



The Centre For Business Relationships,
Accountability, Sustainability and Society

WORKING PAPER SERIES No. 19

Trade and Sustainability: Promoting Closer Co-operation Between the Trade and Environment Regimes



Andrew Williams



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Abstract

The relationship between the international trade and environmental regimes has been characterised by debate over the causes of environmental degradation and the most appropriate means of addressing it. Advocates of trade liberalisation argue that the elimination of barriers to free trade is the most effective means of protecting the environment. Opponents maintain that in many cases free-trade is a major cause of environmental degradation, and support the use of interventionary measures to restrict these negative effects. This paper argues that, from a sustainability perspective, each approach has both positive and negative economic, social and environmental impacts, and as a result there are potential shortcomings of adopting trade-related environmental protection strategies based wholly on either liberalization or restriction. In this light, the paper investigates an alternative approach to the design of trade policy that is more cognisant of broader sustainability objectives. It is suggested that an innovative approach to the use of Sustainability Impact Assessments (SIAs) can, amongst other things, assist policy-makers in the identification of a broader range of potential sustainability impacts, and facilitate improvements in the *ex ante* planning of appropriate ‘flanking’ measures to mitigate or enhance such impacts. In addition, by fostering closer cooperation between the WTO and MEA secretariats, it is argued that such an approach can reinvigorate progress towards ‘mutual supportiveness’ between the two regimes, as envisaged in the Doha Ministerial Declaration.

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Published by

The Centre for Business Relationships, Accountability, Sustainability & Society (BRASS)
Cardiff University
54 Park Place
Cardiff CF10 3AT
United Kingdom
<http://www.brass.cf.ac.uk>

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ISBNs 1 904393 42 X (print)
1 904393 43 8 (web)



Introduction

The relationship between the international trade and environmental regimes has been characterised by tensions between the two objectives of trade liberalisation and environmental protection (WTO, 2004). Advocates of trade liberalisation argue that the elimination of barriers to free trade is the most effective means of protecting the environment. Opponents maintain that in many cases free-trade is a major cause of environmental degradation, and support the use of interventionary measures to restrict these negative effects. These conflicting perspectives on the causes of environmental degradation, and the most appropriate means of tackling it, represent a challenge for policy-makers. Although *prima facie* each perspective represents a valid means of addressing environmental problems, it has also been argued that neither does so without in some way compromising economic, social or developmental objectives (Kirkpatrick et al, 2004; Motaal, 2001). In the context of the sustainable development agenda, such sub-optimal outcomes are undesirable. Here, the goal of realising economic, social and environmental goals simultaneously (WCED, 1987) necessitates ‘positive sum’ policy or developmental outcomes, something that cannot be reconciled with trade-offs. Given the potential shortcomings of adopting trade-related environmental protection strategies based wholly on either liberalization or restriction, there is therefore a need to investigate alternative approaches to policy-design that are more cognisant of broader sustainability objectives.

In investigating such alternative approaches to policy-design, this paper focuses on the inter-relationship between the Multilateral Trading System (MTS), the complex of trade agreements centred around the General Agreement on Tariffs and Trade, and overseen by the World Trade Organisation (WTO), and Multilateral Environmental Agreements (MEAs) that employ trade-based measures to meet their objectives. The central aim of the WTO is to liberalize trade between its members. On this basis, WTO members are not permitted to discriminate between other members’ traded products, or between domestic and international production. In contrast, several MEAs with trade-based measures are enforced through trade-bans that forbid trade between parties and non-parties or non-complying parties. Since they require that signatories discriminate between the same product traded with another country on the basis of their membership of the MEA, such trade-bans can conflict with WTO rules (Brack & Branczik, 2004, p8-9).

In the past, this conflict has largely shaped the relationship between the two regimes. As a consequence, many of the initiatives aimed at addressing the different perspectives of the trade

and environment regimes have been rules based and litigious (Shaw & Schwartz, 2002) and have sought simply to delineate areas of jurisdictional authority and investigate appropriate means of dispute settlement (Motaal, 2001; Mavroidis, 2000). However, several recent developments have led to a growing recognition of the underlying need for a more strategic and cooperative approach between the WTO and MEA secretariats. In particular, the Ministerial Declaration made at the WTO summit in Doha (WTO, 2001) establishes the principle of sustainable development as a core objective of the WTO and calls for a culture of 'mutual supportiveness' between the two regimes.

Since Doha, however, progress towards meeting these two objectives has been slow. Following the marginalisation of the whole range of trade and environment issues at the WTO ministerial conference in Cancun in September 2003 (ICTSD, 2003, p3) there are some concerns that the whole issue of trade and the environment will be dropped from the Doha round (Brack & Branczik, 2004, p10). In an effort to help salvage the process, research has, amongst other things, focused on the need for improved assessment methodologies to provide a sound understanding of the linkages between economy, environment and development. Cosbey (2002) suggests that such exercises in integrated assessment are beyond the capability of the WTO in its current form and establishes the need for capacity building via institutional reform. To this end, Cosbey suggests a number of possible changes in the structure of the WTO, mostly related to openness and integrated thinking.

