
Frontiers in trade: the clean development mechanism and the general agreement on trade in services

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Abstract: By authorising investment, technology transfer, project development and emissions trading between developed and developing countries, the Kyoto Protocol's Clean Development Mechanism (CDM) will present new opportunities for international trade. Projects hosted in developing countries will result in 'Certified Emissions Reductions' (CERs), which may be used to assist developed countries to meet their emissions reduction targets. Because CERs will share the qualities of licenses and not products or services, they should not be subject to regulation by the WTO. However, services related to CDM project development, and financial services rendered in the CER trading system, may fall within the scope of the General Agreement on Trade in Services (the GATS). While the GATS will likely not interfere with the CDM's international rules, it could sometimes have a 'chilling effect' on individual countries as they implement their domestic CDM systems. Clear CDM rules promulgated at the international level may help minimise potential conflicts.

Keywords: Clean development mechanism; climate change; emissions trading; financial services; GATS; GATT; global warming; joint implementation; Kyoto Protocol; subsidies; sustainable development; trade and environment; trade disputes; World Trade Organisation.

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1 Introduction

When Parties to the UN Framework Convention on Climate Change adopted the Kyoto Protocol in 1997, they agreed for the first time to internationally binding targets and timetables under which most developed countries and economies in transition would collectively reduce their emissions of heat-trapping greenhouse gases (GHGs) [1,2]. One of the Kyoto Protocol's significant features is the incorporation of market-based

mechanisms designed to allow the industrialised 'Annex I' countries to achieve their required emission reductions at a cost-effective level. No international environmental agreement to date has relied on flexible market mechanisms to the extent called for in the Protocol. The common feature of these 'Kyoto' mechanisms is that they will allow Protocol Parties to transfer greenhouse gas emissions allowances among themselves. The Protocol contains three such mechanisms: Joint Implementation (JI), International Emissions Trading (IET), and the Clean Development Mechanism (CDM) [2, arts. 6, 12, 17].

The CDM is unique among the Kyoto mechanisms because it permits industrialised countries with emissions targets and developing countries that do not have targets (the so-called 'non-Annex I' Parties) to collaborate to reduce or avoid GHG emissions. Under the CDM, Annex I Parties or their authorised private entities may invest in emissions mitigation projects sited in developing countries. For example, the Annex I investor might pay to convert a coal-fired power plant located in a non-Annex I country to natural gas. The developing country 'host' receives environmentally sustainable technology at no added cost. The Annex I investor obtains 'Certified Emissions Reductions' (CERs) representing the amount of greenhouse gas emissions that are avoided by the cleaner burning plant [3]. The investor can then use the CERs to meet part of its 'home country' emissions reduction obligation.

Like Article 6 JI and Article 17 IET, activities under the CDM will present new opportunities for international trade. However, in an increasingly 'globalised' economy, the desire for a liberal trading system can conflict with the need to control pollution and preserve dwindling natural resources. Several recent decisions by dispute resolution panels of the World Trade Organisation (and its predecessor, the pre-WTO General Agreement on Tariffs and Trade (GATT)) have led some to question whether panels – and WTO rules themselves – give sufficient weight to environmental and health imperatives [4].

This Article will examine the potential for conflict between the still evolving rules of the CDM and the WTO, with a focus on the General Agreement on Trade in Services (the GATS) [5]. Many of the GATS disciplines are also in a formative stage and have yet to be tested in a dispute. Nevertheless, it may be possible to anticipate some of the ways in which disputes could arise. This Article attempts to identify some possible areas of conflict and analyse and evaluate the merits of such trade-based challenges. It explains why, in resolving disputes, the objectives of the Kyoto Protocol may not be well served if trade concerns are given priority over environmental ones. It also suggests some strategies to prevent disputes from occurring in the first place.

Additionally, important areas of research and analysis exist that are beyond the scope of this Article. Examples include the implications that multilateral and bilateral investment agreements could have for CDM project development and management [6], and the effect of GATT rules on trade in the goods that CDM projects may produce [7].

The reader should note that no WTO dispute panel has ever been asked to rule on a challenge to a trade-related measure taken pursuant to an obligation under a multilateral environmental agreement such as the Kyoto Protocol. Recent GATT cases suggest that dispute panels may give added deference to trade measures taken in pursuit of such commitments [8]. Some commentators also argue that rules of customary international law should discourage WTO panels from reviewing measures that are required by a separate treaty, e.g. [9]. These considerations are also beyond the scope of the Article.

2 The Kyoto Protocol and the clean development mechanism

When the Convention's Conference of the Parties (COP) adopted the Kyoto Protocol in 1997, it agreed that CERs earned from CDM projects from the year 2000 could be used "to assist in achieving compliance in the first commitment period" [2,art.12.10]. However, 'certified' emissions reductions can obviously not be produced until institutions and procedures are in place for certifying them. Despite long, intensive negotiations, the Parties have not yet finalised rules for operationalising the CDM and the Protocol. The precise structure the CDM will take is, accordingly, still subject to some speculation.

The Protocol text gives some guidance. The CDM shall benefit non-Annex I Parties by assisting them in "achieving sustainable development and in contributing to the ultimate objective of the Convention" [2,art.12.2.3]. Annex I Parties can use CERs accruing from CDM projects to contribute to compliance with part of their emissions limitation and reduction commitments [2,art.3(6)]. Emissions reductions resulting from project activity are to be certified on the basis of:

- 1 voluntary participation approved by each party involved
- 2 real, measurable and long-term climate benefits
- 3 emissions reductions that are additional to any that would occur in the absence of the project [2,art.5].

Additionally, negotiators have made significant progress toward agreeing upon the CDM's legal and institutional framework [10]. CDM activities will be supervised by an Executive Board, subject to the authority of the Protocol's supreme governing body, the "Conference of the Parties serving as the Meeting of the Parties" (COP/MOP). The Board will decide whether to accept CDM projects. It may be responsible for issuing CERs. It will be responsible for accrediting and overseeing the work of "designated operational entities." These operational entities will be charged with the tasks of independently evaluating projects and verifying and certifying the emissions reductions claimed by the project developer [10].

3 Introduction to WTO and GATS rules

During the same time that the world's nations have been trying to formulate a coordinated response to the global warming threat, they inaugurated a powerful regime for governing and further developing the international trading system. The Agreement Establishing the World Trade Organisation was adopted in 1994 [11]. The WTO Agreement significantly elaborates upon GATT, which has been the primary legal instrument governing international trade in goods since 1947 [12]. The WTO Agreement contains renegotiated versions of the 1947 GATT and the various side agreements that were concluded over the years [13]. The Agreement also includes annexes containing, *inter alia*, new multilateral agreements governing subsidies, investment and trade in services, and new, binding rules and procedures for the settlement of disputes [14].

GATT/WTO law is founded on three fundamental principles – the Most-Favoured-Nation (MFN) obligation, the national treatment obligation and the prohibition against quantitative measures, [12, arts.1 III, XI]. The first two are 'relative' standards that bear

upon the treatment that must be accorded by a WTO member to similar or dissimilar goods or services originating from another member. The third is one of the WTO's 'absolute' standards, which prohibit members from using certain kinds of trade measures [15].

