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Environmental Goods and Services Negotiations at the WTO:

Lessons from multilateral environmental agreements and ecolabels for breaking the impasse

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Executive Summary

> *There is no doubt that an immediate contribution that the WTO can make to the fight against climate change is to indeed open markets to clean technology and services. The Doha Round of trade negotiations offers an avenue for expanded access to products such as scrubbers, air filters and energy management services. […] Launched within a broader context of the Doha Round's environmental chapter, the negotiations on environmental goods and services could deliver a double-win for some of our Members. A win for the environment and a win for trade.*
> —WTO Director-General Pascal Lamy, December 2007

The Doha Ministerial Declaration mandated that members of the World Trade Organization (WTO) negotiate, as part of the overall package of Doha results, the reduction or elimination of barriers to trade in environmental goods and services (EGS). This laudable initiative is an excellent example of the ways in which the multilateral system of trade can help serve the aims of the trading system, the environment and development. Several recent submissions have explicitly tried to link the process to climate change as a priority environmental issue. But the talks in this area are deadlocked, in part due to disagreements on the definition of EGS and the scope of goods and services to be liberalized.

This analysis looks for paths to progress in the EGS negotiations. It deals only with environmental goods, and not with services, sticking to those parts of the current Doha discussions that have been at once the most controversial, and the most laden with potential.

It is useful at the outset to categorize the types of goods that have been proposed for inclusion to date, since each would need somewhat different treatment, and each would have different implications for the multilateral trading system, were it included in a regime of EGS.

- Type I goods operate in their end use (or in disposal) in a manner that causes less environmental damage than some baseline cases.[1] High efficiency home appliances, such as washing machines and refrigerators, are examples of Type I goods. Renewable energy technologies also fall into this category; in their end use, they generate power, but they do so in an environmentally superior manner as compared to conventional technologies.

[1] This classification is a sub-set of what are known as environmentally preferable products (EPPs) (UNCTAD, 1995; Tothova, 2005). EPPs cause significantly less environmental harm at some stage of their life cycle than alternative products that serve the same purpose. The classification proposed in this paper divides this up such that the production phase of the life cycle is covered as Type III goods, and the end use and disposal is covered under Type I. In the spring 2010 Chair's summary of the negotiations, the EPPs grouping contains only six goods, all included because of their biodegradability (WTO, 2010).

- Type II goods have environmental improvement as a primary object. These include environmental remediation technologies, such as centrifuges, that can be used to remove oil from water in oil spills; pollution prevention technologies, such as chemicals and mechanical inputs used in the end-of-pipe process of carbon capture and storage; and natural resource management technologies, such as photogrammeterical surveying instruments used for GIS imaging.
- Type III goods use processing and production methods (PPMs) that cause less environmental damage than other similar goods. Organic agriculture is an example of this sort of good. The current Chair's listing of proposed goods (WTO CTESS, 2010, Annex III) does not contain any goods distinguished by virtue of their PPMs, but organic agricultural goods have been indirectly proposed by, among others, Brazil, in discussing the types of EGS liberalization from which developing countries might benefit.

To date, there has been no agreement within the WTO on the type of goods that will be covered by the EGS regime. Neither has there been agreement on the mode of negotiation by which the goods will be decided. Various countries have proposed a list approach (negotiations that would arrive at some agreed list of goods and services for special treatment), a request and offer approach (akin to the current services negotiations, conducted by individual requests and offers for special treatment of specific goods and services) and a project approach (any goods and service used for agreed types of environmental projects would receive special treatment).

The lack of progress is a concern, but is understandable; the WTO members in Doha may have underestimated the scale of the journey on which they were embarking. Beyond the difficult questions of which goods to include on the list and how to negotiate, which have been the main preoccupation to this point, are other challenges that could require the WTO to innovate and branch out in ways it has never done. A list of EGS must be a living document, to which new items can be added, and from which the existing items can be dropped when they are rendered ordinary by technological advances. Without that ability, any list would soon cease to serve the basic objectives it was meant to achieve; goods that deserved special treatment would not be listed, and goods that did not would be. In essence, assembling a list of goods that are preferred is a classic exercise in standard-setting, an activity that, to date, the WTO has studiously avoided. And proper standard-setting demands good institutions, both of governance and of information.

Fortunately, there are existing efforts that have addressed many, if not all, of these challenges. The prior experience of several multilateral environmental agreements (MEAs) provides key lessons for the possible establishment of an EGS list and its management. This document looks at the experience of three multilateral environmental agreements and three ecolabelling schemes to draw lessons relevant for the multilateral system of trade as it wrestles with the challenges of negotiating and maintaining an EGS regime.

The Convention on International Trade in Endangered Species (CITES) was first global environmental agreement dealing with trade. Signed in 1973, it provides an example of how countries can work with a set of criteria to define a list of goods destined for special treatment, and regularly update it to maintain its integrity. CITES, which restricts trade in an agreed list of species of flora and fauna, is particularly relevant for EGS negotiations as it has been in force for more than three decades, has global membership and is considered one of the most effective environmental treaties, regulating trade in approximately 5,000 fauna and 28,000 flora species.

Several aspects of CITES listing procedures are relevant to EGS negotiations. Firstly, CITES requires a scientific backing for any proposed additions to the list. The backing must be presented by the proponent and follow a specific format. CITES then has a relatively fast and efficient mechanism to vote on new additions. Such a procedure could be replicated within EGS negotiations and would result in a list with sufficient political backing (consensus or two-thirds majority) to move negotiations forward, while relieving parties of the seemingly impossible task of agreeing on a pre-established list or precise definition of EGS products.

CITES also has the flexibility to allow those who object to a specific listing to place a reservation and thus remain unbound. The two-thirds majority voting procedures for each product, combined with the possibility to make reservations to specific products in the list, might grant the EGS negotiations the flexibility necessary to populate a list of EGS products that could be presented as a result of negotiations in the WTO's Committee on Trade and Environment Special Session (CTESS), and allow a progressive process for liberalizing trade in EGS. To encourage the maximum level of liberalization as an end result, reservations could be: limited in time, restricted to developing countries only and encouraged to be withdrawn at all stages of the process.

CITES relies heavily on scientific advisory bodies for recommendations as to listing, for assessments of the continued relevance of particular listings and other questions of a technical nature. By contrast the WTO negotiations have avoided any such formal technical input on the components of, or management of, the various lists under consideration.

Other more recent MEAs, such as the Rotterdam Convention on Prior Informed Consent (the PIC Convention, dealing with the trade of hazardous chemicals) and the Stockholm Convention on Persistent Organic Pollutants (the POPs Convention) also provide important insights on the management of listed goods for special treatment under the trade regime. The Rotterdam Convention evolved from a voluntary list of 26 chemicals and pesticides (The London Guidelines) into a legally binding treaty of prior informed consent for traded hazardous chemicals. Like CITES, the PIC Convention relies on the submissions of Parties for additions to the list. Having set out the

criteria to be met by any submission, the Parties have delegated to a scientific review body the task of assessing the submissions against those criteria, and forwarding recommendations accordingly to the COP for their subsequent consideration. The criteria are science-based, are related to the objectives of the Convention and are subject to empirical verification.

It is worth noting that the Parties agreed that outside expertise was needed to assess the submissions proposing new additions to the PIC list. This expert advice is in the service of decisions that are ultimately political, taken by the COP—the equivalent of the WTO's General Council. The composition of, and rules of procedure for, the Convention's Chemical Review Committee might be of use to the WTO in establishing its own such body. It is also important to note that the Convention struggles with barriers to effectiveness in the form of lack of funding for technical assistance and capacity building in developing countries. Any EGS regime should carefully assess how to incorporate developing country concerns and needs in the spirit of the WTO principle of special and differential treatment.

The Stockholm Convention on Persistent Organic Pollutants (POPs) maintains three lists of POPs for which there are varying degrees of restrictions on production and trade. The Convention (like the other Conventions surveyed above) was founded on commonly understood final objectives and multilaterally agreed principles. These starting ingredients made it possible for the Parties to agree on the criteria for additional listing and on the 12 POPs that were originally listed. The drafting of the original criteria for listing was delegated to a geographically balanced ad hoc experts group that forwarded its recommendations to the Parties. Decisions are normally taken by consensus, but the Chemical Review Committee can take decisions by two-thirds majority if consensus is impossible.

EGS negotiations can draw significant lessons from ecolabelling experiences as well. Ecolabels are market-based instruments that are supposed to stimulate demand for goods whose production or use has a positive impact (or less of a negative impact) on the environment. Such goods are environmentally superior to other like-products. However, who decides what is superior, how, and with what consequences, are contentious issues. These issues are likely to be faced in creating a list of EGS as well.

The experience of ecolabels for coffee offers a few important lessons. First, it is of paramount importance to assess the actual environmental merits of a good against its clamed merits. In coffee sustainability initiatives, this has been a very low priority until very recently. Second, it is important to assess any potential impacts that would discriminate against small and medium-sized producers, or against exporters from certain regions. Coffee also offers the interesting example of a good for which there are many existing standards, none of which is ideal. If the WTO were to try to refer to existing standards in assembling its lists, this problem would need to be addressed.

This is not the case for ecolabelling in fish products, where the Marine Stewardship Council (MSC) ecolabel is dominant. It is a successful third-party verified label certifying sustainability of wild fish catches. In this case study, lessons in governance are important. In particular, openness in the formative phase of standard setting and inclusive governance features within which standard setting takes place are extremely important for the inclusion of views and influence from developing countries and small producers. This, in turn, has implications on the likelihood that such actors view MSC (or any organization/standard underlying the inclusion of a good in the EGS list) as having an impartial and legitimate role and on the operational success of the standard as a whole.

The Energy Star program is a voluntary ecolabel administered by the U.S. Environmental Protection Agency and the Department of Energy, though based on its success, there are agreements to implement it in a number of other countries as well. It sets standards in more than 60 product categories, including commercial and consumer appliances, heating and cooling equipment, consumer electronics, office equipment and lighting fixtures. Those products that meet the standards are permitted to display the Energy Star logo. Starting from coverage of just computers and monitors in 1992, the program now recognizes some 40,000 individual products.

The Energy Star ecolabel would have particular relevance for an EGS regime that included Type 1 or Type 3 goods. Perhaps the most important lesson is the importance of regular review and revision for the specifications that define the list. Energy Star has a set of criteria that prevent its specifications from becoming outdated and conducts regular reviews of the products it covers, with updates every few years for key products. It also has procedures for sunsetting those products that are no longer appropriate for listing—products that have been left behind by technological progress, or for which there is no need for continued listing, as there is full market penetration. Both of these features would need to be a part of any WTO regime for EGS that included goods based on their *relative* merits (Types 1 and 3).

Also noteworthy is that the program has an explicit list of criteria for adding new products to the list of covered items. They must produce significant energy savings, they must be produced by more than one manufacturer, they must give a rapid payback on consumer investment, etc. This sort of guidance is very useful in considering which products should be granted the privilege of listing.

The experience of MEAs and ecolabelling programs bears directly on some of the most difficult issues facing WTO members as they seek to create and maintain an EGS regime. The key recommendations from this study are as follows:

1. Start from first principles

The three MEAs surveyed started with environmental principles, and with shared agreement on the objectives of the negotiations, and proceeded from there to elaborating lists that were appropriate. The EGS negotiations have no such guiding compass, and should reference principles and objectives enunciated elsewhere for environmental protection, to make the job of deciding what to include less political and more grounded in environmental realities. This could be done by reference to principles in multilateral agreements on environment (such as the Rio Principles), or by using as a basis for negotiation the work begun by others, such as the many available lists of green technologies propounded by the IEA, the UNFCCC and others.

2. Refer to standards created outside the WTO, where they exist

The three types of goods that might be included in any EGS regime would need somewhat different treatment, but all should reference standards created outside the WTO.

With respect to Type I goods, the experience surveyed in this paper strongly suggests that the WTO does not have the capacity to create and maintain a living list. Nor, if the members know what is good for the Organization, should it have the appetite. The sort of ongoing revision to the list and verification of claims that is fundamental to the Energy Star ecolabel shows that any standard based on *relative* merit will require continuous technical review efforts of the kind the WTO simply cannot undertake.

As such, where there are existing standards, the WTO should make reference to them, rather than trying to specify its own list. In the context of Type I goods, Japan has proposed as much, suggesting that something like the Energy Star standard could be referenced in the WTO text; Steenblik (2005, p. 21) also raises this possibility.

In the context of Type III goods, in the unlikely event that the members choose to consider these, the argument is much the same as for Type I goods. Again, such goods would get preferential treatment as a result of their relative merit, and relative merit can be expected to change over time.[2]

In some cases, for Types I and III goods, *many* standards exist, but abundance is not necessarily a good thing. As shown in the case of coffee ecolabels, where there are many different and competing standards, it will be difficult to adopt one in particular. Members have several viable alternatives in such cases: combine parts of different standards to create a new one (not recommended, since it would involve the WTO creating a standard), use a minimum common denominator (again this

[2] This will not always be the case. Standards for organic agriculture, for example, could be expected to change very slowly, if at all. Standards for carbon intensity of steel production, on the other hand, would change with predictable regularity.

would involve some level of specification by the WTO), or reference several standards as presumed equivalent.

In the context of Type II goods it is less obvious that there would be a need for regular revision. But any technology for environmental improvement can become dated and rendered obsolete by new and more effective technologies. Without a regime for review and revision, a list of Type II goods would eventually protect producers of yesterday's technologies to the detriment of cost-effective innovative environmental technologies. Here, however, there are few, if any, standards to which the WTO could make reference as the basis for a list.

3. Where standards do not exist, go slowly

In the context of Types I and III goods, if there are no existing standards, members should not proceed with listing, but should establish objective criteria for including goods that would allow future additions. That is, if there is no standard for automobile fuel that would give preference to ethanol blends or other clean fuels, then those fuels should not be listed. But there should be certainty that, if and when a fuel standard is created that meets certain criteria, then fuels will be covered by the EGS regime.

The experience of existing ecolabels, as surveyed above, gives us some lessons in the challenges of establishing a "good" standard. In response to those challenges there has been movement at the international level to codify some of the desired traits of the organizations in charge of administering such standards. The ISEAL Alliance, for example, defines and codifies best practice, at the international level, for the design and implementation of social and environmental standards systems. Other guidelines that could be drawn upon for the governance of individual standards are the ISO guidelines for the setting of standards, for certification and for accreditation.

An alternative to establishing a new standard is the approach taken by the Energy Star regime with respect to buildings. There, the program did not lay down specifications, but rather simply certified the top 25 per cent of performers as of the time of certification. This would require more work than simply referencing an existing standard—it would involve some regular assessment of the current state of practice—but would be less complex than creating a new standard.

The principle of going slowly is demonstrated in many of the regimes surveyed above. The Energy Star program started with just computers and monitors. The CITES, Rotterdam and Stockholm Conventions all started with limited lists and have worked to make them more comprehensive. The key to making such a solution acceptable to those whose favoured candidate goods are left off the list is to establish fair, objective criteria for future additions. If those criteria relate to existence of standards, as suggested here, then it will be in the interests of exporters to create such standards, and they will soon be created.

In the context of Type II goods, a different approach is called for. Goods whose primary objective is environmental improvement seldom have to compete in their product classes with goods that are environmentally damaging, and therefore a labelling based on relative merit is not appropriate. But there is value in the approach taken by the MEAs surveyed above, all of which have scientific advisory bodies to give them input on, among other things, what should be on or off the lists. For Type II goods, the WTO should create a technology advisory group, made up of members nominated by their respective governments, to deliver a list of technology areas with significant potential to contribute to environmental objectives (carbon capture and storage, solar thermal, soil remediation, etc.), and a list of the key goods, identified by Harmonized System (HS) codes, that are necessary in each area.

