protocol), Art 2(2).

⁵⁸ UNFCCC, art 2.

⁵⁹ Kyoto Protocol, Arts 2 and 3.

⁶⁰ J Robinson, J Barton, C Dodwell, M Heydon, and L Milton, *Climate Change Law: Emissions Trading in the EU and the UK* (Cameron May: London, 2007) at 44.

pollutants.⁶¹ Some developing countries, constrained by capacity and resources, are already considering design and use of these instruments. Such domestic carbon trading schemes raise further trade and investment issues.

Current domestic emissions trading schemes are built on a variety of different legal rules and frameworks. At the basic level, there is a distinction between a cap-and-trade system and a baseline-and-credit system.⁶² For instance, like the EU's emission trading scheme, Australia's proposed scheme (to be introduced from 2010 under the Rudd administration) adopts a cap-and-trade approach, which is promoted as an effective way to limit carbon emissions while continuing to provide business incentives in an economy focused on natural resource development.⁶³ The United States' trading scheme for NOx emissions imposed a cap of 143,000 tonnes in 2003, with the baseline year ranging from 1990 to 1995. As of 2007, this approach brought emissions to 5% below the cap for that year.⁶⁴ Alternatively, the Canadian province of Ontario operates a mixed emissions reductions scheme for nitrous oxide and sulphur dioxide (NO & SO₂),⁶⁵ attempting to combine cap-and-trade features with those of a baseline-and-credit system.⁶⁶ The innovative linkage of allowances and emissions reduction credits seeks to ensure dynamic interplay in a restricted and fragile market.

As such, domestic sustainable development objectives, as well as a State's trade and investment profile, can and do shape the fundamental design of any emissions trading system.⁶⁷

3.3. Trade and Investment Implications of Carbon Trading

Depending on regulatory instrument choices, and how they are designed and implemented, carbon-trading schemes can have important implications for trade and investment law. Complementarity and mutual supportiveness is needed. A foreign trading partner or investor that perceives itself to be economically disadvantaged by an emissions trading scheme could launch a claim under the WTO, a regional trade tribunal, or an investment treaty investor-State tribunal, and the regulators would be required to spend significant resources defending their embryonic regime.

⁶¹ M Gehring and K Price 'Implementing the Kyoto Protocol in Canada and the UK: A Discussion of the Economic Instruments Employed' in CPM Waters (ed), *British and Canadian Perspectives on International Law* (Martinus Nijhoff: Leiden, 2006) 255, 262.

⁶² UNFCCC National Reports; online <www.unfccc.int/national_reports/items/1408.php>, accessed 31 March 2009.

⁶³ See Carbon Pollution Reduction Scheme Green Paper, Australian Government, Department of Climate Change (July 2008), Summary Report, online: <<http://www.climatechange.gov.au/greenpaper/index.html>>, accessed 31 March 2009.

⁶⁴ US Environmental Protection Agency: Clean Air Markets; online: <www.epa.gov/airmarkets>, accessed 31 March 2009.

⁶⁵ Environmental Protection Act 1999, Ontario Regulation 397/01. See also Ontario Emission Trading Registry Introduction, online: <www.ene.gov.on.ca/envision/air/etr/index.htm>, accessed 31 March 2009.

⁶⁶ See especially, M Gehring and C Streck, 'Emissions Trading: Lessons from SOx and NOx emissions Allowance and Credit Systems Legal Nature, Title, Transfer and Taxation of Emission Allowances and Credits' (2005) 35 *Environmental Law Reporter* 10219 at 10227.

⁶⁷ See eg. D Hirsch, A Bergman and M Heintz, 'Emissions Trading—Practical Aspects' in M Gerrard (ed), *Global Climate Change and U.S. Law* (American Bar Association: Chicago, 2007).

For domestic carbon trading, both basic elements and accompanying measures, if not carefully designed, might discriminate against firms from foreign trading partners or foreign investors. The issues can be divided into two general categories. First, specific trade disciplines agreed in the WTO and other trade agreements might, if not properly analysed and characterized, appear to disallow the use of certain carbon trading measures. Second, and perhaps most problematic, recently agreed investment treaty commitments may, if not carefully interpreted, be used to challenge carbon trading measures, constraining their adoption or limiting their effective implementation.

3.3.1. Trade Law Implications of Carbon Trading Measures

Disciplines agreed in the WTO might inadvertently or otherwise be interpreted by regulators or dispute settlement bodies in a way that unduly constrains the effectiveness of emissions trading schemes. There may be direct regulatory effects, where a trade authority or dispute settlement mechanism questions or disallows certain measures, or indirect regulatory effects, where environment and development authorities could be dissuaded from using carbon reduction measures with threats of trade challenges (so-called 'regulatory chill').

One trade issue that is often raised, for instance, involves the use of government subsidies. If an allowance, credit or unit that grants a right to produce carbon emissions were characterised as an unfair government subsidy for the purposes of a regional trade agreement or, more generally, WTO rules on subsidies and countervailing measures, allocations of emissions trading systems might be challenged in trade law. Or, parallel to a domestic ETS, a regulator may provide incentives for firms to reduce carbon emissions or adopt new technologies. Such measures could be characterized as an inappropriate border measure, likely to be inconsistent with WTO rules.⁶⁸ For instance, a blanket exemption from tax payments has been judged to be a subsidy.⁶⁹ However, in many cases, trade rules are structured to accommodate such situations. Most trade rules on subsidies, including in the WTO, initially provided for 'windows' or reservations for environmental measures, especially for subsidies meant to encourage the adoption of new technologies. Of course, as trade liberalization continues and rules are refined through dispute settlement, such windows might become more limited. In WTO negotiations, some interests have proposed to set limits on the 'green box' subsidies, the WTO-recognized category of subsidies which are permitted due to their environmental objectives, so that subsidies authorized in one State may not be recognized as legitimate by others.⁷⁰ In any case, many carbon reduction subsidies could still conform due to their lack of significant trade impact. In the case of ETS permit allocations, such a trade impact might be assessed by a comparison with

⁶⁸ Jeffrey Frankel, 'Environmental Effects of International Trade' Harvard Kennedy School Working Paper Series (2009) 39; online: < <http://www.regeringen.se/content/1/c6/11/88/18/9ba64bac.pdf>>, accessed 31 March 2009 (with thanks to Christina Voigt for drawing this article to the authors' attention).

⁶⁹ See especially, *US-Canada WTO Corn Trade Dispute* WTO Doc WT/DS357/11; discontinued.