Many key aspects of the Clean Development Mechanism will entail services or service-related functions [16]. Accordingly, one of the most important WTO agreements, insofar as the CDM is concerned, will be the GATS. Under both the GATT and GATS, the MFN obligation requires every WTO member to give the goods, services or service providers of any other member treatment no less favourable than that it accords the 'like' goods, services or service providers of any other country [17]. The provision prevents members from playing favourites between countries, so that any varying treatment accorded a good or service must be based upon qualities of the product or service itself rather than on its country of origin or destination [18]. The national treatment obligation extends this non-discrimination principle to a country's treatment of foreign and domestic goods and services by requiring the country to extend to imported foreign goods, services and service providers treatment no less favourable than it gives its own, similar domestic goods, services and service providers [12, art.III]. Under the GATT, the prohibition against quantitative measures generally restricts a member's ability to impose quotas on imports or exports of goods [12, art.XI]. The GATS rules on extending market access to service providers are roughly analogous to (though presently weaker than) that GATT provision [19].

These core principles are tempered by several exceptions that members can invoke for various reasons. Most important from an environmental perspective are the GATT provisions allowing countries to adopt or enforce trade measures that are "necessary to protect human, animal or plant life or health" or that relate "to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption" [11,art.XX(b),(g)]. However, such measures may not be taken if they "constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or [are] a disguised restriction on international trade." [5, art.XX]

While both the GATT and GATS are based on the common principles of most-favoured nation and national treatment, they are different in important ways. Most terms of the GATT are obligatory for all members. By contrast, many of the core GATS commitments apply to members only if they elect to 'opt-in'. The GATS allows members to claim specific exemptions from the MFN obligation for up to ten years from the date the agreement entered into force [5, art.II.2 and annex]. It also gives members a choice whether to offer national treatment or market access to services at all [19,art.XVI.XVII]. Like the GATT, the GATS contains an environmental exception for measures that are necessary to protect animal, plant and human life or health, yet it does not include the GATT exception pertaining to conservation of exhaustible natural resources [5, art.XIV(b)]. Additionally, the subsidies provisions of the GATS are quite different from those found in the Agreement on Subsidies and Countervailing Duties, which is applicable to products covered by the GATT [20].

Most of the WTO Agreements, including the GATT and GATS, contain new notification and transparency provisions [21]. For example, WTO members must periodically publish their trade laws in a transparent manner [22]. If the new laws could be inconsistent with WTO obligations, the member must first notify the WTO secretariat,

who posts the notices for the benefit of all WTO members. These notices should allow sufficient time for other members to submit comments, which must be taken into account before the final regulation enters into force [23].

4 Potential for conflicts between the CDM and the GATS

This part begins by identifying three basic trade-related components that will be associated with CDM projects:

- 1 certified emissions reductions (CERs)
- 2 services employed in the development, management and oversight of CDM projects
- 3 financial services related to trade in CERs.

The remaining sections examine each of these trade-related components to determine whether WTO law might apply to them and what some of the implications might be if it does.

The reader should note that, in the event a WTO member disagreed with a CDM rule promulgated by the COP or COP/MOP, it would not be able to challenge that rule *directly* through the WTO dispute settlement process. Only *states* can be WTO members with GATT or GATS obligations, and only WTO members can be party to a dispute settlement proceeding [24]. Intergovernmental organisations such as the United Nations or the FCCC Conference of the Parties are not WTO members; hence, the WTO dispute settlement process could not supply a venue for directly challenging a rule promulgated by them.

However, for the CDM to be operational, its rules will have to be implemented by individual countries through their domestic legislative and regulatory systems. If a WTO member believed its trade rights were being impaired by a CDM rule, it could challenge the rule by lodging a complaint with the WTO against another member that had implemented it under its domestic law. In the event the complaint was successful, the dispute settlement body would recommend the member to amend or revoke its law to bring its practices into conformity with WTO rules.

4.1 CDM trade-related components

At least three basic GATS-related components may be identified under the CDM:

- 1 certified emissions reductions (CERs)
- 2 services employed in the development and management of CDM projects
- 3 financial services related to trade in CERs.

4.1.1 Certified emissions reductions (CERs)

Under the Kyoto Protocol, CERs will be issued in recognition of emissions reductions accomplished in developing, non-Annex I countries. They will be used for compliance purposes by countries with binding emissions reduction or limitation commitments, the developed Annex I countries.

CERs might take the form of tangible (paper) certificates, or they may exist only in computerised registries. Each CER will represent one unit of carbon dioxide equivalent and will likely be identified by a unique serial number. Annex I Parties will be able to use CERs to increase their assigned amount, which will permit them to increase their domestic emissions by an equivalent amount [2,art.3.12]. Project investors presumably will be able to turn in their CERs to their national governments to satisfy their obligations under their domestic emissions regulatory regimes. Additionally, they may have the option of selling CERs to other entities and/or governments.

4.1.2 Services related to the development of CDM projects

Developing a CDM project within a host country will require the provision of many kinds of services. While they could collectively be described as ‘CDM project development services’, for the most part they will be services that are already employed in many other types of construction and development projects. Designing a CDM project will require engineering, architectural and planning services. Construction may require general construction, installation, assembly, finishing and, in some cases, landscaping and real estate services. Monitoring and maintaining the project may require database and accounting, testing and analysis, and consulting services. Securing project funding and executing contracts will necessitate financial, lending and legal services. In addition to services directly related to project development, the CDM project cycle will require relatively new kinds of non-government services, including monitoring, verification and certification of emissions reductions. All of these services might be provided by nationals of:

- 1 Annex I countries
- 2 non-Annex I countries, including the host country
- 3 non-Parties.

4.1.3 Financial services related to trade in CERs

Assuming a secondary market in CERs is allowed under the international rules, it will be facilitated by such services as brokerage, advisory and ratings services, and exchanges that are involved in the buying, selling or trading of CERs. These services would also include transactions in CER derivatives, such as futures or options contracts. Like other services, CDM-related financial services could conceivably be provided by the nationals of any country; they may be rendered anywhere.

The following sections will discuss each of these trade-related components as they may relate to the GATS.

4.2 Certified emissions reductions (CERS)

The threshold task for evaluating the effect of WTO law on international trade in CERs is to determine what they are—products, services or something else. If they are a kind of product or service, then they could fall under the purview of the WTO through the GATT or GATS. If they are something else – say, a licence – then they would be exempt from WTO coverage, meaning their international trade might be restricted by governments in

any manner without worrying about violating WTO rules. This section concludes that CERs should be considered neither goods nor services, and thus will probably not be directly subject to GATT or GATS regulation.

Some Annex I Parties may find it desirable to discriminate between CERs. For instance, the Conference of the Parties has been unable to agree on the question of whether or not sustainable development criteria should be established at the international level to govern the development and implementation of a CDM project in a developing country host. Many prospective host countries object to such a requirement on the grounds that it would constitute an impermissible intrusion upon their sovereignty. At the same time, other countries, including some Annex I countries, would prefer such rules as a means of ensuring that CDM projects do not have ancillary, negative impacts on important values like biodiversity or the welfare of indigenous communities [25].

