
Committee on Trade and Environment

**DISCUSSION PAPER ON THE ENVIRONMENTAL EFFECTS
OF SERVICES TRADE LIBERALIZATION**

Items 6 and 9

Note by the Secretariat

This document has been prepared under the Secretariat's own responsibility and without prejudice to the positions of Members and to their rights and obligations under the WTO

I. INTRODUCTION

1. At the October 2001 meeting of the CTE, the WTO Secretariat was requested to prepare a background document on the effects of services trade liberalization on the environment.¹ This paper looks at three selected areas: tourism, land freight transport (inter-urban) and environmental services. Subsequently, it briefly considers the horizontal issue of how to assess environmental effects of services trade liberalization. The objective of the paper is to stimulate debate in the CTE under Items 9 and 6 of the CTE Work Programme (Annex).²

2. As a Secretariat note, this document does not attempt to assess the environmental effects of services trade liberalization. Such an assessment is best done at the national level, whether by governmental bodies or others. While the optimal scenario would have been to have a number of completed national assessments, specific to the issue at hand, such studies are difficult to come by. This has been a significant constraint. Few national assessments of trade negotiations are specific both to services trade liberalization *and* potential associated environmental effects. Furthermore, the diversity of services trade is likely to imply that environmental effects – both positive and negative – may differ significantly between sectors, and it is difficult to attempt to identify clear-cut horizontal issues.

3. This lies behind the choice of looking at specific cases, even within services sectors. The selection of cases was based on their usefulness in exposing potential interlinkages between services trade liberalization and the environment. This choice should not be seen as an indication of the non-relevance of other sectors, or sub-sectors.

¹ WT/CTE/M/28, 31 October 2001, *Report of the Meeting held on 4 October 2001*, Note by the Secretariat, paragraphs 5-13.

² While the request for this paper was made under Item 9, it also has a bearing on Item 6 and it is therefore circulated under both these items. This document does not consider the legal aspects of the relationship between Paragraph (b) of Article XIV of the GATS and Article XX of GATT 1994. This was considered in more detail in a previous Secretariat note (WT/CTE/W/9 of June 1995).

II. SERVICES TRADE

4. Unlike goods, the supply of services is not subdivided into a precise multi-digit tariff-line classification system such as the Harmonized System. Nor is its trade as easily tracked across borders. Under GATS, services trade is generally subdivided under 12 sectors and the trade itself is characterized by four modes of supply (Tables 1 and 2, below). Barriers to trade typically take the form of market access and national treatment limitations (such as requirements relating to government approval or authorisation). Liberalization entails the progressive removal of these barriers.

Table 1: Service Sectors	
1	business (including professional and computer) services
2	communication services
3	construction and related engineering services
4	distribution services
5	educational services
6	environmental services
7	financial (insurance and banking) services
8	health-related and social services
9	tourism and travel-related services
10	recreational, cultural and sporting services
11	transport services
12	other services not included elsewhere
Source: Services Sectoral Classification List, Sector (A-D) in MTN.GNS/W/120, 10 July 1991	

Table 2: Modes of Supply	
"Mode 1"	<i>cross-border supply</i> (the service itself crosses the national border, such as the supply of advice by electronic means)
"Mode 2"	<i>consumption abroad</i> (for example, the consumer travels abroad for tourism, education or medical treatment)
"Mode 3"	<i>commercial presence</i> (for example, the establishment of branch offices or agencies of a foreign supplier in the territory of another WTO Member; note that this does not necessarily require the presence of foreigners)
"Mode 4"	<i>presence of natural persons</i> (the admission of foreign nationals to another country to provide services there)

5. While the nature of services trade liberalization is not dealt with here,³ four general contextual points are made before considering the specific examples.

³ For more detail on the ongoing negotiations, see the "Services" pages at www.wto.org. A useful source reviewing the literature on the relationship between services and the environment is: Andrew, D., *Services trade liberalization: assessing the environmental effects*, in *The Environmental Effects of Free Trade*, pp.361-389, North American Commission for Environmental Cooperation (NACEC), Montreal, 2002.

6. Current context. Members have agreed, *inter alia*, that the direction of the on-going negotiations is one of progressive liberalization. These negotiations are taking place within the existing structure of the GATS and with the existing schedules as the starting point. It is recalled that the existing structure of the GATS allows countries flexibility in terms of the scheduling of commitments, as well as with respect to the conditions that governments chose to impose on foreign suppliers of services. Services trade liberalization is to take place with due respect for national policy objectives, the level of development and the size of economies of individual Members, both overall and in individual sectors.⁴

7. Regulatory adjustment. While liberalization involves the progressive removal of barriers to services supply, this does not necessarily diminish the role of government. Quite to the contrary, liberalization might even sharpen the need for appropriate regulation so as to achieve certain policy objectives. Environmental policy, for instance, might strive to mitigate negative environmental effects of services trade liberalization or enhance such positive effects, or both. In this sense, the environmental impact of liberalization in any individual sector may ultimately depend on whether or not liberalization proceeds under current regulatory conditions or with regulatory adjustments. New regulations may be needed to ensure continued compliance with environmental policy objectives when trade is liberalised.⁵ If appropriate regulation is in place, and prices reflect the full cost of production (including environmental cost), liberalization should benefit the environment because it leads to more efficient resource use.