⁷⁰ Canadian Federation of Agriculture, Trade Policy Statement; online: <http://www.cfa-fca.ca/pages/index.php?main_id=61>, accessed 31 March 2009.

any previous, less effective rules. And in most instances, GHGs caps place an additional burden on the company and places them generally at a disadvantage *vis-à-vis* non-regulated competitors. Viewed in this light, it would be difficult to challenge an ETS using trade rules on subsidies. Furthermore, trade and investment issues affect the political feasibility of new laws and policies to address climate change. Were a State to attempt to introduce a carbon tax for a carbon-intensive project, this could jeopardize the international competitiveness of its domestic companies.⁷¹ To address these concerns, States may seek to implement border tax adjustments (BTAs).⁷² The use of BTAs has been proposed as a solution to the potential distortions created by an ETS emission credit requirement: *For legal purposes ... border tax adjustments ... amount to two different measures which follow a distinct regime: The first measure, refunds for exports, has to stand the test whether it constitutes an outlawed subsidy. The second measure, taxes charged on imports, has to fend off the suspicion that it represents an illegal discrimination.*⁷³

As suggested by Joost Pauwelyn, a State seeking to implement carbon trading provisions could utilize BTAs so as to ensure continued competitiveness. To avoid challenges of discrimination, the proponents argue that imports are being required to pay a carbon tax at the border to equalize competition between actors, where 'the tax is then simply the extension to imported products of the tax or cost of holding emission allowances imposed on domestic producers'.⁷⁴ The opposing argument highlights that, in the context of emissions trading, the allowances (which are levied on imported products to mirror their carbon costs of production in a 'non-regulated' State) are often allocated free of charge to domestic actors, raising claims of 'national treatment' violations.⁷⁵ Furthermore, it is unclear whether such BTAs would avoid challenges where the tax concerned an input such as energy, which is fully consumed and not present in the final product itself. The *US-Superfund* dispute offers some guidance,⁷⁶ where the WTO Panel permitted BTAs for chemicals used during production—though these chemicals were also still present in the final product.⁷⁷ Just as an ETS could be seen in subsidies terms as a tax, an ETS could be characterized as having the effect of a tax, permitting equalisations. A scheme characterized as a unilateral 'carrot or stick' BTA could be a promising avenue for emissions trading schemes within the

⁷¹ It is also something which may raise questions of the 'regressiveness' of any carbon tax, meaning that already poorer actors from developing countries would be penalised in the short term; though question whether the long term impact on the poor in the event of no carbon taxing would not be worse. See Stephen Tindale and Chris Hewitt, *Must the Poor Pay More? Sustainable Development, Social Justice and Environmental Taxation* in Andrew Dobson (ed), *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice* (OUP: Oxford, 1999).

⁷² Report of the Working Party on Border Tax Adjustments, BISD 18S/97, 2 December 1970.

⁷³ R Ismer and K Neuhoﬀ, 'Border Tax Adjustments: A feasible way to address nonparticipation in emissions trading' Cambridge Working Paper Series CWPE (Cambridge University Press: Cambridge, 2004) at 9.

⁷⁴ Joost Pauwelyn 'U.S. Federal Climate Policy and Competitiveness Concerns: The Limits and Options of International Trade Law' Working Paper (Duke University Press: New York, 2007) at 41.

⁷⁵ With thanks to Christina Voigt for her input on this argument.

⁷⁶ 'United States - Taxes on Petroleum and Certain Imported Substances', Report of the Panel, Doc L/6175 - 34S/136, 1987.

⁷⁷ Richard Tarasofsky, 'Heating Up International Trade Law: Challenges and Opportunities Posed by Efforts to Combat Climate Change' (2008) 1 CCLR 7 at 11.

framework of global trade rules.⁷⁸ It would be important to calculate the ETS equivalent BTA conservatively, and to be prepared to address challenges in trade or investment tribunals.⁷⁹

In another example, as mentioned above, the WTO's Agreement on Technical Barriers to Trade (TBT) seeks to ensure that technical regulations are not 'more trade restrictive than necessary to fulfil a legitimate objective' and do not discriminate between 'like products.'⁸⁰ Regulations that take into account process and production measures (PPMs), restricting the entry of goods which have been produced in a carbon-intensive way, could be open to trade law challenges based on non-discrimination and prohibitions on quantitative restrictions. As noted above, the product itself is not different from its competing product—it is only the production method that differs. As such, the products *simpliciter* remain 'like' and differing treatment would be caught by national treatment or non-discriminatory provisions. For the ETS, this distinction means that States could have trouble giving significant trade advantages to products produced under the application of a national or even international ETS. For instance, the EU has a firm commitment to promote climate protection internationally,⁸¹ and its scheme allows covered emitters to benefit from Clean Development Mechanism (CDM) and Joint Implementation (JI) credits, though only up to a specified limit.⁸² If standards were perceived as being based on PPMs and appeared to discriminate between products from different countries, any preferential treatment in terms of tariffs for those products could be challenged in the WTO and other regional trade dispute settlement fora.⁸³ However, few trade rules prevent general use of labels or certification schemes. Such 'eco-labelling' allows the consumer to know that certain goods were produced in a more environmentally friendly (or, at least, less environmentally harmful) manner than the competing product.⁸⁴ As noted by Simon Baughen:

Caution as regards PPMs is perhaps understandable, in that they can be seen as one [WTO] member's attempt to impose its environmental standards on other members. However, the issue of PPMs may, in future, come up in the rather different context of transboundary spill-overs, where the objection to the way in which a product is manufactured is based on adverse environmental consequences felt in the member state imposing the measure. This could well occur in the context of the

⁷⁸ Zhang, ZhongXiang, 'Multilateral Trade Measures in a Post 2012 Climate Change Regime?: What can be taken from the Montreal Protocol and the WTO?' MPRA Paper No 12782; online: <www.mpra.ub.uni-muenchen.de/12782>, accessed 31 March 2009.

⁷⁹ *Ethyl Corporation v Canada*, Award on Jurisdiction, 24 June 1998, (1999) 38 ILM 708.

⁸⁰ Agreement on Technical Barriers to Trade (adopted 15 April 1994, entered into force 1 January 1998) 1186 UNTS 276, art 2.2.

⁸¹ This will become stronger after the Lisbon Treaty enters into force as it explicitly commits the Union to in the new Art 191 (ex 174) of the Treaty on the Functioning of the European Union '1. Union policy on the environment shall contribute to pursuit of the following objectives: [...] - promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.'

⁸² Stephen Gardner, *EU ETS: The winners and losers of EU emissions trading* (Climate Change Corp: London, 2008). As a group, ETS participants are allowed to buy up to 1.4 billion CDM credits during the 2008-12 trading phase.

⁸³ A Cosby, *Environment and Trade: A Handbook* (UNEP/IISD: Winnipeg, 2000).

⁸⁴ An interesting problem would be whether a carbon market 'seller'—habitually selling credits rather than purchasing them—could voluntarily eco-label itself or its product.

*contribution to global warming made by the carbon emissions produced from a particular mode of production adopted by a member.*⁸⁵

Taking this proposition one step further, in emissions trading schemes, the practice of 'climate compliant' self-labelling could in theory fall within prohibition on PPM-based measures, should a State use such voluntary declarations or self-labels to assign legal consequences. However, where the impact on sustainable development and the environment is 'transboundary' in nature, such as climate change and carbon emissions, then the measure could no longer be seen as extra-territorial but rather becomes one which WTO Panels, in the *US-Shrimp* dispute and others, have recognised as being within the competence of States.⁸⁶ Emissions trading could be characterised as addressing such 'transboundary' issues.