If the COP does *not* adopt an international rule for sustainable development criteria, these Annex I countries may prefer not to purchase or accept CERs originating from host countries that decline to adopt or adequately implement national sustainable development rules. If CERs were considered to be goods or services under the WTO, then such preferences could violate the most-favoured nation obligation and could expose the discriminating country to WTO-recommended compensation or countervailing trade sanctions.

Similarly, if the COP decides to make 'sinks' (land use, land use change and forestry) projects eligible for the CDM, some Annex I countries may not want to accept CERs derived from them, especially if they believe the rules for measuring and guaranteeing the claimed climate benefits are inadequate. If CERs were deemed to be goods or services, then such countries might not be able to ban the import of CERs derived from sinks projects without fear of retribution through the WTO dispute resolution mechanisms.

4.2.1 CERs as goods

Neither the GATT nor the GATS is especially helpful in defining precisely what constitutes a product or service. The GATT does not define the words 'goods' nor 'products'. Although some people refer to the 'product' or 'commodity' of carbon when discussing the CDM, they obviously do not expect CDM investors to receive carbon for their efforts. Rather, CDM investors will acquire allowances or credits that they may be able to sell to a third party or apply toward their own domestic emissions obligations.

The hallmark of goods or products is that they are 'things'. Goods may be produced by labour, intellectual effort or natural process; they can be transported from place to place [26]. While the idea of what constitutes a good was once limited by whether it was considered tangible, tangibility has become elastic enough a concept to permit the European Court of Justice to rule that electricity is a good [27]. Perhaps a reasonable definition of a good is that it is something produced by labour, intellectual effort or natural process that can be transported from place to place and that possesses physical attributes (including such attributes as electrical charge) that give it value.

CERs might exist as tangible things. They may be paper certificates; alternatively, they may exist only in electronic form in computerised registries or databases. Nonetheless, to the extent paper certificate CERs can be described as things, they will be things in the sense that a printed licence is a thing. The holder of the licence or CER does

not value or use the certificate as a piece of paper but instead values it for the rights it symbolises or conveys.

A licence is permission by a competent authority to do an act that, without the permission, would be prohibited or illegal [28]. While such permission may be transferable from one holder of the licence to another, the permission itself is not created through any kind of production process and it has no physical attributes that give it value. In the case of the CDM, CERs will represent permission granted to the holder by the COP/MOP and/or Executive Board to emit one tonne of carbon dioxide equivalent, which the holder would not have been allowed to emit but for its possession of the CER. CERs thus should properly be viewed as a kind of licence that confers a right – *a future right to pollute*. Just as a licence is not a good but merely a permit to do something, so a CER should not be seen as a good. Because the GATT only covers trade in goods, it is probably unlikely that a country's treatment of CERs would fall under the GATT.

4.2.2 CERs as 'services'

The GATS does not actually define 'services' but instead identifies examples of services that fall within its scope. During the negotiations under the Uruguay Round, the GATT Secretariat prepared a reference list from the more detailed Central Product Classification (CPC) developed by the United Nations Statistical Office [29]. The CPC lists no services directly analogous to the issuance of CERs. However, the CPC does not specifically list all imaginable forms of services, nor does it list as-yet unimagined services that might emerge in coming decades. Accordingly, the fact that a service is not listed in the CPC does not necessarily mean it will not be covered by the GATS in the future [6, pp.560–61]. As WTO members periodically reclassify the definitions of specific services to update the CPC in light of economic changes, the CPC could include listings that encompass or are directly relevant to CDM services.

To decide whether CERs are services within the ambit of the GATS, it may be useful to consider the U.S. Clean Air Act's sulphur dioxide (SO₂) emissions trading scheme [30]. Under the SO₂ program, electric power plants are given an emissions target or cap and an equivalent number of emissions allowances. If a utility reduces its emissions below its target it can sell the excess allowances to another plant, which can then raise its own emissions by the amount of allowances it purchased. The Clean Air Act explicitly stipulates that emissions allowances allocated under the plan constitute a "limited authorisation to emit sulphur dioxide in accordance with the provisions of [the Act]" [30]. Thus, even though allowances can become available for trading because a utility rendered the 'service' of reducing its emissions, the allowances themselves are not services but government-issued 'limited authorisations' – licences – that give their recipients the right to emit a given amount of pollution.

Like SO₂ allowances, CERs will be created not by a power plant or project developer, but by an administrative institution acting under governmental authority – in this case the CDM Executive Board. The CERs will not be part of the project nor part of the services that created the project and reduced the emissions. Rather, they will be a kind of tradable permit – issued or approved by the Executive Board – that acknowledges a certain amount of greenhouse gas emissions were reduced or avoided and which, in turn, gives the holder of the permit the right to emit an equivalent amount of emissions at a different time and place.

Both CERs and SO₂ allowances play the same kind of role in their respective regimes: Each allows the holder to emit a certain quantity of regulated pollutants that it would not be allowed to emit *but for the allowances*. Each is a form of government-granted permission. Neither CERs nor SO₂ allowances should be considered a form of service under the GATS [31].

By clearly defining CERs (as well as ‘emissions reduction units’ under Article 6 joint implementation and ‘assigned amount units’ under Article 17 emissions trading) as a form of licence or permit, Kyoto Protocol Parties could lessen the possibility that a WTO member might try to use the WTO dispute settlement understanding to preempt or redefine the intentions of the COP/MOP. Parties might include language in the CDM implementing decision that paraphrases the US Clean Air Act language: “CERs shall constitute a limited authorisation to emit carbon dioxide equivalent in accordance with the rules in and under the Protocol.”

A ‘licence view’ of CERs would help ensure that there was no question that the COP/MOP would have the sole authority to decide whether CER trade with non-Parties will be restricted; whether CDM-eligibility criteria might curtail a Party’s ability to use CERs; whether a Party might be limited in how many CERs it can tender for compliance purposes during any given time period; or whether the COP/MOP or a designated authority might respond to a case of non-compliance by suspending the right of a Party to export, import or redeem CERs. The licence view could also protect the right of individual Parties to enact domestic regulations that restrict the use of CERs in ways not specifically articulated under the international rules. This unambiguous authority would, in turn, help Protocol Parties avoid the “chilling effect” that may be present when negotiators – uncertain whether or not their decisions could somehow run afoul of WTO rules – consciously or unconsciously allow their uncertainty to make them refrain from taking needed action.

4.3 *Project development services*

Many commentators have considered the CDM paradigm to be one characterised by bilateral activity, in which an investor from a developed country underwrites and develops a project in a developing country. However, the Protocol, as well as the implementing rules presently being negotiated, will not necessarily restrict CDM projects to the bilateral, Annex I home country and non-Annex I host ‘paradigm’. The project developer and investor could be distinct entities from the same or different countries. The developer could be a local company; a consortium or joint venture of companies; a multinational company; or a local, regional, or national government. It could be an intergovernmental organisation such as the World Bank that pools moneys from many investors and then directly develops and manages projects or, instead, identifies eligible, independent entities to receive the funds and develop the projects themselves. The developer could manage all aspects of the project on its own, or it could function like a general contractor, arranging with local and/or foreign companies to provide many or even all of the services involved in building the project. Some developing countries may even develop and finance CDM projects independently, without collaboration with any Annex I entity and with the intent of selling any resulting CERs directly to other entities or Parties on the open market.

