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Working Paper No 2011/17| June 2011

The Environmental Area Initiative (EAI) Approach to the WTO Negotiations and Environmental Goods and Services: Linking Trade Policy and Climate Change.

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Content

I. Introduction

Recognition of the potential of the multilateral negotiations on environmental goods and services (EGS) to contribute directly to climate change mitigation objectives has grown markedly among the WTO membership. This is evident in the major shift of focus in the recent submissions and proposals, from goods and services relevant to environmental protection, rehabilitation and sutainability, to those pertinent to climate change, including a proposal to link the negotiations with the Clean Development Mechanism (CDM).[1] The Doha Round has stalled but continuing submissions reflect an optimism and interest by Members to reach an agreement in an area that has grown even more in importance since the negotiations were launched in 2001. The observed trend in the proposals further reflects an urgency among the membership to address the enormous challenges of climate change, and lends support to growing global acknowledgment of the link between climate change and trade and the call to direct the negotiating focus on climate-friendly goods and technologies.[2]

Discussion on climate-friendly goods will inevitably need to confront the issue of non-tariff barriers (NTBs) in general, and standards and labelling, in particular. While the negotiating mandate on EGS is aimed at the reduction or, as appropriate, the elimination of tariff and non-tariff barriers,[3] and even as the importance of NTBs is widely recognized, there is a lack of proposals. This deficiency has rendered the negotiating exercise lopsided. The negotiations have focused on tariffs and on environmental services while the mandate to negotiate on NTBs has largely been ignored. This situation, however, is expected to change. In March 2010, proposals on the subject have been received from Brazil and Japan.[4]

The Environmental Area Initiative (EAI) approach to negotiating EGS in the WTO, proposed by Cottier and myself (UNCTAD 2009; WTI 2009), may be an alternative and more viable approach to linking trade negotiations and climate change mitigation policies. It is not limited to negotiating tariffs and services commitments but addresses the complexity of issues by organising negotiations on the basis of specific targets and goals, and can be viewed as a consolidating approach by bringing together all WTO issues pertinent to the environmental goal identified (in this case, climate change mitigation). The approach, moreover, gets around the limitations and legal incompatibility of negotiating approaches proposed by the WTO membership until 2008.[5]

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1 18-19 February 2010 CTESS meeting. The proposals came from Argentina, Saudi Arabia, Japan, and the Philippines and are on renewable energy, waste management, recycling, and remediation, energy efficient appliances. Argentina's submission of November 2009, meanwhile, outline the benefits of linking its proposal on an integrated approach with Clean Development Mechanism (CDM) projects. Stated benefits would include, among others, the direct use of goods and services aimed at climate mitigation and adaptation thus preventing dual or multiple usage, reduce costs of setting up CDM, and promote technology transfer (TN/TE/W/74).

2 See World Bank (2008), WTO-UNEP (2009), UNCTAD (2010). Some observers have also suggested that specifically adding climate to the negotiating agenda would "breathe new life into the negotiations", the idea being that synergies may be gained by linking climate negotiations to WTO negotiations (Hufbauer, Charnovitz and Kim 2009).

3 Doha Declaration in Paragraph 31 states, "With a view to enhancing the mutual supportiveness of trade and environment, we agree to negotiations, without prejudging their outcome, on... (iii) The reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services."Available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm

4 The Chairman's report of March 2010 summarizes Member submissions since 2008

5 They can be grouped according to:

- list approaches (for industrial and for environmentally preferable products) submitted by various countries (e.g. submission by the United States, TN/TE/W/52, TN/MA/W/18/Add.7, 4 July 2005; submission by the European Communities, TN/TE/W/56, 5 July 2005; submission by Switzerland, TN/TE/W/57, 6 July 2005)
- project approach (Environmental Project Approach, submission by India, TN/TE/W/54, 4 July 2005) and

The negotiating outcome of the EAI approach will be the drafting of an EGS framework agreement that translates the mandates of the Doha Declaration into specific obligations, and addresses linkages with other WTO areas of relevance to EGS. Previous publications by Cottier and myself have outline the operationalization of EAI, but fall short of expanding on the non-tariff-related mandate and related issues. In this paper, the EAI approach is developed further to now include NTBs, focusing on standards. By exploring the case of organic products, which belongs to the category of environmentally-preferable products (EPPs)[6] and the sector where standards and labelling are most prevalent, the paper aims to draw insights for dealing with standards and voluntary labelling in the EGS negotiations.[7] The significance of standards and labelling in the context of climate change requires a broad discussion and clarification of WTO rules applicable to standards. This paper presents issues that need to be dealt with in the discussion that is expected to be generated by the recent WTO proposals, and recommend steps that Members could take to address them. A shorter section of this paper will cover technology transfer, and how the EGS negotiations can assist in putting into concrete terms Kyoto Protocol commitments through complementary measures and commitments in relevant WTO policy and regulatory areas. Possible modalities for negotiating EPPs will be outlined in the section that covers the recommendations on provisions that should be considered in the drafting of an eventual EGS framework agreement.

II. An EGS Framework Agreement: Expanding the EAI Approach

The Environmental Area Approach (EAI) attempts to address the limitations of the proposals so far for a negotiating approach to EGS, generally classified as a list approach, a project approach, or an integrated approach. These approaches were thought to be lacking in focus and scope and had issues of compatibility with WTO law. The list approach, while fully in line with WTO policies and instruments of tariff reductions, poses a dual use problem,[8]may be naturally biased in favour of developed countries (as environmental technology is often advanced technology), and fails to consider NTBs as well as services. The project approach, led by India on the other hand offers coherence and focus, but the model poses difficulties in terms of legal obligations. The approach creates potentially differential treatment between products used for a project and those outside the project, essentially a dual use problem, the distinction of which may not muster scrutiny under a like-product analysis. The approach, moreover, lacks a truly multilateral dimension. The later joint proposal by Argentina and India merges the concepts of listing and project into an integrated approach, sequencing the definition of goals and targets and actors pre-determined to benefit from specified concessions. The approach, however, raises complex legal issues, as it relies primarily on privileging the importation of specific goods and services for specific purposes and specific operators, which entail potential for discrimination that is inconsistent with WTO obligations.

- integrated approach (e.g. submission by Argentina, TN/TE/W/62, 14 October 2005).

6 Environmentally preferable products (EPPs) are "industrial and consumer goods that have enviromentally preferable characteristics relative to substitute goods, that is, reduced environmental impacts in production, end-use or disposal. They are generally used for purposes other than environmental ones in commercial and household applications." Examples include organic agricultural products, CFC-free refrigerants, chlorine-free paper, biodegradable natural fibers such as jute, sisal and coire, natural dyes, organic soaps free of phosphates, water-based paints, natural rubber, polymers, gums and adhesives, equipment used to generate renewable/clean energy, ethanol and other clean/renewable fuels, energy-efficient lighting, etc. (Hamwey, 2005)

7 Organic products are derived from organic agriculture production system, regarded as an effective strategy for mitigating climate change, by the Food and Agriculture Organization (FAO).