Sustainable development has been recognised as an objective of world trade law under the WTO, both by the Panel and Appellate Body in the *US-Shrimp* and subsequent disputes, and in the 2001 Doha Declaration.⁸⁷ Two world trade law arguments could, as such, be used generally by regulators and trade dispute settlement bodies to address any such areas of overlap.

First, trade dispute settlement bodies may carefully consider the definition of 'like products' when assessing the legality of measures designed to combat carbon emission consequences. It is possible that States would be permitted, under trade law, to take a product's GHG emissions into account in determining its 'likeness' with another product.⁸⁸ The *EC-Asbestos* dispute remains indicative of the current stance on discrimination of like products, demonstrating that in certain instances, such as when a carcinogen is being substituted in a marketplace with potentially less carcinogenic alternatives, the WTO Appellate Body will take minute physical differences into consideration, shifting the burden of proof onto the challenger to demonstrate that their goods are indeed 'like' a less harmful substitute.⁸⁹

In the alternative, any measures might still be justified under GATT XX(g) exceptions for measures to conserve exhaustible natural resources, or GATT XX(b) exceptions for measures necessary to protect human, plant or animal life and health. The Panel in the *US-Shrimp* dispute explicitly reserved the right for environmental measures to be excused from WTO obligations through Article XX(g), provided that similar products from other States were not given preferential treatment through special side agreements. It would be hard to describe the Kyoto Protocol, as an international agreement open to all WTO Member States, as setting

⁸⁵ See eg. Simon Baughen, *International Trade and the Protection of the Environment* (Cavendish, New York 2007) 4.

⁸⁶ United States – Import Prohibition of Certain Shrimp and Shrimp Products, AB-1998-4 at para 186.

⁸⁷ *Ibid.*, Doha Ministerial Declaration (14 November 2001) WT/MIN(01)/DEC/1, online: <http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm>, accessed 31 March 2009, M Gehring & MC Cordonier Segger (eds.), *Sustainable Development in World Trade Law* (Kluwer Law International, The Hague 2005) at Introduction.

⁸⁸ Tarasofsky (*supra* note 77) at 7; Miles (*supra* note 51).

⁸⁹ Marie-Claire Cordonier Segger & Markus W. Gehring, 'Precaution, Health and the World Trade Organisation: Moving Toward Sustainable Development' (2003) 29 *Queens Law Journal* 133.

discriminatory or exclusive standards.⁹⁰ To prove that a measure is 'necessary' to protect health or the environment, as noted by the Panel in the *Brazil-Retreaded Tyres* dispute, it may be sufficient to demonstrate, on the balance of qualitative evidence, that it is *likely* to contribute to achieving the legitimate health or environmental objectives.⁹¹

3.3.2. Investment Law Implications of Carbon Trading

While emissions trading can raise certain specific trade issues depending on the design of the regime, the most significant challenges are likely presented by recent developments in international investment law. Of course, international investment agreements (IIAs) could potentially promote sustainable development, by ensuring more stable investment climates and thus encouraging investors to provide private funds for CDM projects and for Joint Implementation (JI). However, in these accords, States have also agreed on disciplines that have been used recently to challenge regulatory measures related to sustainable development.⁹² As noted above, in IIAs, Parties often grant foreign investors the right to challenge host States in investor-State arbitral tribunals under UNCITRAL or ICSID rules, particularly on claims related to performance requirements, fair and reasonable treatment, expropriation, and transparency. These privileges may be used to challenge carbon trading measures, depending on how new domestic schemes are designed, and how the IIAs are interpreted.⁹³ As with trade law, these challenges have both direct effects, where a State is asked to compensate an investor or group of investors for the economic impact of new carbon regulations, or indirect regulatory effects, where environment and development regulators are 'chilled' from adopting or implementing carbon reduction measures due to threats of investor-State litigation. Several examples can be provided to illustrate these implications.

First, on an almost theoretical level, emissions trading schemes may not always be classified as pure market-based instruments,⁹⁴ absent of 'command and control' origins. The very existence of a government-imposed cap on the amount of carbon that can be emitted by a given sector is evidently 'control' in nature. That cap establishes a performance requirement, but allows for the market to set the price of carbon emissions and for firms to choose abatement technologies to meet the standard. However, even the introduction of new performance standards could pose questions under certain investment treaties. In such treaties, the US and Canada have sought to prevent or constrain the use of performance requirements or standards that were once popular in developing countries, as a way to enhance the value of an investment by mandating a certain way of producing a product such as sourcing local

⁹⁰ Committee on Trade and Environment – Committee on Trade and Environment Special Session – Matrix on Trade Measures Pursuant to Selected Multilateral Environmental Agreements (14 March 2007) WT/CTE/W/160/Rev.4.

⁹¹ Brazil – Measures Affecting Imports of Retreaded Tyres (DS 332)

⁹² Miles (*supra* note 51) at 26. See also M Gehring, MC Cordonier Segger and A Newcombe, *Sustainable Development in World Investment Law* (Kluwer Law International, The Hague 2009) (forthcoming).

⁹³ J Werksman, KA Baumert and DK Navroz, 'Will International Investment Rules Obstruct Climate Protection Policies' Climate Notes (World Resources Institute: Washington DC, 2001).

⁹⁴ Robinson et al (*supra* note 60) at 44.

services, labour or content (local content requirement), or earning foreign exchange through export requirements.

Second, the scope and nature of the emissions trading system is important. The design and legal consequences of emissions trading scheme implementation potentially raises claims of 'indirect expropriation'.⁹⁵ States choose whether their scheme will be limited to a particular sector or economy-wide in application, and which jurisdictions will be subjected to (or allowed entry into) the scheme. Emitters targeted by such systems can include both direct emitters of carbon, such as power plants or even car owners, and also those 'further upstream' in the chain of carbon use, such as oil companies or petroleum refiners. For instance, the European Union (EU) Emissions Trading System (ETS) covers power and industry sectors only,⁹⁶ and focuses simply on addressing CO₂ emissions.⁹⁷ Depending on the data collected and economic impact assessments, States decide whether their schemes will be comprehensive, or simply sectoral, and whether partial coverage can achieve their objectives. Such choices may affect the competitiveness of national companies against each other and against foreign companies. If investments in foreign investor dominated sectors were seen as being unjustly targeted by stringent and costly requirements 'tantamount to expropriation' while other domestic-investor dominated heavy emitters were excluded from the scheme, challenges might be issued under IIAs. If a regulator places a cap on the use of carbon in some sectors and not others, there is the potential for such measures to be characterized as indirect expropriation of that company's investment. Similarly, if the cost of carbon certificates becomes high enough to threaten the economic viability of certain investments (for instance fossil fuel exploration and development, or a coal-fired power plant), the carbon measure could also be deemed 'tantamount to expropriation'. The core debate focuses on who bears the risks of private investments into 'high carbon' sectors—host governments or investors? Essentially:

*... if a government measure is undertaken for a clear public welfare purpose (such as health and safety, environment, public morals or order, etc.), and is non-discriminatory, but has the effect of harming a ... foreign investor, under what circumstances can that measure be held to be an indirect expropriation, for which the government must pay compensation?*⁹⁸

As demonstrated in the *Ethyl v Canada Case*,⁹⁹ claims of indirect expropriation can be made when new government measures affect the value of a foreign investment in a specific or unique industry. Such issues could arise for governments implementing climate change measures, as in some countries, carbon-intensive industries can be dominated by

⁹⁵ Saleemul Huq and Hannah Reid, 'Benefit Sharing under the Clean Development Mechanism' David Freestone and Charlotte Streck (eds.), *Legal Aspects of Implementing the Kyoto Protocol Mechanisms: Making Kyoto Work* (OUP: Oxford, 2005) at 229.