Although such strategies might represent a useful means of embedding the principles of sustainable development in WTO negotiations, they do little to promote true mutual supportiveness *between* the WTO and MEA secretariats. Furthermore, by concentrating solely on change within the WTO, there is a risk that the role of MEA secretariats in the process might be neglected. In this light, this paper presents an alternative approach; one that continues to recognise the central importance of integrated assessment activities, but that also seeks to facilitate closer cooperation between the two regimes. In doing so, it is suggested that the employment of Sustainability Impact Assessment (SIA) methodologies (CEC, 2004) could serve as a catalyst to, i) enable progress towards meeting the twin objectives of sustainable development and mutual supportiveness; and, ii) provide policy-makers with a useful tool to inform *ex ante* policy decisions.

To date, SIAs have only ever been carried out to assess the sustainability impacts of trade liberalisation initiatives (e.g. George & Kirkpatrick, 2003). However, in order to realise the

possibilities outlined above, a parallel assessment of the sustainability impacts of imposing MEA trade-measures would also be required. Such a joint assessment exercise could heighten awareness of the full range of possible economic, environmental and socio-developmental outcomes of trade liberalisation or restriction. In addition, it could facilitate the type of closer cooperation between WTO and MEA staff envisaged in the Doha Ministerial Declaration. However, given the likely diversity of interests amongst the constituent groups, it is possible that organisational rearrangement alone will not bring about the full range of benefits envisaged (Von Moltke, 2001, p14). Therefore, this paper also outlines a number of ‘organising principles’ that might i) inform the SIA process; ii) serve as a common platform upon which to base dialogue between the two regimes; and, iii) assist policy-makers in the co-ordination and implementation of positive ‘flanking measures’ designed to complement trade-based measures.

The paper is organised as follows. The section below briefly outlines some of the main elements of the inter-relationship between the trade and environmental regimes, focusing in particular on contrasting perspectives of the role of the WTO and MEAs in realising environmental objectives, as well as on the main areas of tension. The next section discusses some of the ways in which the WTO has sought to reconcile the activities of the two regimes. It expands on the argument that, although these initiatives have helped to foster linkages between the two regimes, they have failed to substantially contribute towards meeting the objectives of sustainable development and the sort of ‘mutual supportiveness’ envisaged by the Doha Ministerial declaration. The following section introduces the concept of SIAs and outlines in more detail how they might help to enable such progress to be made. The final section of the paper presents a case study of the proposed implementation of the *Basel Convention* (UNEP, 1989) as a means of controlling the export of hazardous electronic waste from the United States to illustrate how the twin processes of capacity building and improvements in SIA methodology might aid decision-makers in practice.

Conflicting Perspectives

At the heart of the inter-relationship between the proponents of the Multilateral Trading System (MTS) and Multilateral Environmental Agreements (MEAs) that employ trade-based measures, lies a long standing dispute over the causes of environmental degradation, and the most appropriate means of addressing it (WTO, 2004; Kirkpatrick *et al*, 2004). Supporters of trade liberalisation argue that it contributes to environmental protection through, *inter alia*, the more efficient allocation of resources, and an increase in the availability of environment-related goods

and services through market liberalization. Furthermore, it also leads to poverty reduction through trade expansion and the encouragement of a sustainable rate of natural resource exploitation (WTO, 2004, p23).

This perspective is largely based on the language of welfare economics, which contends that perfectly competitive markets will on their own deliver “Pareto efficiency”¹. In this context, restrictions on the buying and selling of commodities result in an inefficient allocation of resources and often contribute towards localised environmental degradation. At the practical level, such “embedded liberalism” has informed many of the activities of the WTO (Howse, 2002). The central aim of the multilateral trading system is to liberalize trade between WTO members. In particular, WTO members are not permitted to discriminate between other WTO members’ traded products, or between domestic and international production. Although in most instances this principle of non-discrimination between ‘like products’ would appear to present no problems for environmental regulation, it has been suggested that the enforcement of MEAs is one area where tensions might arise (Brack & Branczik, 2004, p8-9).

Estimates suggest that between 240 and 250 MEAs currently exist, with membership varying from relatively small groups to over 180 countries. Around thirty to forty MEAs incorporate trade-related measures. (Brack & Branczik, 2004, p8; Hoffman, 2002, p4). There are three broad sets of reasons why trade restrictions have been incorporated into MEAs (Brack & Gray, 2003, p7). Firstly, to provide a means of monitoring and controlling trade in products where the uncontrolled trade would lead to or contribute to environmental damage. This may extend to a complete exclusion of particular products from international trade. Secondly, to provide a means of complying with the MEAs requirements; and thirdly, to provide a means of enforcing the MEA, by forbidding trade with non-parties or non-complying parties. In practice, it is this third type of trade measure that, in particular, appears to conflict with WTO rules. This is because it requires that signatories discriminate between the same product traded with another country on the basis of their membership of the MEA.