This section identifies and evaluates ways in which the GATS might affect how governments treat the provision of CDM project development services. The section

concludes that the GATS should generally not impair the ability of countries to achieve their sustainable development objectives through the CDM. Where the possibility for conflict does exist, Protocol Parties may minimise it by providing as much clarity as possible in the CDM rules.

4.3.1 GATS applicability

The GATS applies to measures affecting trade in services supplied:

“From the territory of one Member into the territory of any other Member ...
by a service supplier of one Member, through presence of natural persons of a
Member in the territory of any other Member.” [32]

In the absence of a generally agreed upon definition of ‘services’ under the GATS, most WTO members have provisionally adopted the Central Product Classification list to describe and categorise their GATS commitments [14]. The list includes general categories covering, *inter alia*, construction and engineering services, environmental services and business services, the latter of which include professional services of architectural, engineering and urban planning and landscape architecture [33]. These areas necessarily overlap. However, construction services are generally those that entail the “application of technology to the building of structures (such as houses) and productive facilities (such as factories) by combinations of skilled and unskilled labour, encompassing both public and private activity” [34]. They include both design (i.e., architects and engineers developing the conception of the project) and implementation [34]. Professional services involve the “provision of intellectual or specialised skills on a personal, direct basis, based on extensive educational training” [35]. All of these services, as noted earlier, may contribute to the development and construction of CDM projects.

4.3.2 Most-favoured-nation treatment

Could a CDM host discriminate against a project applicant on the basis of the applicant’s home country not having acceded to the Kyoto Protocol (and thus not being a Protocol Party)? The Protocol does not address whether projects can be developed by entities whose national governments have not become Protocol Parties. Article 12 states that project emissions reductions shall be certified on the basis of, *inter alia*, “voluntary participation approved by each Party involved.” That requirement implies that a project developer will at least have to operate under the sponsorship of a Party. Moreover, the more detailed CDM rules being negotiated by the COP include tentative provisions that would allow entities to participate in CDM activities only if their home countries satisfied all of the CDM eligibility criteria, which would include the requirement that they ratify the Protocol [10, pp.10–12,34–40]. It is thus likely that CDM rules will allow project developers to participate in the CDM only if their national governments have acceded to the Protocol, meaning that CDM host countries that adhere to the rules would be required to discriminate between project applicants on the basis of their home country’s Kyoto Protocol status.

As a preliminary matter a specific rule like this, which elaborates the terms for participation in a mechanism created under a broadly multilateral regime and which is promulgated under the decision-making apparatus of that regime, should automatically be

deemed to have priority over the more general GATS rule [36]. But even if the CDM participation rule were not considered to have priority, the 'Recognition' provisions of the GATS may accommodate this situation [5]. The GATS acknowledges that WTO members who accept the entry of foreign service providers need to retain the power to regulate those providers through licensing, certification and authorisation processes, so long as they do so in a "reasonable, objective and impartial manner" [5, art.VI.1]. Article VII permits members to recognise the qualifications of service providers from particular countries, adding that, "wherever appropriate, recognition should be based on multilaterally agreed criteria" [5, art.VII.1.5]. Assuming the COP or COP/MOP establishes a 'ratification for participation' requirement, a WTO member who required CDM project development applicants to be nationals of (or sponsored by) a Protocol Party should be viewed as observing the recognition criteria authorised under the multilateral rulemaking process of the Protocol.

4.3.3 Article II exemptions

WTO members had a one-time option of exempting themselves, for up to ten years, from compliance with the GATS MFN obligation in respect to any specific service sector [37]. As discussed above, the service of developing and implementing a CDM project will actually be an amalgam of many different service sectors that have existed for some time, including construction and engineering services, environmental services, and professional services of architectural, engineering, and urban planning and landscape architecture. Accordingly, a CDM host country that had listed any of these or related sectors as Article II exemptions could argue that CDM project development and implementation within its borders were not entitled to MFN treatment, at least to the extent that they implicated the exempted sector(s). However, WTO members are in the process of negotiating the winding down of these 'opt outs'. By the time the CDM is operationalised, Article II exemptions may not be especially relevant to CDM-related services.

4.3.4 Market access

Unlike the GATT, which establishes a default position of unlimited market access and national treatment for all foreign members' goods, the GATS allows members to maintain restricted access rules and to continue favouring their own domestic service sectors unless they affirmatively commit otherwise [38]. Article XVI establishes a member's right to deny entirely market access to a service sector unless the member affirmatively lists that sector in its Schedule of Specific Commitments [5, art.XVI.1]. So long as the member has not listed the sector on its Schedule, nor allowed any other member to enter the market, it may refuse entry in that sector to all members. However, once a member enters into commitments and opens its market to the services or service providers of another member, then the MFN obligation requires it to accord the same treatment to any other members who would like to enter the market in the same service sector.

Could the market access provision be used somehow to coerce a developing country into participating as a CDM host against its wishes? After all, as discussed earlier, the service of developing and implementing CDM projects is arguably an amalgamation of many service sectors [39]. By listing those sectors on their Schedules and thereby

extending market access in CDM component areas to all WTO members, some developing countries could conceivably appear to have allowed access to CDM projects when in fact they did not wish to do so.

Such coercion is unlikely. First, the question confuses the ‘opening up’ of a GATS services sub-sector by a country with a country’s granting of permission to host a CDM project. But more importantly, the Protocol’s Article 12 plainly states that CDM projects should be certified on the basis of “voluntary participation approved by each Party involved.” Any investor or developer trying somehow to avoid that requirement would not be able to obtain certification for any of the project’s emissions reductions and would thus receive no CERs which (from the point of view of the investor) would obviate the purpose of the CDM project development service in the first place.

4.3.5 National treatment

If a WTO member elects to extend market access to a service, then GATS Article XVII obligates the member to accord the services and service suppliers of all other members treatment no less favourable than that given to its own like services and service suppliers [40]. However, just as in the market access rule, this concession is due only when the member has affirmatively listed the service sector in its schedule of specific commitments [5, art.XVII.1].

In many cases the CDM service trade of developing and implementing projects will be bilateral; i.e., developing countries will import the project development service rather than produce it domestically. In these situations questions of national treatment on the part of CDM hosts might not arise, because the host’s nationals would not be supplying project development services, would consequently not be competing with foreign Annex I suppliers and, thus, would not be receiving any treatment at all to which the treatment of project service suppliers from Annex I countries could be compared.

However, the Protocol’s language does not restrict the development and implementation of CDM projects to Annex I sponsors or developers [2,art.12]. A developing country may be free to design and implement its own CDM projects for the purpose of exporting the certified emissions reductions, provided that the project satisfies the CDM requirements of certification, auditing and verification. In such a case, the host country could accord CDM projects developed by foreign service suppliers treatment less favourable than that accorded projects developed by its own nationals, unless the host had listed CDM-related project services on its schedule of specific commitments.

There may be good reasons for a country to protect its domestic service providers involved in CDM or related projects. The country may believe that protecting its service providers involved in an emerging domestic technology, like the manufacture and installation of solar panels, is essential for meeting sustainable development goals, including reducing dependency on fossil fuels and extending the availability of electricity to isolated and rural populations. By acquiring additional capital through the sale of CERs, the country might be able to develop its domestic service capacity more quickly.