8 Refers to the problem in dealing with goods which have both environmental and non-environmental uses, e.g. pipes.

The philosophy behind EAI is to organise negotiations on the basis of specific target areas and goals, e.g. individual sectors under Clean Development Mechanism (CDM) such as renewable energy technologies, reduction of emissions from industrial processes, to name a few. By identifying goals, both goods and services, as well as other issues relevant to these environmental goals are assured to be covered. The EAI approach offers a method which reduces complexity by proceeding in certain steps, from political decisions in identifying environment areas, to implementation of services and goods liberalization commitments. More importantly, the approach brings into the negotiations other trade instruments and regulatory areas of WTO law such as standards and subsidies that determine significantly the level of trade in this sector. An additional value of the EAI approach is that it allows leveraging across issues and not across sectors, a more coherent strategy that could be especially favorable to developing countries.[9] By negotiating according to environmental areas, the approach also permits the identification of a priority area(s) wherein an agreement could first be secured, for reasons of urgency or level of complexity.[10]

The approach requires the preparatory work of resolving problems of definition and classification in services, after which a specific environmental area and regulatory goal will be identified. Services relevant to this area will be identified after which all goods essential to the delivery of these services have to be liberalised, regardless of duality of use. A separate set of rules will apply for EPPs, whose inclusion as a group of products will be mandatory, and independent of regular environmental goods (or those associated with an environmental service). Outlined below are the details of how EPPs might be dealt with in the negotiations using the EAI approach.

EPPs will be identified as a specific environmental area, after which a listing of agreed upon goods will be done. It is recommended that an independent group of experts be formed by the Committee on Trade and Environment to define the criteria for what is environmentally preferable, and to develop a long list of products that pass the criteria. From the long list of EPPs, WTO members will then choose which products to be included in an EPP list for tariff liberalisation.[11] There are several options. One would be the inclusion of all products in the list in a single round of tariff reduction, or on a staggered basis. Another could be the inclusion of only selected products. Another could be leaving the option to the individual Member of what products to liberalise provided a certain cut-off, quota or numerical target is achieved, e.g. volume of trade for tariff lines committed must be "x percent" of trade in goods for "x period." The first option is obviously the ideal one, as it is comprehensive and likely to achieve liberalisation in environmental goods more rapidly. Once an item is on the list, Members will then have to decide on the

9 One-dimensional obligations, with concessions limited to one type of transaction (i.e. crossborder imports) and one trade policy instrument (i.e. tariffs) may not be of much use to WTO members that lack much negotiating leverage to solve access problems caused by regulation or subsidization in major markets. This supports the concept of issue linkage or issues tie-in, where an agreement spans multiple levels of interaction. An issue tie-in could be pursued on two levels: (i) as an "extended coherence" in the relationship between the WTO and other international instruments (e.g. multilateral environmental agreements (MEAs), where part of an agreement becomes an *acquis* of another agreement); and (ii) within the WTO treaty itself, in terms of interfacing issues that are usually dealt with separately. In the former case, members States could pursue the objectives of the Kyoto Protocol within a framework agreement on environmental goods and services, and vice-versa, whereby the framework requirements of the WTO could be taken into account in negotiations under the Kyoto Protocol. See Vikhlayaev (2010).

10 In EAI, renewable energy could be identified as priority over wastewater management, for example.

11 If organic products are decided to be included in the EPP list, Members would still need to identify which specific organic products to include.

modalities for tariff reduction. For most products, it will be a fairly straightforward exercise with tariff reductions implemented according to the Member' schedule of commitments.

A limitation posed by HS system (Harmonized Commodity Description and Coding System) is that it does not differentiate between a product that contributes to an environmental objective and a similar one which does not.[12] Moreover, while there are products which are obviously environmentally-preferable, e.g. natural-based products (e.g. jute) which are defined as individual tariff lines, there are EPPs whose positive environment impact is not detectable in the product itself (e.g. organically-grown cotton) or is on its use or disposal, and are not classified separately in the HS system. In addition, there might be new climate technologies which would not fit in any of the existing harmonized system. All these pose difficulties for extending the tariff preference due all these types of EPPs at the border. Tariff lines are harmonized up to the 6-digit level of the HS Code, but Members are free to adopt additional subcategories and notes for internal purposes. Introducing subcategories that correspond to these EPPs is one solution to get around the limitations mentioned above, and it is easier to create categories nationally.[13] EPPs, however, are increasingly regarded as a distinct category of goods whose use and promotion is envisioned to expand even more in the long-term, that if not set out clearly in customs classification can only lead to confusion and uncertainty in the implementation.[14] It is worthwhile, thus, for WTO Members to consider the creation of new harmonized tariff lines designated for EPPs, requesting the World Customs Organization to initiate the process.

Creating new tariff lines, however, for EPPs which are subject to standards based on non-product related process and production methods (NPR-PPMs) will not be so straightforward as for other EPPs. Members would need to first make a political decision to open discussions on these type of standards, and agree on how to proceed. The complexities of standards (mainly of NPR-PPMs) and how the EGS negotiations may approach and resolve some of the major difficulties identified are discussed in the next chapter.

The EPP list should be open-ended. A technical committee will have to be composed to which all future submissions for addition to the list will be made, and who would then be responsible for the review, assessment, and recommendation to the entire CTE for voting (a permanent advisory body composed of experts will assist the technical committe). The updating of the list should be a continuing and a regular process. As newer and more environmentally efficient products or technologies enter the market, some will replace older or now obsolete products or technologies. Perhaps a separate tariff reduction scheme will apply to those products which are on the list, keeping in mind that the older product should not, in principle enjoy tariff advantage over the new and more environmentally efficient one, although this could be the case if a transition phase for the new product is decided on. Owing to a characterisitic of this sector which is the growing number of eligible products as a result of continuous innovation for more environmentally preferable goods and

12 An example would be energy-saving lamps which are not classified differently from conventional ones, hence belonging under the same tariff subheading with the same applicable duty. Such lamps are classified at the 6-digit level under HS tariff heading 94.05.

13 The use of "ex-outs", however, as shown by the example of the Information Technology Agreement (ITA) has revealed the problem of ensuring a consistent interpretation of customs classification. See Vikhlyaev, A. (2010).

14 The experience of ITA implementation is instructive for EGS goods, especially technology-related ones (Vikhlyaev 2010).

efficient technologies, as well as new types of services needed, negotiating commitments for EGS would need to be a continuous process. Decision could be taken at some point in future to apply low tariffs only to new products for a provisional period, in effect creating a practically tariff-free regime for all environmental goods.

After the modalities for undertaking commitments have been agreed on,[15] it is suggested that Members draft a framework agreement that will specifically set out the rules and obligations of Members in relation to EGS. The following sections will discuss issues that need to be fleshed out in the proposed agreement in relation to non-tariff barriers, and technology transfer.

III. Non-tariff barriers: The issue of standards and voluntary labelling

Even a cursory look at EPPs shows that standards and voluntary labelling are the most important non-tariff measures affecting trade in this category of products.[16] Many EPP products are, and more being contemplated to be, subject to standards. International standards can contribute to climate change mitigation by facilitating trade in low carbon goods, and transfer of climate change technologies. Complying with climate-related standards also enable industries and producers to manage emissions of greenhouse gases along the supply chain, as a response to consumer pressure for cleaner and more environment-friendly goods.

In principle, standards are aimed at facilitating trade because it provides assurance to importers of certain characteristics and quality of the good, thus facilitating market transactions, and on the part of consumers, facilitate comparison across products with common essential characteristics. These mechanisms, which take the form of producer certification and product labelling, aim at creating a niche market and promoting their respective standards as appropriate and legitimate across a sector. These standards are governed by their own systems, outside the purview of the state, and with the regulatory capacity to back up these obligations. The use of standards is increasingly prevalent to the extent that bearing a label is almost a *de facto* requirement for maintaining or expanding market position in the face of a more demanding consumer base who base their purchasing decisions on information that products have been produced under certain desirable social and environmental conditions. Thus, while standards are voluntary in nature, they are not, in application.