As with the Conventions surveyed above, the members would have the final say on the recommendations submitted by the advisory group, but the group's existence would give the listing process a scientific grounding analogous to the existence of the standards referenced for Type I and III goods.

4. Build in flexibility

As noted above, in order to make the restrictions imposed by CITES palatable to the Parties, it was necessary to build in some flexibility. Parties can lodge reservations, under specified circumstances, to the listing decisions of the COP. This same sort of flexibility might be necessary to consensus on a regime for EGS liberalization within the WTO. It might, for example, be necessary to allow members to lodge reservations to a certain *de minimus* number of goods. Alternatively, the limit could somehow be linked to the value of the goods denied preference (e.g., percentage of value of global trade, or value of domestic production).

5. Base it on science

A key element in all the experience surveyed above is the need for scientific expertise in the form of a scientific or technical advisory body. All of the MEAs surveyed relied heavily on such bodies, and the ecolabelling schemes also employ scientific capacity, though more usually in-house. If the members did not choose to simply reference existing standards, such a body could help draft the criteria that would guide decisions on what goods and services should be on the list. Other roles for such a body are noted below.

The scientific advisory body might also be charged with regular review of the existing list, with a view to recommending revisions in light of technological progress, to considering the advent of new technologies for inclusion, and to assessing actual environmental impact. A set of criteria for this sort of review was described above in the context of the Energy Star program.

As noted in the experience of the ecolabelling practice, openness is of primary importance. Meetings of the scientific advisory body might be made open to the registered public to observe and, as is the practice in most MEA negotiating meetings, contribute by commenting on proposals and other agenda items. It would be particularly important to elicit the views of developing country producers.

The final decision-making body, akin to the COP in the MEAs surveyed, could be the WTO's Committee on Trade and Environment (CTE) or the General Council. Any recommendations from the scientific advisory body would go here for actual approval. A key decision would be whether to institute voting as a last resort as under POPs (perhaps with reservations possible, as recommended above), or to strive for consensus, as with PIC.

6. Build in special and differential treatment

It would be particularly important, as shown in the experience of the coffee and fish ecolabelling practice surveyed above, to make provisions for technical assistance and capacity building for developing country producers, to help them take advantage of the opportunities offered by liberalization of EGS. As noted above, developing country producers face special difficulties in understanding requirements and getting certified under existing labelling schemes, and certification under the EGS regime would be no different. Funding to support capacity building in this area would contribute to both environmental and development objectives, and would be in line with existing WTO mandate and practice on trade-related technical assistance.

Overcoming the stalemate in WTO environmental goods and services negotiations requires creative approaches to defining environmental goods and services, and managing the regime that is created by fulfilling the Doha mandate. The final regime should provide enough policy space for developing countries to develop their own technological alternatives for "greener" production, while giving a strong "push" to international trade in those technologies that may pave the way to a low carbon economy. Experience gained in MEAs and in ecolabelling initiatives constitutes a valuable store of ideas and innovations that may help unlock the present stalemate within the CTESS. Agreeing on how to populate and maintain a list of environmental goods, and commencing such a process in an open and non-discriminatory manner, would send a positive message of political will for the promotion of a global low-carbon economy.

There is no doubt that an immediate contribution that the WTO can make to the fight against climate change is to indeed open markets to clean technology and services. The Doha Round of trade negotiations offers an avenue for expanded access to products such as scrubbers, air filters and energy management services. […] Launched within a broader context of the Doha Round's environmental chapter, the negotiations on environmental goods and services could deliver a double-win for some of our Members. A win for the environment and a win for trade.
—WTO Director-General Pascal Lamy, December 2007

1.0 Introduction

The Doha Ministerial Declaration mandated the members of the WTO to negotiate, as part of the overall package of Doha results, the reduction or elimination of barriers to trade in environmental goods and services (EGS). This laudable initiative is an excellent example of the ways in which the multilateral system of trade can help serve the aims of the trading system, the environment and development. Several recent submissions have explicitly tried to link the process to climate change as a priority environmental issue. But the talks in this area are deadlocked, in part due to disagreements on the definition of EGS and the scope of goods and services to be liberalized. Doha negotiations on the liberalization of trade in EGS have thus yet to deliver on their aim of achieving triple wins for trade, the environment and development.

Indeed the WTO members in Doha may have underestimated the scale of the journey on which they were embarking. Beyond the difficult questions of which goods to include on the list and how to negotiate, which have been the main preoccupation to this point, are other challenges that could require the WTO to innovate and branch out in ways it has not done to date. A list of EGS must be a living document, to which new items can be added, and from which the existing items can be dropped when they are rendered ordinary by technological advances. Without that ability, any list would soon cease to serve the basic objectives it was meant to achieve; goods that deserved special treatment would not be listed, and goods that did not would be. In essence, assembling a list of goods that are preferred is a classic exercise in standard-setting, an activity that, to date, the WTO has studiously avoided. And proper standard setting demands good institutions, both of governance and of information. At the end of the day, how can we ensure that the resulting regime, which may have significant economic impacts, still respects both the environmental goals that are its foundation, and the WTO imperative to guard against protectionism and serve economic development?

Fortunately, there are existing efforts that have addressed many, if not all, of these challenges. The prior experience of several multilateral environmental agreements (MEAs) provides key lessons for the possible establishment of an EGS list and its management. The first global environmental agreement dealing with trade, the Convention on International Trade in Endangered Species (CITES) signed in 1973, provides an example of how countries can work with a set of criteria to define a list of environmental goods for trade liberalization, and regularly update it to maintain its environmental soundness. CITES is particularly relevant for EGS negotiations as it has been in force for more than three decades, has global membership, and is considered one of the most effective environmental treaties regulating trade in approximately 5,000 fauna and 28,000 flora species. Other more recent MEAs, such as the Rotterdam Convention on Prior Informed Consent (the PIC Convention, dealing with the trade of hazardous chemicals) and the Stockholm Convention on Persistent Organic Pollutants (the POPs Convention) also provide important insights on the management of listed goods for special treatment under the trade regime.

EGS negotiations can draw significant lessons from ecolabelling experiences as well. Ecolabels are market-based instruments that are supposed to stimulate demand for goods whose production or use has a positive impact (or less of a negative impact) on the environment. Such goods are environmentally superior to other like-products. However, who decides what is superior, how, and with what consequences, are contentious issues. These issues are likely to be faced in creating a list of EGS as well. In particular, the ecolabelling experience can teach lessons related to: governance and best practice for the management of the EGS list; standard setting and management of individual items included in the EGS list; assessment of the actual environmental impact of items included in the list; and fairness of procedures and requirements that would be placed on small producers and/or developing countries in the drawing of such list and/or in the setting of standards regulating individual items.

This study explores ways in which the experience of MEAs and ecolabels could provide useful input to WTO EGS negotiations. To this end, Section 2 briefly reviews the discussions taking place in the EGS negotiations and main challenges identified in defining the scope of products for liberalization. Section 3 reviews CITES rules and regulations by covering: the CITES structure, its permit system, procedures to amend the lists of species in its Appendices, scientific criteria, political decisions, countries' discretionary space, measures to limit the scope of listings, and scientific procedures oriented at maintaining the environmental soundness of the Convention. In each case, aspects that may be relevant to EGS negotiations are highlighted. Section 4 reviews the experience of ecolabelling and the lessons it provides for EGS negotiations. First, it provides a background on the main features of ecolabels and the WTO rules applying to them. Second, it examines case studies on sustainability labels in coffee and ecolabels in fisheries in order to highlight the significance of each for EGS negotiations. Section 5 concludes by merging the insights of the analyses of MEAs and ecolabels to provide some suggestions on how an EGS list could be managed.

2.0 Background of Doha EGS Negotiations and Main Approaches Proposed To Date

The Doha Declaration adopted as a result of the Fourth WTO Ministerial Conference (2001) asked WTO members to identify environmental goods and services as a group for liberalization. Paragraph 31 (iii) of the Doha mandate establishes that negotiations should pertain to: "the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services."

While the mandate is clearly for both goods and services, the present analysis concerns itself only with goods, as experience in the WTO discussions has shown that these probably offer the most potential for environmental benefit, but also the most difficult path forward.

The Doha mandate does not specify what constitutes an environmental good or the desirable extent of liberalization; therefore countries have been struggling since its adoption to come up with a list of environmental goods and modalities for liberalization. That effort entails two sorts of decision:

- What types of goods will be considered appropriate for preferential treatment?
- What sort of negotiating approach will the members take in liberalizing?

On the first question, there are at least three candidate types of goods that have been mooted for special designation as "environmental":

- Type I: Goods that are environmentally superior in end use
- Type II: Goods for which environmental improvement is a primary object
- Type III: Goods that are environmentally superior in production and processing

Type I goods operate in their end use (or in disposal) in a manner that causes less environmental damage than some baseline cases.[3] Japan, for example, has proposed a listing for HS870390: passenger motor vehicles other than those with internal combustion engines. When operated, these vehicles have low emissions compared to conventional motor vehicles. High-efficiency home appliances, such as washing machines and refrigerators, are also examples of Type I goods (Japan

[3] This classification is a sub-set of what are known as environmentally preferable products (EPPs) (UNCTAD, 1995; Tothova, 2005). EPPs cause significantly less environmental harm at some stage of their life cycle than alternative products that serve the same purpose. The classification proposed in this paper divides this up such that the production phase of the life cycle is covered as Type III goods, and the end use and disposal is covered under Type I. In the spring 2010 Chair's summary of the negotiations, the EPPs grouping contains only six goods, all included because of their biodegradability (WTO, 2010).

has proposed HS841510 – efficient air conditioners). Renewable energy technologies also fall into this category; in their end use they generate power, but they do so in an environmentally superior manner as compared to conventional technologies (the U.S. and EU have proposed HS730820 – towers that can be used to support wind turbines).[4]

Type II goods have environmental improvement as a primary object. These include environmental remediation technologies (a number of countries have proposed HS842119 – centrifuges that can be used to remove oil from water in oil spills); pollution prevention technologies (Saudi Arabia has proposed a number of chemicals and mechanical inputs used in the end-of-pipe process of carbon capture and storage) and natural resource management technologies (such as HS901540 – photogrammeterical surveying instruments, used for GIS imaging).

Type III goods use processing and production methods (PPMs) that cause less environmental damage than other similar goods. Organic agriculture is an example of this sort of good. The current Chair's listing of proposed goods (WTO CTESS, 2010, Annex III) does not contain any goods distinguished by virtue of their PPMs, but organic agricultural goods have been indirectly proposed by, among others, Brazil, in discussing the types of EGS liberalization from which developing countries might benefit (Brazil, 2007).

As to the second question—how to liberalize? —WTO CTESS (2010, para. 14) outlines three main approaches that have been suggested, though some proposals have consisted of combinations of these:

- The list approach to liberalization;
- Liberalization by request and offer;
- Project-based liberalization.

Each of these is examined in greater depth below.

2.1 The list approach

The list approach was first introduced within EGS negotiations as a developed country proposal based on existing OECD and APEC lists of EGS. An initial list of 480 products compiled by the WTO Secretariat was further trimmed to 153 environmental goods, including a reference to special and differential treatment and a review mechanism to maintain the list in line with technological

[4] Some might argue that wind-power turbines are Type II goods—primarily aimed at environmental improvement. But in fact renewable energy technologies are primarily aimed at *producing energy*. They happen to do so in a way that is more environmentally friendly than their conventional competitors.

developments. The list classified most products according to the six-digit HS Code, a system used to track global trade, based on a unique code for each commodity. Under the World Customs Organization's HS system, each commodity in trade is assigned a numeric code, with lower-digit numbers representing broader groups and higher-digit numbers representing increasingly specific descriptions of goods. Six digits is the most detailed level of specification for the purposes of WTO negotiations. In addition, regions and countries may differentiate among products by widening codes to eight or even ten digits. The list proposal also included a number of ex-outs, which are specific subcategories beyond the HS 6-digit levels to be defined by individual countries for customs purposes (WTO CTESS, 2007).

Challenges presented by a single list proposal were voiced by many developing countries that objected to liberalizing trade in products with dual uses that may not lead to environmental benefits, or that sought to include agricultural goods like biofuels or organic products in the list (WTO CTESS, 2007; WTO CTESS, 2008a).

Further to negotiations, the U.S. and the EU presented a short list of 43 goods and services directly related to climate change mitigation in November 2007, with the objective of approving it in the short term and allowing more time to negotiate a broader list of EGS, leading to an EGS agreement in the medium term (ICTSD, 2007a).

2.2 The end-use, or project, approach

Proponents of the end-use, or project, approach seek to restrict the number of goods identified for liberalization, with India suggesting originally that they should pertain to pre-approved environmental projects, and Uruguay proposing that tariff reductions be limited to products used in activities that implement multilateral environmental agreements (WTO CTESS, 2006a, WTO CTESS, 2006b).

Further to comments received, India and Argentina presented another proposal in 2007 to set out a phased approach to EGS liberalization that would, in a first stage, identify and agree on a list of environmental activities (such as air pollution control and renewable energy); and then develop a country list of public and private entities that carry out the agreed activities, and notify the list to the WTO for activities to be eligible for preferential tariff treatment.

In a more recent submission Argentina, like India before it, went further to suggest that goods from agreed categories be given preferential treatment only if they were used as part of projects under the Kyoto Protocol's Clean Development Mechanism—a facility that allows approved climate-friendly investments to generate tradable credits for their greenhouse gas emissions reductions (WTO CTESS 2009a).

Several nations, including Australia, Chile, the U.S. and Canada expressed their reservations to the end-use approach. They were concerned over its potential to create bureaucratic procedures, or to violate the most favoured nation (MFN) principle if small enterprises were to be discriminated against as a result of their limited access to the complex procedures that may be required to be included in such a list (WTO CTESS, 2007b; ICTSD, 2007b).

2.3 The request-offer approach

Although initially countries seemed to share the idea that consensus could be achieved within the CTESS on a single list or approach to the identification of products to be subject of tariff reductions, the difficulty of having all countries agree on a standard degree of liberalization for the same set of products soon became evident. As a result, Brazil proposed in 2007 to engage in a set of "request and offer" rounds, following traditional WTO mechanics whereby countries request specific liberalization commitments from each other, and then extend the tariff cuts agreed bilaterally to all other nations as a result of the MFN principle (WTO CTESS, 2008a). There would not be a single list of EGS products, but each country would establish its own degree of liberalization and incorporate EGS within their overall non-agricultural market access, services and agriculture negotiations (Brazil, 2007). Cuba proposed a mixed approach whereby products used solely for environmental purposes would be included in a list, while dual-use products would be subject to request-offer rounds (WTO CTESS, 2008b).

The request-offer round proposal presents its own complexities: some countries highlighted it could be time consuming and cumbersome, while others were concerned that the merits of having a separate EGS negotiation would be lost (WTO CTESS, 2008b; ICTSD, 2007c).

2.4 Challenges in making progress

At the end of the day, the EGS negotiations on environmental goods are not progressing well. Nine years of negotiation have not brought us much closer to an agreed list of goods, or to answers to the more fundamental questions posed above: what sort of goods are we talking about, and how would we negotiate which ones are in and which ones are out?

This paper starts from the assumption that a successful conclusion to the EGS negotiations would be in the interest of the trade, environment and development communities. The remaining sections survey the practice of MEAs and ecolabels in pursuit of that end.

3.0 Lessons from Multilateral Environmental Agreements (MEAs)

This section examines, in turn, three MEAs that hold important lessons for the EGS negotiations: the Convention on International Trade in Endangered Species of Flora and Fauna (CITES), the Rotterdam Convention on Prior Informed Consent (PIC) and the Stockholm Convention on Persistent Organic Pollutants (POPs). Many of the salient lessons are drawn out in this section, but they are summarized again in the concluding Section 5, after Section 4's analysis of the lessons available from ecolabelling experiences.