8. A strong link between services liberalization and the environment may not be sector-specific (which is the focus of this paper), but depend also on a chain of causation that runs from liberalization to development and from development to environment. Ultimately, positive environmental impact will depend on the availability of resources a society is able to invest to protect the environment. In turn, resource availability is determined by the level of development. In other words, there is a positive link between freer trade and economic growth which can lead to reduced poverty and higher standards of living, including a better environment.

9. Attributing potential environmental effects. It is difficult to distinguish between on the one hand those environmental effects which may be attributable to services trade, and, on the other hand, those environmental effects which may arise due to other factors. Once the link to services trade has been established, a second and separate consideration is whether *liberalization* thereof makes things better or worse. Yet another step in this exercise is estimating the extent to which services trade liberalization can be attributed to liberalization under GATS. For the purposes of this paper the vehicle for liberalization is not key: it is the environmental effect arising from services trade liberalization, irrespective of its origin, which is of interest. It could be equally relevant to consider the environmental effects – both positive and negative – of *not* liberalizing services trade.

10. Link to goods. While a supplied service is generally intangible, its direct environmental impact could be measured by the effect it has on the consumption of associated goods. With respect to transport, for example, consumption of fuel causes a negative environmental effect (CO₂ emissions). On the other hand, the export of a service may bring with it know-how and technology which leads to more efficient and environmentally friendly fuel extraction. Furthermore, the provision of some services may be linked to that of goods. In considering the environmental effects of services trade liberalization, effects that arise from the supply and consumption of associated goods need to be kept in mind.

⁴ S/L/93, 29 March 2001, Trade in Services, *Guidelines And Procedures For The Negotiations On Trade In Services*, paragraph 14.

⁵ For more on services assessment *per se* see S/CSS/W/117, 15 November 2001, Council for Trade in Services, Special Session, *Assessment Of Services Liberalization: Potentially Relevant Considerations And Criteria*, Note by the Secretariat, paragraph 11.

III. SELECTED EXAMPLES

1. Tourism

11. In a 1998 Secretariat note, it was noted that environmental problems were an important challenge facing the tourism industry.⁶ Tourism is one of the largest industries in the world and while growth was affected by the events in 2001, the World Tourism Organization (hereafter "WTO/OMT") expects a recovery in 2002.⁷ In the debate on tourism, "sustainability" has grown in importance.

12. "Sustainable tourism" is defined as one that:

"meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems".⁸

13. At the 1992 Rio UN Conference on Environment and Development, tourism was not an issue. But in September 2002, at the World Summit on Sustainable Development (WSSD) in Johannesburg, tourism received considerably more attention and the WTO/OMT launched a publication on sustainable tourism and the alleviation of poverty.⁹ In recognition of the growing importance of the issue, the United Nations designated the year 2002 as the International Year of Ecotourism. Ecotourism can be seen as *one* instrument to achieve the more ample goal of sustainable tourism; it encompasses the notion of a contribution, or direct promotion of nature conservation.¹⁰ As a sector within the tourism industry, it has grown rapidly.

14. The concept of sustainable tourism includes three aspects: environmental, socio-cultural and economic impacts of tourism. Focusing on the environmental impact, one of the basic threats of expanded tourism activities comes from added pressure on natural resources associated with additional consumption. Although this threat is relevant to several environmental media – be it air, water, land, wild fauna or flora – biodiversity is a key area of concern.¹¹ The Convention on Biological Diversity (CBD) and the United Nations Environment Programme (UNEP) have jointly developed draft guidelines for activities related to sustainable tourism in this respect. These guidelines note, for instance, that "to be sustainable, tourism should be managed within the carrying capacity and limits of acceptable change for ecosystem ... [t]ourism should be restricted, and where necessary prevented, in ecologically sensitive areas".¹²

15. Having said the above, the tourist industry's potential contribution to sustainable development, particularly in developing countries, is not in question. Nor is the policy objective of protecting the environment. But there is the obvious point that damage done to the very environment which is often at the heart of the tourists' attraction will, at the end of the day, affect the viability of the sector in the long term. Hence the issue becomes one of finding ways and means of taking this concern into account while removing obstacles in international trade in a manner consistent with the goal of progressive liberalization in the services sector.