As well as contravening principles of non-discrimination, many at the WTO also contend that trade bans are an ineffective means of achieving environmental objectives. It is suggested that, although such measures might solve an environmental problem, they also create potentially offsetting inefficiencies through their trade restrictive effect. In this context, they are never the

¹ In microeconomics, “Pareto efficiency” or “Pareto optimality” is achieved when all possible “Pareto improvements”, or reallocations of resources that make everyone better off, are achieved (see Motaal, 2001, p1226).

‘first best’ policy option (Motaal, 2001, pp1231-1232). Moreover, the over-reliance on one type of control, such as a trade ban, in cases where the underlying environmental, economic and social context is very complex, is seen as a factor limiting the success of MEAs with trade based measures (Hoffmann, 2002, p10).

In contrast, supporters of MEAs with trade-based measures contend that it is in fact trade liberalisation policies that are to blame for environmental degradation, as well as for a range of social and developmental problems, particularly in developing countries (Schilder, 2002). This perspective is in part based on the belief that the sort of ‘perfect’ market conditions required to enjoy the full benefits of trade liberalisation are unrealistic and do not conform to empirical evidence. As a consequence, it is argued that the claim of welfare maximisation through liberalisation is unfounded, unsubstantiated and often ‘grossly exaggerated’ (Schilder, 2002, p3). Furthermore, in the absence of such idealised market conditions it has been suggested that ‘win-win’ outcomes of increased economic welfare and ‘optimal’ environmental quality are not guaranteed through liberalisation. Instead, in real world situations, both positive and negative effects should be expected (Kirkpatrick *et al*, 2004, p4). Such complex and often indeterminate outcomes have been categorised in terms of their cross-cutting effects on sustainable development (OECD, 1994; UNEP/IISD 2000; UNEP, 2002; George & Kirkpatrick, 2003; Brack & Branczik, 2004; Kirkpatrick *et al*, 2004). These effects are summarised in Table 1.

Table 1 – Potential cross-cutting sustainability effects of trade liberalisation

Type of Effect	Economic Impact	Social Impact	Environmental Impact
<i>Scale effects</i>	+ Economic growth - Economic decline + Increased average income per capita - Decreased average income per capita	+ Increased consumption and material welfare for poorer socio-economic groups	- Increased scale of production leads to more use of natural resources and increased pollution + Increase in financial capacity may provide more resources for env. protection & support greater demand for env. friendly goods
<i>Technology effects</i>			+ Greater access to less polluting new technologies - Increased trade in ‘old’ technologies may increase negative env. impact

<i>Structural effects</i>	+ Increased average income per capita - Decreased average income per capita	+ Structural shift in economy to activities that provide higher wages - Structural shift in economy to activities that provide lower wages	+ Structural shift in economy towards less polluting/resource intensive activities - Structural shift in economy towards more polluting/resource intensive activities
<i>Location effects</i>	+ Provision of new employment opportunities	- Spatial transfer of pollution/disposal activities that exploit cheap labour	- Spatial transfer of production/ disposal activities creates 'pollution havens'
<i>Regulatory effects</i>	+/- Trade measures may have impact on domestic economic policies	+/- Trade measures may have impact on domestic social policies	+/- Trade measures may have impact on domestic environmental policies

Based on Kirkpatrick et al (2004) and Brack & Branczik (2004) and expanded by author

It is clear from the above analysis that conflicting perspectives on the causes of environmental degradation, and the most appropriate means of tackling it, represent a challenge for policy-makers. The situation is further complicated when understood in terms of the sustainable development agenda (WCED, 1987). Although, *prima facie*, it appears that each perspective has a valid role to play in helping to address environmental problems, it can also be argued that neither does so without in some way also compromising economic, social or developmental objectives. In terms of sustainable development, such trade-offs are both sub-optimal and undesirable.

Since it can be argued that each approach can result in both positive *and* negative effects, there are potential shortcomings in adopting trade-related environmental protection strategies that either wholly accept or wholly abandon the principles of trade liberalization or restriction. As a result, there is a need to investigate alternative approaches to policy-design that are more cognisant of broader sustainability objectives and that recognise the inherent validity and potential benefit of each perspective. To help explore how such new approaches might be achieved in practice, the section below briefly traces the history and future prospects of initiatives aimed at cultivating a more supportive relationship between the WTO and MEA secretariats.

Initiatives to date

From the beginning of the 1970's onwards, the GATT secretariat began to address the inter-relationship between the multi-national trading system and environmental protection policies (WTO, 2004). However, these early initiatives tended to focus solely on the impact of environmental policies on international trade and paid little attention to the underlying motivations for environmental protection or the complex relationship between the two systems. Although developments in the environmental field led, in 1971, to the establishment of a GATT *Group on Environmental Measures and International Trade* (the 'EMIT group'), the body remained largely inactive until the period immediately prior to the Rio Earth Summit twenty years later. It was not until the establishment of the WTO in 1995, and the growing high-profile of trade-environment disputes, that more importance was attached to the issue. The EMIT group was transformed into the Committee on Trade and Environment (CTE) and charged with, amongst other things, identifying the relationship between trade measures and environmental measures in order to promote sustainable development (WTO, 1994). The CTE meets around three times a year and has convened several information sessions with MEA secretariats to deepen understanding of the relationship between MEA and WTO rules.