The proliferation of private-led standards and their increasing international acceptance are two recently observed developments.[17] These standards now exist in a range of sectors, including in forestry, agriculture, and food products among others.[18] They differ from those set by traditional standard setting bodies whose authority emanates from governments or intergovernmental organizations such as the Codex Alimentarius, or from national standard setting bodies such as the International Standard Organization (ISO). These voluntary mechanisms, however, have the

15 The specifics of possible modalities have been extensively discussed elsewhere by Cottier and Baracol-Pinhão (2009a, 2009b).
16 The term "standards" as used in this paper follows the definition of standards as set out in the TBT Agreement, which refer to voluntary application. (Other authors use the term "private standards", e.g. Appleton.)
17 Marx (2010) cites the increase in the sale of certified products, the number of firms having their products certified, and the growth of the certification sector itself to claim that the use of such standards are proliferating.
18 Examples are Forest Stewardship Council for forestry, Fair Trade Labelling Organization for agriculture and food, and Marine Stewardship Council for fishery (Bernstein and Hannah, 2008).

potential to affect international trade, even if they are not adopted officially as national standards or regulations. The potential arises because 'civil' regulation blurs the boundaries between voluntary and mandatory regulation, 'public' and 'private', and 'hard' and 'soft' law (Brewer and Hannah, 2008). The potential increases as the number of standards continue to increase and expand into ever newer products.[19]

1) Standards and labelling in the WTO

The TBT Agreement is the WTO agreement pertinent to standards and labelling. It deals with the development and implementation of mandatory technical regulations by governments as well as explicitly, with private activities to develop and adopt standards and to conduct conformity assessment. Under this Agreement, standard is as a normative specification that is for voluntary application.[20] Standard is defined by the TBT Agreement as "A document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method."

There are two distinct references to standards and standardising bodies in the TBT Agreement that may be applicable to a discussion of environmental standards and labelling: Article 4 (Preparation, Adoption and Application of Standards) and the Code of Good Practice for the Preparation, Adoption and Application of Standards (Annex 3) of the TBT Agreement.[21] There is, however, uncertainty on how current WTO rules apply to private-sector led standards. Experts and observers widely concur that the TBT Agreement has significant limitations in addressing this type of standards and voluntary labelling (Appleton 2009, Gascoine 2006, Bernstein 2008).[22]

The definitional issues that are problematic in the interpretation of the Code give rise to the uncertainty surrounding the treatment of standards in the WTO. In a detailed analysis by Appleton (2009), he identifies the scope of the Code as a major issue. In TBT Annex 1(2), the definition of 'standard' uses the phrase, 'document approved by a recognized body.' What a 'recognised body', however, is only referred to as 'international body or system', 'regional body or system' and various other 'bodies.' These latter entities are defined, but in a vague and insufficient way. In the absence of a precise definition, then, of a 'recognized body , it is probable that a panel will be called upon to decide whether an entity is such. Appleton goes on to outline elements which the panel could examine. The entity could first be judged as being recognised explicitly in the WTO as a standardisation organisation, or whether it is clearly within the definitions of Annex 1 (4) – (6) of TBT. For entitities other than those falling within the above category, the examination would include questions relating to the extent of involvement of WTO members or WTO-recognised bodies in its standardisation activities, and whether it supports a TBT objective. About 70 non-

19There is, however, still a lack of empirical studies on the impact of these standards on exports. UNCTAD, in collaboration with FAO, however, has conducted 12 case studies on the impact of EurepGAP standard for fresh fruit and vegetables on exporting countries. See UNCTAD website for individual case studies.

20 On the other hand, in the SPS Agreement a standard is a normative specification that is given mandatory application. The mandatory norms – whether official or private – under the TBT Agreement are termed *technical regulations*.

21 It should be noted that membership to the Code may be accepted or withdrawn anytime.

22 Labelling schemes may be mandatory, as the case is when they result from technical regulations.

governmental bodies have accepted the Code, but a close look at the standards that they promulgate show that they do not promulgate so within the meaning of the Code – their activities are directed towards commercial purposes. It follows, then, that if they are not promulgating 'standards' as defined in Annex 1(2) of TBT, they cannot be classified as a 'standardising body' within the meaning of the TBT. That they could be considered 'non-governmental bodies' according to Annex 1(8) is unclear as well. Not only is there confusion as to the meaning of the term 'body', but also to the 'legal power to enforce a technical regulation.' The Code is likewise lacking in provisions relating to 'non-governmental bodies' who implement their own conformity assessment procedures.

It appears, thus, that private schemes fall outside the scope of the TBT Agreement. An additional complication is that most of these standards are based on non-product related production and processing methods (NPR-PPMs), which are not disciplined by the TBT Agreement.[23] If so, these mechanisms which have a significant impact on trade would steer clear of multilateral rules and obligations such as non-discrimination and avoiding the setting up of unnecessary obstacles to trade, which comprise the lynchpin of global trade. Zarrilli and Burnett (2009) suggest that for private standards to be captured as governmental measures under WTO, a strong link between private action and government could be established, e.g. incentives to certified biofuels which implies government reliance on certification developed by a private body. There are those who support leaving the current global standards regime as it is, with minimal regulation from the WTO, giving continuous free reign to the development of voluntary standards (mainly supported by Bernstein, 2008). An opposite view is taken by most observers and commentators, who propose having a separate agreement (plurilateral instrument, e.g. WTO *Reference Paper on Telecommunications Services*) where the issue of private or nongovernmental standard bodies and their relation to the WTO will be addressed.

This author inclines toward the latter view but instead of a plurilateral agreement involving only Members who are interested, the issues posed by the language of the TBT Agreement should be discussed within the Committee on Trade and Environment (CTE) involving all Members. All relevant matters and clarification agreed on should then be incorporated into the eventual EGS framework agreement. Dealing with the complex issues of standards affecting environmental goods in a separate agreement will likely avoid the difficulties that an amendment process to the TBT Agreement will entail.

2) Standards in the EGS negotiations

While the mention of the term "standards" was avoided in Paragraph 31 of the Doha Declaration, the mandate covers non-tariff barriers, of which standards (including those set by private bodies) constitute a source of barrier to trade. Moreover, there is an explicit mandate for continuing discussions at the WTO on ecolabelling. Paragraph 32 instructs the Committee on Trade and Environment (CTE) to give particular attention to the issue.[24] NTBs were given equal importance in the

23 See Appleton, 2009; Zarrilli and Burnett, 2009. An example would be the Forestry Stewardship Council. NPR-PPMs is significant from an environmental perspective because it refers to the impact of the method of the production and transport of many products on the environment.

24 Paragraph 32. We instruct the Committee on Trade and Environment in pursuing work on all items on its agenda within its current terms of reference, to give particular attention to:

...

(iii) labelling requirements for environmental purposes.

Available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm.

mandate, but only very recently has there been indications among the membership on the willingness to open this subject. Japan has proposed harmonized standards for energy efficiency, conformity assessment by competent authorities, third party certification, and self-declaration of conformity.[25] Brazil has proposed the harmonization of standards for organic products.[26] The much-needed impetus to begin negotiations is already there, but significant work remains to be done in order to fully clarify or develop appropriate and acceptable rules.

While standards promise greater market access to higher-value export markets in developed countries, there is reluctance on the part of developing countries to engage extensively on this issue in the EGS negotiations which stems from the perception that it may open the way to a discussion of non-product related production and process methods (NPR-PPMs) and eventually to non-trade standards (e.g. labor), considered politically sensitive issues. If the EGS negotiations, however, is to seriously contribute to global climate mitigation, negotiations on NTBs should be undertaken in parallel with the tariff reduction and elimination and services liberalization exercise. The negotiations on EPPs may open the way for a discussion on private-led standards and labelling.

