International Society for Ecological Economics
Internet Encyclopaedia of Ecological Economics

Trade and Environment

Professor Paul Ekins

February 2003

1. THE TRADE-ENVIRONMENT AGENDA
Through the 1990s world trade expanded at rates substantially faster than the growth rate of the global economy, spurred by the conclusion of the Uruguay Round of trade negotiations and the setting up of the World Trade Organisation (WTO) in 1995. This was only one aspect of a more fundamental process of globalisation which also included the growth and extended reach of transnational companies and greatly increased international interaction between and organisation of civil society organisations. The 1990s also saw the acceptance by the world community, at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, that the global environment was under unprecedented stress from human activities, and the conclusion of several agreements to begin to address some of the most serious perceived global problems. This article is about the trade/environment relationship.

The debate about this relationship is still characterised by fundamental disagreement on some of the most basic issues, between those who consider that trade liberalisation could, and should, be good for the environment, and those who fear that its effects will be negative, and could be disastrously so. Points made in support of the former view include:

• Trade liberalisation promotes economic growth. As societies become richer, they acquire both the will and the resources to protect the environment.
• Trade liberalisation promotes the efficient allocation or resources (including environmental resources), allowing the production of a given economic product with the least possible use of resources.
• Trade liberalisation promotes the international transfer of environmentally-preferable technologies.
• Trade liberalisation promotes the convergence of environmental standards for products and processes towards the higher levels of rich countries, and increases the markets for environmentally-preferable products.
• Trade liberalisation promotes international co-operation in other areas, notably environmental protection.

In contrast, the following arguments have been made to support the view that trade liberalisation and the environment are in conflict:

• Trade liberalisation amplifies environmental externalities through its promotion of economic growth.
Trade often involves long-distance transport, which is one of the principal sources of environmental externalities.

Because of competitiveness pressures, trade liberalisation will result (at best) in political drag on environmental policy making by governments, and (at worst) in an environmental 'race to the bottom' through competitive deregulation.

Trade rules arising from trade liberalisation impede national governments in their attempts at environmental protection, either because of possible trade effects (e.g. through mandatory re-use of containers) or because of perceived discrimination (e.g. eco-labelling).

Trade rules may inhibit the use of trade measures in multilateral environmental agreements.

The production of some highly-traded goods (e.g. cotton, cigarettes, certain foods) is more environmentally-destructive than the production for domestic consumption which it replaces.

Opportunities to use land for trade result in subsistence farmers being displaced onto environmentally-marginal land, where they cause environmental damage.

Trade-environment relationships are inextricably entwined both with social concerns (such as labour standards) and issues of North-South development co-operation. Indeed, it is likely that progress will only be made on trade-environment issues if these other issues are addressed as well. Undoubtedly this makes the situation much more complicated.

2. ASSESSING TRADE-ENVIRONMENT ARGUMENTS

Despite their contradictory nature, none of the views given above can be totally dismissed, and for most of them a body of evidence can be cited in their favour. The uncertainty about the net environmental effect of trade liberalisation is due to the difficulties involved both in quantifying the individual effects, and in determining what portion of the individual effects is due to trade liberalisation rather than other causes. This section considers the evidence for the different views.

2.1 Trade, growth and environmental quality

There is a robust tradition of academic thought to the effect that trade liberalisation both increases global income and allows all the parties to trade to share in that growth. However, the survey by Edwards (1993) was only able to come to tentative conclusions on the relationship between trade and economic growth, finding that, while there was no shortage of studies which showed a clear correlation between trade and growth, many of these were not methodologically robust. In any case, trade-growth correlation is not the same thing as trade-growth causality, and there are a number of reasons why high GDP growth might stimulate trade rather than the other way round. Later work by Frankel & Romer (1999) finds no evidence that high incomes lead to more trade and finds that the impact of trade on income is substantial. However, they also find that “the null hypothesis that these variables [trade and size] have no effect is typically only marginally rejected at conventional levels. As a result, the estimates still leave considerable uncertainty about the magnitude of their effects.” (Frankel & Romer 1999, p.381)
Despite the theoretical and empirical uncertainties, modelling of the income effects of trade liberalisation routinely treats correlation as causality and finds that trade liberalisation increases income substantially. Thus Goldin et al. (1993)’s work for the OECD and the World Bank finds that full trade liberalisation would increase global GDP by $450 billion, while the liberalisation then envisaged by the GATT’s Uruguay Round was estimated to increase global GDP by $213 billion (Goldin et al. 1993, p.13). It is these kinds of perceptions and calculations of the benefits of trade liberalisation that provide the motivation for countries to dismantle their own trade barriers as long as others do the same.