In November 2001, largely on the insistence of the EU delegation, the ministerial declaration made at the Doha summit included several paragraphs related to trade and the environment. In particular, paragraph 31 launched negotiations *'with a view to enhancing the mutual supportiveness of trade and the environment.'* These negotiations focus on the relationship between WTO rules and specific trade obligations set out in MEAs, procedures for information exchange between MEAs and the relevant WTO committees and on the criteria for the granting of observer status in WTO bodies (WTO, 2001, p6-7). In addition, paragraphs 32 and 33 of the Doha declaration outlined a range of 'non-negotiating' issues in relation to trade and the environment, including, amongst other things, technical assistance and capacity building for developing countries and environmental reviews. Importantly, the declaration also contains, in paragraph 6, a strongly worded statement reaffirming the WTO's commitment to the objective of sustainable development. This is reinforced in paragraph 51 with an explicit call for the CTE, together with the Committee on Trade and Development (CTD), *'to act as a forum to identify and debate developmental and environmental aspects of the negotiations, in order to help achieve the objective of having sustainable development appropriately reflected.'* (WTO, 2001, p10).

Although the ‘Doha mandate’ clearly established the principles of sustainable development and ‘mutual supportiveness’ between the trade and environment regimes as key objectives of the WTO, concrete developments towards meeting these aims have been limited. The declaration divided responsibility for dealing with the ‘negotiating’ and ‘non-negotiating’ issues between two groups. The CTE Special Session (CTESS) was charged with dealing with the negotiating issues, while the CTE Regular (CTER) assumed responsibility for handling non-negotiating issues (WTO, 2004, p9). To date, much of the work of the CTESS has been rules-based and litigious and oriented towards dispute settlement. Moreover, although discussions within the committee have undoubtedly contributed towards a greater understanding of trade-environment issues, little progress has been made beyond such awareness raising. Similarly, the work of the CTER on the non-negotiating element of the Doha mandate has shown limited signs of any moves towards more integrated, sustainability oriented policy options. For instance, in discussions held on technical assistance and capacity building, although members have recognised that initiatives aimed at bringing together trade and environment officials are essential to foster coordination and policy coherence, no firm steps have been taken in this direction beyond the ‘encouragement of further cooperation and coordination’ between the WTO, UNEP, UNCTAD and MEAs in the delivery of technical assistance (WTO, 2004, p11). Following the marginalisation of the whole range of trade and environment issues at the WTO ministerial conference in Cancun in September 2003 (ICTSD, 2003, p3) there are some concerns that the whole issue of trade and the environment will be dropped from the Doha round (Brack & Branczik, 2004, p10).

It therefore clear that, although there has been some recognition of the importance of the trade-environment issue in the WTO, there has been little effort to move the agenda forward in any meaningful way. If this inertia continues there is a risk that tensions between trade liberalization and environmental protection will remain unresolved and that policy will continue to be uncoordinated and, in the context of sustainability, sub-optimal. If such outcomes are to be avoided there is now a pressing need to investigate potential solutions to the current impasse.

Analysis of the potential for the WTO to move beyond such superficial approaches to meeting its stated objectives has focused on, amongst other things, the need for improved assessment methodologies to provide a sound understanding of the linkages between economy, environment and development (Cosbey, 2002). The section below investigates how one such assessment methodology, that used in carrying out Sustainability Impact Assessments (SIAs), might be

employed to facilitate progress towards meeting the twin objectives of sustainable development and mutual supportiveness between the trade and environment regimes.

A Way Ahead? – Sustainability Impact Assessments

Sustainability Impact Assessments (SIAs) are a tool to help facilitate the *ex ante* and *ex post* assessment of the economic, socio-developmental and environmental impacts of trade agreements (Lee & Kirkpatrick, 2001, p396). Their main aim is to identify possible problems that may arise as a result of changes in trade flows as well as the policies and measures that could be implemented to further the sustainability of trade. The European Union has been a forerunner in promoting the use of SIAs in this context (CEC, 2004). Briefly, the EU methodology for *ex ante* impact assessment (*Ibid.* 2004; CISDL, 2001) is to begin by carrying out an initial screening and scoping exercise to find out which trade measures of the negotiating mandate are likely to cause significant impacts, and to establish the appropriate coverage of each SIA. This is followed by a preliminary assessment of the impacts of detailed measures against key sustainable development indicators. These ‘core indicators’ relate to a range of economic, social and environmental themes including real income, employment, health, poverty and environmental quality, as well as ‘process’ indicators to measure consistency with the principles of sustainable development and institutional capacities to implement sustainable development strategies (CEC, 2004, p16). In addition, the various cross-cutting sustainability effects outlined in table 1 are also considered. The assessment stage is followed by an analysis of the types of mitigation and enhancement measures that might need to be appraised throughout future, more detailed SIA studies. Such ‘flanking’ measures might include international and regional initiatives to promote technical cooperation and capacity building in developing countries, and measures by national governments to address market imperfections, regulatory failures or social inequalities, which are harmful to sustainable development.