The complexity of addressing standards and voluntary labelling in EPPs is evident in the questions facing negotiators: *How should private-led standards be regarded in the negotiations, i.e. how can private schemes be brought within the ambit of WTO rules and disciplines?* Recognition of these standards is perhaps the key. The question now would be how this recognition should be achieved. Can the current standards applied to EPPs identified in the list be recognized as relevant by WTO at face value? On the alternative, should each standard first fulfill certain minimum conditions before being considered "relevant" or sufficient as an international standard according to the definition of the TBT Agreement or perhaps any agreement reached, such as the EGS framework agreement? As there exists many standards for a wide range of products (several may exist for just one product), each with its own strengths and weaknesses, emphasizing different features or different criteria, how should different and competing environmental standards for the same good from the same country be treated? It is a case that could happen with labels that differentiate between organic and environmental where one standard falls short of the other standard in one criterion or another.[27]

Underlining all these questions is the need for the Members to clarify the relationship of the WTO with private standard setting and conformity assessment bodies. At present, this relationship is limited to information sharing, though even this is very minimally observed.

Preparatory to negotiating on standards, it will be useful if the CTE could request the WTO Secretariat to divide the list of goods considered as EPPs (work done by the expert group) between those EPPs not currrently subject to standards and labelling and those which are not. This delineation will only be to provide an overall picture of the extent of the use of standards among EPPs. It will also be necessary to conduct an inventory of all standards and labels used on all environment goods (not just EPPs), their scope and all other information necessary to aid the

25 TN/TE/W/75/Add.1 submitted in February 2010.
26 Job (07/146) submitted in October 2007.
27 That is, organic label covers some environmental issues but does not adequately consider others while on the other hand, rainforest alliance which covers several environmental aspects, falls short of organic standards (Cosbey et al 2010).

negotiating process. As for where the discussion on standards and voluntary labelling of environmental goods should take place, it is suggested that the responsibility be with the CTE, or perhaps a working group under the committee created for this purpose, but not with the TBT Committee.

3) Standards in the EGS framework agreement

In lieu of a plurilateral agreement that some observers propose in order to deal with standards and voluntary labelling, it is proposed instead that this subject be dealt with in the EGS framework agreement. The agreement should cover all issues regarded as important in the implementation of these standards. The first task would be to define and clarify the relevant terms from the TBT Agreement, already mentioned in a previous section. The following would need precise and clear language: "standardising body", "standardising bodies", "international body or system" and various other "bodies", and other terms that would be relevant to the implementation of standards, voluntary labelling, private certification schemes, and other activities being carried out by private bodies in particular conformity assessment. A clarification of these terms would define how WTO intends to develop or how it interprets its relationship with these private standardizing bodies.

The second task would be to bring voluntary standardization within the ambit of WTO disciplines by extending WTO recognition to voluntary and private sector-led standards which conform to certain requirements established multilaterally. Standard setting is not within the competence or the role of the WTO, and the concern is not to regulate the number of standards but to regulate their use. Without interfering with the environmental standard criterion that will be left to the expert bodies, the WTO should be able to set the principles or criteria that would define what is the minimum that should be complied with in order for a standard to be "recognized" by the WTO. The principal criterion should be that the use of the standard is shown to have clear and positive environmental impacts. Participation of environment standardization bodies and international standard setting organizations such as Codex Alimentarius, IFOAM, International Standards Organization should be sought in defining the environmental elements of the criteria. Coordination with ISEAL (International Social and Environmental Accreditation and Labelling) Alliance, which defines and codifies best practice for the design and implementation of social and environmental standards systems, should also be pursued.

The other elements of the criteria, and which the WTO should be able to regulate, should include the following: standards are formulated in a way that do not discriminate against type of producer (large producers as against small and medium-sized producers), type of country (developed and developing), and location (standard is written in a way that only South American producers can comply, but not African ones because of particular agro-ecological conditions). Private standardizing bodies intending to develop new standards and wishing to be "recognized" have to adopt guidelines for environmental standard-setting processes developed or endorsed by the WTO, as the case may be. In situations where international standards exist or a standard has already dominated the market, WTO could recognize the standard with some improvements or additional conditions, e.g. providing more evidence of positive environmental impacts associated to the label, special provisions for small producers from developing countries.

WTO Members shall have the obligation of ensuring that all standards being implemented by their nationals conform to the WTO guidelines for a minimum standard. An expert group should be designated to evaluate standards against the criteria set, after which the approval of the CTE has to be sought. Members could decide to limit or cap the number of environment standardizing organizations and voluntary labelling schemes that could operate for any particular product or group of products. Specific provisions may be drawn in the EGS framework agreement to require Members to establish an institutional framework to oversee voluntary standardisation in their territory.[28] To ensure transparency, a WTO procedure to monitor national standard-setting processes, and the use of standards has to be set up, including reporting and notification obligations to the WTO.

A provision for the regular review of the criteria should be made, giving an opportunity for proposals and clarifications at any time during the review process, as well as a provision on standards revision. Standards need to be reviewed to assess their relevance and effectiveness whether the need continue to exist, or external circumstances have changed that require changes to the standard. The decision to revise will come about as a result of the review process, thus the timeframe is indefinite. The process for revision will be similar to that of standards development. A transition period for the implementation of the revised criteria should also be provided. A special body created by the CTE should conduct the review process as membershipwide review may not be advisable. Experience has shown that such review mechanisms at the WTO for product coverage have not been effective (International Technology Agreement, Agreement on Trade in Civil Aircraft) (IISD 2010 quoting Kim 2007).

Members would also have to agree on how to deal with conformity assessment. The provisions of the TBT Agreement on conformity assessment could serve as a basis for developing disciplines appropriate for voluntary and private-led standards. The WTO should encourage the laying down of common international procedures for approval or accreditation of conformity assessment bodies, which would reduce duplication of work and enhance access to markets, including by countries in which regulatory infrastructure is absent or less well developed. Membes shall have an obligation to notify WTO of conformity assessment systems and their procedures which operate in their territories.

Use of Codes of Practice could be considered for areas which are inherently complex, sensitive, but with significant trade potential. In particular, it is suggested to put together a Code of Good Conduct for certifying biofuels, and another for organic products.

4) Standards and labelling of EPPs: The case of organic products[29]

The case of organic products merits special attention when talking about standards and labelling in environmental goods. Among EPPs, organic products

28 Voluntary does not only mean private-led as standards can also be implemented by sub-national governments. The voluntary nature of the relevant provisions of the TBT Agreement (Article 4.1) and the Code of Good Practice refer to "local government and non-governmental standardizing bodies within their territories, as well as regional standardizing bodies of which they or one or more bodies within their territories are members...."

29 For a discussion on certification of biofuels, see "Certifying biofuels: benefits for the environment, development, and trade?" by Simonetta Zarrilli and Jennifer Burnett (WTI, 2009)

constitute the largest number of products and the sector which has used private-led standards far longest.[30] The proliferation of standards in different markets often require producers and exporters to be certified according to different organic standards and related schemes. These multiple certifications are very costly and tedious for potential exporters, and thus effectively become barriers to trade (Willer and Yussefi (2007). A related concern is that the same level of transparency required of public regulatory processes may not apply to private-sector led standardization and their associated control and enforcement processes (Smith 2009). The latter also gives rise to the potential of standards being used as a protectionist tool.