Determining the effects of economic growth and trade on the environment is even more problematic. The theoretical literature has so far proved unable either to endorse the virtuous trade-growth-environment circle often invoked by advocates of trade liberalisation, or the more pessimistic view espoused by its opponents (Ulph 1997). Empirically studies have found that there are so many problems of definition measurement (Van Beers & Van den Bergh 1996), and so many different factors to be taken into account (Jenkins 2001), that it is not possible to generalise about whether or not an increased orientation towards exports will be environmentally beneficial.

There has been more research on the issue as to whether economic growth will amplify any negative environmental externalities associated with production and/or consumption, or whether it will facilitate their abatement by intensifying preferences for environmental quality and providing the resources to give these preferences effect. There is now an extensive literature on the ‘Environmental Kuznets Curve (EKC)’ hypothesis, which in crude terms states that environmental quality tends to improve beyond a certain income threshold. A number of studies of this literature (for example, Ekins 1997, Cole et al. 1997, Bruyn et al. 1998) have concluded that, in general, the EKC hypothesis does not hold, and that, even for those measures which tend to exhibit the EKC income/environment relationship, there is nothing automatic about the relationship or the turning point income threshold. The role of environmental policy in achieving environmental improvement in a context of rising incomes is crucial.

This leads directly to another issue of controversy in the trade-environment debate: the extent to which trade liberalisation will reduce the political will to implement policies for effective environmental protection.

2.2 Trade liberalisation and environmental policy
There is little dispute in principle with the (then) GATT Secretariat and trade theorists generally that the first-best means of addressing domestic environmental damage is likely to be through domestic policy that directly tackles the environmental problem, rather than through trade policy (e.g. GATT 1992 p.21, Anderson & Blackhurst 1992 p.20, Nordström & Vaughan 1999 p.26). Similarly the first-best approach to global environmental problems is likely to be through international treaties involving all the relevant parties. However, there are a number of practical problems with the implementation of these approaches in a context of rules-based trade liberalisation.
Pressure on Competitiveness

In all countries, environmental policy is enacted with reference to other policy objectives, of which economic policy objectives are among the most important. The most difficult environmental policies to implement are those which are perceived to have a negative perceived impact on the economy. It is certainly true that world trading rules allow countries to protect their own environments. But they often do not allow countries to protect their domestic industry from competitors who do not protect their environment and thereby gain a competitive advantage. At the very least, such a situation might be expected to put a drag on environmental policy making that is thought to have a negative effect on competitiveness. At worst, the result could be competitive environmental de-regulation, or what has more dramatically been called “the race to the bottom” (Esty & Geradin 1997, p.273; Esty & Gentry 1999, p.162; Mabey & McNally 1999, p.27).

The effects of trade liberalisation on environmental policy making will depend strongly on the extent to which it is perceived environmental policy has, or may have, an impact on corporate competitiveness. Unfortunately, as with so many other issues in this area, opinions are divided on this as well.

The conventional economic view is that the realisation of environmental benefits through environmental policy is likely to entail economic costs and therefore impact negatively on industrial competitiveness. However, against any costs of environmental regulation need to be set a number of possible benefits, including cost reduction from reduced waste and waste management costs, first-mover advantages and stimulation to innovation, which may result in the development of new products or new business opportunities. Considerations of this sort have led Porter (1990, pp.647-648) to hypothesise that environmental regulations may be good for economic competitiveness.

Apart from anecdotal single-firm case studies, There is little empirical support for Porter’s optimistic hypothesis. Nor, however, has it been convincingly refuted. Analysis by Jenkins (1998) gives marginal support to Palmer et al. over Porter. Overall Jenkins’ review of the literature suggested that “there was no strong universal relationship between environmental pressures and competitive performance, either at the firm level or the industry level” (Jenkins 1998, p.38).