To date, SIAs have only ever been used to assess the sustainability effects of WTO trade agreements after they have been made, as opposed to at the negotiation stage. Efforts to understand the underlying reasons for the lack of significant progress in negotiations have highlighted the inherent interconnectedness of sustainable development with all fields of economic activity. In this respect it is suggested that the cross-cutting nature of the issue is at odds with the current structure of the WTO (Cosbey, 2002), with the result that initiatives have

only been made in small isolated sectors and only on regional issues². In relation to SIAs, Cosbey (2002) suggests that such exercises in integrated assessment are beyond the capability of the WTO in its current form and establishes the need for capacity building via institutional reform. To this end, a number of possible changes in the structure of the WTO are suggested, mostly related to openness and integrated thinking. Although such exercises might represent a valuable opportunity to embed the principles of sustainable development in WTO negotiations, they currently do little to promote true mutual supportiveness *between* the WTO and MEA secretariats. By concentrating solely on change within the WTO, there is a risk that the role of MEA secretariats in the process may be neglected. In addition, while it has been recognised that SIA flanking measures might include '*collaborative agreements between international organisations to clarify the relationship and strengthen the consistency between international trade agreements and other types of international agreements*' (George & Kirkpatrick, 2003, p13), MEA secretariats have not yet been involved in the process. Moreover, since SIAs have been limited to the appraisal of scenarios based on further trade liberalisation against 'business as usual' (e.g. George & Kirkpatrick, 2003) no efforts have been made to assess the potential sustainability impacts of MEA type trade restrictions.

Strategies to facilitate 'mutual supportiveness' through SIAs

The earlier analysis has highlighted the possibility that the employment of SIA methodologies can facilitate closer cooperation between the WTO and MEA secretariats of the type envisaged in the Doha Ministerial Declaration. In addition, the implementation of joint SIAs that consider the effects of both further liberalisation *and* restriction could potentially facilitate a broader understanding of the range of sustainability impacts associated with any trade-based policy, and allow the planned coordination of flanking measures. Such a process would represent a powerful tool to assist policy makers in the design of policies and measures more closely aligned with sustainability objectives.

However, we have also seen that attempts to strengthen the relationship between the WTO and the various MEA secretariats, although showing some promising signs, are still largely characterised by a degree of inertia. Therefore, the challenge now is to investigate ways in which the sort of enhanced cooperation envisaged above might be realised in practice. With this in mind, a tentative strategy to move the process forward is outlined below.

² See the *Center for International Development at Harvard University - Global Trade Negotiations* homepage at

Capacity Building

As highlighted earlier, paragraph 51 of the Doha Ministerial Declaration calls on the WTO Committee on Trade and Development (CTD) and the Committee on Trade and Environment to *'each act as a forum to identify and debate developmental and environmental aspects of the negotiations'* in order to appropriately reflect sustainable development (WTO, 2001, p10). However, by stating that the bodies continue to act independently of each other, the wording of the paragraph still implies an element of functional separation. This arrangement is unlikely to facilitate the type of holistic and integrated discursive process required to give justice to the sustainable development mandate. In order to foster such a process, a more cooperative arrangement, taking into account the social, economic and environmental implications of international trade rules would be required. At a practical level, it has been suggested that such thematic separation could be overcome if this element of the work of the two committees was combined through the establishment of a joint Committee on Trade and Sustainable Development (CTSD). Such a committee would include representatives from both developed and developing countries, and be open to input from international organisations with an interest in one or more elements of sustainable development, including UNCTAD, UNEP, the World Bank and UNDP (CISDL, 2002, p6). Although this proposal would play an important role in further embedding the principles of sustainable development in the WTO organisational structure, it falls short of promoting mutual supportiveness between the trade and environment regimes of the type outlined above for a number of reasons. Firstly, there is no recognition of the role that representatives from MEA secretariats could play in committee proceedings; secondly, by focusing solely on the impacts of WTO trade rules the committee would not consider the sustainability effects of MEA type trade restrictions; and thirdly, the fact that proceedings would be carried out under the auspices of the WTO could lend an implicit inferiority to the views of members from outside the organisation.