3.1 The Convention on International Trade in Endangered Species (CITES)

CITES was negotiated following a request by the United Nations Conference on the Human Environment, held in Stockholm in 1972, on the need to convene a plenipotentiary conference "as soon as possible, under appropriate governmental or intergovernmental auspices, to prepare and adopt a convention on export, import and transit of certain species of wild animals and plants" (UN 1972, recommendation 99.3). IUCN had been working on the design of a global instrument to address the over-exploitation of wildlife for international trade, and circulated to UN members several drafts for a convention, with the first list of proposed species appearing in 1969. A further revision of the draft convention was put forward by the U.S.A., and served as a basis for discussions during the Plenipotentiary Conference to Conclude an International Convention on Trade in Certain Species of Wildlife, held from February 12 to March 2, 1973 in Washington D.C. Representatives from 80 countries attended the Plenipotentiary Conference, and on Saturday, March 3, 1973, 21 countries signed the CITES Convention, which entered into force on July 1, 1975 (McNeely, 2003). There are currently 175 country parties to CITES.

Since the 1970s, CITES has regulated international trade in plant and animal species listed in its appendices, currently including around 5,000 fauna species and 28,000 flora species. It has a mechanism to establish a list of species subjected to trade restrictions, and to grant trade permits to specimens, products and sub-products of listed species, according to specific scientific criteria.

3.1.1 CITES Structure

CITES is governed by a Conference of the Parties (COP) a biennial or triennial gathering of all 175 countries that are parties to this Convention, which takes decisions on listing new species in the appendices or uplisting or downlisting existing species, and recommends measures to manage and improve the Convention's effectiveness.

CITES also has a Standing Committee integrated by regional representatives who meet annually to: provide policy guidance to the Secretariat concerning the implementation of the Convention and management of its budget; oversee the implementation of management plans for key species like elephants and sturgeons; and prepare resolutions for consideration by the COP. Both the COP and the Standing Committee may recommend trade suspensions to allow time for non-compliant parties to take those measures necessary to enforce CITES provisions.

To address scientific issues, CITES has a Plants Committee and an Animals Committee integrated by scientists elected by each of the different regional groups (two per region) that meets twice between COPs. The Scientific Committees are in charge of: providing scientific advice on species status; deal with nomenclatural issues; undertaking periodic review of species listed in the appendices to ensure their proper categorization; advising when certain species are subject to unsustainable levels of trade; and drafting resolutions for consideration by the COP.

A Secretariat for CITES is administered by the UN Environment Programme (UNEP) and undertakes the day-to-day administration of the Convention. The Secretariat provides technical assistance and communicates relevant information to CITES parties on the different aspects of the Conventions' implementation, and monitors enforcement of CITES decisions. Statistics on trade in CITES species are kept by UNEP's World Conservation Monitoring Centre (UNEP-WCMC) through its species trade database, which compiles information submitted by parties annually on all CITES permits issued or received as a result of international trade.

Relevance of CITES structure to WTO EGS negotiations

CITES's structure has similarities to that of the WTO, where the Secretariat, Standing Committee and Conference of the Parties are akin to the WTO's Secretariat, CTE and General Council. The bodies with most relevance to the WTO EGS negotiations are its Scientific Committees, which might be useful if criteria were to be adopted on the type of goods that may enter the EGS list. In that case, following the CITES example, a scientific committee comprised of regionally nominated representatives, with a clear mandate to maintain the environmental soundness of the "list" would provide the backing necessary to promote liberalization of state-of-the-art technologies for sustainability while suggesting the elimination of obsolete products from the list.

3.1.2 CITES permit system

Working alongside CITES organs are Scientific and Management authorities in each country party to the Convention, who are in charge of verifying the compliance with CITES criteria prior to issuing export/import permits for CITES-listed species. They also cooperate with customs, police and border agencies to promote efficient implementation of CITES provisions. International trade in

species listed in CITES Appendices requires specific permits to certify the legality of shipments that are imported, exported or introduced from the sea. A CITES permit must accompany shipments of all CITES species, and is issued upon confirmation of the legality of such shipments and conformation with CITES criteria.

International trade in an Appendix I species (those in danger of extinction), whether it be a specimen or any part or derivative (such as seeds, furs, tusks or leather goods) requires both an export permit and an import permit. To issue an export permit, a Scientific Authority of the State of export must advise that such export will not be detrimental to the survival of the species in question; and a Management Authority of the State of export must verify that: the specimen was legally obtained; if alive, it will be prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment; and an import permit has been granted for the specimen (CITES Article III).

To issue an import permit, a Scientific Authority of the State of import must advise that the import will be for purposes which are not detrimental to the survival of the species involved and be satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it, and a Management Authority of the State of import must be satisfied that the specimen *is not to be used for primarily commercial purposes* (CITES, Article III, emphasis added).[5]

International trade in Appendix II species does not require an import permit and only requires an export permit with similar requirements to those for Appendix I (CITES, Article IV). Thus, the purpose of trade is irrelevant for Appendix II species. Since Appendix II species may be subject to high levels of trade, Scientific Authorities in each Party are expected to monitor overall levels of export in listed species and flag those cases were they consider exports should be limited (through annual quotas, for example) in order to maintain species throughout their range at levels consistent with their role in the ecosystems in which they occur.

Relevance of the CITES permit system for EGS negotiations

The CITES permit system is one possible way to deal with goods that are deemed "environmental"— that is, a *sui generis* system of permitting could certify that the good in question met the guidelines specified by EGS rules. But the CITES model might, in the end, be overly complex when applied to EGS, as it is constructed with the ultimate aim of restricting trade in a small number of goods.

[5] The article also stipulates specific requirements, in line with the above, for the issuance of re-export certificates and introduction from the sea.

3.1.3 *Listing species in CITES Appendices I, II and III: Scientific criteria, political decisions and countries' discretionary space.*

Unlike other MEAs that seek to ban certain products, CITES's aim is not to restrict trade per se but to regulate international trade in a manner that ensures that international trade of wild animal and plant species does not threaten their survival.

CITES-listed species are placed in three appendices according to their status. Appendix I lists species in danger of extinction due to international trade, permitting such trade only in exceptional circumstances; Appendix II lists species that may become endangered or enter Appendix I if their trade is not regulated, and thus require controls aimed at promoting their sustainable use. Listings, or amendments to Appendix I and II require a decision by the COP, where all countries are represented. Appendix III species do not require approval by COP and are listed voluntarily by range states seeking international cooperation to control their trade.

For listings in Appendix I and II, a party interested in listing a species or amending the list must submit a proposal 150 days prior to the COP, supported by scientific and biological data on population and trade trends. Proposals are circulated to other parties, the Secretariat and non-governmental organizations (such as TRAFFIC or IUCN), which may present their opinion on the merits of each proposal.

Proposals to amend the appendices (listing, uplisting or downlisting a species) must be based on CITES criteria. Biological criteria include the size of the population, area of distribution and rate of population decline. Trade criteria include whether the regulation of trade in a species is required to ensure that the harvest of specimens from the wild does not reduce the wild population to a level at which its survival might be threatened by continued harvesting or other influences (CITES, 2007).

At the COP, a proposal to amend Appendix I or II must be adopted by consensus or a two-thirds majority of parties present and voting. Countries need not explain the reasons for their votes, therefore although scientific criteria are required to back proposals, political considerations may ultimately decide on their fate.

Once a species is listed, CITES procedures will apply to all international trade in specimens, parts or derivatives of such species, regardless of whether particular range states or importers supported the listing. Parties may, however, enter reservations at the time of listing, with respect to any species listed in the appendices. Reservations are a prerogative of the parties and do not require support (Articles XV, XVI or XXIII of the Convention).

Species subject to high levels of commercial trade, such as timber or fisheries, have proved to be those hardest to list. It took ten years for mahogany to enter Appendix II after the first proposal for its listing in 1992, and proposals to list Patagonian toothfish and porbeagle shark have been rejected in 2002 and 2007, respectively. Proposals on whales also provide a good example of how scientific and other considerations play out during listing discussions.

At COP 13 held in Bangkok in 2004, for example, Japan proposed opening commercial trade in minke whales by downlisting three stocks from Appendix I to Appendix II. Japan's proposal was based on scientific findings, including estimations of stocks adding to 160,000 animals, an indication that the species did not meet biological criteria for an Appendix I listing. Japan argued at the meeting that the stocks of common minke whales could "in no way be regarded as threatened with extinction" and emphasized the downlisting was critically important "in order to demonstrate that CITES makes its decisions on the basis of scientific and objective information, *not for political reasons*" (CITES 2004a, emphasis added).

However, non-scientific considerations, including the high regard many people and some countries' tourism industries have for whales, and concerns over the effect a CITES downlisting could have on the future of the International Whaling Commission (IWC) led to a rejection of the Japanese proposal. At COP 13, the CITES Secretariat recommended the proposal's rejection "to maintain good level of coordination among CITES and the International Convention for the Regulation of Whaling (ICRW)" and to respect the IWC's worldwide moratorium on commercial whaling. Many parties echoed the Secretariat's concerns and urged the proposal's rejection. However, none challenged its satisfaction of CITES listing criteria (CITES, 2004b). Due to the highly controversial nature of the proposal, Japan requested a secret ballot. The proposal was then rejected by 55 votes in favour, 67 against and 14 abstentions (CITES, 2004c). As a result, minke whales remain in Appendix I with a reservation by Iceland, Japan, Norway and Palau.

Relevance of CITES listing criteria for EGS negotiations

Several aspects of CITES listing procedures are relevant to EGS negotiations. First, CITES requires a scientific backing for any proposal. The backing must be presented by the proponent and follow a specific format. CITES then has a relatively fast and efficient mechanism to vote on new species to be included in the list. Such a procedure could be replicated within EGS negotiations and would result in a list with sufficient political backing (consensus or two-thirds majority) to move negotiations forward, while relieving parties of the—seemingly impossible—task of agreeing on a pre-established list or precise definition of EGS products.

CITES also has the flexibility to allow those who object to a specific listing to place a reservation and thus remain unbound. The two-thirds majority voting procedures for each product, combined

with the possibility to make reservations to specific products in the list, might grant the EGS negotiations the flexibility necessary to populate a list of EGS products that could be presented as a result of CTESS negotiations, and allow a progressive process for liberalizing trade in EGS. To encourage the maximum level of liberalization as an end result, reservations could be: limited in time, restricted to developing countries only, and encouraged to be withdrawn at all stages of the process.

3.1.4 Scientific procedures

CITES has several scientific procedures to ensure the soundness of the Convention's implementation. These include: non-detriment findings performed by scientific authorities at the country level to ensure trade takes place at sustainable levels; reviews of significant trade performed by the CITES Scientific Committees to ensure national authorities are complying with CITES criteria when authorizing trade; and periodic review of the appendices performed by the CITES Scientific Committees to maintain the appendices' environmental soundness.

Non-detriment findings

Non-detriment findings (NDFs) are the responsibility of scientific authorities in exporting states, which, prior to authorizing exports of a specimen or its products or subproducts, must ensure that such exports will not be detrimental to the survival of the species in question. The CITES Secretariat and Scientific Committees may provide countries with technical assistance and guidance on NDFs upon request. The Scientific Committees, for example, worked with parties in establishing NDF methodologies for timber species, like agarwood, ramin and bigleaf mahogany.

Review of significant trade and periodic review of the appendices

The review of significant trade (RST) is a process by which the CITES Scientific Committees control the sustainability of trade in species listed in CITES appendices with high levels of international trade. RSTs evaluate whether countries are performing adequate NDFs when allowing trade in CITES species. This procedure only evaluates legal trade flows as it is based on data available in the UNEP-WCMC trade database. Cases of urgent concern are brought to the attention of the Standing Committee for remedial measures to be taken, which may include technical assistance for countries to improve CITES implementation, and in extreme cases, trade bans.

CITES Scientific Committees are also in charge of periodically reviewing the Appendices to ensure listings are still relevant. At the suggestion of Parties at COP, the Committees request interested scientific institutions to perform a review on the status and impact of trade on particular species or families. Further to these reviews, the Scientific Committees then recommend to the COP which species may be excluded from the Appendices.

Relevance of CITES scientific procedures to WTO EGS negotiations

Specific science-based procedures to ensure the list of EGS remains environmentally sound may prove a useful precedent for the EGS talks. Procedures need not be cumbersome or complex, but they would need to be based on some sort of criteria for including or removing goods from the list—something that is currently lacking.

3.2 The Rotterdam Convention on Prior Informed Consent (PIC)

3.2.1 Structure of the PIC Convention

The objective of the Rotterdam Convention on Prior Informed Consent is to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use, by facilitating information exchange about their characteristics, by providing for a national decision-making process on their import and export and by disseminating these decisions to Parties.

Chapter 19 of Agenda 21 contains an international strategy for action on chemical safety. It calls on States to achieve, by the year 2000, the full participation in and implementation of the PIC procedure, including possible mandatory applications of the voluntary procedures contained in the Amended London Guidelines and the International Code of Conduct (London Guidelines) (Carpenter, Cosbey & Krueger, 1997). In November 1994, the 107th meeting of the Food and Agriculture Organization (FAO) Council agreed to proceed with the preparation of a draft PIC Convention as part of the FAO/UNEP Programme on PIC (Carpenter, Cosbey & Krueger, 1997). Negotiations on the PIC Convention began in March 1996, the Convention was adopted September 1998, and it entered into force in February 2004.

The PIC Convention is essentially an information-sharing agreement, enabling governments to make informed decisions on import. The Convention includes facilitation of information exchange about characteristics of listed chemicals; a national decision-making process on import and export of chemicals; and the dissemination of a Party's decision relating to a chemical's import to other Parties (Kohler, 2006). The Rotterdam Convention does not regulate, control or restrict the production or use of the chemicals under its purview, however the listing of chemicals under the convention requires their standardized labelling in international trade and requests Parties to decide whether, and under what conditions, to authorize the import of a listed chemical (Kohler, 2006).

The negotiation process involved adapting the voluntary London Guidelines into a legally binding instrument. By 1998, the London Guidelines included 22 pesticides and four industrial chemicals in a voluntary PIC procedure. This list was agreed upon as the starting point for the PIC Convention (Hough, 1999). From the Conference of the Plenipotentiaries (September 1998) until the Convention came into force, an interim PIC Procedure was put in place, to aid the transition to a binding agreement. All of the chemicals included in the interim PIC procedure prior to the entry into force of the Convention were added to Annex III of the Convention—the list of chemicals subject to the prior informed consent procedure—at the first Conference of the Parties (COP1) (Baldwin *et al.*, 2001).

The PIC Convention procedure for adding new chemicals differs for "banned or severely restricted" chemicals and "severely hazardous pesticide formulations." Banned or severely restricted chemicals are defined as chemicals, virtually all use of which within one or more categories has been prohibited by final regulatory action in order to protect human health or the environment, but for which certain specific uses remain allowed. A severely hazardous pesticide formulation is a chemical formulated for pesticide use that produces severe health or environmental effects observable within a short period of time after single or multiple exposures, under conditions of use (Rotterdam Convention, 1998).