Like most WTO compliance questions, the validity of such an act would depend on the facts. Developing countries, such as Costa Rica, which recognise the potential benefits of participating in the CDM, have already begun producing their own greenhouse gas mitigation projects with the idea of lowering transaction costs and attracting foreign investment [41]. If such a developing country host allowed foreign service suppliers to develop projects, but subjected those suppliers to rules more onerous

than those to which it subjected its own project developers, then the home country could plausibly make a GATS claim that the CDM host was violating the national treatment provision by affording treatment less “favourable than that it accords to its own like services and service suppliers” [5, art.XVII.1]. The viability of the claim would depend on the complaining country’s ability to show that the host had effectively included CDM project services on its schedule of specific commitments. If the complainant could not meet that burden of proof, it would fail to state a claim upon which a WTO panel could recommend relief and the host would be under no obligation to extend national treatment to foreign CDM service suppliers.

4.3.6 *Domestic regulations*

Many Annex I and some non-Annex I countries have established national programs relating to the CDM’s ‘learning phase’, Activities Implemented Jointly (AIJ). For instance, the United States Initiative on Joint Implementation (USIJI) has developed guidelines for AIJ project participation under which it evaluates proposed projects and determines whether or not they will receive US approval [42]. In developing countries national programs promulgate project criteria to determine, *inter alia*, whether a proposed project comports with the country’s development and environmental priorities and whether it should in turn be approved [43]. As is the case in these pilot activities, the rules for CDM participation in both home and host countries will be determined not only by the COP/MOP as provided under the Protocol, but also by the individual national CDM programs of the prospective home and host participants.

As discussed above, in the section on national treatment, developing country governments may wish to tailor CDM rules to their own domestic needs, with a view to furthering their own sustainable development goals or increasing their capacity to participate in the Climate Convention, Protocol or CDM. For example, a host’s rules might protect an emerging domestic service sector in renewable energy technologies. The rules may make approval of foreign-developed projects contingent on a commitment to transfer technology beyond that offered as part of the project. Or the host’s rules might require project developers to give preference to local service sub-contractors, extend capacity building to local people outside the specific scope of the project, or give local business or government officials a significant role in determining how a project is managed and operated.

In some situations such requirements in national program rules could be interpreted as overt or disguised barriers to trade if they made it more difficult for a foreign CDM service provider to compete with other similarly situated service providers [44]. Depending on the facts of the individual case and the service sectors the host country had committed to liberalising, affected home countries could plausibly state GATS claims against a host on the grounds of host violations of the MFN, market access or national treatment obligations. ‘Defendant’ countries might defend their measures by first arguing that they did not impair a GATS-protected service. Second, they might assert that the measure does not actually violate the GATS commitment. Failing that, they might claim that the measure was “necessary to protect human, animal or plant life or health,” and that it was not applied to “constitute a means of arbitrary or unjustifiable discrimination” or a “disguised restriction on trade” [45].

Many of these ancillary or additional CDM requirements promulgated by domestic authorities could be beneficial from the point of view of fostering climate protection

and/or sustainable development. At the same time, others could be used as a surreptitious way to obtain an unfair advantage that might not further those objectives. Perhaps the best way to avoid future uncertainty and disagreements that could distract CDM participants from cooperatively realising the Protocol's goals would be for the COP and/or COP/MOP to adopt non-binding guidelines for domestic implementation of CDM programs. Guidelines would not require a Party to implement or administer its domestic program in a specific way. However, they would provide a sense of some of the means, including domestic preferences, that the Parties as a whole believed to be appropriate [46]. As virtually all WTO members are party to the Climate Convention (and hopefully will be Protocol Parties as well) it would be unlikely that a WTO member would use that body's dispute settlement mechanism to challenge another member's implementation of its domestic CDM program – especially when that program was operated under guidelines that the member had agreed to in the climate forum [47].

4.3.7 Domestic service monopolies

Despite GATS provisions that could theoretically qualify a host country's freedom to discriminate against foreign CDM project developers, hosts could feasibly employ the GATS monopoly exception to shut foreign developers out entirely, if they so desired. The GATS does not require members with domestic service monopolies to allow competition from foreign service suppliers [5, art.VIII]. However, a host's monopoly may not use its position to compete unfairly in a specific service commitment area that is beyond the scope of its monopoly rights [5, p.2]. Thus, a host's state-owned Department of Mines, that enjoyed exclusive power to control all mineral extraction in the country, would probably be acting beyond the scope of its monopoly power if it asserted a general right to exclude foreign service providers from domestic development of CDM projects. On the other hand, if the host's electric power generation and distribution were controlled by a state-owned utility, the utility could probably use its monopoly power to dominate the development and implementation of all electricity-related CDM projects undertaken in the country. So long as the asserted monopoly rights did not affect the supply of a service that had been previously covered by the host's specific commitments, the host country would likely have no obligation to give notice or allow foreign CDM developers to participate in the domestic CDM project development market.

4.3.8 Transparency and procedural protections

Among the most striking ways that the GATS and other WTO agreements departed from the status quo are its requirements that members afford each other transparency, notification and procedural protections regarding measures they take affecting trade. With limited exceptions, each member must publish or make publicly available "all relevant measures of general application which pertain to or affect the operation" of the GATS [5, art.III.1.2]. Because the country program rules of Protocol signatories could affect the operation of the trade in CDM project services, those rules may constitute measures which 'pertain to or affect the operation' of the GATS. Thus, regardless of any sunshine provisions the CDM may or may not eventually adopt, WTO members wishing to participate in the CDM as either hosts or home countries may be obliged to publish or make publicly available their country program rules. Moreover, the GATS transparency provision requires (except in emergency situations) all such rules to be published "at the

latest by the time of their entry into force” [5, p.1]. For CDM service providers, this requirement could lessen the possibility that country program rules might be adopted or changed abruptly or applied in an arbitrary or discriminatory manner.

Of even more importance to CDM participants are the GATS provisions giving service suppliers rights to procedural protections. Under the terms of the Protocol, a project sponsor desiring to develop a CDM project must obtain the approval of both the developer’s home country and the developing country host where the project will be located [2, art.12.5(a)]. In situations where the proposed project services could be interpreted as being included under the host’s schedule of specific commitments, the project applicant would be entitled under the GATS to timely processing of its application [5, art.VI.3]. Additionally, the GATS includes a general obligation (binding on all members regardless of their commitments on their national schedules) entitling all service suppliers to judicial, arbitral or administrative review of administrative decisions affecting trade in services, provided that such a requirement is not inconsistent with the constitutional or legal structure of the member [5, art.VI.2]. The GATS could thus provide most CDM project developers with a substantive right to protest a host country’s decisions when the developer is negatively affected by them, as well as a right to an objective and impartial hearing and, where justified, an appropriate remedy [5, art.VI.2].

These protections could give CDM project developers and service providers assurances of fair treatment and due process which could complement or even enhance those that they may receive directly through the international CDM rules. By increasing investor confidence, the GATS sunshine provisions could, in turn, stimulate greater financial flows to the CDM, allowing the mechanism to accomplish greater emissions reductions and technology transfer to developing countries. Implementing the protections could also place greater burdens on the resources of local CDM offices in non-Annex I countries. While enhanced transparency should benefit all CDM participants – Annex I and non-Annex I alike – the greatest direct benefits will probably accrue to foreign project developers. Consequently, all Annex I Parties should renew and act upon their commitment to provide developing country Parties with the “new and additional financial resources” that their compliance with the climate regime’s rules will require [1, art.4.3].