In spite of these reservations, a WTO-CTSD could still play an important role in the process of promoting mutual supportiveness between the trade and environment regimes. However, to ensure such equitable cooperation, it is suggested that representatives of the committee should form a constituent part of a broader organisation, one that also includes representatives of relevant MEA secretariats and is charged with considering the sustainability impacts of liberalisation and restriction in parallel. Furthermore, as recognised in the earlier proposal (CISDL, 2002, p5), there may also be a role for an independent organisation, such as UNEP or

UNDP, to manage this new organisation, and to oversee, or even coordinate, the implementation of joint SIAs carried out by WTO and MEA staff as part of its remit. In order to move this proposal forward, it is suggested that the initial process of establishing such an innovative organisation might be facilitated by the involvement of the UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development (UNEP-UNCTAD, 2004) or the International Institute for Sustainable Development (IISD) Trade Knowledge Network³.

In terms of the process of carrying out joint SIAs, it is envisaged that the proposed new body would assume a key role during the initial screening and scoping stages through jointly identifying those trade measures, whether liberalising or restricting, likely to cause significant impacts, and establishing the appropriate coverage of each SIA. The organisation would also represent the most appropriate forum to assess the wide range of impacts against the defined indicators, and to decide upon the most appropriate flanking measures that might be employed to complement policy decisions. However, in order to ensure that such measures are properly adapted to the social and political context underlying the policy change, it is vital that the SIA process is truly participative. To this end, it is essential that relevant stakeholders are involved in decision making processes, not just at the international level, but also at the regional and local levels. To facilitate the engagement of potentially diverse groups and ensure the full articulation of local stakeholder interests it is suggested that the proposed SIA organisation should establish local and/or regional offices. Some MEA secretariats (e.g. the Basel Convention) already have such offices in place and represent ideal candidates for adaptation to incorporate this new broader role. These regional bodies could also feed into decisions made at the international level, and act as a mechanism to ensure that flanking measures are properly tailored to local socio-economic situations and the specific needs of the local environment.

Organising Principles

In order to complement the organisational changes suggested above, it is also important that the proposed changes in the SIA process address the broad range of concerns associated with the approach. Critics of SIAs have highlighted a range of limitations, including concerns over the confidentiality of data, the length of the process and the resources needed. In addition, although SIAs are considered to constitute a contribution in terms of knowledge, the weak link between previous studies and the policy-making process has been criticised (Borregaard, 2002). In response to these criticisms the EU, which still remains the leading advocate of the tool, has

³ See <http://www.iisd.org/tnk> and <http://www.iisd.org/trade/ccied/trade.htm>.

established a comprehensive set of performance criteria to ensure that SIAs are, amongst other things, accountable, transparent, time-effective and well integrated into existing processes for the formulation of policies (CEC, 2004, p7). It would be essential that any organisation established to facilitate parallel SIAs of WTO and MEA trade measures was fully cognisant of these criteria and carried out the process in accordance with their requirements.

Although the concept and general objectives of sustainable development have been recognised by both the WTO and MEA secretariats, it is possible that notions of its real implications, and of the most effective means of realising its goals will vary. As a consequence, the type of organisational change suggested above may only make sense if it results in new modes of working and a wider appreciation of the potentially unifying effect of such change. In this sense, and given the potentially very wide range of interests and backgrounds of the participants in the proposed organisation, it might also be useful to establish a variety of 'organising principles' to inform discussion and debate. Von Moltke (2001, pp35-48) outlines a range of 'institutions', in effect principles, that might help guide such processes of organisational change. In addition, Cordonier-Segger *et al* (2001, p6) outline the so called 'Winnipeg principles' a set of 'indivisible guides' for trade and trade-related environment and development policies to help in the achievement of sustainable development. In many respects, the principles suggested by these commentators are similar to the EU performance criteria (CEC, 2004) and relate to operational issues such as participation, subsidiarity and accountability. However, several others might also be usefully employed to help foster deeper understanding within and between the representatives of a joint SIA organisation. Expanding on the work of these commentators, Table 2 (overleaf) outlines how some of these key principles could be used to inform joint SIA exercises. In addition, several further organising principles are suggested, in view of the particular nature of the organisational innovation envisaged.

Table 2 – Organising principles for joint Sustainability Impact Assessments

Science	Perceptions of the role of science in informing SIAs may vary. To avoid conflicts, it is vital to establish a common approach to the use of science in collecting data as well as in the assessment of results.
Uncertainty & precaution	It is important that the inherent uncertainty relating to scenarios used in the SIA process is accounted for. In this light, consideration should be given to how the precautionary principle might be exercised when using SIAs to inform trade-based policies and flanking measures.
Equity	Consideration should be given to how notions of spatial and inter-generational equity might inform the SIA process. In addition, ways that the results of SIAs could be employed to enhance trade-based policies in terms of their contribution to social justice and the equitable distribution of resources should be considered.
Environmental capacity	It should be recognised that the SIA process represents a valuable tool in identifying the limits to development or trade-based measures imposed by the environment. Attention should also be paid to the role of joint SIAs in informing policy-makers how measures might be devised that respect such limits.
Perceived utility of materials traded	Perceptions of the relative utility of many traded materials may vary. For example, materials might be regarded by one country as ‘waste’ and by another as a useful secondary resource. It is vital that the participants in the SIA process are aware of this complexity both in assessment and when considering policy-linkages and flanking measures.
Guiding motivations	Differences in the historical, present and emerging motivation for promoting either trade liberalisation or restriction should be accounted for in the SIA process. The rationale for free-trade has been primarily economic and interest based, whereas that for trade restriction has been largely socio-political and principles based. It is important that underlying strengths and weaknesses of each perspective are fully appreciated and used to inform the SIA process.
Notions of time	The influence of time on issues relating to each of the above principles should be taken into account. For example, scientific advancements may result in a reappraisal of environmental capacities. Since SIAs, by their very nature, contemplate the future impacts of actions taken in the present, it is important that such potential changes are accounted for when devising likely scenarios.