⁶ S/C/W/51, 23 September 1998, Council for Trade in Services, *Tourism Services*, Background Note by the WTO Secretariat, paragraph 3.

⁷ *A year after "11-S": climbing towards recovery*, News Release from the WTO/OMT, 9 September 2002, Madrid, Spain (www.world-tourism.org).

⁸ WTO/OMT definition.

⁹ For more information on the publication see www.world-tourism.org

¹⁰ For definitions on eco-tourism see the joint publication of UNEP and the International Ecotourism Society: *Ecotourism: Principles, Practices & Policies for Sustainability*, Megan Epler Wood, UNEP, 2002. More useful information on ecotourism is contained in the Final Report of *The World Ecotourism Summit*, Québec, Canada, 19-22 May 2002 (www.ecotourism2002.org).

¹¹ For more detail, see *Environmental Impacts of Tourism* at UNEP's website at: <http://www.unep.org/pc/tourism/sust-tourism/>.

¹² *Draft International Guidelines For Activities Related To Sustainable Tourism Development In Vulnerable Terrestrial, Marine And Coastal Ecosystems And Habitats Of Major Importance For Biological Diversity And Protected Areas, Including Fragile Riparian And Mountain Ecosystems*, contained in Annex 1 of the *Report Of The Workshop On Biological Diversity And Tourism*, Santo Domingo, 4-7 June 2001, UNEP/CBD/WS-Tourism/4. See, in particular, Guideline 6 on Impact Management for the text quoted here. A summary of these Guidelines is contained in: <http://www.biodiv.org/programmes/socio-eco/tourism/guidelines.asp>.

16. It is perhaps interesting that a study by the International Institute for Environment and Development (IIED) on sustainable trade, addressing *inter alia* the tourist sector, found among its conclusions that the market appeared to play little role in stimulating social and environmental responsibility, and that legislation appeared to be a greater driver in this respect.¹³ Along the same lines, the CBD notes in its Decision on Biological Diversity and Tourism, that self-regulation of the tourism industry for sustainable use of biological resources has only rarely been successful.¹⁴ Hence, the promotion of adequate regulations and harmonized approaches could in itself play a key role in promoting – and thereby enhancing – sustainable tourism.

17. Regarding harmonized approaches, the WTO/OMT has developed a "Global Code of Ethics for Tourism"¹⁵ which is aimed at, *inter alia*, minimizing the negative impacts of tourism on the environment. This was included in their contribution to the WSSD in Johannesburg. Awareness-raising has been identified as an important tool in this respect, both at the level of the consumer in the originating country – as well as local authorities in the destination country – to accelerate the implementation of sustainable development in the tourism sector. The WSSD Plan of Implementation, adopted in Johannesburg in September 2002, in promoting sustainable tourism, contains actions aimed at stimulating awareness and the diversification of economies, including through the facilitation of access to markets.¹⁶

18. The term "leakage" of profits often arises in this context. "Leakage" of profits is described by the UNCTAD as a process "whereby part of the foreign exchange earnings generated by tourism, rather than being retained by tourist-receiving countries, is either retained by tourist-generating countries or remitted back to them".¹⁷ The concern here is that such leakage should not lead to reduced resources available for environmental protection. Ideally, the exact opposite should be the case: to maintain sustainability, some benefits should be re-invested in the maintenance of the environmental resource being exploited thereby harnessing some proportion of the tourism resources to this end. "Leakage" is not exclusively relevant to services trade – it is equally relevant to goods. In considering whether a country is made better or worse off because of increased tourism, a more relevant question may relate to the level of net earnings which remain in the destination country. A WWF study on the environmental and social effects of liberalization of tourism services concluded that the impacts on sustainable development from such liberalization would be *both* positive and negative.¹⁸ Hence, it is the net effect which is interesting. Important in this context is the extent to which both foreign and local operators are accountable for environmental costs. The host country's regulatory framework – and enforcement thereof – will be a significant factor in this regard.

19. Turning to the on-going negotiations, compared to other services sectors, tourism is generally more liberalised, with a relatively high level of commitments under GATS. Several developing countries attribute considerable importance to the sector for their economy and there have been calls for broader and more in-depth commitments, particularly in Mode 2 (consumption abroad) and Mode 3 (commercial presence).¹⁹ At the same time, the need for flexibility to address environmental concerns has been called for. For example, Kenya notes, in its proposal on services, the right of Members in the GATS to use necessary flexibility to pursue legitimate policy objectives such as the encouragement of eco-tourism for sustainable development.²⁰ Cuba stresses that "liberalisation of tourism services should not give rise to contradictions with national policies with regard to environment preservation".²¹ Other Members are more general but the fundamental point is the

¹³ *Overview Report - Stimulating Sustainable Trade, Phase 2*, Nick Robins and Tom Fox eds., International Institute for Environment and Development (IIED), November 2000, UK. See in particular the section on Tourism in South Africa.