It is not only competition for trade in goods and services which may affect environmental policy making. Just as potent a source of competitive pressure is the desire for foreign direct investment (FDI), which is important for all economies and is now the largest source of development finance for developing countries (Gentry 1999, Figure 4, p.25). As with competition for trade, there is the danger that a desire to attract FDI will cause a competitive lowering of environmental standards. Reviewing this issue, Zarsky (1999, pp.47-48) concludes that there is no evidence that this desire is in general leading to ‘pollution havens’ or a ‘race to the bottom’. However, there is also no shortage of case studies showing that FDI often causes great environmental damage, especially in developing countries, and in general environmental standards (and their enforcement) are not improving fast enough to offset the environmental degradation of the increased economic activity which FDI brings about. “It is in this sense that the claim that foreign
direct investment is bad for the environment has credibility." (Zarsky 1999, p.49)

Whatever the reality of the impact of environmental policy on competitiveness and flows of FDI, there is certainly a strong perception of its likely negative effects, both in business in respect of the former and in governments in respect of the latter. Zarsky (1997, pp.31ff.) considers that the pressures of global economic competition have engendered in governments an unwillingness to effect unilateral measures for environmental protection, such that environmental policy has become ‘stuck in the mud’.

Esty & Geradin (1997) have documented examples in both Europe and North America where environmental policy measures have been subjected to legal challenge on the grounds that they distort trade and where concerns about competitiveness have impacted on the process of environmental law making. They consider that this causes “‘political drag’ or ‘regulatory chill’, making it difficult for governments to move towards optimal environmental policies.” (Esty & Geradin 1997, p.273) They also note that the difference in environmental standards between the United States and Mexico has been an important factor in fuelling fears about a regulatory ‘race toward the bottom’ in the context of the North American Free Trade Agreement (NAFTA).

The extent to which this was recognised as an issue during the negotiations on NAFTA is evidenced by the fact that NAFTA’s environmental ‘side agreement’ has a specific provision that all three NAFTA countries should fully implement their environmental legislation, and expresses their intention to achieve upward harmonisation of this legislation over time. However, there is no evidence that this intention has yet been realised. The phenomenon of ‘political drag’ and ‘regulatory chill’ means that, in practice, there may be little governmental appetite for more stringent environmental standards. However, even where there is such appetite, it may be challenged not only by other governments, who perceive the standards to be an unacceptable constraint on trade, but also by private companies.

Private Challenges to Environmental Policies
The increased international interdependence of national economies, the increased flows of FDI between them, and the consequent increased presence of foreign investors in nearly all countries, have led to concerns that these investors should receive fair treatment from their host governments. One expression of this concern was the Agreement on Trade-Related Investment Measures (TRIMs, WTO 1994, pp.163ff.), which was one of the Uruguay Round agreements. Of far more relevance so far to the environment has been Chapter 11 of NAFTA (NAFTA 1992).

NAFTA’s Chapter 11 is intended to give foreign investors security in the country of their investment. It does this by setting out certain disciplines which must be respected by NAFTA governments, including non-discrimination between domestic and foreign investors, prohibitions on certain types of performance requirements on investors, and prohibitions on direct and indirect expropriations, or measures tantamount to expropriation. If an investor perceives that a host government has failed to observe a discipline, it can seek redress, and damages, in a special NAFTA dispute resolution process that may be kept completely secret to the parties concerned. Mann & Von Moltke (1999, p.3) consider that NAFTA’s Chapter 11 “contains the most extensive set of
rights and remedies ever provided to foreign investors in an international agreement". They also consider that all the disciplines are potentially troubling from a sustainable development perspective (Mann & Von Moltke 1999, p.4).