4.3.9 Subsidies

The GATS treats subsidies in a hortatory rather than legally binding manner. Instead of establishing rules governing the use of subsidies, Article XV lays out a framework for future negotiations “with a view to developing the necessary multilateral disciplines to avoid [the] trade distortive effects” subsidies may cause [48]. Thus, unlike trade in goods, trade in services under the GATS is not subject to binding rules regarding subsidisation [49].

However, the WTO could adopt binding GATS subsidy rules in the future. In that case, financial assistance to CDM project developers from their own governments might be viewed as a form of subsidy. Some European Union members, notably Norway and the Netherlands, have given financial support to the joint implementation component of investment projects [50]. A country’s assistance to its project developers might allow those developers to create CDM projects at lower cost than could unsubsidised developers. In the event the unsubsidised developers found themselves unable to compete in the CDM project service-supply market, their governments might make a case that the

unsubsidised developers had been seriously prejudiced by the subsidising government's actions [51].

The possibility of actual complaints like this will depend on the future shape of the rules for the CDM, the GATS, and the individual country programs. However, prohibiting a country from providing assistance to its nationals who want to develop CDM projects could have the effect of dampening overall participation in the CDM, especially in its early years. Once again, clear Protocol rules or guidelines could minimise the chances that this kind of 'chilling effect' would occur. Protocol negotiators should consider including a statement in the CDM guidelines acknowledging their intention not to view a Party's assistance to its nationals who are engaged in CDM project development as a trade subsidy that could have legally cognisable adverse effects on other Parties [52].

4.4 Financial services related to trade in CERs

This article has argued that trade in CERs should properly be viewed as trade in a form of licence and that CERs should thus not be considered within the scope of the GATT nor the GATS [53]. A separate analysis and conclusion applies to the CER trading system, which will likely include brokerage, advisory and ratings services and service providers, as well as exchanges that are involved in the buying, selling or trading of CERs [54].

The Financial Services Annex to the GATS establishes that all WTO members should extend the GATS' liberalised treatment of services to the financial service suppliers of other members. Financial services that are covered by the Annex include, *inter alia*:

"trading for own account or for account of customers ... the following: (C) derivative products including, but not limited to, futures and options; ... (E) transferable securities; (F) other negotiable instruments and financial assets, including bullion." [55]

It is not apparent whether the commercial trade in CERs would fall under these definitions. Securities are evidences of debts or property, while negotiable instruments are generally written promises to pay a certain sum of money at a certain time. If CERs are a form of licence they are arguably neither of these. Though they could very well constitute an asset to their holder they probably cannot be considered 'financial assets', which are ordinarily assets denominated or redeemable in money.

However, trading in options or contracts for the future delivery of CERs would represent trade in a kind of derivative product and, therefore, might come under the Annex definition and the scope of the GATS. Moreover, even if non-derivative trade in CERs is not covered by the Annex, those WTO members that have fully liberalised their financial sectors may be obliged to give such trading services full GATS protections [15, p.256].

These protections could mean that traders and exchanges based in any country could enter the market to act as brokers or advisers in the trade of CERs and/or their derivatives originating from any non-Annex I country [56]. However, the provisions of the Financial Services Annex should not mean that anyone will be free to own, or even hold, CERs. Emerging Protocol rules require all of the Protocol's tradable permits, including CERs, to be tracked at all times in the computerised registries set up by every Party who engages or allows its nationals to engage in trading [57].

As currently envisioned by the CDM draft rules, every Annex I Party will have a national registry in the form of an electronic database that shows the Party's actual holding of tradable permits at a given time. For those Parties who allow their entities to take part in the Kyoto mechanisms, each approved entity (i.e., each domestic citizen or company) will have an account that shows the permits it holds. These entity accounts will be electronically linked to their home Party's registry. When a private entity acquires or transfers a permit, the deal will not "close" until the entity records it in its account. When an acquisition and/or transfer is recorded, it will be immediately reflected in the Party's registry.

This real time accounting will facilitate evaluating the total amount of permits or allowances a Party holds and will protect the system from fraud, forgery or double-counting. Hence, it will be an essential component of the Protocol's compliance system. Under the terms of Protocol rules, only Parties will have registries and only their national entities will have accounts that feed into those registries. Thus, any trader whose home government is not Party to the Protocol will not be able to "own" CERs, though it may still be able to provide financial services relating to their trade.

5 Conclusion

By authorising investment, technology transfer, project development and emissions trading between developed and developing countries, the Kyoto Protocol's Clean Development Mechanism will present new opportunities and challenges for international trade and cooperation. This Article has identified and examined a few ways the CDM could be affected by international trade law – especially by the General Agreement on Trade in Services. Much of the Article's analysis has necessarily been speculative. As my colleague Jacob Werksman has stressed, we should be aware that these 'issue-spotting' exercises can have a tendency to exaggerate the theoretical potential for problems and, by doing so, could increase the possibility of actual disputes between countries [15, p.262].

The conclusions and recommendations of this Article are intended to have the opposite effect. First, the analysis concludes it is unlikely that the tradable allowances issued upon the certification of a CDM project's accrued emissions reductions could reasonably be considered products or services within the ambit of the GATT or GATS. Instead, they should be viewed as a kind of tradable licence or permit issued by the CDM Executive Board. This 'licence view' suggests that countries acting individually or collectively will have wide latitude to regulate CERs in ways they believe are appropriate, without concern that such treatment will be subject to WTO jurisdiction.

Second, many or all of the individual services that collectively constitute CDM project development are services that could be defined as falling under one or more of the categories identified in the list of services covered by the GATS. But two of the most important GATS provisions affecting the treatment of these services – the market access and national treatment obligations – are 'opt-in' commitments. Very few WTO members (and nearly all of them industrialised countries) have made commitments for the energy or environmental services sectors, which will arguably be among the most important service sectors for CDM projects [58]. Accordingly, it is likely that non-Annex I host countries would not at this time be required to extend market access or national treatment to CDM project services. This leaves a significant opportunity open for countries acting collectively within the climate and trade regimes – as well as individually when they

consider what services they may want to list among their GATS commitments – to take the initiative to ensure that the GATS enhances, rather than interferes with, the CDM's sustainable development objectives.

Third, instead of succumbing to a 'chilling effect' under which they refrain from adopting sustainable development rules, out of a vague fear that they could conflict with the WTO, countries can minimise the potential for such conflicts by providing as much clarity as possible in the Protocol and CDM rules. The challenge here will be to design the rules and guidelines carefully so there is no chance that a Party's domestic implementation is somehow considered *ultra vires* simply because it was not specifically articulated in the international guidelines.