⁹⁶ Although extensions to the scheme are continually under review. Most recently, the Aviation industry is intended to be subjected to the system.

⁹⁷ AD Ellerman and P Joskow, 'The European Union's Emission Trading System in Perspective' (Pew Center: Arlington, 2008).

⁹⁸ A Cosby, NAFTA's Chapter 11 and the Environment, Discussion Paper for CEC Public Workshop, Mexico City 24 March 2003 at 3.

⁹⁹ *Ethyl* (*supra* note 79).

multinational extractive enterprises (foreign investors) with the necessary know-how and capital for exploration and development. Moreover, the resulting repeal by Canada of the MMT ban clearly demonstrated the indirect effect of a foreign investor challenge on government policy directions.¹⁰⁰ Indeed, if a developed State such as Canada could be perceived to have 'chilled' its regulatory decisions due to international investment law obligations, IIAs, and expropriation challenges, it seems possible that a developing country might face even higher pressure to avoid necessary regulatory changes. Whether or not the developing country could in fact afford to compensate for the expropriation is a particularly pressing issue in the case of climate change measures, including emission trading schemes.

Third, the actual legal nature of an allowance has been flagged in the design of various US emissions trading systems. For instance, the SO₂ trading system under the Acid Rain program of the 1990 Clean Air Act raised the issue of property rights. The possibility that an allowance would constitute a property right potentially raised arguments in the US, based on 'taking of property' under the Fifth Amendment of the US Constitution. This was resolved by classifying the allowances as tradable goods which were, nevertheless, not property rights as such.¹⁰¹ However, legal concerns remain that contractual or property rights might be subject to claims by those holding the credits, in the situation where regulations are introduced which alter the value of the allowance or credit in question.¹⁰² The decision to imbue allowances with property-like status could potentially open governments to allegations of expropriation under investment treaties, should the value or quantity of these allowances be reduced in the future. The potential for such an approach to conflict with international investment law is evident, and could lead to investor-state disputes. Having said this, the 'quasi-property rights' character of emission certificates is now widely recognized and seen as a necessary condition of many emission trading schemes.

Fourth, it is important to consider how allowances or emission reduction credits (ERCs) are allocated amongst the participants in an emissions trading scheme. The allocation of allowances by the government to the actors—whether these are particular industry-specific actors, or 'carbon-intensive parties' or any other pre-determined set of actors—can be problematic in trade and investment terms. Allocations indicate the degree to which carbon can be emitted, within a system, and thereby 'pre-determines the overall environmental benefits that can be expected from the system'.¹⁰³ Allocation, *ie.* assigning certain certificates, is an intensely political process, and compromises are often necessary. Both trade and

¹⁰⁰ A Newcombe, 'Regulatory Expropriation, Investment Protection and International Law: When is Government Regulation Expropriatory and When Should Compensation be Paid?' (LLM Thesis, University of Toronto 1999) (unpublished); online: <<http://ita.law.uvic.ca/documents/RegulatoryExpropriation.pdf>> accessed 31 March 2009.

¹⁰¹ Gehring & Streck (*supra* note 66).

¹⁰² See especially, N Fichthorn and A Wood, 'Preserving the SO₂ Market' Environmental Finance (September 2002); online: <www.emissions.org/publications/member_articles/ef9ema2002.pdf>, accessed 31 March 2009.

¹⁰³ Matthieu Wemaere and Charlotte Streck, 'Legal Ownership and Nature of Kyoto Units and EU Allowances' David Freestone and Charlotte Streck (eds.), *Legal Aspects of Implementing the Kyoto Protocol Mechanisms: Making Kyoto Work* (OUP, Oxford 2005) at 41.

investment concerns can be triggered by allocations of credits which are discriminatory, or not 'fair and reasonable'. Not only could this process raise concerns for the competitiveness of firms and operators within the domestic and international markets, but it also raises concerns as to discrimination toward non-national actors which compete in the targeted market. Among various options open to designers of emission trading schemes, free allocation, allocation based on 'grandfathered rights', allocation based on more modern 'baseline', and partial auctioning pose similar problems. If any non-national actors within the territory do not receive precisely the same allowances as comparable national actors, these firms can argue that they have been prejudiced in the market if they incur higher costs to reduce their carbon output or find the resources to pay for their continued output. This could be held to violate trade obligations of non-discrimination and national treatment, but more importantly, it could also be characterized as going beyond the 'fair and equitable treatment' standard promised to foreign investors in most IIAs. For instance, in light of the EU's design choices, windfalls may have been received by certain Parties through the free allocation process.¹⁰⁴ In another example, the New Zealand Climate Change Response (Emissions Trading) Amendment Act 2008, which came into force in September 2008, will gradually incorporate sectors of the New Zealand economy until 2013, and permits some allocations free of charge.¹⁰⁵ Still, as the proposed scheme is designed to be much broader in scope than for example the EU ETS or RGGI, distortions may be less relevant. The further option of 100% auctioning resolves many such concerns, though this can still entail competitive consequences depending on the frequency, size, and accessibility of auctions, should it be shown that *in effect*, regulations made participation more challenging for foreign firms. This problem is difficult but not impossible to address. For instance, many ETS regulations have incorporated provisions specifically ensuring no distinction between national or foreign-owned companies.

Another basic design element that triggers trade and investment issues involves the commitment to regulatory transparency, which may well support the designers of emissions trading schemes. It has been argued that emissions trading 'may also be more transparent and accessible than traditional command and control schemes: anyone wishing to challenge the environmental effectiveness of the trading regime can question directly the level of the overall cap rather than having to unravel the, often complex, relationship between specific controls applied to an individual plant and an ambient environmental quality standard'.¹⁰⁶ The transparency of domestic law and policy-making process is important to any potential investor.¹⁰⁷ However, as mentioned above, investors can

¹⁰⁴ Ellerman and Joskow (*supra* note 97).

¹⁰⁵ Climate Change Response (Emissions Trading) Amendment Act 2008, 25 September at s 73. See Emissions Trading Scheme for New Zealand, Report to Business New Zealand (NZIER Publishing: Wellington, 2007).

¹⁰⁶ Robinson et al (*supra* note 60) 45. See also, R A Stewart, 'Economic Incentives for Environmental Protection: Opportunities and Obstacles' in R L Revesz, P Sands and R A Stewart (eds), *Environmental Law, the Economy and Sustainable Development* (Cambridge University Press: Cambridge, 2000).