The discipline that has attracted most public concern is that concerned with the interpretation of expropriation. There is no space here to examine the legal issues involved in detail, as Mann & Von Moltke (1999) do, but it is possible that this discipline "establishes a potential right to compensation or damages for new environmental measures adopted by a NAFTA party", with "taxpayers money being required to pay for the right of a government to protect the environment" (Mann & Von Moltke 1999, p.16), in total contravention of the polluter pays principle. This is now more than a theoretical possibility. Mann & Von Moltke (1999, p.5) list eleven known cases that have been filed under Chapter 11, six of which are environmentally related (because of the secrecy surrounding disputes, their list may not be complete). Depending on their outcomes, these cases could turn the regulatory chill of the previous section into a regulatory freeze.

Fears of such a situation were a major factor in generating the opposition on environmental grounds to the Multilateral Agreement on Investment (MAI), negotiations on which were started under the auspices of the Organisation for Economic Co-operation and Development (OECD) in 1995. They sought to extend to OECD countries as a whole (and, it is surmised, thence to the whole world through the WTO), the kind of investor protection afforded by NAFTA. However, the controversy surrounding both the content and procedures of the negotiations caused them to be suspended in April 1998, and abandoned six months later. This experience proved, if nothing else, that further liberalisation of investment, and of trade, is going to require very different processes than those to which the trade and investment communities have been accustomed to use.

2.3 Trade liberalisation and international environmental policy
At the international level the same problem of policy implementation arises as at the national level, albeit for different reasons. Multi-country environmental treaties are notoriously difficult to conclude. Unilateral actions involving trade policy can sometimes be an effective way of moving towards multilateral agreements or their implementation (see Charnovitz 1992, p.207, for examples). Moreover, trade policies may be among the only available instruments whereby countries that agree among themselves not to damage the global environment can prevent others from doing so. Currently about 20 out of 200 multilateral environmental agreements (MEAs), including some of the most important ones such as the Convention on International Trade in Endangered Species (CITES) and the Montreal Protocol on ozone depleting substances, provide for the use of trade policy to achieve their objectives. This may seek to restrict environmentally damaging trade per se, or may have the objective of encouraging compliance from signatories, or of encouraging participation in the MEA from, or imposing sanctions on, non-signatories to it. The OECD (1999, p.166) considers that trade measures in MEAs have been effective in both these and other ways. Yet it is not clear that such measures, especially in respect of non-signatories, are compatible with GATT/WTO rules.

This situation is undesirable for both environmental and trade reasons. Probably most importantly, it introduces uncertainty into the process of negotiating MEAs which cannot but inhibit the incorporation of trade measures,
even when these would be both justified and necessary to the achievement of the MEA’s environmental objectives. Moreover, in any actual conflict between the trade measures in an MEA and WTO rules, currently the only forum in which the conflict could be resolved is through the Disputes Settlement mechanism of the WTO. This effectively gives precedence to trade law over environmental considerations. Both these reasons will reinforce the perception that the multilateral trading system is inimical to effective environmental protection, on the one hand calling for international environmental problems to be resolved through multilateral agreements, but on the other perpetuating uncertainty over the validity of the principal class of measures that could make the agreements effective. If environmental concerns become stronger, as seems likely, this perceived anti-environment bias to the trading system cannot but undermine the general acceptance of its legitimacy, and at worst could seriously affect its operation (by unilateral trade-environment measures becoming more common) or development (through further disruptions such as were witnessed at the Ministerial Meeting in Seattle in late 1999).

It is for such reasons that Brack (1999, pp.294ff.) has proposed the negotiation of a new WTO Agreement on MEAs. This should cover such issues as the definition of an MEA, and of the trade measures which they might incorporate, the possible provision of resources to enable low-income countries to comply with MEAs and arrangements for dispute settlement. Brack considers that a failure specifically to address the linkage between the trading system and MEAs, and clarify existing uncertainties, can only lead to conflict between them in the future, similar to the kinds of trade-environment conflicts which have already emerged and which are the subject of the next section. It was probably considerations such as these which led to this issue being included in the round of WTO negotiations which were launched in Doha in 2001, although no progress has yet been made to clarify the situation.

3. CONFLICTS BETWEEN TRADE AND THE ENVIRONMENT

Of the three international economic institutions proposed following the Second World War, two - the International Bank for Reconstruction and Development (World Bank) and International Monetary Fund - were formally established. The third, the International Trade Organisation (ITO), was only realised as a General Agreement on Tariffs and Trade. GATT came into force in 1948. UPDATE By 1991 103 states were formal Contracting Parties (CPs) to GATT, including the 24 industrialised countries that comprise the OECD and account for 75% of world trade, and another 29 states were applying GATT on a de facto basis.