Regarding procedures for banned or severely restricted chemicals, when the PIC Secretariat receives at least one notification from each of two PIC regions regarding a particular chemical that it has verified meet the requirements of Annex I (information requirements for notifications made pursuant to Article 5), it forwards them to the Chemical Review Committee (CRC) for consideration for inclusion in Annex III. If the CRC (described below) agrees the chemical fulfils the requirement for Annex III, it prepares a decision guidance document (DGD), for consideration of the COP. The COP decides if the chemical should be subject to the PIC procedure and added to Annex III. Annex II of the Convention lays out the criteria for listing chemicals in Annex III, including that the submitting Parties have taken regulatory action to restrict the use of the chemical, that such action was based on a risk assessment, that there is evidence of ongoing international trade in the chemical, and that the risks identified are not specific to the geographical area where the regulatory action was enacted.

Regarding procedures for severely hazardous pesticide formulations, any Party that is a developing country or a country with an economy in transition and that is experiencing problems caused by a severely hazardous pesticide formulation under conditions of use in its territory, may propose to the Secretariat the listing of the severely hazardous pesticide formulation in Annex III (Rotterdam Convention, 1998). The Secretariat then verifies the proposal contains the information required by the proposing party (specified in Part 1 of Annex IV: Information and criteria for listing severely

hazardous pesticide formulations). When the requirements have been fulfilled for a particular severely hazardous pesticide formulation, the Secretariat forwards the proposal and the related information to the CRC. The CRC assesses the submission against the criteria for listing set out in Part 3 of Annex IV, and recommends to the COP whether the severely hazardous pesticide formulation in question should be listed in Annex III. The COP then takes a decision on listing the chemical in Annex III. The COP meets every 2 years and the CRC meets annually. COP decisions are taken by consensus, as Parties could not reach agreement on a voting arrangement.

Relevance of the PIC structure to the WTO EGS negotiations

Like CITES, the PIC Convention relies for additions to the list on the submissions of Parties. Having set out the criteria to be met by any submission, the Parties have delegated to the scientific review body the task of assessing the submissions against those criteria, and forwarding recommendations accordingly to the COP for their subsequent consideration. The criteria are science-based, related to the objectives of the Convention, and subject to empirical verification. These are all important potential lessons for the management of an EGS list once it has been established, as well as for the prerequisites that would make such establishment easier.

3.2.2 *Description of the Chemical Review Committee process*

Article 18 of the Convention provides for the establishment of a subsidiary body called the Chemical Review Committee (CRC). The CRC reviews the relevant supporting information for candidate chemicals including severely hazardous pesticide formulations, in line with the information requirements and criteria set out in the Convention. The CRC recommends to the COP whether or not a chemical should be listed in Annex III of the Convention and subject to the PIC procedure.

The CRC meets annually and operates under the same process as the ICRC, described above. Decisions of the CRC are taken by consensus or by a two-thirds majority vote of Parties present (Ivers *et al.*, 1998). As well as examining the notifications for listing new chemicals, the CRC is also a forum for the exchange of information and expertise.

The CRC is a 31-member body, with eight members from the African States, eight members from the Asian and Pacific States, three members from the Central and Eastern European States, five members from the Latin American and Caribbean States and seven members from the Western European and other States (UNEP/FAO/ RC/COP.1/CRP.8/Rev.2). The decision on the composition of the CRC was controversial and subject to extensive debate at COP 1. Experts normally serve four-year terms, for no more than two consecutive terms. The membership rotates every two years as terms are staggered. The members of the CRC are government-designated experts in chemical management and are appointed by the COP.

Regarding conflicts of interest CRC members are required to annually disclose activities, including business or financial interests, which might call into question their ability to discharge their duties and responsibilities (UNEP/FAO/RC/COP.1/CRP.17).

The CRC has met four times since its inception and recommended to the COP that three chemicals (chrysotile asbestos, endosulfan and tributyl tin) be included in Annex III and therefore subject to the PIC Procedure. The COP agreed to add tributyl tin at its meeting in 2008 and deferred decision on endosulfan and chrysotile asbestos (more on this below). The CRC has concluded over 20 chemicals should not be added to Annex III "at this time" usually because notifications of banned or severely restricted chemicals have omitted risk evaluations under prevailing conditions. No severely hazardous pesticides have been nominated.

A chemical can be removed from Annex III if a Party submits to the Secretariat information that was not available at the time of the decision to list a chemical in Annex III and that information indicates that its listing may no longer be justified in accordance with the relevant criteria in Annex II or, as the case may be, Annex IV. In this case the Secretariat shall forward the information to the CRC which will review the information. If the CRC decides to recommend removal from Annex III, it shall prepare a revised DGD and a decision will be taken by the COP. No chemicals have been proposed for removal from Annex III.

Although the quality of the CRC's work is well recognized, the lack of notifications of new severely hazardous pesticide formulations from developing countries is concerning. Frequent media articles indicate pesticide poisonings continue to occur in many developing countries, yet developing countries do not seem to be taking advantage of the opportunity to add them to the PIC Procedure. This points to one of the continued concerns raised over the Rotterdam Convention by developing countries—that is, that there is no money for technical assistance or capacity building. In the case of the Rotterdam Convention, the important opportunity that allows developing countries to propose the PIC Procedure based on the way chemicals are used is not being taken up, meaning the procedure for adding chemicals is reflecting the concerns of developed countries and countries with economies in transition, much more than developing countries.

Relevance of the PIC scientific procedures to the WTO EGS negotiations

The WTO should note the agreement of the Parties that outside expertise was needed to assess the submissions proposing new additions to the PIC list. It should also note that this expert advice is in the service of decisions that are ultimately political, taken by the COP—the equivalent of the WTO's General Council (though such decisions could also easily be delegated to the Committee on Trade and Environment). The composition of and rules of procedure for the CRC might be of use to the

WTO in establishing its own such body. It is also important to note the barriers to effectiveness posed by the lack of funding for technical assistance and capacity building. Any EGS regime should carefully assess how to incorporate developing country concerns and needs in the spirit of the WTO principle of special and differential treatment.

3.2.3 Political processes in the PIC Convention

Two of the three recommendations made by the CRC for listing chemicals in Annex III have been rejected by the COP (chrysotile asbestos and endosulfan). The political dynamics of this situation warrant further discussion.

Chrysotile asbestos has been on the PIC "table" since the INC process and has been rejected for inclusion in the PIC Procedure by each COP. Even though the ICRC determined that the notifications on the substance met the Convention's criteria for listing banned or severely restricted chemicals in Annex III, a handful of countries, for the most part asbestos producers, strongly opposed the inclusion of the substance in the PIC procedure (Barrios *et al.*, 2004). Due to lack of consensus agreement to list the chemical and the lack of a voting mechanism, the issue has been continually deferred to each consecutive COP.

The impasse over chrysotile asbestos has led to disillusionment among Parties and observers. In an attempt to make progress, at the fourth COP, the Secretariat produced a thought starter proposing to overcome the COP's inability to reach consensus by amending the Convention to introduce either voting procedures to list chemicals in Annex III, or creating a new annex with a list of chemicals for which parties would *voluntarily* apply the PIC procedure (Aguilar *et al.*, 2008). Both proposals were rejected on the grounds that they might create a permanent default mechanism or "two-speed convention" and therefore undermine the incentive for listing chemicals in Annex III (Aguilar *et al.*, 2008).

The issue of endosulfan was addressed by the COP for the first time in 2008. Despite the CRC recommendation that endosulfan be listed in Annex III, India, Iran and China argued that criterion Annex II(d) on intentional misuse had not been applied correctly (Aguilar *et al.*, 2008), calling into question the legitimacy of the CRC decision. The COP decided to ask the UNEP legal office to review its previous advice and agreed to consider the adding endosulfan again at COP 5.

The COP debates on chrysotile asbestos and endosulfan highlight the challenges faced by the Convention and the political ramification of addressing "live" chemicals—those that are actively used and traded. The opposition to addressing chrysotile asbestos and endosulfan was led by the main producer and user countries (ENB, 2008a) and indicates that these countries equate listing chemicals in the PIC Procedure, and allowing countries to make informed decisions, to a trade ban.

This conflict between protecting human health and the environment by listing chemicals in the PIC Procedure and protecting economic interests against the possibility of countries responding with trade restrictions is likely to re-emerge repeatedly (Eckley *et al.*, 2003).

Relevance of the PIC politics to the WTO EGS negotiations

The political dynamics discussed above demonstrate what the WTO EGS negotiators have already learned: negotiations on lists are difficult when significant economic interests are at stake. Despite the presence of scientific advisory bodies in the PIC, and objective criteria for listing, these difficulties have persisted; since the COP makes the final decisions and there is no provision for a voting mechanism, decisions are by consensus only.

3.3 The Stockholm Convention on Persistent Organic Pollutants (POPs)

3.3.1 Structure of the POPs Convention

The objective of the POPs Convention, mindful of the precautionary approach as set forth in Principle 15 of the Rio Declaration on Environment and Development, is to protect human health and the environment from persistent organic pollutants.

In 1995, the UNEP Governing Council (GC) adopted Decision 18/32 and initiated an assessment process regarding a list of 12 POPs (PCBs, dioxins and furans, aldrin, dieldrin, DDT, endrin, chlordane, hexaclorobenzene, mirex, toxaphene and heptachlor), taking into account the circumstances of developing countries and countries with economies in transition. The assessments of the chemicals included available information on chemistry, sources, toxicity, environmental dispersion and socioeconomic impacts. An Ad Hoc Working Group on POPs that developed a work plan for the assessment of these 12 substances and the Intergovernmental Forum on Chemical Safety concluded that sufficient information existed to demonstrate that international action, including a global legally binding instrument, was required to minimize the risks from 12 specified POPs through measures to reduce and/or eliminate their emissions and discharges (Campbell *et al.*, 1998).

The list of 12 POPs chemicals was derived from the short list of 16 POPs that were being discussed by the United Nations Economic Commission for Europe in the context of the POPs Protocol to the Convention on Long-range Transboundary Air Pollution (LRTAP). The LRTAP POPs Protocol covers an additional four substances: polycyclic aromatic hydrocarbons (PAHs), chlordecone, HCH and hexabromobiphenyl. The 12 POPs selected by UNEP were largely thought to represent the "worst" POPs, as well as being of marginal commercial value.

In 1997, the UNEP GC adopted Decision 19/13C endorsing the conclusions and recommendations of the IFCS. The GC requested that UNEP prepare for and convene an intergovernmental negotiating committee (INC) with a mandate to prepare an international legally binding instrument for implementing international action beginning with the 12 specified POPs. The first meeting of the INC was also requested to establish an expert group for the development of science-based criteria and a procedure for identifying additional POPs as candidates for future international action (Campbell *et al.*, 1998). Negotiations on the POPs Convention began in 1998, the Convention was adopted in 2001, and the Convention came into force in May 2005.

The Convention requires Parties prohibit and/or take the legal and administrative measures necessary to eliminate: production and use of the chemicals listed in Annex A (aldrin, chlordane, dieldrin, endrin, hexaclorobenzene, mirex, toxaphene, polychlorinated biphenyls [PCBs]) subject to the provisions of that Annex and some specific exemptions; and import and export of the chemicals listed in Annex A. Parties are also required to restrict production and use of the chemicals listed in Annex B (DDT). Parties are also required to take measures to reduce the total releases derived from anthropogenic sources from dioxins, furans, PCBs and hexaclorobenzene, included in Annex C. Under the Convention, import and export of the 10 intentionally produced POPs is severely restricted. Once all substance specific-exemptions have ceased, import and export is allowed only for the purpose of environmentally sound disposal under restricted conditions.

Article 8 (Listing chemicals in Annexes A, B and C) of the Stockholm Convention sets out the way in which parties may propose chemicals to be added to the Convention. Parties are to submit proposals to the Secretariat, which verifies that that are completed according to requirements and then forwards the proposal to the Persistent Organic Pollutants Review Committee (POPRC) (the POPRC is described in Section 3.3.2). Once the POPRC makes a recommendation to be included in the Convention, this is considered by the Conference of the Parties. The POPRC meets annually and the COP meets every two years. The COP takes decisions on substantive matters by consensus, as no agreement could be reached on a voting provision.

Relevance of the POPs structure to the WTO EGS negotiations

It is informative to note the long history of multilateral consultations and information sharing that built up to the final agreement on the need for a Convention, and on the list of candidate chemicals over which it would have force. Some of this happened outside the Convention process, for example in the LRTAP talks. The Convention, furthermore, was founded on commonly understood final objectives, and multilaterally agreed principles. These founding ingredients made it possible for the Parties to agree on the criteria for listing—a task that still eludes the negotiators of EGS liberalization—and on the 12 POPs that were originally listed.

3.3.2 *Description of the Persistent Organic Pollutants Review Committee (POPRC)*

According to Article 8 (Listing of chemicals in Annexes A, B and C) of the Stockholm Convention, a Party may submit a proposal to the Secretariat for listing a chemical. The proposal should contain the information specified in Annex D, which includes a number of criteria for listing: persistence, bioaccumulation, potential for long-range environmental transport and adverse effects. The Secretariat then verifies that the proposal contains the information specified, and forwards the proposal to the POPRC. The POPRC examines the proposal and applies the screening criteria specified in Annex D. If the POPRC is satisfied that the screening criteria have been fulfilled, it makes the proposal and the evaluation of the POPRC available to all Parties and observers and invites them to submit the information specified in Annex E (sources including production data, uses and releases, hazard assessment, environmental fate, monitoring data, exposure data, risk evaluations, status of the chemical under international conventions). The POPRC further reviews the proposal, taking into account any relevant additional information received, and prepares a draft risk profile in accordance with Annex E. The draft is made available to all Parties and observers, technical comments invited. Once these are received, the POPRC completes the risk profile. If the POPRC decides that the chemical is likely, as a result of its long-range environmental transport, to lead to significant adverse human health and/or environmental effects such that global action is warranted, the proposal proceeds. The Convention notes that lack of full scientific certainty shall not prevent the proposal from proceeding.

The POPRC then invites information from all Parties and observers relating to the considerations specified in Annex F (information on socioeconomic considerations) and then prepares a risk-management evaluation that includes an analysis of possible control measures for the chemical in accordance with that Annex. Based on the risk profile and the risk management evaluation, the POPRC then recommends the COP consider listing the chemical in Annexes A, B and/or C. The COP, taking due account of the recommendations of the Committee, including any scientific uncertainty, shall decide, in a precautionary manner, whether to list the chemical, and specify its related control measures, in Annexes A, B and/or C. If during any of the above stages the POPRC is not satisfied that the screening criteria have been fulfilled, it informs all Parties and observers, makes the proposal and the POPRC evaluation available and sets the proposal aside.

Assisting the POPRC is a standing roster of experts that the Committee may invite to support it in its work. The roster was compiled by the Secretariat from nominations submitted by the Parties. The process for inviting experts (Decision UNEP/POPS/POPRC.1/2) to participate in the work of the Committee involves the Committee identifying the need, followed by the Secretariat verifying the availability of expertise, and the Chair of the Committee confirming the skills are appropriate. If it is

determined that the skills are not available, the Chair may identify other experts for that purpose. These outside experts bring specific expertise to the deliberations where needed, and also add a layer of objectivity, not being direct government appointees.

The first INC for the Stockholm Convention convened in 1998 and created a Criteria Expert Group (CEG) as a subsidiary body mandated to develop science-based criteria and a procedure for identifying additional POPs as candidates for future international action. The CEG developed the procedure to be coordinated by a subsidiary body for adding new chemicals to the Stockholm Convention. The CEG was tasked with completing their work before INC-4 in 2000, but in fact finished by INC3 in 1999. The procedures were adopted by INC3 and incorporated into the Convention in appropriate articles and annexes.