¹⁰⁷ The Preamble to the Aarhus Convention expressly calls for 'transparency in all branches of government' when implementing provisions related to the Aarhus Convention's aims: Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, adopted 25 June 1998, entered into force 30 October 2001) 38 ILM 517.

seek investment treaty guarantees against changes in government policy (not just fiscal or tax policy, but also environment and development policy),¹⁰⁸ hoping to stabilize regulations for the lifetime of an investment.¹⁰⁹ A regulator may need to make it clear to potential investors that post-establishment decisions, *ie.* governmental decisions influencing the investment after it has been made, will take State commitments under the UNFCCC and the Kyoto Protocol into account. Moreover, transparency works in many directions. As discussed elsewhere, impact assessments and other such requirements can contribute to stability rather than detracting from it, by generating valuable investment intelligence and creating a more level playing field for investors.¹¹⁰ To that end, by securing transparent policy decisions, States might insulate their new climate policies from formal investor-State challenges, while also contributing to their clarity and legitimacy.¹¹¹

Each of these aspects can influence the effectiveness of an emissions trading scheme. Additionally, these basic design questions are accompanied by myriad technical and practical rules, and trade and investment rules apply to the *de facto* effect of measures, not just their letter or intention. These include, but are not limited to, measurement and monitoring of emissions, calculation of individual baselines, and enforcement of sanctions for non-compliance. For instance, in addition to possible civil or criminal pollution-related penalties, the NOx trading scheme requires the surrendering of three allowances for every tonne not accounted for, for the next trading period. In such treaties, the US and Canada have sought to prevent or constrain the use of performance requirements or standards that were once popular in developing countries, as a way to enhance the value of an investment by mandating a certain way of producing a product such as sourcing local services, labour or content (local content requirement), or earning foreign exchange through export requirements.

A further concern must also be noted. Certain IIAs contain clauses agreeing to freeze the laws of country to the time the investment was made, or not to apply new laws to the investment, or to bear the costs of all regulatory changes affecting an investment: so-called stabilization clauses. These commitments could be problematic from the standpoint of ETS regulations. The principle difficulty posed is that States are bound to continue treating the investment in a certain way which may become no longer viable in light of the UNFCCC objectives, and the developing scientific discoveries that have driven the evolution of the climate regimes.

As seen in the *Methanex v US* dispute,¹¹² not all investor-State tribunals are willing to interpret their jurisdiction over regulators so broadly. While some IIAs can be used to question environmental protection and

¹⁰⁸ Pauwelyn (*supra* note 74); Andrea Ross-Robertson, 'Is the Environment Getting Squeezed out of Sustainable Development?' [2003] Public Law 249.

¹⁰⁹ Baughen (*supra* note 85) Chapter 7.

¹¹⁰ M Gehring, MC Cordonier Segger and A Newcombe (eds) *Sustainable Development in World Investment Law* (Kluwer Law Int.: The Hague, 2009) (forthcoming).

¹¹¹ Tarasofsky (*supra* note 77).

¹¹² *Methanex v USA*, Award on Jurisdiction, 28 August 2002.

sustainable development regulations, others clearly cannot be extended so far.¹¹³ Still, where States enact measures, including emissions trading schemes, to favour low-carbon development over carbon-intensive projects, especially in developing countries where the extractives sectors are dominated by a few foreign investors, these interests could well frame investor-State challenges in terms of performance requirements, discrimination, fair and equitable treatment, or expropriation. Where such allegations are raised, it will be important to secure an appropriate interpretation of the concept of 'like circumstances'. It is only where two parties are in 'like circumstances' and receive different treatment that sustained tribunals would find discrimination. For future climate change measures, the inclusion of public interests and carbon emissions in one proposed project as compared to another which does not take such issues into account might serve to distinguish hitherto 'like' parties from one another. The recent ICSID arbitration between *Parkerings* and Lithuania demonstrates this principle.¹¹⁴ The case concerned two competing firms from Norway and the Netherlands in their tenders to construct and operate traffic facilities in the Lithuanian capital Vilnius. The Norwegian company (FET) argued discriminatory treatment in favour of the Dutch firm and the case turned on the concept of 'likeness.' The Tribunal ultimately found that the State could take into account matters of a proposed project's impacts on the environment when deciding how to treat different projects: 'Underscoring that each State has an undeniable right to exercise its sovereign legislative power—albeit in a reasonable and fair manner—and that an investor must anticipate a possible change of circumstances, and thus structure its investment in order to adapt it to the new legal environment (particularly of a country in transition), the tribunal rejected the FET claim, concluding that the Republic of Lithuania had not given any explicit or implicit promise that the legal framework of the investment would remain unchanged'.¹¹⁵ The tribunal's approach has been welcomed in leading legal scholarship on these issues:

This decision points to the ecological impact of an investor's project as a determinative factor in the like circumstances test. If this approach is followed in future investor-state disputes, then the potential for non-discrimination requirements in international investment agreements to frustrate climate change mitigation regulation will be significantly reduced.¹¹⁶

Learning from this experience, negotiators may need to recognize the importance of maintaining flexibility for climate change measures in investment treaties, while regulators take care to design the rules for carbon trading, and clean technology investments, to avoid discrimination between industries in 'like circumstances.' This approach can extend to implementation of emissions trading systems. For instance, in s 60 of the

¹¹³ Jessica C Lawrence 'Chicken Little Revisited: NAFTA Regulatory Expropriations After *Methanex*' (2006) 41 *Georgia Law Review* 261.

¹¹⁴ *Parkerings-Compagniet AS v Republic of Lithuania*, ICSID Arbitration Case No ARB/05/8, Award, 11 September 2007, para 375, 392 at 2 October 2007; online: <<http://ita.law.uvic.ca/documents/Parkerings.pdf>>.

¹¹⁵ UNCTAD, *Latest Developments in Investor-State Dispute Settlements*, (UNCTAD: Geneva, 2008) at 5; online: <www.unctad.org/en/docs/iteiia20083_en.pdf>.

¹¹⁶ Miles (*supra* note 51) at 32.

New Zealand Climate Change Response (Emissions Trading) Amendment Act 2008, a State authority can exempt otherwise regulated participants under the Act from complying with the emissions trading provisions. For firms with which the Crown signed a negotiated greenhouse gas agreement before 31 December 2005, such an exception may be granted, providing both stability for existing agreements and flexibility for government authorities.¹¹⁷ For instance, the flexibility provided by the New Zealand Act will be beneficial when addressing expropriation or other investment related claims.

Further potential refinements to ensure that trade and investment laws, particularly in regional treaties which advance beyond the globally agreed disciplines, do not unduly constrain domestic regulatory flexibility to address climate change, and might even promote more sustainable development, are discussed later in this chapter.