¹⁴ CBD, Decision V/25 on *Biological Diversity and Tourism*, Adopted By The Conference Of The Parties To The Convention On Biological Diversity, COP5, Nairobi, 15-26 May 2000, see in particular paragraph 6 under "B. Tourism and environment".

¹⁵ Approved in October 1999 by the Members of the WTO/OMT at their 13th General Assembly, Santiago, Chile.

¹⁶ WSSD Plan of Implementation, paragraph 41.

¹⁷ *Report of Expert Meeting on Strengthening the Capacity for Expanding the Tourism Sector in Developing Countries ...*, UNCTAD, Geneva, 8-10 June 1998, see in particular paragraph 7 of the Chairperson's Summary.

¹⁸ Juda, N. and S. Richardson (2001), *Preliminary assessment of the environmental and social effects of liberalisation in tourism services*, Gland: WWF, WWF International Discussion Paper.

¹⁹ See, for example, the proposals from Costa Rica (S/CSS/W/128), Mercosur (Argentina, Brazil, Paraguay and Uruguay, in S/CSS/W/125) and Cuba (TN/S/W/1).

²⁰ Kenya in S/CSS/W/109, paragraph 10.

²¹ Cuba in TN/S/W1, paragraph 10.

same.²² Members may wish to discuss to what extent current rules are a constraint in this regard, or whether the constraints lie elsewhere.

2. Land freight transport (inter-urban)

20. The transport sector covers a wide range of activities involving the movement of goods or passengers over land, in the air, or at sea. The contribution transport makes to the efficient production and allocation of resources is not questioned. International transport is what makes trade possible and an efficient use of resources is in itself beneficial to the environment. As transport is an activity that is bound to increase, it matters, from an environmental point of view, *how* this growth takes place. Unlike what was the case for tourism, Agenda 21 contains a section which directly addresses transportation (in the context of the protection of the atmosphere). Therein it is stressed that transportation has an essential role to play in economic and social development and that transportation needs would undoubtedly increase. But Agenda 21 also points at the environmental challenges: *inter alia*, the need to limit, reduce or control harmful emissions and other adverse environmental effects of the transport sector.²³

21. While there is a wealth of information regarding negative environmental effects resulting from transport, there is not a vast number of national assessments of services trade liberalization in the transport sector which address potential links between the two. One significant difficulty, again, is to distinguish between increases in freight transport due to trade liberalization and increases due to other reasons, such as overall economic growth. Ideally, one would analyse the transport sector by constructing a matrix with the mode of transport on one axis (air, land and sea) and the environmental effects on the other (i.e., consumption of fossil fuels that contribute to CO₂ emissions, noise, biodiversity loss, introduction of invasive species). But that would go beyond the scope of this paper.

22. When comparing various modes of freight transport, the OECD concluded, in 1997, that energy use and air pollutant levels were markedly higher for trucking than for other modes of freight transport (being air, shipping and rail).²⁴ Guided by this, and for the purpose of illustrating the issue, we focus on one row of that imaginary matrix: inter-urban freight transport over land and related environmental concerns. This is not to say that there may not be other modes of transport – along with associated environmental effects – also worth exploring.²⁵

23. Using an "Analytical Framework",²⁶ a study on "NAFTA Transportation Corridors"²⁷ was undertaken by the North American Commission for Environmental Cooperation (NACEC) to examine environment-related shifts along two specific trans-boundary border regions between Mexico, Canada and the United States.²⁸ It analysed environmental indicators for air, water, biodiversity and "quality of life". The study noted that the pace of environmental protection related to NAFTA transportation corridors had lagged behind that of trade. It questioned why highway expansion activities rather than rail improvements were being pursued. It also emphasized the need to better understand, *inter alia*,

²² For examples, see Switzerland in S/CSS/W/79, paragraph 14 or the point made by the United States in S/CSS/W/31, paragraph 6 and reiterated in S/CSS/M/13, paragraph 303.

²³ Agenda 21, Chapter 9 on "Protection Of The Atmosphere", Section "B. Promoting sustainable development" contains a section on "Transportation".

²⁴ *Freight and the Environment: Effects of trade liberalization and transport sector reforms*, OECD, 1997, Paris, p.12.

²⁵ For more detail on environmental effects linked to transport, see UNEP at <http://www.uneptie.org/energy/act/tp/index.htm>.