Based on work of von Moltke (2001) & Cordonier-Segger et al (2001) and expanded by author.

Case Study - The Basel Ban and its effect on the trade in waste electronics

Having outlined a potential strategy to help policy-makers address the tensions that exist between the trade and environment regimes, this section briefly illustrates what such innovations might mean at the empirical level. The case study below analyses the debate relating to the proposed implementation of the so called ‘Basel ban’ on the transboundary shipment of hazardous wastes as a means of controlling the negative environmental effects of the export of waste electrical and electronic equipment from the United States to China and elsewhere.⁴

Estimates suggest that a significant proportion of the waste computers collected for recycling and reuse in the Western United States are in fact exported for treatment overseas (Puckett & Smith, 2002). The underlying reasons for this trade are primarily economic. In the Western United States, the recycling of waste electronics is not a very profitable enterprise. Although there are some valuable precious metals, particularly in printed circuit boards, the revenue from their sale is often offset by the high disposal costs attached to unsaleable materials. Furthermore, the combination of a poorly developed domestic Cathode Ray Tube (CRT) recycling infrastructure and high transportation costs means that recycling companies located on the Western seaboard often find it much cheaper to transfer materials to Asia than to domestic facilities. This economic pressure is further compounded by the fact that labour costs are significantly lower in importing countries, meaning that it is far easier to make a profit by carrying out recycling there.

Representatives of several environmental NGOs, including the *Basel Action Network*, *Silicon Valley Toxics Coalition* and *Toxics Link* have visited the recipient countries, including China and India, to investigate the conditions under which this waste is treated (Puckett & Smith, 2002; Toxics Link, 2003). Much of this recycling activity is carried out by locally owned businesses, or “Township and Village Enterprises” (TVEs) which, although important drivers of economic development, often employ rudimentary recycling methods that have, in many cases, resulted in a range of negative impacts on both the local environment and on human health. Based on these findings, the environmental lobby in California argued that the only effective means of halting the detrimental effects of the export activity was a total ban on the export of electronic waste to non-OECD countries, in line with the Basel Ban (UNEP, 1989). The result of this campaign was that, in 2003, the Californian state legislature adopted legislation that,

⁴ Partly based on results of research jointly carried out by the author in California, USA during October 2003 as part of a broader project investigating sustainability issues in the electronics industry.

amongst other things, introduced strict controls on the export trade, and established a system of prior informed consent to carry out such activities⁵. However, the legislature fell short of imposing a total ban, arguing that the state lacked the authority to enact such a provision unilaterally. This resolution is unsatisfactory to several environmental groups, both in California and elsewhere in the USA, and has led to growing calls for the federal government to ratify the Basel Convention and establish national legislation banning the trade in waste electronics to non-OECD countries.

In contrast to these demands for trade restriction, opponents stress the social and economic importance of the trade to recipient countries. For example, some countries view the import of reusable items, particularly ICT equipment, as a means of improving skill levels and computer literacy (Toxics Link, 2003, p31). Furthermore, commentators highlight the fact that in countries like China, waste electronics represent a valuable source of secondary materials to fuel a rapidly expanding economy. In this sense, it has been suggested that the enforced cessation of trade would constitute an example of ‘green protectionism’ and impose unfair restrictions on socio-economic development in developing countries. Advocates of this perspective argue that the continuing liberalisation of trade activity represents the most effective means of ensuring environmental protection. For example, Chinese companies currently produce a large proportion of the world’s computers and, in response to the requirements of importing countries, have raised environmental standards in manufacture. Some suggest that this trend towards convergence in environmental standards might also work in reverse, and lead to the environmentally sound management of end-of-life computers. Furthermore, the likely increase in the flow of materials as a result of further liberalisation might provide economies of scale and allow the profitable diversion of the existing manufacturing skills and resource base into more professionalised demanufacturing or remanufacturing activities (Lin *et al*, 2002, pp. 568-576).