4. Improving Trade and Investment Regimes for Sustainable Development

The obligations of States under international trade and investment law might intersect with certain elements of climate change regulations, requiring careful work to design compatible measures to establish emissions trading schemes, and may potentially lead to constraints on policy and law-making flexibility.¹¹⁸ However, as noted in the 1987 Report of the World Commission on Environment and Development,¹¹⁹ the 1992 Rio Declaration and Agenda 21,¹²⁰ and the 2002 Johannesburg Declaration and Plan of Implementation,¹²¹ trade and investment could also provide important contributions to sustainable development. Just as in the international climate regime, in many trade agreements and international investment agreements, Parties explicitly highlight their shared commitment to sustainable development as part of the object or purpose of the treaty. For instance, the North American Free Trade Agreement (NAFTA) includes a reference to the need to 'promote sustainable development' within its Preamble.¹²² Both the Canada–Chile Free Trade Agreement and Chile–US Free Trade Agreement also recognize the importance of strengthening capacity to protect the environment and promote sustainable development.¹²³ The Canada–Peru Free Trade Agreement makes explicit reference, in the chapter entitled 'Investment', to corporate social responsibility and the need for Parties to encourage enterprises to incorporate such standards into their internal policies.¹²⁴ The EU–Chile Association Agreement goes further, committing to implement their accord in accordance with the 'principle of sustainable

¹¹⁷ NZ Climate Change Response (Emissions Trading) Amendment Act 2008; Richard Benwell, correspondence with authors, with thanks.

¹¹⁸ See eg. Miles (*supra* note 51).

¹¹⁹ World Commission on Environment and Development, *Our Common Future* (OUP: Oxford, 1987).

¹²⁰ Rio Declaration on Environment and Development (1992) 31 ILM 874; Agenda 21 (*supra* note 35).

¹²¹ JPOI (*supra* note 35).

¹²² North American Free Trade Agreement, 32 ILM 289 (1993).

¹²³ Canada-Chile Free Trade Agreement, 36 ILM 1079; US-Chile Free Trade Agreement, 42 ILM 1026.

¹²⁴ Canada-Peru FTA, signed 29 May 2008, Chapter 8 'Investment', Article 810. See also Angela Delfino et al, *Corporate Social Responsibility and Climate Change, in Climate Change: A Guide to Carbon Law and Practice* (Globe Business Publishing: London, 2008) at 157.

development',¹²⁵ and EU economic negotiations with Central America seek to 'harness globalisation in support of sustainable development' and 'ensure an appropriate balance between economic, social and environmental components in a sustainable development context'.¹²⁶ Sustainable development is a key objective of the world community, not only in the abstract, but in the very arena that has most sought to encourage economic growth—investment and trade policy and law.¹²⁷

In regional trade and investment agreements, States have gone further in certain instances, seeking to promote sustainable development through the inclusion of innovative yet practical international instruments. Several preventive provisions, cooperative mechanisms and new trade liberalization enhancement initiatives can be identified. There are also important procedural innovations which can support sustainable development. Many legal options are available to States seeking to deliver on a commitment to sustainable development in a regional trade and investment regime, either as a principle or an objective.

First, States can include introductory provisions which signal the Parties' commitment to sustainable development, such as preambular commitments to 'promote sustainable development' as a 'joint resolution' of the Parties to the accord, or other initial provisions which commit to engage in the accord in accordance with a 'principle of sustainable development'.

Second, States can include provisions which create 'windows' or exemptions from trade rules, where trade obligations might otherwise constrain regulators and policy-makers, mitigating their effects. For instance, in trade and investment agreements, many States adopt general exceptions for measures related to the conservation of exhaustible living and non-living natural resources, and the use of measures, including environmental measures, necessary to protect human, animal, or plant life or health.

States may further adopt specific exceptions in sections of the trade and investment treaty where it is clear that trade rules on *inter alia* sanitary and phytosanitary standards, technical barriers to trade, intellectual property rights, public procurement, services, or investment, might constrain the use of environmental and social measures. States may insert explicit reservations by the Parties of socially or environmentally sensitive sectors (such as parks, land use planning, energy policy, and other natural resources reserved from investment provisions, or health and education sectors from services disciplines), often linking these reservations to the findings of sustainability impact assessments or environmental assessments of the trade agreements. States can also include general interpretive statements to guide potential areas where

¹²⁵ EU-Chile Association Agreement, 30.12.2002; online: <www.ec.europa.eu/trade/issues/bilateral/countries/chile/eu/euchlagr_en.htm>.

¹²⁶ Draft EU-Central America Negotiating Directive (2007) at para(s) 3.4 & 3.7; the States involved are Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama. online: <www.bilaterals.org/article.php3?id_article=8336>, accessed 31 March 2009.

¹²⁷ M Gehring & MC Cordonier Segger (eds), *Sustainable Development in World Trade Law* (Kluwer Law Int.: The Hague, 2005) at Introduction.

trade rules could otherwise constrain the use of measures agreed in other international (or regional) agreements.

Third, States can negotiate mechanisms for 'value-added' but parallel (non-integrated) social and environmental cooperation strategies, such as parallel agreements (or chapters, or both) for cooperation on environmental and social matters; the development of institutions for social and environmental cooperation including carbon trading; the agreement to adopt and implement common work programmes on specific environmental or social projects such as emissions monitoring and registration, particularly when accompanied by reliable capacity-building, technology transfer and financing commitments; and even factual report or complaints mechanisms to provide recourse when it appears that environmental or social rules are being violated in order to gain trade or investment related advantages.

Fourth, States may include constructive 'sustainable development' oriented trade and investment rule enhancement initiatives, where a positive 'triple-win' might be achieved within the trade agreement. These may include, for instance, sanitary and phytosanitary provisions which promote scientific cooperation and risk assessment to improve levels of health or environment protection; government procurement provisions which make public purchasing of low carbon goods or services more affordable; technical barriers to trade provisions to implement non-discriminatory certification processes and promote mutual recognition; intellectual property rights provisions which support low carbon technology transfer or respect for traditional knowledge; investment provisions which privilege socially responsible corporations and low-carbon investments; measures to promote reductions in illegal trade in forestry products; measures to secure additional liberalization of environmental goods and services including waste management or low-carbon transportation; or measures to secure reductions in unsustainable fossil fuel development subsidies.

Finally, certain procedural innovations can be undertaken by the Parties during the trade negotiations to promote sustainable development, and secure the integration of environmental and social concerns into a trade and investment treaty. Such process changes may also assist Parties and others in identifying useful innovations that might be included in a trade or investment agreement. For instance, States may undertake *ex-ante* (or ongoing) environment, development, human rights or sustainability impact assessments and reviews of trade liberalization policies and draft treaties. The outcomes of these assessments, as mentioned above, may be used to identify the areas where preventive, cooperative or enhancement initiatives could be useful in a trade or investment treaty. States may also host consultations between economic, environment and development authorities. They may agree upon, or strengthen, diverse mechanisms to ensure transparency and public participation in trade negotiations, and they may also establish new mechanisms to inform tribunals about sustainable development issues, including *amicus curiae*, public participation and expert consultation measures.

It is not yet clear which strategies or instruments will have the most success in helping to integrate social and economic development and environmental protection. It is likely that no one single measure provides the solution to all sustainable development challenges. Rather, many different provisions may be needed throughout the treaty. Certain instruments, such as the normative or regulatory evaluation elements of *ex-ante* sustainability impact assessments, are still underdeveloped. Others, such as the new system of certification to ensure that forestry products traded from Peru to the United States are not obtained through illegal logging, are simply very new.¹²⁸ Such provisions alone will not necessarily ensure that sustainable development priorities are given more weight by the Parties in complying with their obligations, or by dispute settlement bodies in interpreting Agreements, as compared to the other relevant objectives of Agreements. However, they appear likely to contribute to the achievement of a greater degree of integration in the trade agreements. This is an important first step toward sustainable development.