²⁶ The Analytical Framework is a methodology designed, *inter alia*, to develop an understanding of the connections between trade and the environment and to develop policy tools to better mitigate negative impacts and maximize positive ones. It was developed by the North American Commission for Environmental Cooperation (NACEC) assisted by a NAFTA Effects Project Team, in order to consider the environmental effects of NAFTA. The NACEC is an international organization created by Canada, Mexico and the United States under the North American Agreement on Environmental Cooperation (NAAEC). It was established to address regional environmental concerns, help prevent potential trade and environmental conflicts, and promote the effective enforcement of environmental law. The Agreement complements the environmental provisions of the North American Free Trade Agreement (NAFTA). The Analytical Framework is available at www.cec.org.

²⁷ *NAFTA Transportation Corridors: Approaches to Assessing Environmental Impacts and Alternatives*, by Sierra Club and Shelia Holbrook-White, Texas Citizen Fund, with technical support from WWF-US, in *The Environmental Effects of Free Trade*, NACEC, Montreal, 2002.

²⁸ The study is specific to two case studies of the most heavily impacted border communities: Laredo, Texas/Nuevo Laredo, Tamaulipas on the US/Mexican border and Detroit, Michigan/Windsor, Ontario on the US/Canada border.

what barriers might exist (economic, regulatory, etc.) which limited the use of alternative modes of transport.

24. Looking at the liberalization of the transport sector in North America, the OECD²⁹ noted among its conclusions that although environmental impacts of transportation almost always increased with the volume of goods transported, it was possible that when trade was liberalized the environmental impact *per unit of consumption* would decrease due to the use of a more efficient mix of resources, technology and transportation. The report noted, for instance, that the use of energy by rail freight in the United States had declined significantly from 1980 to 1993, while rail ton-miles had increased. This was in part due to the use of more efficient locomotives and improved infrastructure.

25. A separate study³⁰ on Europe painted a bleaker picture. It concluded that EC policy had been implemented in a manner that had favoured the environmentally *less* friendly modes of transport and that environmental advantages of rail and water ways had not been transformed into market advantages. However, efforts are currently underway to bring change to the common transport policy. The European Commission's White Paper on "European Transport Policy for 2010: Time to Decide"³¹ attempts to adapt the common transport policy to the requirements of sustainable development. Among the proposed specific measures are guidelines aimed at revitalizing the railways sector, including efforts to bolster competition between railway companies both at the national as well as international level.

26. The Norwegian Ministry of Foreign Affairs has completed an assessment on the environmental consequences of trade liberalization in the transport sector.³² Their report concludes that the likelihood of negative environmental effects resulting from the ongoing rounds of negotiations "seems small". However, along the lines of the points made above, possible negative effects may arise if liberalization distorts relative competitiveness in favour of more road transportation. On the positive side, liberalization could lead to more effective employment of transport capacity.

27. While the environmental effects of services trade liberalization in the transport sector have not been a major issue in the on-going GATS negotiations, on a general note, the European Communities recalls in its transport proposal the right to regulate in pursuance of non-trade objectives such as safety, *environment* and social cohesion.³³

28. The above has provided an example of the importance of regulatory adjustments along with liberalization. Environmental impact of liberalization can be expected to depend on whether or not liberalization proceeds under status quo regulatory conditions or with regulatory adjustments. For example, to the extent that transport activities lead to the consumption of fossil fuels and thereby contribute to CO₂ emissions, there is a negative environmental effect. And as international freight transport is not likely to diminish, this puts the spotlight on technology. The industrial development of fuel efficient engines and advanced exhaust gas treatment will – and have – countered some of the negative environmental effects. But industry responds to incentives. Regulatory measures, including the setting of standards, and the use of taxes, could help creating the incentives (and removing the disincentives) for the right "mix" of transport modes which could address legitimate environmental concerns.

²⁹ *Liberalization in the Transport Sector in North America*, OECD, 1997, Paris, in particular p.5 and 23.

³⁰ *Liberalization and Structural Reform in the Freight Transport Sector in Europe*, OECD, 1997, Paris, pp.41-43.

³¹ See: http://europa.eu.int/comm/energy_transport/en/lb_en.html.

³² *Miljøkonsekvenser av mer liberal handel med transporttjenester*, Notat 92/01, Econ Senter for økonomisk analyse, Oslo, March 2002. Note that this study is mostly in Norwegian. However, it contains an English summary. It is available from the Norwegian Ministry of Foreign Affairs.

³³ Communication From The European Communities, *GATS 2000: Transport services*, S/CSS/W/41, 22 December 2000, paragraph 29. See also the general point in S/CSS/W/32, *GATS 2000: Sector Proposals*, 22 December 2000, paragraph 6.