The first Stockholm Convention COP established the POPRC and Parties borrowed heavily from the Rotterdam Convention, adopting the CRC's size (31 experts) and geographic distribution, and a similar procedure for disclosing conflicts of interest relating to the POPRC. POPRC4 in 2009 also agreed to meet in closed session before the start of each meeting of the Committee to discuss any issues related to conflicts of interest (UNEP/POPS/POPRC.4/CRP.2) (Kohler, Roemer-Mahler & Templeton, 2008). Like the CRC the POPRC is open to observers. The POPRC takes decisions by consensus and only resorts to voting in decision-making if "all efforts have been exhausted" (Article 19.6[c]).

The POPRC has convened annually since 2004. It has considered nominations of 10 chemicals. The first eight of these chemicals were considered for inclusion in the Stockholm Convention by COP 4 in 2009. These chemicals represent the first additions to the original 12 POPs.

The chemicals considered at COP 4 included: pentaBDE, essentially a "dead" chemical, with no production; chlordecone, no longer known to be produced or used; hexabromobiphenyl, which is no longer produced; lindane, largely phased out but still used in some developing countries; alphaHCH and betaHCH by-products of industrial lindane production; c-octaBDE, a flame retardant banned in the U.S. and EU; pentachlorobenzene, a largely banned flame retardant; and PFOS, a ubiquitous substance still used and only recently controlled in developed countries. The first six of these chemicals were recommended for listing in Annex A (and therefore elimination) of the Convention. Pentachlorobenzene was recommended for listing in Annex A and Annex C (unintentional emissions) due to unintentional releases. PFOS, the first "live" chemical to be addressed, was recommended for inclusion in Annex B (restriction of use).

The Stockholm Convention was negotiated around 12 specific POPs and there is no provision for deleting items, but only for adding chemicals.

Relevance of the POPRC mechanism to the WTO EGS negotiations

Several aspects of the POPRC mechanism are worth noting. First is that the POPRC works more intensively on the drafting of the documents for COP consideration than does the PIC's CRC, which relies solely on information provided by the Parties. Another is that the Parties have specified the grounds on which comments may be submitted by Parties on any submission, and they explicitly include socioeconomic considerations, even in an environmental treaty. This suggests that the EGS criteria might also try to find the flexibility to include such criteria, given the objectives of the multilateral trading system. The drafting of the criteria for listing was delegated to an *ad hoc* expert group, which forwarded its recommendations to the Parties—a model that could be copied by the WTO. It is also interesting to note that the POPRC can resort to voting if consensus is impossible. The roster of experts is an interesting institutional feature that might be adopted by the WTO. Finally, it is instructive to note that the POPs Convention did not reinvent the institutional wheel, and borrowed heavily from the IPC Convention's norms for the creation of its scientific advisory body.

3.3.3 Political processes in the POPs Convention

Since its inception the POPRC has met five times and has been chaired by Reiner Arndt (Germany), who also chaired the ICRC process and the CEG. The first two meetings proceeded smoothly—the first pushed through five new chemicals to the next stage of the review process (Annex E assessment). The second POPRC pushed the first five chemicals through to Annex F assessment phase and five new chemicals through to the Annex E phase. During the first two meetings, the POPRC characterized itself as being: flexible with proposals, adding new data when available; hard working, with members of the POPRC working late into the night to flesh out proposals; and collegial, with all decisions being taken by consensus. This dynamic was certainly influenced by the fact that eight of the ten chemicals proposed were "dead"—that is, generally no longer produced, with alternatives available for most or all uses. Two of the chemicals, PFOS and SCCPs, are "live" chemicals. SCCPs are widely used in metal-working and flame retardants (Ashton, Beintema & Pasini, 2006). PFOS, an industrial chemical commonly used in water, oil, soil and grease repellents, has recently been controlled by developed countries, but not yet controlled by developing countries (Ashton, Kohler & Pasini, 2007).

The efficient dynamic at POPRC1 and 2 may also have been influenced by the fact that, prior to recommending to the COP that a chemical be included in one of the Convention's annexes, the process has three stages. The first two meetings were only dealing with moving proposals to Annex D and Annex E stages and not with recommending that chemicals be included in the Convention. Annex F stage of proposal assessment considers socioeconomic issues and it is possible some

POPRC members considered this the more appropriate stage to debate issues of "live" chemicals. At POPRC3, the Committee encountered significant hurdles as its members disagreed over how to address "high-stakes" chemicals on the agenda—SCCPs and PFOS (Ashton, Kohler & Pasini, 2007). After extensive discussion on the issue of listing PFOS and its 96 precursors, the eventual clarification of the exact substances to be listed, the Committee eventually recommended to the COP that it list PFOS under Annex A or B of the Convention. Practically, listing in Annex B allows "restricted" use, as opposed to elimination. Several Committee members were unhappy with this decision as many felt PFOS does not warrant the status granted to DDT, the only chemical currently listed in Annex B. In May 2009, COP4 in fact decided to list PFOS in Annex B, meaning that global action to phase out the substance is limited. This result is a testament to the influence of politics in the decision-making process.

The fourth POPRC meeting in 2008 also saw a dramatic shift in negotiating dynamic with the POPRC contending with "live" chemicals SCCPs and newly proposed endosulfan, (Kohler, Roemer-Mahler and Templeton, 2008), as well as the presence of 14 new members, due to Committee rotation. As such the rules and procedures of POPRC as well as precedent set by POPRC1, 2 and 3 had to be restated several times (Kohler, Roemer-Mahler and Templeton, 2008) and the influx of new members necessitated the development of new working relationships.

At POPRC5, members were sensitive to moving the proposal on SCCPs to Annex F as several suggested there was not enough data to warrant global action. The POPRC was forced to compromise, and agreed to invite a SCCPs expert to present to the Committee at POPRC5, consequently delaying decision on advancing the proposal on SCCP until this time. At POPRC5 there was no consensus on the proposal to move SCCPs from Annex E, and no action was taken.

It was on the issue of endosulfan, however, that the political dynamics began to play out for the first time in POPRC. The issue of conflict of interest arose when an NGO suggested an endosulfan manufacturing plant in India is a state-owned enterprise and that the representative from the Government of India was therefore in conflict of interest (ENB, 2008). While the Chair and the Secretariat promised to look into the issue in the intersessional period, the proposal on endosulfan and the decision if it met the Annex D criteria was dealt with at POPRC4. Unable to make a consensus decision on considering endosulfan, the Committee voted on whether it would consider the European Communities' proposal to list endosulfan. Twenty-four members voted in favour of considering the proposal, while China and India opposed, and Germany and Sierra Leone abstained (Kohler, Roemer-Mahler and Templeton, 2008). The proposal was considered but a consensus decision could not be made on progressing endosulfan to Annex E. As such, the Committee made use of Article 19.6(c) (establishment of the POPRC), which allows for the POPRC to adopt decisions by a two-thirds majority vote of the members present and voting if all efforts at consensus

have been exhausted. China and India decided not to vote. In all, 24 members would be considered present and voting. Endosulfan moved to Annex E (ENB, 2008). The necessity of invoking the voting clause points to the increasingly political nature of the POPRC in the face of "live" chemicals, and the delicate balance of representatives, which can be tipped by Parties with vested commercial interests. While the non-parties, including the U.S., indicated they were unhappy with the vote and stated that it called into question the legitimacy of the POPRC, others stated that by using Article 19.6(c), the POPRC was in a sense proving its legitimacy, by refusing to be railroaded by political interests.

Relevance of the POPs politics to the WTO EGS negotiations

As with the PIC discussion above, the political difficulties described here are testimony to the complex challenges that emerge when significant economic interests are at stake. The provision in the POPs Convention for voting where consensus cannot be achieved stands in interesting contrast to the PIC context, though there is no process for reservations such as is found in the CITES Convention.

4.0 Lessons from Ecolabelling

EGS negotiations can draw significant lessons from ecolabelling experiences. Ecolabels are market-based instruments that are supposed to stimulate production practices, trade flows and actual product characteristics that can provide a positive impact (or minimize a negative impact) on the environment. Therefore, they can be constructed as being environmentally superior to other like-products. However, who decides whether that is the case, how, and with what consequences are contentious issues. These issues are likely to be faced in building up a list of EGS as well, particularly in the case of Types I and III goods.

In the following discussion, the ecolabelling experience will provide input into four sets of issues that would be at the heart of a successful EGS regime:

- *Issues of governance and best practice*: What organization should govern the EGS list? Who will be represented in such an organization? What kind of features will it have? How will the list be revised and with what frequency? What kinds of governance structure will it have? How will the organization decide which organizations set the standards for individual EGS?
    - As distinct from the MEAs surveyed above, there is no equivalent organization in ecolabelling that can make these kinds of decisions; in other words, there is no authority that defines which ecolabels are indeed "eco" and which ones are not; the closest one comes to some oversight is the ISEAL alliance, which sets best practices for labelling in relation to environmental and socioeconomic sustainability. FAO has set specific guidelines and a code of conduct for the development of ecolabels in fisheries. More generally, the International Organization for Standardization (ISO) has drawn a number of guidelines for the setting of standards, and for certification and accreditation. We will briefly reflect upon these experiences in the fish case study (in relation to the FAO guidelines) and in the last subsection on ecolabels.
- *Issues of governance and best practice for standard setting and management for individual EGSs included in the list*: What are the features of the organizations or bodies that would decide what standards will be used to measure if a good or service is "environmentally superior"? Who was involved in the standard setting and revision processes? What indicators, methods of measurement, devices and procedures will be used to assess compliance against the standard? How will the standard be revised/reassessed and with what frequency? What procedures are used for certification and what agencies carry it out?

- The ecolabelling experience has numerous lessons to teach in this realm. These will be spelled out in detail through the case study material, especially from the case study of fishery ecolabelling. In relation to coffee sustainability labels, a variety of standard organizations are active, and their features, history, trajectory and corporate involvement have a strong influence on an ecolabel's effectiveness, inclusiveness and market reach. Such experiences are also of interest for EGS where there is no existing standard, in that they can suggest what kinds of organizations and governance structures are best to develop and maintain them.

- *Issues of actual environmental impact*: Do the individual EGS that would receive special tariff treatment lead to actual environmental benefits? What is the impact of the "environmental superiority" of such products against like-products? How is such impact to be measured? What are the time dynamics of such impact? This is a different set of issues than the previous set, where the focus was on compliance against a standard and on standard management; here, the issue is the actual environmental impact of an EGS.
    - Both case studies on coffee and fish ecolabels suggest that, while much knowledge is available on standard compliance in ecolabelling, paradoxically, not much is known on the actual impact of ecolabels on the environment. This opens up ecolabels to serious challenges. The same challenges will apply to a possible EGS regime.

- *Issues of fairness for small producers and/or developing countries*: Does the EGS list contain items that are overwhelmingly produced in industrialized economies or by large-scale producers? Is such a feature the result of procedural choices that can be constructed or perceived as unfair or biased? Are the extra costs of producing EGSs vis-à-vis like-products a serious barrier for would-be producers of a small-scale nature or based in developing countries? What kind of technical assistance and technological transfer can be operated to counteract that?
    - Accusations of bias against small producers and developing countries have beset a number of ecolabels. Reassurances of technical assistance have often not been enough to dissuade affected parties. Accusations that ecolabels constitute hidden protectionism will not cease unless this issue is taken seriously. Any EGS regime within the WTO will have to be based on strong support from developing countries, thus this is a key issue.

Such reflections are born from a heated debate that has developed in the last one to two decades on ecolabels, from which a number of concerns have arisen, such as:

- possible lack of transparency and participation in standard-setting in ecolabelling;
- underlying protectionist motives;

- high potential costs of complying with required management practices and data collection;
- high costs of certification in developing countries relying on expensive imported experts;
- inadequate institutional and technical capacity in developing countries; and
- doubts about whether ecolabelled products actually lead to improved environmental conditions and practices.

Given the specific nature of different ecolabels and the dearth of data on impact both on the environment and on trade flows (Rotherham 2005), we will not seek generic answers to these sets of issues. Rather, we draw on primary research on selected ecolabels (coffee sustainability labels, and the MSC label for sustainable fisheries) to provide a set of more specific assessments. In passing, we will also draw on selected institutional experiences (ISEAL alliance, FAO code of conduct for sustainable fisheries) to explore some cross-cutting procedural and governance issues.

4.1 Ecolabels: General characteristics, typologies and critical issues

Before we move on to the case study material, we first lay out some of the general characteristics and typologies of ecolabels that are available in the marketplace and highlight their main contentious points, focusing on issues that are likely to be relevant for the establishment of an EGS list.

*Ecolabel*s: they are signs (marks, logos or product endorsements) affixed to a product (or service) that are recognizable to consumers at the point of sale. Ecolabels create market-based incentives to consume products that are (or are supposed to be) produced in an ecologically sustainable way. Consumers, by choosing the ecolabelled product and possibly by paying a premium price for it, can reward ecologically sustainable products over non-labelled products, and thus provide a market advantage to producers and suppliers of ecolabelled products (in the form of higher prices and/or higher volumes).

Voluntary nature: ecolabels are voluntary processes—the companies or industries submitting to such processes do so of their own accord. However, this does not necessarily mean that those who do not submit to ecolabelling handle products that are not sustainable. Barriers to entry, costs and other technical factors may impede some groups of players (or indeed whole countries) from participating in the process.

Certification: is the process of verifying that the claims made by the ecolabel and attached procedures and standards are actually complied with; most, but not all, ecolabels are awarded as a result of a certification process, but not all certifications lead to ecolabels (they may be carried out for industry-use only, or for publicity on companies' websites under the umbrella of CSR, but not affixed to the product itself).

Types of ecolabels: (a) first-party: individual producers or marketers set their own standards and base the assessment of compliance on self-declaration; (b) second-party: an industry association sets the standards that are verified either internally by the association or by an external agency; (c) third-party: an association or organization external to the industry (or in association with it) sets the standards and governs the ecolabelling procedures, relying on third-party agencies for certification. In general third-party ecolabels are considered more independent and trustworthy.

Proliferation: the proliferation of ecolabels mean that it is often difficult to compare the comprehensiveness of claims (different aspects and combinations of aspects of sustainability may be covered in different ecolabels), their "depth" (some ecolabels have lower standards than others, even if they refer to the same aspect of sustainability) and the consistency of interpretations (even when the standard is clear and uniform, different operational interpretations in time and space make it difficult to compare claims). Where this is the case, and if the EGS list were to rely on external standards, problems would arise in relation to deciding which standards are to be applied for inclusion of an item in the EGS list.

Narrow versus broad focus: ecolabels that focus on a narrow set of environmental issues tend to have higher standards, are easier to implement and are more likely to achieve their stated environmental impact goals (they are also easier to be assessed against such goals), but may miss important elements that influence environmental outcomes. For example, the Smithsonian "bird-friendly" label for coffee sets the golden standard in terms of tree cover and bird habitat preservation. However, it does not address other environmental issues, such as water and waste management in the coffee farm. "Dolphin-friendly" tuna labels address the killing of dolphins that are caught by tuna vessels, but do not address the sustainability of the tuna stock itself. The opposite is true of broader ecolabels. For example, Rainforest Alliance-certified coffee covers a variety of environmental issues, but its forest cover standards are lower than the Smithsonian label, and good agricultural practices include integrated pest management, but fall short of organic practices. The tension between narrow and broad focus is likely to be an issue in relation to defining "environmental superiority" of individual EGS.

Market coverage versus higher standards: a successful label is based on consumer uptake (leading to higher market share) and at the same time on having enough suppliers that match the ecolabel standards to provide enough volume and variety. An ecolabel that is too tough will fail in the market place, at least at the beginning; one that is too easy will have only limited (or no) impact on the environment. Similarly, if the standards for inclusion in the EGS list are too high in comparison to existing practices, the actual impact on the environment is going to be negligible. If a high standard is nevertheless set for inclusion, a provisional period of graduation (when a lower and incremental standard is applied) may be the solution.