Organic products constitute a major export interest of developing countries,[31] and have been proposed formally as a distinct group of products for EGS liberalization.[32] The demand for these products especially in developed countries highlight the growing importance and the role of private-led standards in trade in environmental goods. At the same time this widespread use and influence on global trade expose the limitations of relevant parts of WTO Agreements. At least two Members (Brazil and Peru) have put forward proposals that identify organic products as goods of interest to developing countries and should thus be granted faster liberalisation.[33] The hesitation of some WTO members to include organic products is because these are agricultural products, which they insist, are not within the mandate for EGS. On the other hand, those proposing their inclusion and others supporting them, argue that the negotiating mandate did not differentiate between industrial and agricultural products.[34] Organic products, however, cover more than agriculture and food products or tariff lines corresponding to Chapters 1-24 (the Agriculture chapters) of the Harmonized System of Classification.[35] Thus, the EGS negotiations which covers goods in general, appears to provide the most appropriate avenue for the discussion of organic products.

a) Profiling the international organic products market

'Organic' is a labelling term that denotes products that have been produced in accordance with organic prodution standards and certified by a duly constituted certification body or authority" (Codex Alimentarius 2001). According to the Codex Alimentarius Commission, "Organic production systems are based on specific and precise standards of production which aim at achieving optimal agroecosystems which are socially, ecologically, and economically sustainable.

The Food and Agriculture Organization (FAO) regards organic agriculture (OA) as an effective strategy for mitigating climate change, as well as adapting to the impacts brought by extreme weather events. OA has the potential to mitigate climate change by restoring the organic matter of soils having double the carbon sequestration efficiency of conventional agriculture. The idea of carbon sink, promoted by the Kyoto Protocol, could thus be partially accomplished through OA.

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30 Farmer associations developed the first standards in the middle of the 20th century. The first international standards were published by the International Federation of Organic Agriculture Movements (IFOAM) in 1980. See Willer and Yussefi 2007.

31 See Willer and Yussefi (2007) for statistics and a comprehensive report on organic agriculture worldwide.

32 Organically grown products currently do not enjoy any tariff advantage over conventionally grown products. There is no separate HS code for organic products or separate national lines in customs classification (Twarog, 2006).

33 Job (07/146) for the proposal from Brazil; Job (07/161) for the proposal from Peru.Some developed countries, however, oppose its discussion because according to them agriculture is not being negotiated here.

34 The EU opposes the inclusion of biofuels although, as pointed out by Brazil, the first submission of the European Communities (TN/TE/W/47) included agriculture products. From http://ictsd.org/i/news/biores/9144/

35 Examples are organic soaps, cosmetics, clothes from organically-grown cotton, etc.

Carbon dioxide emissions per hectare of OA systems are up to two-thirds lower than in conventional systems, and there is less nitrous oxide emissions as well. OA also contributes to reduced energy consumption, consuming only 30 to 64 percent of that of conventional farms, as well as performing better in terms of energy efficiency, about 81 percent better than high-input conventional farming. In terms of climate adaptation, studies in areas which have experienced droughts have shown that OA can better adjust to extreme variations in climate through its potential to counter soil degradation being more resilient to water stress and to nutrient loss, and potential to counter salinization problems. (Scialabba and Hattam 2002). Thus, because of the environmental benefits derived from it compared with conventional, organic agriculture (OA) is considered by UNCTAD as part of EPPs (Twarog 2006).

The issue of organic products is a complex one. The organic market is currently characterised by third party certification (as opposed to self-declaration), certification based on the process and not on the product (an organic product's organic integrity cannot yet be determined in the marketplace, i.e. only a paper trail can establish this, the existence of two "international" standards (CODEX and IFOAM), the existence of national legislation in many countries not necessarily based on international standards, possibility of public and private certification bodies operating at the same time (as is the case in some countries), and the existence of several conformity assessment guidelines (ISO and IFOAM). That accreditation of certification bodies is also being done by several bodies at various levels (government, national accreditors which may sometimes be quasi-government, or international private accreditor, the IOAS) adds further to the complexity (Courville and Crucefix 2004).

For organic products, two international standard systems exist: the Codex Alimentarius guidelines and the private sector-led International Federation of Organic Agriculture Movements (IFOAM) Basic Standards. Both can be readily adopted and serve as basis for national standards.[36] The Codex Committee on Food Labelling developed the Codex Alimentarius Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods which was approved by the membership in 2001. The initiative was taken in order to facilitate the increasing trend in production and trade in organically produced foods, and to prevent misleading claims. It also intended to facilitate international harmonization of requirements for organic products, and guide governments in establishing national regulations.[37] As they stand now, the systems are consistent but not identical to each other (Bowen 2004). The issue of interest to negotiators is how WTO should treat these two internationally recognized systems.

b) International harmonization in organic guarantee systems

The organic guarantee systems in place in the three major markets for organic products (US, EU, and Japan) are generally not based on a body of internationally recognized standards. Conformity assessment bodies (CABs) are approved and supervised by authorities of each of these countries for compliance, and operate three separate programmes, with modification of standards, for each. Developing country

36 As an intergovernmental body, Codex Alimentarius represents public-private interests. The IFOAM basic standards while already existing for more than 20 years has no connection with any government or international standardizing structures.

37 The guidelines cover the organic production concept, description and definitions, labelling and claims, and rules of production and preparation, inspection and certification systems, and import control. Codex Alimentarius, "Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Products", CAC/GL 32

exporters are thus faced with higher costs to conform with each programme. The existence of different systems poses major limitations in bringing about international harmonization. Other factors add to the difficulty of harmonization: lack of precedents in government systems for multilateral equivalence (and few for bilateral equivalence),[38] no available mechanism for negotiating multilateral equivalency, non-transparency in existing and pending government determinations of equivalency, and the non-integration of the mechanism for multilateral equivalency by the private international system into the government regulatory system (Bowen 2004).

Differences in agronomic conditions, culture and stage of development of organic culture justify the differences in standards across regions. This situation, however, poses complexities both for governments and certification bodies in recognizing organic products certified in other systems, as well as for producers and suppliers who have to face a myriad of standards for different markets. Using equivalence as a solution to address these complexities through international harmonization is an option that is seriously being considered FAO, UNCTAD, and IFOAM. The three organizations convened in 2003 the International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF) comprising a number of governments, intergovernmental bodies, and private sector bodies. The ITF aims to move organic guarantee systems forward by having one international organic standard for reference (supporting both Codex Guidelines and IFOAM Basic Standards), a mechanism for judgment of equivalence to the reference standard, and one set of international requirements for organic certification bodies as reference for equivalency and recognition.[39]

Under what is called the ITF EquiTool, the elements of and procedures for equivalence assessment are laid out. Principal parties have to agree on the choice of base standard, appointment of an expert panel, the objectives, scope, and the methodology for assessment. It also proposes steps for the resolution of outstanding issues as well as ways to ensure transparency, allowing for the public to submit comments. In terms of certification and conformity assessment, the ITF recommends the use of a tool which it has developed for benchmarking equivalence called the International Requirements for Organic Certification Bodies (IROCB) which is also a means to converge requirements, and where direct accreditation is possible.[40]

c) Defining rules for organic products

Within the EGS negotiations, following the decision to include organic products in the EPP list, additional work need to be done to ensure that the use of standards in this sector will not constitute a restriction to trade. Owing to the special characteristics of the organic products market, it is recommended that a Code of Good Practice for Organic Products be put together to define WTO rules for dealing with this sector, annexed to the EGS framework agreement.