3. Environmental Services

29. Before considering what environmental services are, it is useful to look at the definition of the environmental *goods and services* industry itself. The OECD/Eurostat definition reads as follows:

"The environmental goods and services industry consists of activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and services that reduce environmental risk and minimise pollution and resource use".³⁴

30. In other words, environmental services is *one* segment of the environmental industry.³⁵ The global environmental industry (including goods and services) was estimated at US\$453 billion in 1996, growing to 522 billion in 2000 and 540 billion in 2001 (the services part of this was about half). The largest markets are in the United States, Western Europe and Japan, but the strongest growth is taking place elsewhere, particularly in developing country regions.³⁶ As the market for international trade in environmental services has grown, the focus on barriers to such trade has sharpened, in particular with respect to limitations on commercial presence (Mode 3) and the employment of nationals of a company's home country (Mode 4). Along with this trend comes a growing debate on the role of government and, more broadly, the social, developmental and environmental effects of such liberalization.³⁷

31. Having asserted now that environmental services is *one* part of the industry, the next issue is the characterization of the environmental services sector itself. This is a less simple task. The focus of the current GATS classification, which dates back to 1991, is on pollution control and waste management (sewage, refuse disposal, sanitation and similar services and "other").³⁸ Since 1991, there has been a significant shift in demand away from these traditional "end-of-pipe" solutions and towards those services related to prevention, control and monitoring. In the ongoing negotiations, some Members have called for a classification which would better reflect this.³⁹ It is noted here that irrespective of how environmental services are classified, governmental services which are not supplied on a commercial or competitive basis are not subject to the GATS. They are, thus, outside the scope of the current negotiations.⁴⁰

32. As classification is not the main issue here for the purposes of this note, we turn to the environmental effects.⁴¹ It could be argued that by their very nature, environmental services have a positive effect on the environment as the service itself is about delivering improved environmental quality. Moreover, national legislation in some countries could be an important driver for industry to build up knowledge and expertise in this area. To the extent that international trade entails transfer of such technology and know how – and greater access to the end-product, i.e., clean water, reduced wastage, recycling – the reduction of barriers to such trade is intrinsically positive to environmental

³⁴ *The Environmental Goods & Services Industry, Manual for Data Collection and Analysis*, OECD/Eurostat, 1999, p.9.

³⁵ Other business activities within the environmental goods and services industry includes equipment manufacturing, research and development, engineering services and construction and installation of facilities (*Supra*, p.17).

³⁶ Environmental Business International (EBI), San Diego, United States.

³⁷ Due to the "public good" nature of this type of service (sewage and refuse disposal, for example), and high level of investment required (i.e., for distribution networks) this sector lends itself to monopoly and has traditionally had a high level of government involvement.

³⁸ *Services Sectoral Classification List*, Sector (A-D) in MTN.GNS/W/120, 10 July 1991. Note that the use of this classification, however, is not mandatory.

³⁹ The European Communities, for instance, have called for a classification which would be broader and reflect the environmental media (such as water, air, solids and hazardous wastes), rather than the type of service itself (sewage, refuse disposal) (S/CSS/W/38). Other Members focus less on the need to change the current list of "core" services contained in the Services Sectoral Classification List (W/120) while recognizing that there are *related* services found elsewhere that are important to the delivery of environmental services (see, for example, Canada in S/CSS/W/51).

⁴⁰ While GATS applies in principle to all service sectors, Article I(3) excludes "services supplied in the exercise of governmental authority". These are services that are supplied neither on a commercial basis nor in competition with other suppliers. Currently, Members are not obliged to grant market access and national treatment to government procurement (GATS Article XIII).

⁴¹ For more detail on classification and definitional issues, see: S/C/W/46, 6 July 1998, *Environmental Services* and WT/CTE/W/67/Add.1, 13 March 1998, *Environmental Benefits Of Removing Trade Restrictions And Distortions, Environmental Services*, (both are Secretariat background notes).

protection.⁴² In fact, considering that environmental services encompasses areas such as the provision of services for air pollution control, waste water management and hazardous waste collection, it could be argued that it is in the interest of all that environmental services be as widely distributed as possible. Yet, as can be seen from the example of water sanitation, the role of government remains crucial to ensure adequate regulatory framework.

33. The need to improve water and sanitation services and facilitate greater access was stressed by UN Secretary General, Kofi Annan, at the WSSD.⁴³ In Johannesburg, countries agreed to commit themselves to the target date of 2015 for reducing the number of people who lack access to proper sanitation. This complemented the previously agreed "Millennium Development Goal" of halving the proportion of people who lack access to clean water (which was reaffirmed in Johannesburg). Water illustrates the close link between health, environment and poverty: one billion people lack access to safe water and two billion lack access to safe sanitation.⁴⁴ Hence, while water is an environmental resource, it is also a necessity for life, and a cornerstone for development. Water sanitation services can play an important role in addressing part of this problem, including the environmental aspects. Government policy may need to strike a balance between, on the one hand, the short-term need of the poorer consumer, and, on the other hand, the longer-term and ultimately crucial need to ensure that the costs of exploiting the water, as a resource, is accounted for. Herein lie two separate aspects: (i) the value of the service of bringing the water to the consumer and taking care of it afterwards and (ii) the value of water as a resource.