5. Technology Transfer Towards Low-Carbon Economies

For sustainable development, the need for 'mutually supportive' trade, investment, and carbon trading rules extends beyond reductions in potential overlaps or conflicts between regimes. The development and transfer of new technologies and practices to reduce greenhouse gas emissions is strongly encouraged in the UNFCCC and the Kyoto Protocol. In Article 4 of the UNFCCC, headed 'Commitments', Parties agree to 'promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors'.¹²⁹ In the Kyoto Protocol, similarly, Parties commit to ensure the transfer of technology to developing country Parties when implementing climate change measures through 'research on, and promotion, development and increased use of new and renewable forms of energy, of carbon dioxide sequestration technologies and of advanced and innovative environmentally sound technologies'.¹³⁰ At the 8th session of the Conference of the Parties to the Convention, Ministers issued a Declaration calling for technology transfer to be strengthened, including 'concrete projects and capacity-building in all relevant sectors such as energy, transport, industry, health, agriculture, biodiversity, forestry and waste management.' This Declaration further recognized that 'technological advances should be promoted through research and

¹²⁸ United States – Peru Trade Promotion Agreement, signed on 12 April 2006, online: <http://www.ustr.gov/Trade_Agreements/Bilateral/Peru_TPA/Final_Texts/Section_Index.html> accessed 31 March 2009; ICTSD 'US-Peru Bilateral to Address Illegal Logging, Boost MEA Implementation' Bridges Trade BioRes, 22 June 2007 <<http://ictsd.net/i/news/biores/9122>> accessed 31 March 2009.

¹²⁹ UNFCCC, art 4(c).

¹³⁰ Kyoto Protocol, Arts 2(1)(a)(iv).

development, economic diversification and strengthening of relevant regional, national and local institutions for sustainable development'.¹³¹

Future carbon trading measures may need to consider technology transfer needs, within the context of trade and investment rules. It is important to consider how emission trading schemes can create the economic incentives to advance development *and transfer* of more sustainable technologies, especially from developed to developing countries as prioritized in the Convention and the Protocol. Emissions trading schemes provide incentives for firms to develop and commercialize new GHG reduction or elimination technologies. But can these technologies, through trade and investment links, also be transferred to developing country Parties to the UNFCCC regime? Do new trade and investment rules provide constraints or opportunities for national, regional, and global efforts to achieve these goals?

At present, a great deal of technology transfer still takes place through official development assistance (ODA). ODA remains critical for developing country Parties 'as a source of support for sector reforms necessary to attract capital to energy markets, and also help commercialise investments in environmentally promising but initially higher-cost technologies'.¹³² However, the degree of significant technology transfer has been far from sufficient to achieve the objectives enshrined in the UNFCCC.¹³³ The contribution of trade and investment law to this challenge has been mixed. In some ways, it can be positive. For instance, increased stability and predictability in investment flows could be central to ensuring that Clean Development Mechanism (CDM) opportunities are realized and that developing countries can begin to gather the resources necessary to move toward a low-carbon economy. As another example, increased trade liberalization could provide access to new technologies, services, and products. Indeed, Paragraph 31(3) of the Doha Development Agenda calls for liberalization of environmental goods and services,¹³⁴ and reductions in trade barriers for environmentally sound technologies might permit more viable economies of scale, or improve access.¹³⁵

However, as some have noted, high licensing fees, protected by trade obligations related to intellectual property rights (IPRs), may also be contributing to the insufficient transfer of technology.¹³⁶ Expensive licensing fees can threaten the possibility of effective technology transfer by making the use of new carbon-reduction technologies, carefully stimulated by relevant emissions trading schemes, impossible for developing country investors and policy-makers in the majority of the world to contemplate. For developing countries and developed country

¹³¹ Delhi Declaration on Climate Change and Sustainable Development, Decision 1/CP.8 para (i) (1 November 2002).

¹³² Alan S Miller, 'International Trade and Development' in *Global Climate Change and U.S. Law*, Michael B Gerrard (ed) (American Bar Association Publishing: Chicago, 2007) at 287.

¹³³ Expert Group on Technology Transfer; online: <unfccc.int/essential_background/convention/convention_bodies/constituted_bodies/items/2581.php>, accessed 31 March 2009.

¹³⁴ Tarasofsky (*supra* note 77) at 12.

¹³⁵ World Bank, *International Trade and Climate Change: Economic, Legal and Institutional Perspectives* (World Bank: Washington DC, 2007) at 70.

¹³⁶ Miller (*supra* note 123) at 294.

investors, the Protocol's Clean Development Mechanism (CDM) provides one valuable means to stimulate investment in clean energy technologies and greenhouse gas mitigation from governments and the private sector as well. It provides opportunities for developed Annex I Parties to satisfy their obligations under the Convention and the Protocol whilst also allowing the host project States to benefit from improved local sustainability standards and the transfer of more sustainable low-carbon technology.¹³⁷ The CDM provides much-needed funds to develop and apply new technologies, and to capture carbon emissions, returning certified emission reduction credits to the investor. Technology transfer requirements can be included in CDM emission reduction purchase agreements, ensuring that a balance is found between the needs of developing countries for new technologies and practices, and the needs of investors and others who develop clean energy and low carbon technologies in different sectors. The vast majority of CDM projects, to date, are taking place in China, with India and Brazil also hosting a significant number. Of these projects, renewable energy continues to be the predominant type of project undertaken, although GHG elimination is also prevalent, especially in China.¹³⁸ Expanded CDM, including programmatic projects, will be central to technology transfer after 2012.¹³⁹ Effective transfer of technology is essential if more coherent trade, investment and climate change cooperation is to achieve global sustainable development objectives.

6. Strengthening International Legal Coherence to Resist Climate Chaos

Current intersections between global and regional rules on trade, investment, and climate change are far from being well understood. How ought countries proceed, especially developing countries, faced with these dilemmas and overlapping legal regimes? On a global scale, there is a need for fast but effective regulatory action in the fields of trade and investment law, as well as in climate law. Not only must carbon reductions be achieved at a much faster pace, but trade and investment in sustainable low-carbon alternatives must also increase. Of equal importance is the improvement of technology transfer to ensure developing countries are actually able to develop more sustainable systems for transportation, energy, housing, agriculture, forestry and other sectors. In this light, it may well be that mechanisms such as effective domestic and international carbon-trading schemes and detailed sectoral agreements will be part of the way forward beyond the terms of the Kyoto Protocol, particularly for developing country Parties where economy-wide participation is impractical.

The UNFCCC and the Kyoto Protocol establish a comprehensive system in which economy-wide emission targets are set, but this does not prevent

¹³⁷ Chapter 10 below and Maria Netto and Kai-Uwe Barani Schmidt, 'CDM Project Cycle and the Role of the UNFCCC Secretariat' in David Freestone and Charlotte Streck (eds), *Legal Aspects of Implementing the Kyoto Protocol Mechanisms: Making Kyoto Work* (OUP: Oxford, 2005) at 192.