The decision by the Members to deal with organic products would entail a decision in relation to the issue of organic certification and labelling based on an NPR-PPM. Should Members be willing to accept defining rules on a process with precise conditions (e.g. strictly environmental sustainability), it will not just be trade

38 So far only EU has formed equivalency agreements, and only with 8 countries: Argentina, Australia, the Czech Republic, Costa Rica, Hungary, Israel, New Zealand, and Switzerland (Bowen, in UNCTAD, p. 200).
39 http://www.unep-unctad.org/cbtf/events/geneva7/ITFpresentation_24Sept08.pdf
40 http://www.unep-unctad.org/cbtf/events/geneva7/ITFpresentation_24Sept08.pdf

in organic products that can be facilitated and regulated at the same time. The decision will pave the way for a similar framework for another EPP sector that has even more impact on climate mitigation, biofuels. WTO Members need to agree on and set up front issues related to definition, i.e. what is "organic" for purposes of EGS negotiations, and what is its scope? The current practice is that each (importing) country has its own definition of what constitutes "organic."[41]The definition can thus be as broad or as narrow as Members choose. The decision of WTO members to agree on a minimum requirement to be recognized "organic" should not prevent other more stringent standards of organic from entering the market. The purpose of the requirement is to expand market potential at the same time to simplify the procedure for developing country exporters. Aside from the scope, it is necessary for Members to identify the objectives of the organic standard, including the justification of the need for the standard.[42]

Considering the characteristics of the organic products market, recognition of the two existing international systems, Codex Alimentarius and IFOAM, by WTO as international standards perhaps offers the least tortuous way of dealing with standards and voluntary schemes in this sector. These international standards could form the minimum criteria by which Members would have to reference their organic standards, and thus achieve equivalency with all other systems. The evaluation of national standards against reference standards should be done by an expert body identified by Codex Alimentarius, IFOAM and the WTO.

In order to simplify the standardization and harmonization process as well as making it less costly for developing countries and more adapted to the particular conditions of their region, setting up of regional organic standards to be referenced to the international standards will be encouraged. Regional standards will replace the numerous standards that already exist, resulting in a lesser number of organic production standards, linked by a common international standard. Regional standards will permit variations related to agroecology or stage of development of organic agriculture (Courville and Crucefix 2004). The same is true with systems of conformity assessment, where regional certification bodies could be set up whose inspection, certification, and accreditation processes should be evaluated against an internationally agreed minimum criteria. To reduce the cost and complexity for small producers in developing countries, group certification (instead of individual certification) will be strongly encouraged whereby a large group of small producers manage their own internal control system. This type of certification should be sufficient to gain entry to any market. Once formal equivalency is achieved, multiple certifications of imported organic products cannot be required in the importing country. To prohibit this practice which is common today will go far in removing a well-recognized barrier to trade in this sector. Recognition of certification bodies from the exporting developing countries will be encouraged. In this case, there is a need for governments in these exporting countries to identify a competent authority responsible for the approval and supervision of the inspection system operated by the official or officially recognized certification body.

The regional route facilitates multilateral equivalence, as it will do away with the necessity to have numerous bilateral equivalence agreements. It will also help

41 The objectives of different organic guarantee systems including that of the EU, the US, and Japan are compared and analysed in Early (2004).

42 Examples of objectives could include non-environment related objectives such as responsible treatment of farm animals, or prohibition of the use of certain technologies such as biotechnology and irradiation, among others (ITF Guide for Assessing Equivalence of Organic Standards and Technical Regulations, 2008).

prevent creation of new trade barriers in the future such as more stringent or duplicative requirements, and will enhance bargaining leverage in future negotiations for equivalence agreements, especially with the major importing countries. To help create the overall enabling environment that would especially be beneficial to developing countries, the Code for biofuels should specify the use of the harmonization and equivalence tools developed by ITF in all possible cases. Where this is not feasible or may be difficult to achieve, as in the case of countries who adopted their national systems before either of the international systems were developed, a criteria for variations should be developed by Members which would allow flexibility within reasonable limits, and at the same time ensure transparency from the onset. A criteria similar to the IFOAM Criteria for Variations could be set up. At the minimum, the criteria should require that the necessity for variation must be established, the alternative production and processing methods comply with the objectives of the international standards, and should not present a potential barrier to trade.[43]

Transparency should be a principal element in the Code. Before adoption of a standard, draft will be circulated to Members for comments, including justification for any deviation from the Criteria. Members will have the obligation to notify the relevant WTO committee of their national organic guarantee systems, compliance with recognized systems at the level of standards and conformity assessment, and where applicable, justification for the variations from criteria. Entering into equivalence agreements require a strict notification obligation. This implies notification of the criteria and processes undertaken by Members concerned as well the outcome of the negotiations, and submission of the text of the agreement. Setting out clear provisions on this will address the non-transparency problem associated with current practice. The work on organic standards at the WTO should be done in close cooperation with Codex Alimentarius and IFOAM. This includes future work on a review process, as well as on standards revision.

The WTO could encourage technical assistance to developing countries in terms of the creation or strengthening of national organic guarantee systems. Other forms of assistance that may be considered to directly improve capacity of developing countries to meet the steep challenges of organic production would be in the areas of institutional support on production technologies, market information and linkages, and financing during the transition period (from conventional to organic production).

It is also suggested to establish a link with technology transfer by making as an obligation for developed countries in cases where standards being implemented are higher or more restrictive than international standards, a contribution towards a fund for upgrading technology and harmonizing processes in developing countries (not to specify a country, to avoid preferential treatment) – part of the recognition of "the contribution that international standardization can make to technology transfer from developed to developing countries" and the recognition that "developing countries may encounter special difficulties in the formulation and application of technical regulations and standards and procedures for assessment of conformity with technical regulations and standards, and desiring to assist them in their endeavors in this regard...."[44] The idea of a fund was already introduced as early as 2001 (Wilson 2001) to support developing countries in meeting "their SPS and TBT

43 Adopted from the IFOAM Criteria for Variations. See ITF Guide for Assessing Equivalence of Organic Standards and Technical Regulations (Oct 2008).
44 Preamble of the TBT Agreement.

commitments, and for meeting new standards as they are harmonised by CODEX and other bodies."

On the procedural aspect, the EGS agreement could provide for regular meetings between the relevant WTO committees TBT and private standard-setting bodies, which could be a venue for developing country delegates to raise their concerns, and be informed of actions that private standard-setting bodies may have set or are planning to undertake. A comprehensive report of national experience of WTO members regarding barriers they have experienced, including other issues such as involvement in standard setting, equivalence, market access (in order to have a better idea of where to start negotiations). Members could also be invited to report to the TBT committee initiatives they have taken to provide technical assistance to developing countries relevent to compliance with private standards.

IV. Technology Transfer in the EGS Negotiations

While technology transfer is not a specific mandate for negotiations in the Doha Ministerial Declaration, the choice of approach to the EGS negotiations can contribute to eventual technology transfer for climate change mitigation. This paper suggests that the EAI approach, which requires identifying an environmental and regulatory area for liberalization as the starting point of negotiations, offers a framework within which technology transfer may be facilitated.

The concept of technology does not just cover scientific and technological knowledge, it is also understood to include "tacit" knowledge that is embedded in the firms' procedures and personnel. In the first conceptualization, the focus is on specific products and production processes, in the second, it is on capabilities.[45] A conceptualization based on capabilities brings to the fore the importance of environmental services, which has so far received less attention as a possible conduit of technology. Environmental services allow the transfer of "tacit" knowledge, which is regarded as an effective means of accelerating technology transfer (Brewer quoting Stern, 2006). The EAI approach is thus most relevant to technology transfer because it emphasizes negotiating environmental services commitments primarily, ahead of identifying environmental goods for tariff liberalization. It supports technology transfer between developing countries (South-South) because commitments in specific environmental services markets will be applicable to all WTO Members.