34. As put by Cuba in its proposal on environmental services, the commitments made by developing countries should be based on the right to adopt appropriate environmental policies. In this respect, the process of liberalization needs to respect *inter alia*, the lack of development and the size of economies – and allow Members a degree of flexibility.⁴⁵

IV. ASSESSMENT

35. A red line through much of the literature on which the above discussion is based is the paucity of data. Data collection is resource-intensive. Taking into consideration that environmental effects may not everywhere be a priority concern, particularly where financial resources are scarce, the choice of *what* data to collected is important. Hence the need to choose the sectors or sub-sectors where the environmental effects can be assumed to be most significant. And this leads us to the importance of methodology.

1. Environmental assessments

36. Before looking at the methodology, a few words on assessment in the context of the services negotiations are called for. Assessment of trade in services, according to the Services Guidelines, is to be an "ongoing activity of the Council [for trade in Services] and negotiations shall be adjusted in light of the results of the assessment".⁴⁶ Naturally, assessing the effects of services trade liberalization is an exercise which is broader in scope than an assessment which is limited to exploring environmental effects. An environmental assessment could, for instance, be part of a broader assessment, along with other "non-economic considerations" such as health.⁴⁷ As noted elsewhere in this paper, few assessments are specific to services trade liberalization *and* the environmental effects thereof.

37. Focusing on the environment, there is no one globally accepted definition of an environmental assessment. The definition tends to depend on who the assessor is. It is characterized

⁴² For more on environmental and developmental benefits, see *Environmental Goods and Services, The Benefits of Further Global Trade Liberalization*, OECD, 2001, Paris.

⁴³ *The Earth's Second Chance*, Financial Times, 29/5/2002.

⁴⁴ *Water Supply & Sanitation Blue Pages, The World Bank Sector Guide 2000*, World Bank, 2000. See also: www.worldbank.org/water.

⁴⁵ S/CSS/W/142, paragraph 4

⁴⁶ S/L/93 *supra*, paragraph 14.

⁴⁷ S/CSS/W/117, *supra*.

as an exercise which involves the identification of potential economic, social and developmental effects of trade and trade liberalization. A previous document circulated in the CTE⁴⁸, illustrates how the approach taken by the assessor will vary depending on:

- (a) the reason for choosing to undertake the assessment;
- (b) which effects are looked at; and,
- (c) how the link between the effects of trade liberalization and the environmental impacts are established.

38. The three examples in the above-mentioned document are still relevant today. The footnotes indicate where up-to-date information on on-going work in this respect can be obtained.

- (a) Canada: Framework For Conducting Environmental Assessments Of Trade Negotiations⁴⁹
- (b) European Communities: Sustainability Impact Assessment⁵⁰ It is noted here that the University of Manchester has now posted its "Inception Report" (under Phase Three), on the website. This includes a section on environmental services.⁵¹
- (c) United States: Guidelines for Implementation of Executive Order 13141: Environment Review of Trade Agreements⁵²

2. Methodology⁵³

39. In January 2002 the OECD Joint Working Party on Trade and Environment circulated a methodology for the assessment of the environmental effects of services trade liberalization involving six steps:

- (a) Scoping services sectors for environmental effects
- (b) Building scenarios of services trade liberalization
- (c) Assessing environmental effects associated with economic changes
- (d) Assessing regulatory effects arising from rule-making
- (e) Screening for significance of environmental effects
- (f) Determining appropriate policy responses

40. This initial step, "scoping", is aimed at providing an overview of the services sectors showing potential environmental pressure points at the national level, as well as revealing areas of potential positive effects. It helps reduce the extent of the assessment by focussing on those areas of most concern to a country. More concretely, it involves the identification of direct environmental effects as

⁴⁸ WT/CTE/W/171, 20 October 2000, *Environmental (Sustainability) Assessments Of Trade Liberalization Agreements At The National Level*, Item 2 of the work programme, Note by the Secretariat.

⁴⁹ See: (i) WT/CTE/W/183, 15 March 2001, *Framework For Conducting Environmental Assessments Of Trade Negotiations*, Communication from Canada; and, (ii) www.dfait-maeci.gc.ca/trade/tna-nac/EAF_Sep2000-e.asp.