GATT rules, expressed in Articles, provide the essential framework conditions for most world trade. GATT Articles are amended, or their scope enlarged, by periodic ‘Rounds’ of negotiations, of which the Uruguay Round, begun in 1986, was the eighth. These rounds are also the means whereby trade restrictions are systematically reduced in pursuit of GATT’s over-arching objective of trade liberalisation. The GATT Articles are founded on the principle of non-discrimination in trade with regard to both products (foreign and domestic products must be treated identically) and trading partners. Article XX permits limited exceptions to this non-discrimination, including on the grounds of protection of human health and the conservation of natural resources, but so far there has never been dispute over environmental resources under GATT in which an exception on these grounds has been upheld. September 2000 saw
the first exception to be accepted on health grounds, in the Canada-France asbestos dispute, as discussed below. Disputes under GATT are judged by a Panel constituted by the WTO. Appeals against Panel rulings are referred to an Appellate Body.

In theory “a country can do anything to imports or exports that it does to its own products, and it can do anything it considers necessary to its production processes.” (GATT 1992, p.23), in order to protect its environment. In practice measures that affect trade may be challenged through the WTO if they are perceived either not to be justified by scientific evidence, or to be more trade-restrictive than necessary. In addition it is clear that a country:

• May not use trade policy to protect its environment from foreign production.
• May not use trade policy to protect the environment outside its own jurisdiction.
• May not impose on imports charges or other restrictions related to their process and production methods (PPMs).

From an environmental point of view these restrictions under GATT impose considerable constraints on environmental policy. There have been a number of cases which illustrate how such provisions under GATT have either brought trade liberalisation, trade rules and environmental policy into conflict, or might do so in the future. Ekins (2000, pp.133 ff.) reviews some of these cases, including the US/Mexico Tuna-Dolphin Dispute, the US/Venezuela Gasoline Reformulation Dispute, the Danish Bottles Case, and the European Commission’s and the Finnish carbon taxes, of which space precludes further mention here. However, two recent cases deserve brief mention

The Shrimp-Turtle and Asbestos Disputes

This dispute arose when the United States banned imports of shrimps from countries which had not taken measures to its satisfaction to ensure that sea turtles (an endangered species) were not caught at the same time as the shrimp were harvested. In 1998 a WTO Panel found that the US import ban was in violation of Article XI, which prohibits the imposition of import restrictions on trade between Members, and that the ban was not covered by the ‘exceptions’ article, Article XX (WTO 1998a). On appeal, the WTO Appellate Body reversed the Panel’s decision on Article XX, finding that the US measure itself was legitimate under the terms of the Article. However, it also found that the way the US had applied the measure involved “unjustifiable and arbitrary discrimination”, and therefore was not consistent with Article XX.

Notwithstanding the fact that the US lost the case, the ruling seems to accept for the first time that a trade measure related to PPMs and applied by a WTO member to conserve environmental resources outside the territory of that member could in principle be consistent with the relevant clause under Article XX and therefore not be inconsistent with GATT rules as a whole. It remains to be seen whether the Appellate Body fully intended this interpretation of its ruling and whether subsequent WTO rulings will build on, or seek to constrain, this interpretation.

In December 1996 France banned on health grounds the import of all varieties of asbestos, including chrysotile. Canada, which is a major exporter of chrysotile challenged the ban as inconsistent with GATT rules, and asked the WTO to adjudicate. A WTO Panel was set up in November 1998 and
reported in September 2000, upholding the French ban, a decision which was confirmed by the Appellate Body when Canada appealed against it. The decisions confirmed the right of countries to discriminate in trade in order to protect public health, an exception available under Article XX but never before acknowledged in practice. These two cases may signal a shift in WTO jurisprudence towards the justification of health and environmental protection measures.