By deciding to pursue climate change mitigation as an area implies a choice by Members of specific strategies toward this end, e.g. clean energy, and the identification of services, goods and technologies appropriate for each strategy. In terms of technologies relevant to each strategy that could be pushed for liberalization, the categorization of technologies for climate change mitigation by Socolow and Pacala (200_) is a most useful reference.[46]

The widespread adoption of climate-friendly technologies in order to significantly cut back global greenhouse gas emissions is a need underscored time and again in all forums on climate change. It does not suffer lack of emphasis in the relevant multilateral treaties, or lack of analysis in many scholarly publictions and

45 Brewer, Thomas (2008).
46 For example, the category on alternative energy sources (increase nuclear power, wind power, photovoltaic power, wind to produce hydrogen to fuel cell cars, biofuels) would correspond to technologies that would necessarily be included under a specific EGS area on clean energy.

discussions. Thirty years from the first time it was articulated in the UN in 1989, the gap between rhetorics and reality is still strikingly evident.[47] The international legal framework to promote acceleration of such technologies is provided by the UNFCCC and Kyoto Protocol. The obligation to undertake technology transfer is set out in several provisions, but most expressly in Article 4(5) which states

> The developed country Parties...shall take all practicable steps to promote, facilitate, and finance, as appropriate, the trasnfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties....

There is also an obligation to finance the transfer, as stated in Article 4(3) and the establishment of a mechanism to carry this out, elaborated in Article 11. While parties to the UNFCCC have met with considerable difficulties in translating these obligations to operational terms, including the interpretation of the vaguely worded "practicable steps" to take, a reasonable conclusion that may be drawn from these provisions is that parties have the option within this Convention to "pay" for technology transfer" (Broch 2009). Broch further suggests that the option to "pay" would be specially significant for those developed country Parties who oppose any obligation that affects the protection of intellectual property rights relevant to climate-friendly technologies. This is an important point, that, if properly considered may provide the basis to overcome the problem of operationalizing these obligations, including that of supporting "the development and enhancement of endogenous technologies of developing country Parties...." A funding mechanism set up with contributions primarily from developed country Parties to support the development of endogenous technologies by developing countries themselves would constitute a concrete "practicable step" to comply with this obligation.

The funding mechanism would be directed towards the establishment of regional technology development centers in developing countries for climate change related-technologies. The Consultative Group for International Agricultural Research (CGIAR) success in bringing about the development and rapid diffusion of technologies in sectors and in developing countries which needed them has demonstrated that international collaboration for research and technology to address urgent global issues can be done. The CGIAR model could be explored and adopted for technologies that would mitigate climate change, for widespread dissemination and use in developing countries. A similar proposal has already been made by G77+China which addresses all the phases of the technology spectrum, from development to diffusion within an institutional framework under UNCFCCC, supported by dedicated fund called a Multilateral Technology Fund. It proposes to establish regional technology excellence centers, governed by an Executive Committee with Technical Panels who will oversee information sharing, and monitoring and assessment.[48]

47 Resolution 44/207, 22 December 1989.
48 Selighson et al, 2009.

Part of the fund should be set aside to build or strengthen national innovation systems, thus equipping developing countries to be able, in the long run, to carry out their own technology development and diffusion within a stronger national innovation system, activities that the CGIAR model will spin off after a certain number of years, and where research and development may then be concentrated on more complex research areas and those with much higher financial requirements. Having the building and strengthening of national technology systems of individual lower income developing countries as a parallel goal will enable these countries to develop capacities to absorb and diffuse technologies. The setting of research priorities and agenda will be guided primarily by needs identified by developing countries themselves. Regular reviews of the research policy will then be necessary to keep its work relevant, cutting edge, and responsive to new challenges. In order to avoid having a research agenda which is donor-driven where specific interests can be unduly exerted, funds should be administered by UNFCCC, and managed through a governing structure that equally represents developed and developing countries. Developing countries will be encouraged to contribute to the fund. The centers should have leading experts in the field and an international scientific staff. These centers will serve as training ground for scientists, engineers and specialists from developing countries, who will be in seconded positions from their own national research institutions with a requirement of return to service after a certain time. The latter condition will ensure a direct transfer of technical know-how to national technology systems, thus facilitating technology transfer, rather than a mere importation of technologies. These centers should then collaborate with individual country national climate change technology systems (like CGIAR does with national agricultural research systems (NARS), who are their clients and collaborators).

To institutionalise support of WTO Members to technology transfer, the EGS framework agreement should set out provisions that would explicitly require commitments from all Members. The establishment of the technology fund and the technology development centers should become a focal initiative. Close coordination will have to be made with the Working Group on Trade and Technology Transfer, which is mandated by the Doha Declaration to examine the relationship between trade and technology transfer, and recommend ways to increase technology transfer to developing countries.[49] How can the establishment of these centers be facilitated within the EGS negotiating framework, and thus, through commitments in services, goods and initiatives in related regulatory areas that could obtained from all Members in the course of the negotiations? Within the EAI approach, the identification of services related to technology development and commitments by Members to open up in specific areas allowing for specificity (as well as limitations) by indicating conditions.

In conjunction with the reduction and elimination of tariffs in goods and opening up of the environmental services sector, a clarification of the role of other trade policy tools and regulatory areas that could be significant in achieving a more effective and widespread adoption of environment-friendly goods and technologies especially in developing countries should be done by Members. Subsidies or at least domestic policies with subsidy elements can be used to provide incentives to market actors to engage in environment-friendly behaviour that would reduce GHG emissions, as are those now widely employed to promote renewable energy and

49 Paragraph 37. "We agree to an examination, in a Working Group under the auspices of the General Council, of the relationship between trade and transfer of technology, and of any possible recommendations on steps that might be taken within the mandate of the WTO to increase flows of technology to developing countries...." Available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.pdf

energy efficiency. A return to the philosophy of Article 8 of the Agreement on Subsidies and Countervailing Measures (ASCM) in order to legitimize the use of certain subsidies is an idea that has already been around since 2005.[50] A new approach in the context of climate change adopting this philosophy would imply identification of subsidies eligible for non-actionability, subsidies defined according to policies appropriate to the implentation of Kyoto Protocol commitments (Howse 2010). A waiver from WTO rules, where subsidies will be reported to a UNFCCC governing mechanism, subject to its surveillance, might also be pursued.

Subsidies, however, might play an added role, one that would hold even a higher importance for developing countries' climate change mitigation objectives by its use as a policy tool to accelerate technology adoption and diffusion. Subsidies could include direct support or incentives to firms set up for the domestic production of technologies developed by the climate change regional technology centers, or to those adopting technologies that exhibit significant environmental benefits over existing alternatives. Subsidies can also be conditioned on the purchase of domestically-produced technologies in sectors for which such technologies can be applied. Subsidies should also include support or incentives given to research, education and training aimed at developing local expertise and technology capacity, to building or strengthening national innovation systems which would support work being done in the regional centers, as well as other initiatives that would ensure the widespread development of endogenous technologies in developing countries. Whether through a non-actionability clause or a waiver, whatever form agreed on by Members as part of the EGS negotiations should be duly spelled out in the EGS framework. There should be strict WTO notification obligations to report subsidies.