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References and Notes

- 1 UN Framework Convention on Climate Change, 9 May 1992, 31 I.L.M. 849 (1992) (entered into force 21 Mar. 1994) [hereinafter Climate Convention or UNFCCC].
- 2 Kyoto Protocol to the United Nations Framework Convention on Climate Change, 10 Dec. 1997, 37 I.L.M. 32 (1998) [hereinafter Kyoto Protocol or Protocol].
- 3 In many cases, the investor and host may divide the CERs according to a mutually agreed formula.
- 4 See, e.g., United States – Restriction on Imports of Tuna, 30 I.L.M. 1594 (3 Sept. 1991) (unadopted) [*Tuna-Dolphin I*]; United States – Restriction on Imports of Tuna, 33 I.L.M. 839 (16 June 1994) (unadopted) [*Tuna-Dolphin II*]; United States – Standards for Reformulated and Conventional Gasoline, WT/DS2/R (29 Jan. 1996); European Community – Measures Concerning Meat and Meat Products (Hormones), Report of the Appellate Body, WT/DS26/AB/R, WT/DS48/AB/R (16 January 1998); United States – Import Prohibition on Certain Shrimp and Shrimp Products, WT/DS58/R (6 April 1998); European Community – Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/R (18 Sept. 2000).
- 5 General Agreement on Trade in Services (1994) WTO Agreement Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Legal Instruments – Results of the Uruguay Round, 15 Apr., 33 I.L.M. 1125, Annex 1B (hereinafter the GATS).
- 6 For an examination of the impacts of investment agreements on the CDM, see Werksman, J. *et al.* (2001) *Will International Investment Laws Obstruct Climate Protection Policies?*, Washington, DC, World Resources Institute.
- 7 Most energy-related CDM projects will be designed not only to accomplish emissions reductions, but also to produce something the non-Annex I host wants or needs. These things will generally be goods that may be subject to regulation under the GATT. See Wiser, G. (1999) 'The clean development mechanism versus the world trade organization: can free-market greenhouse gas emissions abatement survive free trade?', *Geo. Int. Env'tl. L. Rev.*, Vol. 11 pp.531, 588.
- 8 See, e.g., United States – Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R, Report of the Appellate Body, 185 (12 Oct. 1998).

- 9 Housman, R. and Goldberg, M. (1995) 'Legal principles in resolving conflicts between multilateral environmental agreements and the GATT/WTO', in R. Housman *et al.* (Eds.) *The Use of Trade Measures in Select Multilateral Environmental Agreement*, p.297, UNEP Environment and Trade Series No. 10.
- 10 See generally Preparations for the First Session of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol, Work Programme on Mechanisms, Annex: Modalities and Procedures for a Clean Development Mechanism, 6th Session, Agenda Item 7(c), U.N. Doc. FCCC/CP/2000/CRP.2/Add.1 (24 Nov. 2000).
- 11 General Agreement on Tariffs and Trade: Multilateral Trade Negotiations, WTO Agreement Embodying the Results of the Uruguay Round of Trade Negotiations, Sept. 1994, 33 U.N.T.S. 187 [hereinafter WTO Agreement].
- 12 General Agreement on Tariffs and Trade, opened for signature 30 Oct. 1947, 61 Stat. A5, 55 U.N.T.S. 187 (entered into force 1 Jan. 1948) [hereinafter GATT].
- 13 As amended by Annex 1A of the WTO Agreement and collectively called GATT 1994.
- 14 See WTO Agreement, Annex 1B, General Agreement on Trade in Services [hereinafter GATS]; id. Annex 1A, 2, Agreement on Subsidies and Countervailing Measures [hereinafter Subsidies Agreement]; id. Annex 1A, 7, Agreement on Trade-Related Aspects of Investment Measures [hereinafter TRIMS]; id. Annex 2, Understanding on Rules and Procedures Governing the Settlement of Disputes [hereinafter DSU]. Two other agreements that pertain to the treatment of goods under the GATT and have particularly important implications for environmental and health-related regulation are the Agreement on Sanitary and Phytosanitary Measures, id. Annex 1A, 4 [hereinafter SPS Agreement], and the Agreement on Technical Barriers to Trade, id. 6 [hereinafter TBT Agreement].
- 15 Werksman, J. (1999) 'Greenhouse gas emissions trading and the WTO', 8 *RECIEL* 251, 254 Blackwell, UK.
- 16 See section 4.1 below.
- 17 GATT art. I; GATS art. II.1.
- 18 Housman, R. and Van Dyke, B. (1995) 'Trade principles relevant to multilateral environmental agreements', in R. Housman *et al.* (Eds.) *The Use of Trade Measures in Select Multilateral Environmental Agreements* 25, 26, UNEP Environment and Trade Series No. 10.
- 19 Compare GATS art. XVI with GATT art. XI.
- 20 Compare Subsidies Agreement with GATS art. XV. Whereas the Subsidies Agreement prohibits certain kinds of subsidies of goods, authorizes dispute resolution when alleged subsidies are contested, and gives injured members the right to take retaliatory measures, the GATS subsidies provision merely suggests that members consider ways to avoid unnecessary subsidization of services, and provides only that a member considering itself to be harmed by the subsidy of another member "may request consultations on such matters. Such requests shall be accorded sympathetic consideration." GATS art. XV.2. However, because the GATS national treatment provisions of Art. XVII require each WTO member to accord foreign services and suppliers "treatment no less favourable" than that accorded to domestic services and suppliers, Art. XVII may be viewed as prohibiting a member from subsidizing domestic services and suppliers in ways that harm foreign services and providers.
- 21 See, e.g., GATT art. X; GATS art. III. The WTO secretariat has prepared a list of all notification requirements included under the WTO Agreements. Working Group on Notification Obligations and Procedures, *Notifications Required from WTO Members Under Agreements in Annex 1A of the WTO Agreement*, WTO Doc. No. G/NOP/W/2/Rev.1 25 Sept. 1995.
- 22 See, e.g., GATT art. X.1; GATS art. III.1.
- 23 See, e.g., TBT Agreement, *supra* note 18, art. 2.9.
- 24 Note that WTO members include Hong Kong (which is a 'Special Administrative Region' of the People's Republic of China) and the supra-national European Community. If a CDM host country were not a WTO member (as is currently still the case with the People's Republic of China), the host would not be able to lodge a WTO-based complaint against a home country

member and a home country member could not initiate such a complaint against the non-member host. Most of the analysis in this Part assumes that both home and host countries are WTO members and thus subject to the strictures of the GATT and GATS.