Higher standards versus exclusion: higher standards are more likely to facilitate environmental improvements, but are also accompanied by higher costs and more demanding procedures; developing country operators have often accused ecolabels of being protectionism in disguise because they place heavy cost burdens on small-scale operators and/or developing countries (especially least-developed countries [LDCs]) more generally. Similarly, if standards for inclusion in the EGS list is perceived to be structurally biased against small producers and developing countries, it is unlikely to ever be established. Specific exceptions or lower standards, technical assistance and technology transfer provisions could be needed to address these issues.

Unclear benefits for producers and free rider issues: older generations of ecolabels built in explicit premiums (both at the producer and consumer levels) for meeting ecolabels' demands and procedures; newer generations have been unable to do so consistently, with the economic and environmental benefits not necessarily compensating for the higher costs sustained (costs of preparing and presenting information for certification, costs of changing operations, costs of certification, and costs of continuing compliance). There are also situations in which the higher costs of obtaining ecolabelling are borne by a party, but the effects are enjoyed (also) by others—this is especially the case in ecolabels in fisheries and is likely to be a major bone of contention in carbon labelling. This is also likely to be an issue in relation to any EGS list where PPMs are used.

4.2 Lessons from sustainability labels in coffee

4.2.1 Overview

Coffee is one of the first internationally traded products where collective efforts were undertaken to develop standards on processes that address environmental (and socioeconomic) concerns. Some coffees, such as organic, fair trade, bird friendly, Rainforest Alliance and Utz Kapeh are sold as certified coffee (see general characteristics in Table 1). Others are sold under sustainability initiatives that are designed by private enterprises—with or without third-party monitoring. A brief outline of the most prevalent process standards follows.

Organic coffee certification is based on a production management system that aims at promoting and enhancing natural soil activity and prohibits synthetically produced agrochemicals. It is based on minimal use of off-farm inputs and on management practices that seeks to restore, maintain and enhance ecological harmony. Accredited certification agencies monitor organic standards on production, processing and handling. In the last decade, its popularity in many major markets has brought this standard into the realm of public regulation.

Fair trade is defined as "an alternative approach to conventional trade that aims to improve the livelihoods and well-being of small producers by improving their market access, strengthening their organizations, paying them a fair price with a fixed minimum, and providing continuity in trading relationships' (Giovannucci & Koekoek, 2003, p. 38).

Rainforest Alliance-certified is a label that offers certifiable standards for *eco-friendly* coffee. It covers several other aspects of the farming system, including forest cover, and also some basic social/labor conditions.

Utz Kapeh, originally set up by Ahold Coffee Company to serve its private needs, is now an independent foundation and has developed a label for growing sustainable coffee—primarily on the combined basis of the "good agricultural practices" of the European Retailer Group (EUREP-GAP) and the social guidelines outlined in SA 8000, the business-focused social accountability standard. It provides a minimum assurance that basic conditions are met and is less rigorous than the previously mentioned certifications.

Table 1: Main features of selected "sustainable" coffee certifications

Name	Actors or organizations setting the standards	Characteristics	Geographic and farm-size coverage
Organic	International Federation of Organic Agriculture Movements (IFOAM) and affiliated associations	Accredited certification agencies monitor organic standards on production, processing and handling; formally, IFOAM basic standards make reference to issues of social justice, but do not set requirements	Global, but most organic coffee comes from Latin America, especially Mexico; all farms
Fair trade	Fair Trade Labelling Organizations International (FLO) and associated Fair Trade Guarantee Organizations	Minimum guaranteed price paid to registered small farmers' organizations that match standards on socioeconomic development; nonprofit organizations set/monitor standards and mediate between registered producers and fair trade importers	Global, but a sizeable amount of fair trade coffee is bought also in Africa; only smallholders
Rainforest Alliance-certified	Rainforest Alliance	Certifies farms on the basis of sustainability standards; covers environmental protection, shade, basic labour and living conditions, and community relations	Initially, Latin American countries only, now expanding in Africa and Asia as well; mostly estates initially, but now also some cooperatives
Utz Kapeh	Utz Kapeh Foundation	Code of conduct for growing sustainable coffee formulated on the basis of the "good agricultural practices" of the European Retailer Group (EUREP); includes standards on environmental protection and management, and labour and living conditions	Mainly in Latin American countries, but growing also in Asia and Africa; initially, mostly estates, but now also some cooperatives

Source: adapted from Giovannucci & Ponte (2005)

4.2.2 *Issues of actual impact*

Here, we briefly assess to what extent sustainability standards fulfill their portrayed goal of improving environmental and socioeconomic conditions in coffee production and trade. This short analysis builds on a body of previous work on the subject (Daviron & Ponte, 2005; Giovannucci & Ponte, 2005). The literature on the subject suggests that farmers receive both direct and indirect

benefits from matching sustainability standards (see Table 2). It is also evident that some of the necessary conditions to preserve local biodiversity are fostered by several of these certification systems (Rice & Ward, 1996; Perfecto *et al.,* 1996; Greenberg *et al.,* 1997), although it is not yet clear what the specific impact of these standards on biodiversity is. Many of these standards, however, provide no guarantee that direct benefits, particularly price premiums, necessarily reach farm labourers or local communities. Some of the most significant benefits are indirect or intangible—such as the strengthening of social capital or the improvement of community-cooperative governance structures (Giovannucci *et al.,* 2000).

Although there are numerous benefits, there are nevertheless also some inherent shortcomings in matching sustainability standards. These weaknesses revolve, from the producers' side, around dependency, hidden costs and vulnerability; from the buyers' side, they are linked to credibility threats. In some cases, standards can create new barriers to entry that threaten producers (particularly the poorest) with the challenges of additional costs, a steep learning curve of adaptation and inadequate extension services. The process of certification can be a costly and sometimes lengthy exercise.

With the right dynamics, the efforts needed to meet sustainability standards can create a virtuous circle of empowerment and organizational strengthening. In other cases, producer organizations find it difficult to maintain cohesion if the expected benefits do not materialize in the short term. For many, the hidden costs of marketing, coordination (e.g., time spent in meetings, transport), uncertainty, and the limitations of collective action may significantly decrease the overall net benefits of certification efforts and threaten the existing governance structures in cooperatives or associations. If a standard becomes the de facto purchasing criterion, then most producers will have to comply and will incur the same difficulties mentioned above (costs, learning curve, extension). Furthermore, as these criteria become a widely accepted standard, there may be an increasing unwillingness among buyers to pay extra for such achievements—leaving producers with higher costs of production and compliance burdens with no direct financial incentive.

The key lesson for the establishment of an EGS list here is that absolute priority must be given to assessing the actual impacts of environmental claims against the background of conditions prevalent in like-products. In coffee sustainability initiatives, this has been a very low priority until very recently (although a new initiative called COSA—Committee on Sustainability Assessment—is trying to bridge this gap). Given the commercial interests in spreading different sustainability labels that compete with each other, this is perhaps understandable. However, in the case of EGS negotiations, providing the proof that an item making it to the EGS list actually has tangible environmental benefits should be paramount.

4.2.3 *Issues of non-discrimination against small producers and/or developing countries*

The problem of non-discrimination in relation to both coffee sustainability labels and possible EGS negotiations revolves around the fact that raising standards makes market access more difficult. A first related issue is then whether the cost-benefit balance in matching higher standards is a positive one at all for producers, and whether larger producers achieve better balances than smaller ones. In this regard, fair trade (especially when market prices are low) and organics display positive outcomes. Fair trade certification is available only to small farmer groups, organizations and cooperatives. The rewards in terms of premiums are known and substantial (as long as there is a fair trade market for the coffee supplied). At the same time, fair trade does not cover the conditions of workers in coffee estates. In relation to organics, recent studies (Bolwig, Gibbon & Jones, 2008) have shown that the benefits for small farmers from organic certification and from adopting organic practices can be substantial. Less clear is the situation in relation to Utz Kapeh and Rainforest Alliance, which pay some premiums, but they are not guaranteed and it is unclear if they are linked to quality only or also to sustainability.

A second issue relates to the distribution of benefits to different coffee-growing regions and among different groups of producers. On this count, Latin America is the clear winner over Asia and Africa, with the exception of fair trade, although the situation is changing. Initially, Rainforest Alliance and Utz Kapeh granted certifications in the coffee sector mainly in Latin America. They are now diversifying into Africa and Asia. Smallholders emerge as winners only in fair trade and, to some extent, in organic certification. In the case of Utz Kapeh and Rainforest Alliance, estates have been the target group more than smallholders and their organizations—although efforts seem to be taking place to correct this imbalance. In neither case are funds provided to producers for investments to comply with the standards and for certification (although both provide help in finding funds).

The point here is not that outcomes of discrimination are characteristic of all ecolabels, and in fact they differ remarkably from one experience to another. *The implication for an EGS regime is that the standards that regulate individual items to be included in the list would have to be regulated with consideration of the possible discriminatory effects in terms of size of producer* (SMEs and microenterprises versus larger producers), *type of country* (developed versus developing countries) and *location* (if the standard, for example, is written in a way that only the product coming from Latin America can comply, but not the same product coming from Africa, because of the specific nature of agro-ecological conditions).

4.2.4 What are the implications for standard selection in relation to an EGS list?

If an EGS list was established, and hypothetically "sustainable coffee" were in it, what standard would be used to measure compliance? This is a difficult question, not only because there are several competing labels operating in the market, but also because they all have relative strengths and weaknesses.

From a point of view of governance, fair trade and organic have been historically more inclusive and transparent in standard setting and revision processes, with substantial producer participation and oversight. This has happened to a much lesser extent with Utz Kapeh and Rainforest Alliance. On the other hand, fair trade has very weak environmental standards, while the social and economic aspects are very strong. Organics cover only some environmental issues, but others are not adequately considered (shade tree coverage, for example). Utz Kapeh and Rainforest Alliance cover several environmental aspects but fall short of organic standards, although Rainforest Alliance's shade standard is more developed (but less so than Smithsonian's bird-friendly standards). Finally, in relation to non-discrimination against small and more disadvantaged producers and regions, fair trade scores better than others, but organics is also reasonably well placed. Rainforest Alliance and Utz Kapeh are catching up on this issue too.

It is clear from this discussion that none of the standards behind these coffee labels could be considered a "perfect" candidate for regulating a hypothetical inclusion into an EGS list. One option would be to establish a new dedicated standard, which would further confuse an already crowded field. Another, more feasible, option would be to recognize as EGS-list compliant any coffee label (and attached third-party certification system) that matches a minimum set of standards on processes, transparency, inclusion, environmental processes and impact. Ideally, such standards would come from the ecolabelling community itself, from efforts such as ISEAL, to avoid the appearance of the trade community sitting in judgment of the ecolabelling community. These observations have broader implications, as it is likely that other items that could be eligible for inclusion in the EGS list have already been subject to different and competing ecolabels.

A final observation in relation to the coffee experience, which has broader implications, is that green coffee already enters into most OECD markets at zero tariff rate. Therefore, a preferential tariff system as envisaged in EGS negotiations would not work because there would not be any advantage in specific kinds of (environmentally friendly) coffees to be included in the list. Such a problem is applicable to all products and services that enter major markets at zero tariff already, which is particularly common for imports into the EU from LDC countries and imports into the U.S. under the Africa Growth and Opportunity Act, for example.

4.3 Lessons from Marine Stewardship Council (MSC) certified fish

4.3.1 Overview

Wild fish stocks are self-renewing, but their capacity to do so depends on leaving enough fish in the sea to regenerate the stocks in subsequent years. In the last couple of decades, FAO and conservation groups have repeatedly highlighted the plight of over-exploitation of fish stocks around the world, and the impact of intensive fishing efforts on the overall aquatic environment. To address these challenges, several fishery management systems have been devised, such as: legal instruments, including global conventions and national/local fisheries laws; soft instruments, such as the FAO Code of Conduct for Responsible Fisheries; and market and civil society initiatives, such as the ISO 14000 series of standards and the Marine Stewardship Council (MSC) label (Allison, 2001; Gardiner & Viswanathan, 2004; Wessels *et al.,* 2001).

Ecolabelled fishery products are a small but growing segment of the fish industry. Their rise relates not only to increased concern with environmental issues, but also to increased competition in the retail sector, thus the search for additional properties in products to add profitability and/or market share. The history of voluntary labels before the advent of the MSC initiative was limited to two single-issue labels (neither of which was third-party certified), aiming at reducing by-catch of dolphins in tuna fishing (Bonanno & Constance, 1996) and of turtles in shrimp fishing. In both cases, the main issue was not one of over-fishing and over-capacity, but one of animal rights and the protection of endangered species (Allison, 2001, p. 945). Current efforts in developing organic certification of fishery products are mainly focused on aquaculture (Mansfield, 2004).

MSC is the main independent third-party certified ecolabel that covers wild-catch fisheries. It was established in 1996 as a joint initiative of the World Wildlife Fund for Nature (WWF), the world's largest private non-profit organization, and Unilever, at the time the world's largest frozen fish buyer and processor. Unilever operates its own internal evaluation system on sustainable fisheries, but also actively promotes MSC certification among its suppliers. At the MSC launch, Unilever committed to buy fish only from sustainable sources by the year 2005. MSC became an independent initiative in 1999. The idea behind MSC is to address worldwide decline in fish stocks by awarding sustainably managed fisheries with a certification and a label that could be affixed to retail products.

MSC certification partly depends upon a chain of custody system that keeps "sustainable" and "other" fish separate from each other from catch to supermarket shelf or ice display. Via its logo, MSC allows consumers to promote sustainable fishing through a market-based (rather than regulation-based) mechanism by choosing the labelled product over the unlabelled product (Jaffry e*t al.*, 2004; Johnston *et al.,* 2001; Roheim, 2003). Certification is granted against a specific standard called the "Principles and Criteria for Sustainable Fishing." Assessment is carried out on a voluntary

basis by accredited third-party certification bodies. The MSC standard is based on three principles, which are elaborated by a number of criteria (MSC, 2004b, p. 4):

1. *The status of the target fish stock*
   "A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery" (MSC, 2004b, p. 14).

2. *Impact of the fishery on the eco-system*
   "Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem […] on which the fishery depends" (MSC, 2004b, p. 15).

3. *Performance of the fishery management system*
   "The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable" (MSC, 2004b, p. 16).

At the catch level, certification is awarded to a "fishery," not to individual operators. Individual operators in the trade, processing and retail sectors can apply for chain of custody certification and for the use of the MSC logo. Certification of fisheries and chain of custody is carried out by independent bodies that are accredited by the MSC Accreditation Committee. Certification of the fishery begins with a confidential pre-assessment by a certification body for a client or client group. Clients are usually associations of fishing operators that catch and handle one or more species in a specific area. If the results of the pre-assessment are such that the client decides to go ahead with a full assessment, the certification body appoints an expert team. This team develops performance indicators and scoring guide-points. Stakeholders can at this point provide feedback on the suitability of these indicators. The fishery is then scored against these indicators, which are aggregated to obtain a score for each of the three principles. Depending on the score, a fishery can be: rejected, asked to fulfill some pre-conditions before obtaining certification, certified with conditions that need to be addressed within a certain period or certified with no conditions. Certified fisheries are subject to annual audits. After five years, they must be reassessed before continuing certification for five more years (May *et al.,* 2003; MSC, 2004a).