Investment measures could further the adoption of endogenous climate-friendly technologies over imported ones, for example, by the implemention of local content requirements. Developing countries could specify this in their regulations for CDM projects where investors, firms and entities implementing a project have to prioritize the use of the locally produced technologies if they are available and they are applicable for use in the sector, and to the extent possible, integrate its use into the overall system of technologies necessary for the implementation of the project. Under the Trade-Related Investment Measures (TRIMS) Agreement, however, this might constitute a breach of the Agreement. Members, however, could agree as in the case of subsidies, to provide an exception in the context of climate change through appropriate wording in the EGS framework agreement.

Technology transfer can also be linked to regulations and standards where an exporting country would need to comply with international or importing country standards thus implying the adoption of processes or methods, including the use of certain foreign technologies. The TBT Agreement in its developing country provisions (Articles 11 and 12.7), however, limit the assistance of developed countries in the form of advice, that is, technical assistance in the establishment of appropriate institutions, and methods for standards conformity. An improvement to this provision can be written into the EGS framework agreement. Members may consider

50 Robert Howse is the leading proponent of this view. See Howse, R., Post-hearing submission to the International Trade Commission: *World Trade Law and Renewable Energy: The Case of Non-Tariff Measures*, Renewable Energy and International Law Project (2005); Howse, R., "Climate Mitigation Subsidies and the WTO Legal Framework: A Policy Analysis", International Institute for Sustainable Development (2010). On a similar vein, Hufbauer, Charnovitz and Kim (2009) propose a "peace clause" for subsidies for research and development on alternative energy and sequestration, physical infrastructure for sequestration, the production and transport of alternative energy for domestic use or export, as well as for environmental subsidies to firms taken in response to multilateral climate commitments.

the more direct approach to facilitate transfer of enviromental technologies by requiring that the implementation of additional standards by importing countries on top of existing international standards, or any deviation from the international standard that implies extra burden to exporters, would oblige specific assistance of the importing country to the exporting country. This could be in the form of provision of technologies or equipment where they are necessary for producers to comply with the higher standards.

V. Conclusion

The negotiations on environmental goods and services (EGS) called for in the Doha Development Agenda has turned out to be more complex than initially thought and thus until now now, almost a decade into its launching, have not delivered concrete outcomes. Much of the attention has been directed to the approach for tariff reduction and elimination and while it comprised a negotiating mandate, it is by no means the entirety of the mandate on EGS. A proposal developed by Cottier and this author, called the Environmental Area Initiative (EAI) renders a focused and managed approach to the complex process, bringing about a balance not just in the fulfillment of the mandate, but also in bridging the interests of both industrialised and developing countries by bringing within the framework of negotiations trade and regulatory areas relevant to EGS of interest to all Members.

Expanding on previous work done on EAI,[51] this paper proposes that negotiations on non-tariff barriers zero in on standards and labelling. The arguments in its favor are compelling: standards are identified by developing countries as the most significant and prevalent barrier to trade in environmentally preferable products (EPPs), a group of products in which they have major export interests and huge potential. Bringing in standards to the table thus widens the scope for trade of developing countries, and will restore the balance in the environment sector heretofore largely dominated by industrialized countries. Moreover, with tariffs already relatively low, the focus on NTBs would be where the most impact could be achieved. Environment-related standards and labelling, however, present a challenge because they are dominated by private-led bodies and outside the scope of the TBT Agreement. This paper outlines a set of disciplines that could bring the actions of private standardazation within the ambit of the WTO without risk of the latter overextending its role and competence.

Identifying EPPs for liberalization is not as straightforward as it appears to be. A significant implication of the EPP identification exercise would be that it requires a political decision among Members to open the discussion on process and production and methods (PPMs). A strict decision to limit PPMs to purely environmental standards could help allay anxieties among developing country Members if standards could be seen as facilitating, rather than being a barrier to, their exports. Standards and EPPs alone will entail much preparatory work, and together constitute the most complex part of the negotiations.

Tariff and services liberalization will facilitate technology transfer, but more than improvement in market access is necessary to accelerate diffusion of environmentally sound technologies. The EGS negotiations can specifically assist in implementing international obligations by developed countries for technology

51 See Cottier T and Baracol-Pinhao D (2009a, 2009b).

transfer, including financing, by setting in place the legal framework that could stimulate and drive technology diffusion in developing countries, through special rules in the areas of subsidies, investment measures, and conditions tied to standards. These rules will also support the development of endogenous capacity for technology development, which should be the long-term objective of technology transfer. Developing countries on their part have to develop and strengthen institutional capacities to absorb new technologies facilitated through any technology transfer pathway.

Drafting an EGS framework agreement is strongly encouraged. Such an agreement will consolidate the various trade and regulatory areas relevant to liberalization of the environment sector, clarify or where necessary, create disciplines and rules to facilitate trade and technology transfer, and outline institutional arrangements with pertinent international bodies, especially with the UNFCCC. Irrespective of existing WTO law, WTO members are free to negotiate a framework which overcomes the uncertainties and limitations of relevant provisions, and complexity. It is a matter of political will and consensus.[52] The agreement would form part of the WTO system, and placed on par with other agreements, prevailing as *lex specialis* over more general provisions.[53]

With the range of issues that need to be covered to make an agreement meaningful and effective in achieving trade and environment objectives, it might be necessary to consider taking the negotiations out of the Doha Round. Having its own timetable will reduce the likelihood of EGS negotiations being held hostage by the delay or even a collapse of the Doha Round. The scope of the technical work required is broad and demanding and intensive coordination is necesary with international organizations such as standardizing bodies (including private bodies), the World Customs Organization for the tariff harmonization process,[54] and possibly implementing bodies of multilateral environmental agreements. Also because of the element of time necessary, the negotiations can proceed in phases, with the more demanding areas such as NTBs dealt with for a more extended period. Coordination with other negotiating groups and/or relevant WTO committees has to be sought in relation to certain areas.[55]

The urgency of the climate change problem and the complexity of attendant issues that trade negotiations can address demand an adequate approach. The EAI offers a viable approach to linking trade negotiations and climate change mitigation policies. By identifying climate change mitigation as a priority environmental area, commitments in services and goods necessary to deliver objectives will be undertaken up front and disciplines to govern climate change-related EPPs, standards, and technology transfer as well as other relevant regulatory areas and their inter-relationships would be established. The EGS negotiations can thus contribute to the enormous challenge of climate change through a comprehensive

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52 This is especially necessary for the issue of NPR-PPMs and the possibility of the revival of non-actionability clause for subsidies. Refer to Cottier and Baracol-Pinhão (2009) for a discussion of Rob Howse's proposal on the latter.

53 For areas which are more complex or controversial and for which consensus might be difficult to achieve, as in the case of organic products and biofuels, negotiating a plurilateral agreement or Code that form part of the EGS framework agreement could prove to be the most viable option. This could also be the case for greenhouse as emmissions control as proposed by Hufbauer, Charnovitz and Kim (2009).

54 If the usual tariff review cycle of 5 years, and implementation of 1-2 years do not coincide with EGS negotiating timetable, Members could perhaps request WCO for a fasttrack process. The latest amendment was in June 2004 with implementation on 1 Jan 2007 (World Bank 2008).

55 E.g. For the case of biofuels, relevant committees and negotiating groups would include Agriculture, Market Access (non-agriculture), Rules (for subsidies).

and coherent framework, the EGS framework agreement, that sets in place trade and regulatory instruments that could support the implementation of Kyoto Protocol and successor agreements.

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