**Eco-labelling and the Precautionary Principle**

Eco-labelling and the precautionary principle also need to be mentioned as core potential, if not yet actual, areas of WTO dispute. The relationship of the former to the vexed issue of PPMs is obvious. Appleton (1999, p196) considers that, unless countries negotiate a WTO agreement on eco-labels, “it is only a matter of time before a WTO member launches an attack on an eco-labelling programme that it views as discriminatory”. However the judgement went in such a dispute, it would damage the WTO.

The precautionary principle “says that the absence of full scientific certainty should not prevent action in cases of threats of serious or irreversible damage” (OECD 1999, p.167). Cameron (1999, p.247) notes: “The precautionary principle has been included in virtually every recently adopted treaty and policy document related to the protection and preservation of the environment.” It is certain that the principle will be increasingly invoked in trade contexts. As with eco-labels, unless the relationship of the precautionary principle to WTO rules is clarified, there is a risk of increased disaffection with the WTO.

Three broad possibilities currently exist for ways in which the WTO could become more sensitive and responsive to environmental concerns:

1. Change the way in which the GATT rules (especially with regard to the Article XX exceptions) and WTO Agreements are interpreted.
2. Develop new Environmental Agreements as part of a new negotiating round.
3. Change the text of the GATT itself.

An important element in any moves towards even considering changes in this area is openness. IISD-UNEP 2000 (pp.67ff.) considers that this has two components in a WTO context: full access to information for affected parties, and participation in the decision-making process. The WTO is far more open than the GATT was in respect of the availability of information, and there are moves towards accepting third party submissions in disputes. Openness will be critical in winning broad agreement to any environmentally related changes in WTO rules which may be put forward. Another prerequisite for such an agreement is that the WTO becomes more reflective of developing country concerns and priorities in the future. To overcome developing country suspicions of trade-environment issues, Western countries will have to ensure they are kept free of any taint of commercial protectionism. They will also need to do far more work prior to WTO plenaries to establish common positions in which developing country concerns are fully taken into account, rather than arriving at positions in closed negotiations at WTO meetings, which other countries are then simply expected to rubber-stamp.
4. CONCLUSIONS
Trade is not the principal cause of environmental degradation. This is rather the result of economic activity in the absence of adequate policies for environmental protection. However, by expanding economic activity trade can amplify environmental damage. Current negative environmental trends suggest that the potential environmental benefits of trade, such as more efficient resource allocation and technology transfer are not presently compensating for this negative amplifying impact. Moreover, the environmental policies which might enable them to do so are not being implemented to the necessary extent, and this implementation is being hindered by trade liberalisation rather than the reverse.

There are three possible ways in which this situation could develop. The first is continuing environmental degradation in a substantially unchanged multilateral trading system. This development would see environmental policy remaining stuck in the mud, with the social pressures for greater environmental conservation failing either to overcome governments’ fear of adverse competitiveness impacts from more stringent environmental policy, or to effect reform of the trading system such that it becomes easier to protect the environment without contravening trade rules. Under this scenario environmental sustainability is the loser, with uncertain but potentially very serious implications for long-term human welfare.

The second possibility is that continuing environmental degradation will give environmental pressure groups the power to force (probably Western) governments to introduce environmental policies in contravention of trade rules, which it proves impossible to change. This would put increasing strain on the multilateral trading system. In the extreme it could lead to its breakdown, as unilateral measures in this area spread to others and destroy the co-operative impulse that is necessary to sustain multilateral agreements.

The third possibility is that the multilateral trading system will reform itself to ensure that, at least, it does not obstruct bona fide environmental policies and that it removes trade-related reasons for governments not to introduce them. Such a development would seek both to realise the environmental benefits of trade and to make it as easy as possible to avoid its environmental costs, and those of economic activity more generally. This would seem to offer the best prospect for maximising the environmental performance of the current economic system and of therefore managing to achieve the complementarity between socio-economic development and environmental sustainability that is the core concept underlying sustainable development.
REFERENCES


Esty, D. & Gentry, B. 1999 ‘Foreign Investment, Globalisation and Environment’ in Globalisation and Environment: Preliminary Perspectives, OECD, Paris, pp.141-172


OECD (Organisation for Economic Co-operation and Development) 1999 *Trade Measures in Multilateral Environmental Agreements*, OECD, Paris