4.3.2 Issues of governance in standard setting and management

The set up of MSC's governance structure and the elaboration of its standard drew a heated debate in fish industry circles in the second half of the 1990s. Industry questioned the motivations of involvement by WWF, while much of the early conservation and "development" critique found an

outlet in various issues of SAMUDRA, a publication of the International Collective in Support of Fishworkers (ICSF) (see Bonanno & Constance, 1996; Broathan, 1999; O'Riordan, 1998; Mathew, 1997; Neis, 1996; Belliveau, 1996). In short, these critiques focused on seven main issues: (1) the motivations of Unilever in starting it; (2) the centralized and corporate structure of MSC; (3) a bias in favour of industrial fisheries, and developed country fisheries in particular; (4) the lack of consultation with fishers in general, and developing country representatives in particular; (5) the perception in developing countries that ecolabels constitute technical barriers to trade; (6) the financial and human resource costs that achieving certification would entail in developing countries and especially small-scale fisheries; and (7) the recognition that the current state of scientific knowledge is no guarantee of sustainability.

From 1996 to1999, MSC and other supporters of the initiative responded to these criticisms, also in SAMUDRA, assuring that workshops and consultations were being carried out around the world. MSC also argued that its certification system was being field-tested in various settings, including small-scale fisheries and fisheries in the developing world. It assured that because the scheme was voluntary, it would not be imposed on anyone, and that it would be market-neutral and non-discriminatory. Finally, MSC claimed that their standard was not going to work against the interests of small-scale fishers because it would promote, among other things, socially responsible fishing. MSC took action in revising its governance structure in 2000: alongside the Board of Trustees, its executive decision-making body (now including developing country members and a fishery economist), two groups reporting to it were created – the Technical Advisory Board and the Stakeholder Council. The Technical Advisory Board provides advice on technical, scientific and quasi-judicial issues to the Board of Trustees (Cummins, 2004).

Even though MSC has been fashioned after the Forest Stewardship Council (FSC) (established in 1993, also with input from WWF and other conservation groups), the latter is an open-member organization, while the MSC structure is "significantly different and more corporate. Its managerial structure is designed to insulate the Board of Trustees from the political influence of civil society actors" (Gale & Haward, 2004, pp. 28–29). Gale and Haward (2004) argue that WWF, having learned from the FSC experience, decided to promote a less inclusive and more efficient governance structure for MSC that could keep up with a fast-moving business environment. This very insulation, however, meant that MSC in its formative years was only partly responsive to the needs of developing country fisheries, and within these, of small-scale and data-deficient ones in particular.

As seen above in relation to sustainability initiatives in coffee, and in more detail here, openness in the formative phase of standard setting and inclusive governance features within which standard setting takes place are extremely important for the inclusion of views and influence from developing countries and small producers. This, in turn, has implications on the likelihood that such actors view

MSC (or any organization/standard underlying the inclusion of a good in the EGS list) as having an impartial and legitimate role and on the operational success of the standard as a whole.

4.3.3 Issues of actual environmental impact

A first line of more recent criticism of MSC has come from conservation groups arguing that MSC-certified fisheries are not sustainably managed in reality. Certification of New Zealand hoki, Patagonian toothfish, South African hake and Alaskan pollock have been at the centre of this criticism. Seeking greater clarity on this question, the MSC commissioned a study (Agnew *et al.*, 2006) that examined the 10 out of 22 currently certified fisheries that have been subject to at least one post-certification audit. The study analyzed 62 certification conditions to determine whether they could be assessed quantitatively and whether they could ultimately lead to environmental benefits. The study identified eight instances of "no gain" (there was no category for "deterioration"") and 89 environmental gains. However, these gains are of very different nature: 29 were "institutional gains" that *could* lead to environmental benefits (thus, these are hypothetical, or conditional, gains); the same can be said of the 27 instances of "research gains." The 17 "operational action" gains are activities in the fishery (such as new regulations) that are expected to lead to environmental gains, but for which there is no automatic link. The most desirable gains, "operational result" gains, amounted to 16 instances; within these 16 instances, only eight (the same number of "no gain" cases) were judged to be most likely stimulated (or partially stimulated) by the certification process (Agnew *et al.*, 2006).

In short, the study paints a mixed picture of the environmental impact of MSC. The authors also highlight some lessons learned. Two of them are particularly interesting: (1) the biggest gains seem to arise in areas where conditions for certification were attached; thus one could argue for stricter certification processes; and (2) the authors argue that "difficult fisheries" should be encouraged to apply for MSC certification, because they are the ones where certification is likely to create the biggest environmental gains. This creates a dilemma for MSC: on the one hand, certification is deemed to be a good pedagogical tool for all fisheries, and the worse the fishery, the higher the potential gains. On the other hand, placing stricter certification conditions seem to lead to higher environmental gains, but this makes it more difficult to be certified and thus decreases the incentive for all fisheries (and especially for "difficult fisheries") to apply. If fisheries do not apply, the market coverage of MSC-labelled products cannot expand further. Thus, to some extent, there is a trade-off between market spread and environmental gain.

In the end, much is known about the environmental impacts of MSC certification. Yet, it is still far from clear that such impact is positive, and when it is, that it is attributable to the label. As well, there are difficult issues involved in setting the stringency of the standard, trading off between global impacts from greater inclusiveness, and the desire to have higher standards.

4.3.4 *Issues of fairness for small producers and/or developing countries*

Another line of criticism against MSC concerns the failure to certify developing country fisheries, especially small-scale, data-deficient ones. Linked to this concern are issues of compliance, certification costs, and shortcomings of scientific data. Out of 38 fisheries, so far, only three developing country fisheries have been certified (South African hake, Mexican Baja California Rock Lobster and Patagonian scallops [Argentina]) and three are undergoing certification. All certified fisheries are located in upper-middle income countries. Especially in the early years of operation, MSC did not pay enough attention to developing country needs, despite the warnings raised as early as 1996. Representatives from developing countries were only invited to one consultative meeting in London. Out of about 10 workshops that were carried out to present the initiative to various fisheries, only one took place in a developing country (South Africa).

Barriers to achieving MSC certification in developing countries range from institutional weakness (lack of know-how) to financial costs (MSC does not provide funding, although it facilitates contacts). Recently, a Sustainable Fisheries Fund has been set up, independently from MSC, to help developing country fisheries to go through the certification process. However, the fund can only make small grants to "help ensure broad based stakeholder input into fishery assessments [...]. It will not be in a position to support large-scale research projects" (SAMUDRA, July 2002, p. 25). At the same time, GTZ, the German development agency, has been financing pre-assessments of possible MSC certification in a number of developing country fisheries.

The overall cost of obtaining certification depends on the nature of the problems uncovered in the assessment and the corrective actions that have to be undertaken. Most MSC products are processed seafood preparations, and retailers are generally able to push certification-related costs upstream to processors. Financial arrangements for certification are left to private negotiation between clients and certification agencies, and there have been calls for MSC to channel such negotiations, which would allow discounts and "soft" payment options for selected fisheries. Another problem with certification costs is that only few certifiers are currently accredited to carry out fishery certification (and one of those has only assessed a single fishery), providing a small base for competitive pricing.

MSC has finally recognized that its standard and certification procedures are not geared towards the realities of developing country fisheries, especially small-scale and data-deficient ones. A special program (MSC Developing World Fisheries Program) is seeking to improve the awareness of MSC in developing countries and to develop guidelines for the assessment of these fisheries. The project aims at developing guidance for certifiers on the use of "unorthodox" information on fisheries, such as traditional ecological knowledge and management systems. It also aims at using a "risk-based"

approach to qualitatively evaluate fisheries. In May 2007 the MSC Technical Advisory Board approved the draft methodological guidance for use in a number of trial fisheries assessments that will be conducted by third-party certifiers. Ongoing trials are taking place in selected fisheries in Argentina, Ecuador/Peru, Gambia, Mauritania, India and Vietnam.

4.3.5 Issues of best practice: Is the MSC system procedurally fair?

A stimulus for revising the MSC system in a way that is friendlier towards developing countries could have been the adoption in March 2005 by the FAO Committee of Fisheries (COFI) of voluntary guidelines for ecolabelling of fish products (FAO, 2005). These guidelines provide a framework of reference for governments and organizations that have or want to establish ecolabels for marine capture fisheries. They include the need for independent auditing, transparency of standard-setting and accountability, and the need for standards to be based on "good science." But unfortunately, transparency and inclusivity in standard *setting* do not work retroactively. The guidelines also lay down minimum requirements and criteria for assessing whether a fishery should be certified—drawing on FAO's Code of Conduct for Responsible Fisheries. They allow for special consideration to be given to small-scale fisheries (para. 29) and for the use of less elaborate methods for stock assessment (para. 32). They also recognize that there are management measures in small scale fisheries that can achieve adequate levels of protection even when there is uncertainty about the state of the resource (para. 32) (FAO, 2005).

On the one hand, the wording of the FAO guidelines suggests that only ad hoc cases can be considered, not a *specific* verification system to be applied in developing countries (and/or to small-scale, data-poor fisheries in general). On the other hand, one could read parts of Paragraph 32 of the guidelines as a justification for adopting special standards (not only verification systems) in relation to specific cases. Yet, when MSC declared that its system would be fully consistent with the FAO guidelines, only two organizational "refinements" were deemed to be needed: (1) separating the accreditation of certification bodies from MSC's standard setting functions; and (2) creating independence between the objections process (to be paid for by the objecting party) and the certification program. So, despite the fact that FAO guidelines open the door for special treatment of developing country (and/or small-scale, data-poor) fisheries in ecolabelling, MSC interprets its own compliance with the guidelines essentially in terms of organizational improvement.

These observations suggest that codes of conduct or best practice alone are not a guarantee of an inclusive and non-discriminatory system of ecolabelling. The same would apply to the management of an EGS list. In general, much stronger provisions should be made for the specific difficulties that small-scale and/or developing country producers might face in delivering EGSs. These need to be built into the management system from the beginning, rather than relying on the principle of "equality of opportunity".

4.3.6 What are the implications for standard selection in relation to an EGS list?

The case study of fish ecolabelling has implications on standard selection issues in relation to an EGS list. This is a situation where there is a well-established organization and a standard that have managed to almost monopolize the market for "sustainable" fish. Other ecolabels in fisheries are much more delimited in scope and coverage. In the hypothetical situation where "sustainable" fish was included in the EGS list on the basis of its "environmental superiority," it might be tempting for the WTO to adopt MSC as the standard for inclusion in the list and MSC the organization that manages such inclusion. This scenario is likely to be repeated in relation to other items that may be proposed for inclusion in the EGS list. In such scenario, rather than accepting the "ready-made" package of an existing standard and organization managing it, the WTO might better serve environmental objectives and solve non-discrimination issues by using its leverage to promote improvements over the status quo. For example, hypothetically, MSC could be asked to implement serious improvements on special provisions for developing countries and small producers, and to provide more evidence that there are positive environmental impacts that are clearly attributable to the label.

4.4 Lessons from the Energy Star ecolabel

4.4.1 Overview

The Energy Star program was established by the U.S. Environmental Protection Agency (EPA) in 1992 as a voluntary ecolabel with coverage for personal computers and monitors. The aim was to reduce greenhouse gas emissions and other pollutants caused by the inefficient use of energy, and to provide visible standards (labels) that made it easy for consumers to identify and purchase energy-efficient goods. In 1996 EPA partnered with the U.S. Department of Energy to administer the program, and over the years a large number of products were added to the program (see Table 2).

As of 2009 Energy Star covered more than 60 product categories including commercial and consumer appliances, heating and cooling equipment, consumer electronics, office equipment and lighting fixtures. It had also expanded to cover various types of buildings, including office buildings, hotels, supermarkets and grocery stores, acute care hospitals and schools. Energy Star has established partnerships for implementation of its standards outside the U.S., including in the EU, Japan, Canada, Norway, Australia, New Zealand, Chinese Taipei, Iceland and Lichtenstein.

To be awarded the label, a product must pass specified standards. Often the product will be differentiated by classes; dehumidifiers, for example, are differentiated into six types, based on the volumes they handle, each with a different energy factor standard to meet. Usually the standards

relate to just energy efficiency, but they may also consider other factors; clothes washers must also meet a water efficiency standard, for example. For most products certification is conducted by the manufacturers themselves, in accordance with recognized test procedures (e.g., ANSI testing standards). In some cases (e.g., windows, fluorescent lights), third-party certification is required.

Standards for buildings are somewhat different, being based on existing practice. To be eligible for Energy Star status as an office building, for example, a building would need to be within the top 25 per cent performers nation-wide. Obviously, this is a moving target.

Table 2 shows a steady growth in the number of products covered under the program. There are set criteria that help decide which products will be included:

- Product categories must contribute significant energy savings nationwide.
- Qualified products must deliver the features and performance demanded by consumers, in addition to increased energy efficiency.
- If the qualified product costs more than a conventional, less-efficient counterpart, purchasers will recover their investment in increased energy efficiency through utility bill savings, within a reasonable period of time.
- Energy efficiency can be achieved through broadly available, non-proprietary technologies offered by more than one manufacturer.
- Product energy consumption and performance can be measured and verified with testing.
- Labelling would effectively differentiate products and be visible for purchasers.

Table 2: Milestones of the Energy Star regime

Year	Selected changes to Energy Star regime
1991	Green lights program established by EPA for efficient lighting in commercial and industrial buildings.
1992	Energy Star established by EPA, covering personal computers and monitors.
1993	Printers added to Energy Star coverage.
1994	Fax machines added to Energy Star coverage.
1995	Energy Star develops standard for buildings, merges with Green Lights. Added to Energy Star coverage: copiers, transformers, and residential heating and cooling products, including air-source heat pumps, central air conditioners, furnaces, gas-fired heat pumps, and programmable thermostats. Standards revised for computers, monitors.
1996	DoE partners with EPA in administering Energy Star. Added to Energy Star coverage: appliances (including dishwashers, refrigerators and room air conditioners), exit signs, insulation and boilers.
1997	Added to Energy Star coverage: clothes washers, residential light fixtures, multifunction devices and scanners.
1998	Added to Energy Star coverage: TVs, VCRs, windows. Standards revised for computer monitors.
1999	Added to Energy Star coverage: consumer audio products, DVD players, roof products, compact fluorescent lights. Standards revised for computers, monitors.
2000	Added to Energy Star coverage: water coolers, traffic signals. Standards revised for computers. U.S. army and Navy procurement adopts Energy Star as standard for new homes. Standard discontinued for gas-fired heat pumps (product non-availability).
2001	Added to Energy Star coverage: set-top boxes, residential humidifiers, ventilation fans, commercial washing machines, ceiling fans, small commercial heating and cooling equipment, commercial refrigerators and freezers.
2002	Added to Energy Star coverage: telephony. Standards revised for: light commercial central air conditioning/air source heat pumps, residential light fixtures, TVs, VCRs.
2003	Added to Energy Star coverage: commercial steam cookers. Standards revised for: consumer audio products, DVD players, residential light fixtures, ventilation fans, TVs, ceiling fans, roof products, windows, doors and skylights.
2004	Added to Energy Star coverage: refrigerated vending machines, air cleaners. Standards revised for: exit signs, TVs.
2005	Added to Energy Star coverage: external power adaptors. Standards revised for: telephony, dehumidifiers, new homes, clothes washers, TVs, set-top boxes, computer monitors, oil furnaces, central air conditioning/air source heat pumps, residential light fixtures, windows, doors and skylights. Performance indicator developed for auto assembly plants.
2006	Added to Energy Star coverage: battery chargers, rebuilt vending machines. Standards revised for: copiers, fax machines, printers, scanners, computers, monitors, telephony, residential furnaces. Standard developed for: manufacturing plants.
2007	Added to Energy Star coverage: digital TV adaptors, commercial dishwashers, commercial ice machines, decorative light strings. Standards revised for residential light fixtures, roof products.
2008	Standards revised for: TVs, telephony, printers, scanners, faxes, set-top boxes, external power adaptors, computers, residential furnaces.
2009	Added to Energy Star coverage: commercial griddles, computer servers, LED lamps. Standards revised for: commercial refrigerators and freezers, TVs, home audio/video equipment, clothes washers, windows, doors, skylights, set-top boxes, computers, computer monitors.
2010	Standards revised for new homes.