- 25 Goldberg, D. (1998) *Carbon Conservation: Climate Change, Forests and the Clean Development Mechanism*, Washington, DC: Center for International Environmental Law.
- 26 *Black's Law Dictionary* 624, 1088 (1979) *The Random House Dictionary of the English Language* 1148 (unabridged ed. 1966) (defining product as "a thing produced by labor").
- 27 Case C-393/92, Municipality of Almelo v. NV Energiebedrijf Ijsselmij, 1994 E.C.R. I-1477.
- 28 *Black's Law Dictionary* 829 (1979).
- 29 GATT Secretariat (1991) *Services Sectoral Classification List*, MTN.GNS/W/120.
- 30 Clean Air Act, Subchapter IV-A (1996) *Acid Deposition Control*, 42 U.S.C.A. §§ 7651 to 7651o, West.
- 31 Even if CERs are viewed as permits or licenses, one might argue that a government's treatment of them could have an effect on the ability of a broker to offer CER-related financial services and thus might be considered a 'measure' that could be subject to the GATS. Moreover, by hosting a CDM project, a non-Annex I country may be deemed to be performing a 'de-carbonization' or emissions reduction service for Annex I countries. One might argue that CERs, as signifiers of this 'service' could be covered by the GATS. See Wisner, *supra* note 6, at 558-6. Alternatively, one might assert that the issuance and sale of CERs should fall under the GATS because they could affect the value of reduction services the host may want to offer. To the extent this state-to-state activity can be characterised as a service, it arguably could be one 'supplied in the exercise of governmental authority' and thus not within the ambit of the GATS. See GATS art. I.3(b). While these questions may merit in-depth analysis, they are beyond the scope of this Article.
- 32 GATS art. I, 1, 2(a), (d).
- 33 Services Sectoral Classification List, *supra* note 29.
- 34 Lee, J. (1990) 'Construction', in P.A. Messerlin and K.P. Sauvant (Eds.) *The Uruguay Round: Services in the World Economy*, The World Bank, pp.69-71.
- 35 Mallampally, P. (1990) 'Professional services', in P.A. Messerlin and K.P. Sauvant (Eds.) *The Uruguay Round: Services in the World Economy*, The World Bank, p.94.
- 36 This priority would reflect application of the customary law principle of *lex specialis*, which provides that in the event of a conflict between two agreements on the same subject matter, the more specific agreement should have priority over the more general agreement as to the matters covered by the specific agreement. See Housman, *supra* note 8, p.311.
- 37 Id. art. II.2. Exemptions had to be taken by the entry into force of the WTO Agreement. See id. annex on art. II exemptions.
- 38 GATS arts. XVI, XVII. WTO members have sought to broaden the scope of the GATS' market access provisions by negotiating annexes requiring members to extend market access to specific service sectors. To date, annexes for basic telecommunications and financial services have been adopted and have entered into force. See GATS Annex on Financial Services, adopted 14 Nov. 1997, entered into force 1 Mar. 1999; GATS Annex on Telecommunications, adopted 30 Apr. 1997, entered into force 5 Feb.1998. Both of these documents are available at <www.wto.org/english/docs_e/legal_e/26-gats.pdf>. Discussions to include energy and environmental services are ongoing.
- 39 See 'Services related to the development of CDM projects', *supra* Part 4.3.1.
- 40 Note that a member can elect to make national treatment commitments without making equivalent market access commitments. The question of how to deal with such a situation is currently being discussed in the Committee on Classification.
- 41 Chacon, C. *et al.* (1998) 'Pilot phase joint implementation projects in Costa Rica: a case study', *Carbon Conservation: Climate Change, Forests and the Clean Development Mechanism*, Washington, DC: Center for International Environmental Law.

- 42 Announcement of Groundrules for US Initiative on Joint Implementation, 59 Fed. Reg. 28, p.442 (1994).
- 43 See, e.g., Mexico's AIJ program, *Joint Implementation Q*, (Foundation JIN, Groningen, Neth.) Sept. 1997, p.2; Guatemala establishes office for AIJ, *Joint Implementation Q*, Foundation JIN, Groningen, Netherlands, Sept. 1997, p.3.
- 44 Measures affecting trade in services (and thus falling within the ambit of the GATS) include measures taken by "central, regional or local governments and authorities ... GATS art. I.3. Measures taken by a CDM national program would accordingly be treated under the GATS as measures taken by the program's central government.
- 45 GATS art. XIV(b). The meaning of the 'necessary' clause in the GATT (which is similar to the GATS clause) has been the subject of numerous high-profile GATT and WTO cases falling within the 'trade and environment' nexus, as well as extensive analysis and commentary by students of both fields. See, e.g., Tuna-Dolphin I, *supra* note 4; Tuna-Dolphin II, *supra* note 4; Reformulated Gasoline Case, *supra* note 4; European Communities – Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/R (18 Sept. 2000); Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef, WT/DS161/AB/R & WT/DS169/AB/R (11 Dec. 2000); see also Housman, R. and Zaelke, D. (1992) The collision of the environment and trade: the GATT tuna/dolphin decision, 22 *Env'tl. L. Rep.* 10268; McDonald, J. (1992) Trade and the environment: greening the GATT: harmonizing free trade and environmental protection in the new world order, 23 *Environmental Law* 397; Housman, R. *et al.* (Eds.) (1995) *The Use of Trade Measures in Select Multilateral Environmental Agreements*, UNEP Environment and Trade Series No. 10; Miller, C. and Croston, J. (1999) 'WTO scrutiny v. environmental objectives: assessment of the international dolphin conservation program act', 37 *Am. Bus. L.J.* 73.
- 46 Both the guidelines and the Parties' intent in promulgating them would have to be carefully spelled out. Otherwise, they could carry the risk of creating a presumption that a national implementation rule that was not specifically identified among the guidelines was somehow a violation of trade rules.
- 47 Because Parties to the Climate Convention have never been able to agree upon written rules of procedure that would govern voting, the general rule that all decisions must be taken by consensus still applies. Accordingly, any decision taken by the Conference of the Parties may be presumed to have been consented to by all Parties.
- 48 GATS art. XV.1. WTO members are currently negotiating the GATS subsidies terms as part of the GATS 'built in' agenda.
- 49 However, the GATS national treatment requirement could be viewed as precluding the use of subsidies if they impair that obligation.
- 50 Niederberger, A. (1997) 'Swiss AIJ pilot program', *Joint Implementation Q*, Foundation JIN, Groningen, Netherlands, July, p.2; Catrinus J. Jepma (Ed.) (1997) 'Netherlands', *Ji registration and certification procedure approved*, *Joint Implementation Q*, Foundation JIN, Groningen, Netherlands, July, p.3.
- 51 See Subsidies Agreement arts. 5, 6. By referring here to the terms of the Subsidies Agreement (which applies to trade in goods), I am consciously assuming that an elaborated subsidy rule for the GATS might operate in a similar fashion.
- 52 The Climate Convention includes the agreement that "[m]easures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade." UNFCCC art. 3.5. Rather than leaving this provision open for possible interpretation by a WTO dispute settlement panel, the COP could take the initiative to provide its own interpretation. Parties could memorialize their views on the subsidy question by including in the CDM text: "Parties agree that a Party's assistance, financial or otherwise, to its private or governmental entities that are engaged in CDM project development shall be presumed not to be a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade."
- 53 See section 4.2.

- 54 This prediction assumes that a secondary market in CERs will be allowed under Protocol rules.
- 55 GATS Financial Services Annex, paragraph 5.
- 56 Brack, D. *et al.* (2000) *International Trade and Climate Change Policies*, Vol. 120, London, Earthscan Publishers.
- 57 UNFCCC (2000) Registries: Draft Conclusions by the Chairmen of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation, FCCC/SB/2000/CRP.22; see also Wisner, G. and Goldberg, D. (2000) 'Hybrid liability under the Kyoto Protocol', 1 *Int'l & Comp. Envtl. L.* 1, Washington: American University.
- 58 For instance, only 48 members, most of whom are OECD countries, have taken commitments in the environmental sector. WTO, Council for Trade in Services (2000) *Communication from the European Communities and Their Member States: GATS 2000: Environmental Services 1*, WTO Doc. No. S/CSS/W/38 (2000).