¹³⁸ Pew Center on Global Climate Change, *Clean Development Mechanism Status Report*, 2008, online: <<http://www.pewclimate.org/docUploads/CDM-Backgrounder.pdf>>, accessed 31 March 2009.

¹³⁹ Murphy (*supra* note 49).

future more detailed progress in specific sectors (or ETS) to ensure mitigation. If sectoral agreements are undertaken, this could increase the contribution of those States currently unwilling to commit to economy-wide agreements. From a developing countries' perspective, the feasibility of entering into either an isolated or even linked framework of sector by sector agreements is significantly increased. Success in a few well defined and monitored areas could well lead to greater foreign investment in carbon reduction technologies, and could also focus private sector innovation efforts. Also, certain sectors such as steel and aluminium production and distribution have more concentrated global actors than do other sectors such as transport. Therefore, any potential negotiations would be simplified with the interests of these actors most carefully recognised.

But perhaps one the biggest advantages of sector-by-sector progress would be the greater ease in addressing competition concerns of the relevant sector actors. The economy-wide approach of the UNFCCC and the Kyoto Protocol (to some degree reflected in the more localized efforts, such as the EU ETS) opens room for actor favouritism by governments. If regulatory space is then used to introduce a national emission trading scheme, for instance with free allocation of certificates, the resulting competitive advantage for one actor over its foreign rivals can lead to real legal questions under trade and investment rules—most particularly non-discrimination / fair and reasonable treatment arguments. 'In contrast, an international sectoral approach could ensure that all global competitors in the given sector undertake mitigation efforts, whether fully comparable or differentiated to reflect equity considerations'.¹⁴⁰ Though this does not yet ensure that distortions are not maintained via the national implementation/assignment of rights/removal of rights, a main advantage of sectoral agreements is that they remove the distortion between current Annex I and non-Annex I countries.

From a developing country perspective, there are a number of options in terms of design and implementation of sectoral agreements. At the basic level, States may create independent sector agreements, or may seek to link sectors and allow trading between them, such as in the EU ETS. The EU ETS is an installation specific scheme, so is the CDM. Sectoral agreements could be government 'owned' and administrated schemes, which would have to be broken down to commitments on the installation level (similar to Annex I commitments which, however, span a whole economy). Unified or harmonized policies could be adopted in a variety of sectors, such as technology-based standards, basic taxes or best-practice standards, between States. These States need not necessarily be identical groups of countries for each participating sector.¹⁴¹ Which sectors would most appropriately be open to progress in terms of climate benefit depends upon a number of varying factors. For instance, a sectors propensity to decrease its rate contribution toward global emissions from 2012 as 'year 0' could be a principal indicator of suitability for international action. From this standpoint, 'emissions from the

¹⁴⁰ D Bodansky, 'International Sectoral Agreements in a Post 2012 Climate Framework', Pew Center on Global Climate Change Working Paper (Arlington: Pew Center, 2007) at 6.

¹⁴¹ *Ibid.*

transportation sectors are the fastest growing source in most countries and pose perhaps the greatest long-term challenge'.¹⁴² Equally, the economic benefits or options present in a given sector might well prove a useful indicator of its availability for international agreement.

Could emissions trading be an option for international progress *within selected sectors*? The viability of this approach could depend not only on the industry-sector selected but also the substantive content of the agreement. If national allocation of credits were to be distributed by national governments, as is most likely to be the case, then agreed principles for such allocation could be based on international guidelines to create a level economic playing field, and pre-empting potential trade or investment claims relating to discrimination.

The interpretation of international investment treaty law will become central in ensuring that there is coherence with sustainable development policies and thereby avoiding litigation and conflict.¹⁴³ To that end, IIAs can include express conflict clauses where matters of sustainable development are at issue. Policies aimed at combating climate change might be also be introduced into the treaties and/or parallel sustainable development cooperation mechanisms by States.¹⁴⁴ Running parallel to this, investment tribunals can recognize that protection and/or promotion of sustainable development values within a given project does affect the circumstances surrounding the investor, often placing superficially similar investments in different circumstances. In investment law, judicious interpretive statements would offer guidance to investors and regulators, helping States to understand under what conditions different treatment would not be found to be discriminatory. In that regard, the *Parker* decision is to be welcomed and it is hoped that that tribunal's reasoning is carried forward in other disputes.

At the same time, certain basic steps can be taken by regulators to minimize the likelihood of challenges based on indirect expropriation and (un)fair and (in)equitable treatment clauses, in the context of emissions trading schemes. Allocation of allowances and the scope of actors and sectors covered by a domestic scheme are important design features which will affect the coherence of State's trade, investment, and carbon trading initiatives.

In terms of ensuring coherence between future climate change policies and trade rules, a number of practical factors have been identified. There clearly are win-win-win trade, investment and climate change approaches, such as cooperation programmes for monitoring and reduction of emissions or the transfer of low-carbon technologies, the liberalization of trade in environmental goods and services related to carbon trading, or the careful design of government procurement rules to exempt green procurement schemes. Future regional trade agreements can seek to explicitly incorporate provisions on climate change and other sustainable

¹⁴² *Ibid.* at 9.

¹⁴³ SE Gaines, 'International Trade, Environmental Protection and Development as a Sustainable Development Triangle' (2002) 11 Rev. EC & Int Env Law 259.

¹⁴⁴ Baughen, *supra* note 85.

development objectives, as well as ensuring transparency for future investors.

But guidance for States is needed in this area, and lessons must be taken from actions taken to date, given the need to both implement measures to conserve exhaustible natural resources and still not unjustifiably restrict international trade or investment.¹⁴⁵ As stated, the Protocol expressly notes that in seeking to achieve a global reduction in carbon emissions, it must also implement measures to minimize adverse effects on international trade.¹⁴⁶ Cooperation between the UNFCCC and the WTO is therefore not merely 'likely',¹⁴⁷ but essential for future coherence in this area. At the forefront of this must be a committed response to the UNFCCC's call to 'accelerate innovation in the development, deployment, adoption, diffusion and transfer of environmentally sound technologies among all Parties, and particularly from developed to developing countries, for both mitigation and adaptation'.¹⁴⁸

¹⁴⁵ UNFCCC, art 3(5); WTO, Art XX(g).

¹⁴⁶ Kyoto Protocol, Art 2(3).

¹⁴⁷ Charnovitz (n 4).

¹⁴⁸ UNFCCC Decision 3/CP.13, 2007.

International Development Law Organization (IDLO)

IDLO is an intergovernmental organization that promotes legal, regulatory and institutional reform to advance economic and social development in transitional and developing countries.

Founded in 1983 and one of the leaders in rule of law assistance, IDLO's comprehensive approach achieves enduring results by mobilizing stakeholders at all levels of society to drive institutional change. Because IDLO wields no political agenda and has deep expertise in different legal systems and emerging global issues, people and interest groups of diverse backgrounds trust IDLO. It has direct access to government leaders, institutions and multilateral organizations in developing countries, including lawyers, jurists, policymakers, advocates, academics and civil society representatives.

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