Source: various Energy Star annual reports.

Products can also be dropped ("sunsetted") from the program. Exit signs were removed in 1996, for example, because the market had successfully transformed away from incandescent lighting, meaning "best practice" was so commonplace as to be meaningless. VCRs were dropped in 1998, since changes in the market meant that these products were no longer manufactured.

As can be seen from Table 2, the standards are frequently revised. Standards for computers, for example, were first introduced in 1992, and were revised upward in 1995, 1998, 1999, 2000, 2006, 2008 and 2009. These periodic revisions are necessary to account for product improvement over time within the product line. The efficient computer of 1992 no longer deserves special recognition in 2010, as technology has improved.

Revision or review of the standards is an ongoing process in practically all product categories. Typically, a review and revision will take place when Energy Star qualified products attain 50 percent of market share, but other factors may also prompt review: a change in Federal minimum efficiency standards; transformational advances in technology; product availability, performance or quality issues; or issues with the mandated testing procedures. Review and revision is also regularly done in the area of verification testing requirements.

By most measures the program has been successful. By 2009 the label had more than 75 per cent recognition among the U.S. public—a significant achievement for any ecolabel. In that year almost 3,000 U.S. manufacturers labelled some 40,000 individual products. The results that year in terms of energy saved were estimated to be enough to save U.S. consumers $17 billion in energy bills, and to avoid the emission of some 45 mega tonnes of CO_2 equivalent in greenhouse gases (EPA, 2010a).

The program is not without its difficulties, though. A recent U.S. Department of Energy audit report (DOE, 2009) found that in spite of the recommendations of a 2008 program review, the program had failed to develop a formal quality assurance program to ensure that the standards were in fact being met. Over-reliance on self-certification and lack of verification, particularly for high-energy consuming items, was noted as the key problem. This lack of oversight in product testing and certification was cited as the program's "most significant shortcoming" (DOE, 2009, p. 3). In response, EPA and DOE have pledged to move to a system of 100 per cent product testing (EPA, 2010b). The audit also criticized Energy Star for failing to adequately monitor to prevent use of the logo by products that had never been approved, with the result that the integrity of the label was diminished. And it found that revisions of some product specifications had not been conducted in a systematic or timely manner. Other critics have noted that a large number of products meeting the Energy Star criteria do not bother to apply for approval, meaning that Energy Star certification is not a reliable indicator of superior performance (Wald, 2010).

4.4.2 *What are the implications for an EGS regime in the WTO?*

The Energy Star ecolabel would have particular relevance for an EGS regime that included Type 1 or Type 3 goods (that is, goods that perform better in their end use than others in their product class, and goods with PPMs that are superior to others in their product class). Perhaps the most important lesson is the importance of regular review and revision for the specifications that define the list. Energy Star has a set of criteria that prevent its specifications from becoming outdated and conducts regular reviews of the products it covers, with updates every few years for key products. It also has procedures for sunsetting those products that are no longer appropriate for listing—products (like VHS machines under Energy Star) that have been left behind by technological progress, or (like efficient exit lighting) for which there is no need for continued listing, as there is full market penetration. Both of these features would need to be a part of any WTO regime for EGS that included goods based on their *relative* performance (Types 1 and 3).

Even Type 2 goods would need periodic review. The WTO would need to avoid situations where outdated technology for environmental remediation, for example, was favoured by low tariffs while new more effective technologies were not. Such a result would go against the objective of environmental improvement and would unfairly protect older technologies from innovative competition.

Also relevant is the need for a credible regime of testing to certify that goods are deserving of preferential listing. An energy-efficient clothes washer, or an organically produced agricultural product, for example, would need to have some sort of mandated third-party certification to prove that it deserved special tariff treatment under an EGS regime. Even Energy Star has found this need to be difficult to address, as described above, but has admitted that it is a critical component of a credible regime.

It is also worth noting that the Energy Star program started small, with just computers and monitors, and added more coverage as time went on, learning along the way. Also noteworthy is that the program has an explicit list of criteria for adding new products to the list of covered items. They must produce significant energy savings, they must be produced by more than one manufacturer, they must give a rapid payback on consumer investment, etc. This sort of guidance is very useful in considering which products should be granted the privilege of listing.

The program also offers an interesting possibility for specification. Energy Star certified buildings are certified by dint of being in the top 25 per cent of energy-efficiency practice at the time of certification. Transferred to the WTO EGS regime, this would avoid the need to set and revise product specifications, though it would of course imply a need to monitor current industry performance in covered goods and technologies.

5.0 Conclusions: Lessons from MEAs and ecolabels for EGS in the WTO

This paper has argued that there are a number of useful precedents on which to draw in fulfilling the Doha mandate on EGS. Several MEAs are struggling with very similar issues in constructing and maintaining specific lists of goods that will receive special treatment. Ecolabelling practice has obvious lessons to share as well.

Some of the lessons on which the WTO might draw are laid out below, with the specifics drawn from the preceding analysis. The key lesson is not so much the specifics of previous experience, however, but that such experience exists at all, and that it has importance for the challenges that the EGS talks are now facing. In the end, the WTO negotiators must find their own way to success, taking what is useful from past efforts and rejecting what is not, but they need to know that others have successfully addressed similar challenges.

5.1 Six recommendations

1: Start from first principles

The three MEAs surveyed started with environmental principles, and with shared agreement on the objectives of the negotiations, and proceeded from there to elaborating lists that were appropriate. The EGS negotiations have no such guiding compass, and should reference principles and objectives enunciated elsewhere for environmental protection, to make the job of deciding what to include less political and more grounded in environmental realities. This could be done by reference to principles in multilateral agreements on the environment such as the Rio Principles, or by using as a basis for negotiation the work begun by others, such as the many available lists of green technologies propounded by the IEA, the UNFCCC and others. In the same vein, for example, the PIC Convention drew on the London Guidelines, and the POPs Convention drew on the LRTAP lists.

2: Refer to standards created outside the WTO, where they exist

The three types of goods that might be included in any EGS regime would need somewhat different treatment, but all should reference standards created outside the WTO.

With respect to Type I goods, the experience surveyed above strongly suggests that the WTO does not have the capacity to create and maintain a living list. Nor, if the members know what's

good for the Organization, should it have the appetite. The sort of ongoing revision to the list and verification of claims that is fundamental to the Energy Star ecolabel shows that any standard based on *relative* merit will require continuous technical review efforts of the kind the WTO simply cannot undertake.[6]

As such, where there are existing standards, the WTO should make reference to them, rather than trying to specify its own list. In the context of Type I goods, Japan has proposed as much (WTO CTESS, 2009b), suggesting that something like the Energy Star standard could be referenced in the WTO text, and Steenblik (2005, p. 21) also raises this possibility.

In the context of Type III goods, in the unlikely event that the members choose to consider these, the argument is much the same as for Type I goods. Again, such goods would get preferential treatment as a result of their relative merit, and relative merit can be expected to change over time.[7]

In some cases, for Types I and III goods, *many* standards exist, but abundance is not necessarily a good thing. As shown in the case of coffee ecolabels, where there are many different and competing standards, it will be difficult to adopt one in particular. Members have several viable alternatives in such cases: combine parts of different standards to create a new one (not recommended, since it would involve the WTO creating a standard), use a minimum common denominator (again this would involve some level of specification by the WTO), or reference several standards as presumed equivalent.
The case of fish ecolabels has described the opposite situation, where there is one dominant standard that could be seen as adequate but that could also be improved. In such a case, the potential impacts of liberalization in the sector might afford WTO members some leverage for encouraging institutional improvements.

In the context of Type II goods, it is less obvious that there would be a need for regular revision. But any technology for environmental improvement—be it a GPS system or pipe used in carbon capture and storage—can become dated and rendered obsolete by new and more effective technologies (Steenblik, 2005). Without a regime for review and revision, a list of Type II goods would eventually protect producers of yesterday's technologies to the detriment of cost-effective

[6] Kim (2007) surveys existing mechanisms within the WTO for review of product coverage, including the International Technology Agreement, the Agreement on Trade in Civil Aircraft and the Uruguay Round agreement to review coverage of pharmaceutical products. The first two have not managed to meet on any regular basis and have effected no revisions. The Council for Trade in Goods has completed three revisions on pharmaceutical goods coverage since the end of the Uruguay Round in 1995. Table 2, which describes just the revisions carried out by Energy Star, makes it clear that Type I goods demand a much more intensive level of effort.
[7] This will not always be the case. Standards for organic agriculture, for example, could be expected to change very slowly, if at all. Standards for carbon intensity of steel production, on the other hand, would change with predictable regularity.

innovative environmental technologies—just the opposite of the final desired effect of the EGS negotiations. Here, however, there are few if any standards to which the WTO could make reference as the basis for a list.

3: Where standards do not exist, go slowly

In the context of Types I and III goods, if there are no existing standards, members should not proceed with listing, but should establish objective criteria for including goods that would allow future additions. That is, if there is no standard for automobile fuel that would give preference to ethanol blends or other clean fuels, then those fuels should not be listed. But there should be certainty that, if and when a fuel standard is created that meets certain criteria, then fuels will be covered by the EGS regime.

The experience of existing ecolabels, as surveyed above, gives us some lessons in the challenges of establishing a "good" standard. In response to those challenges there has been movement at the international level to codify some of the desired traits of the organizations in charge of administering such standards. One of the key actors is the ISEAL Alliance (International Social and Environmental Accreditation and Labelling Alliance). The ISEAL Alliance provides a "global framework for the social and environmental standards movement to coordinate, cooperate and build its capacity to deliver positive global impacts."[8] It defines and codifies best practice, at the international level, for the design and implementation of social and environmental standards systems. Members of the ISEAL Alliance need to be compliant with the ISEAL Standard-Setting Code' (ISEAL, 2006)—the international reference for setting credible voluntary social and environmental standards.

Other guidelines that could be drawn upon for the governance of individual standards are the ISO guidelines for the setting of standards (ISO/IEC Guide 59, Code of Good Practice for Standardization, 1994), for certification (ISO Guide 62, General Requirements for Bodies Operating Assessment and Certification/Registration of Quality Systems, 1996; and ISO Guide 65, General Requirements for Bodies Operating Product Certification Systems, 1996), and for accreditation (ISO Guide 61, General Requirements for Assessment and Accreditation of Certification/Registration Bodies, 1996).

An alternative to establishing a new standard is the approach taken by the Energy Star with respect to buildings. There, the program did not lay down specifications, but rather simply certified the top 25 per cent of performers as of the time of certification. This would require more work than simply

[8] See www.isealalliance.org

referencing an existing standard—it would involve some regular assessment of the current state of practice—but would be less complex than creating a new standard.

The principle of going slowly is demonstrated in many of the regimes surveyed above. The Energy Star program started with just computers and monitors. The CITES, Rotterdam and Stockholm Conventions all started with limited lists and have worked to make them more comprehensive. The key to making such a solution acceptable to those whose favoured candidate goods are left off the list is to establish fair objective criteria for future additions. If those criteria relate to existence of standards, as suggested here, then it will be in the interests of exporters to create such standards, and they will soon be created.

In the context of Type II goods, a different approach is called for. Goods whose primary objective is environmental improvement seldom have to compete in their product classes with goods that are environmentally damaging, and therefore a labelling based on relative merit is not appropriate. But there is value in the approach taken by the MEAs surveyed above, all of which have scientific advisory bodies to give them input on, among other things, what should be on or off the lists. For Type II goods, the WTO should create a technology advisory group, made up of members nominated by their respective governments, to deliver a list of technology areas with significant potential to contribute to environmental objectives (carbon capture and storage, solar thermal, soil remediation, etc.), and a list of the key goods, identified by HS codes, that are necessary in each area.

The group would not have to start from scratch. In the context of energy and climate change, the IEA's regular publication *Energy Technology Perspectives* already describes the key technologies. Similar authoritative sources also exist in other areas. As with the Conventions surveyed above, the members would have the final say about the recommendations submitted by the advisory group, but the group's existence would give the listing process a scientific grounding analogous to the existence of the standards referenced for Types I and III goods.

4: Build in flexibility

As noted above, in order to make the restrictions imposed by CITES palatable to the Parties, it was necessary to build in some flexibility. Parties can lodge reservations, under specified circumstances, to the listing decisions of the COP. This same sort of flexibility might be necessary to gain consensus on a regime for EGS liberalization within the WTO. It might, for example, be necessary to allow members to lodge reservations to a certain *de minimus* number of goods. Alternatively, the limit could somehow be linked to the value of the goods denied preference (e.g., percentage of value of global trade, or value of domestic production).

5: Base it on science

A key element in all the experience surveyed above is the need for scientific expertise in the form of a scientific or technical advisory body. All of the MEAs surveyed relied heavily on such bodies, and the ecolabelling schemes also employ scientific capacity, though more usually in-house. If the members did not choose to simply reference existing standards, such a body could help draft the criteria that would guide decisions on what goods and services should be on the list. Other roles for such a body are noted below. Following the practice of the surveyed MEAs, the advisory body might be a regionally balanced body made up of experts nominated by member country governments, serving fixed terms. It might also be supplemented by the services of a roster of experts that it would appoint and call on as needed.

The scientific advisory body might also be charged with regular review of the existing list, with a view to recommending revisions in light of technological progress, to considering the advent of new technologies for inclusion, and to assessing actual environmental impact. A set of criteria for this sort of review was described above in the context of the Energy Star program.

Suggestions for new items to add to the list, or for changes to be made to the existing list, might be made by the member countries. Following the practice of the MEAs surveyed above, the submissions might be directed to the scientific advisory body for a preliminary check against the information requirements and the criteria for listing or revision, and then forwarded to the members with comments for their consideration. Suggestions might also come directly from the scientific advisory body as a result of its regular assessment of the existing list and new technologies. Such assessment might even be farmed out to sectoral experts, as in CITES.

As noted in the experience of the ecolabelling practice, openness is of primary importance. Meetings of the scientific advisory body might be made open to the registered public to observe and, as is the practice in most MEA negotiating meetings, contribute by commenting on proposals and other agenda items. It would be particularly important to elicit the views of developing country producers.

The final decision-making body, akin to the COP in the MEAs surveyed, could be the CTE or the General Council. Any recommendations from the scientific advisory body would go here for actual approval. A key decision would be whether to institute voting as a last resort as under POPs (perhaps with reservations possible, as recommended above), or to strive for consensus, as with PIC.

6: Build in special and differential treatment

It would be particularly important, as shown in the experience of the coffee and fish ecolabelling practice surveyed above, to make provisions for technical assistance and capacity building for developing country producers, to help them take advantage of the opportunities offered by liberalization of EGS. As noted above, developing country producers face special difficulties in understanding requirements and getting certified under existing labelling schemes, and certification under the EGS regime would be no different. Funding to support capacity building in this area would contribute to both environmental and development objectives, and would be in line with existing WTO mandate and practice on trade-related technical assistance.

5.2 Final considerations

Overcoming the stalemate in WTO environmental goods and services negotiations requires creative approaches to defining environmental goods and services, and managing the regime that is created by fulfilling the Doha mandate. The final regime should provide enough policy space for developing countries to develop their own technological alternatives for "greener" production, while giving a strong "push" to international trade in those technologies that may pave the way to a low-carbon economy. Experience gained in MEAs and in ecolabelling initiatives constitutes a valuable store of ideas and innovations that may help unlock the present stalemate within the CTESS. Agreeing on how to populate and maintain a list of environmental goods, and commencing such a process in an open and non-discriminatory manner, would send a positive message of political will for the promotion of a global low-carbon economy.

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