Potential contribution of new SIA procedure

This case study highlights the tensions that exist between the supporters of trade liberalisation and trade restriction, as well as the clear differences in the perspectives of the opposing camps regarding the most effective way to remedy the existing social and environmental problems. In addition, it illustrates the difficulties faced by policy-makers, both in deciding upon the most appropriate course of action, and in designing policies and measures that meet broad sustainability objectives. In this context, it is suggested that the implementation of the new

⁵ See Senate Bill 20 (SB20) and the Electronic Waste Recycling Act (2003), available at: <http://www.cjwmb.ca.gov>.

organisational structure and SIA procedures outlined above might benefit policy-makers in the following ways:

Comprehensive identification of sustainability impacts – It is likely that an SIA carried out to assess the potential effects of both liberalisation and restriction of the trade in waste electronics would identify a broader range of sustainability impacts than an SIA focused solely on one policy alternative. For example, in terms of economic impact, a joint SIA might reveal that trade restriction would result in an overburdened domestic recycling infrastructure in the USA. However, it might also identify the financial and competitive pressures facing community enterprises if liberalisation resulted in a more consolidated and professionalised demanufacturing infrastructure in recipient countries.

Active engagement of local stakeholders – The involvement of local interest groups would be actively facilitated by the new organisational structure. In particular, the establishment of local and/or regional SIA offices, possibly based at existing Basel Secretariat Regional Centres, would actively encourage input from the broadest possible range of stakeholders. Such a structure would help to strengthen awareness of the complex economic, social and environmental effects of proposed policies.

Provision of formal arena to debate issues – The type of organisational change envisaged could also foster deeper understanding amongst participants of the underlying motivations for limiting or expanding the trade in waste electronics. Such a forum in which to discuss contentious issues might also facilitate the useful cross-fertilisation of ideas relating to potential flanking measures aimed at the mitigation or enhancement of the effects of trade policy. For example, if it was decided that a policy of trade restriction was the most appropriate resolution, participants in the process would be better placed to lobby for mitigating measures, such as the establishment of economic incentives to invest in the USA recycling infrastructure or the provision of training to assist TVEs in regeneration activities.

Balanced knowledge of ‘utility’ of waste electronics – A joint-SIA process could provide policy-makers with a more balanced understanding of how the perceived utility of waste electronics might vary from place to place. For example, in the USA, many environmental NGOs attach greatest importance to the view that used computers are hazardous ‘wastes’ that must be managed in an environmentally responsible manner. However, whilst the recycling industry is appreciative of such environmental concerns, it is also aware of the residual value of such items

on secondary materials markets, and adopts a more resource-based perspective to their management. Furthermore, some stakeholders perceive the re-use of used computers as an important means of realising socio-economic benefits, via increased penetration of ICT usage and enhanced ICT skills in domestic labour markets.

Broader understanding of effects of time on utility and impacts – In relation to the variety of perspectives on the utility of waste electronics, a joint-SIA process, and the associated organisational change, might also help to cultivate a longer-term appreciation of temporal variations in utility. For example, used computers imported for re-use will stop working eventually, and will need to be managed appropriately when they do. Furthermore, the value of secondary materials contained in waste electronics might fluctuate on international markets and positively or negatively effect demand. A more sophisticated understanding of these changes may help policy-makers to avoid implementing policies based on a limited interpretation of utility, and enable the design of more flexible and holistic trade-policies and flanking measures, tailored to the management of such wastes or materials over time.

Conclusion

At the empirical level, policy-makers are often faced with competing demands from a wide range of stakeholders, each convinced of the merits of their particular perspective on trade-policy. However, in the context of sustainable development, it is likely that effective trade measures will need to move beyond a limited focus on either more liberalisation or more restriction, towards a more integrated approach that is cognisant of the relative strengths and weaknesses of both perspectives. The case study above provides an example of how the establishment of an innovative and flexible approach to the SIA process could promote such an approach, as well as facilitating the sort of mutual supportiveness between the WTO and MEA secretariats envisaged in the Doha Ministerial Declaration (WTO, 2001).

In moving the process forward, further research is needed to investigate the practicalities of the new approach, as well as to identify potential barriers to its implementation. Amongst other things, potential research should focus on how the currently fragile political will to implement such changes might be nurtured, as well as on how strong linkages between the SIA process and subsequent policy decisions could be established and maintained. In addition, it would be useful to explore how applicable such an approach might be in relation to other MEA's with trade-based measures, and any modifications that may be necessary in order to bring about tangible

benefits. It is vital that any proposed institutional or organisational changes are closely suited to the particular 'problem structure' (Von Moltke, 2001, pp11-14). In this sense, the strategy outlined in this paper should not be seen as wholly prescriptive, but rather as a set of core ideas, around which more flexible approaches, tailored to the specific context, could be organised.

The relationship between the trade and environmental regimes is a complex arena, characterised by a variety of perspectives on the causes of environmental degradation, and a range of often entrenched views on the most efficient means of addressing it. In moving towards the design of effective, integrated, and above all, sustainable trade-measures it is important that policy-makers are aware of such contrasts, as well as the likely economic, social and environmental impacts that may occur as a result of their actions. In this light, the type of organisational innovation outlined above could represent a concrete step towards such objectives.

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