⁵⁰ See: (i) WT/CTE/W/208 (also circulated as WT/COMTD/W/99 and TN/TE/W/3), 3 June 2002, *Sustainability Impact Assessment*, Communication from the European Communities; (ii) <http://idpm.man.ac.uk/sia-trade>.

⁵¹ The exact address for this is: <http://idpm.man.ac.uk/sia-trade/Phase%203A/SectStudIncRep.pdf>.

⁵² The Executive Order 13141 on "Environmental Review of Trade Agreements", signed in 1999, directed the United States Trade Representative (USTR) and the Council for Environmental Quality (CEQ) to develop these guidelines. For an example of the application of these Guidelines, see <http://www.ustr.gov/environment/environmental.shtml>. The Guidelines themselves can also be obtained from this website.

⁵³ This section draws entirely on: *Assessing the Environmental Effects of Services Trade Liberalization: A Methodology*, OECD, COM/TD/ENV(2000)123/FINAL, 15 January 2002, Paris.

well as indirect ones. Direct effects would include those which have a high specific impact on the environment at the source or facility (for example air transport, electricity utilities, hospitals) but also those that have a cumulative impact from several sources. It also includes indirect effects, which are less obvious, such as influence of client behaviour of consulting activities, or technology choice with subsequent impacts from construction and operation (consulting engineering).⁵⁴

41. The next challenge is that of identifying those environmental effects associated with those economic changes which in turn are associated with trade liberalization. Hence, this second step entails building scenarios on the scope or degree of liberalization (status quo, partial, complete, etc.).

42. The next two steps look at the environmental effects induced by both the economic and regulatory changes. On economic effects, the OECD makes a further sub-division: (i) estimating the economic changes arising from liberalization of main restrictions, and then (ii) assessing the environmental effects of these economic changes. Regarding the former (economic changes), it is of interest to assess not only the direction but also the extent of these economic changes in order to, in turn, assess the environmental effects which result from these. The latter (environmental effects) includes an analysis of (i) scale effects, (ii) structural (or composition), (iii) technology effects and (iv) product effects.

43. Regulatory effects are considered separately. Key questions here revolve around the changes made, for example, in GATS rules which might affect domestic regulatory capability: How will the ability of a Member to select regulatory mechanisms to meet national environmental policy objectives be affected by new rules?

44. The last two steps involve an identification of those effects which are significant and the determination of a policy response to this. Appropriate policy responses could include:

- (a) modification of some aspect of the trade agreement, including environmental safeguards in the trade measure or agreement; or
- (b) implementation of complementary environmental mechanisms to accompany the trade measure or agreement; or
- (c) putting emphasis on designing "flanking" measures (boost positive, buffer negative).

V. CONCLUDING REMARK

45. This paper has attempted to expose linkages between services trade liberalization and the environment in the areas relevant to tourism, transport and environmental services. At the root of the discussion is the question: What are the constraints for the policy objective of protecting the environment when liberalizing services trade? Three distinct issues arise in considering this question: (i) the need to identify, in each specific sector or sub-sector, economic policy tools that translate into incentives and/or disincentives that promote legitimate environmental objectives; (ii) the extent to which flexibility under current rules would allow for their implementation; and (iii) whether regulatory capacity (know-how, resources) exists to implement and enforce them. As priorities may vary among Members, a methodology which helps focus policy on the most significant environmental effects (be they positive or negative) will be key.

⁵⁴ See also *Services Trade Liberalization: Assessing the Environmental Effects*, presentation by Dale Andrew (OECD Trade Directorate), *supra* note 3.

Annex

CTE Work Programme

Item 9

*The work programme envisaged in the Decision on Trade in Services and the Environment
(S/L/4 of 4 April 1995)*

DECISION ON TRADE IN SERVICES AND THE ENVIRONMENT

Ministers decide to recommend that the Council for Trade in Services at its first meeting adopt the decision set out below.

The Council for Trade in Services,

Acknowledging that measures necessary to protect the environment may conflict with the provisions of the Agreement; and

Noting that since measures necessary to protect the environment typically have as their objective the protection of human, animal or plant life or health, it is not clear that there is a need to provide for more than is contained in paragraph (b) of Article XIV;

Decides as follows:

1. In order to determine whether any modification of Article XIV of the Agreement is required to take account of such measures, to request the Committee on Trade and Environment to examine and report, with recommendations if any, on the relationship between services trade and the environment including the issue of sustainable development. The Committee shall also examine the relevance of inter-governmental agreements on the environment and their relationship to the Agreement.
2. The Committee shall report the results of its work to the first biennial meeting of the Ministerial Conference after the entry into force of the Agreement Establishing the World Trade Organization.

Item 6

The effect of environmental measures on market access, especially in relation to developing countries, in particular to the least developed among them, and environmental benefits of removing trade restrictions and distortions.
