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Acknowledgments

In November 1998, the Productivity Commission held a workshop on industry competitiveness, trade and the environment. The particular focus of the workshop was on the interlinkages between trade and environmental issues.

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March 1999

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Competition, trade and the environment: An Overview

Andrew Dolling, Andrew Coleman and Don Gunasekera

Interest in competition, trade and the environment has intensified over the last few decades. Technological progress, freer trade policies, and relatively stable economic and political conditions have contributed to increasing international competition and trade — with world exports reaching around $US 5.5 trillion in 1997 (IMF 1998). At the same time, heightened community, government and business awareness of environmental issues has been such that they are now very much part of the domestic and international agenda.

This increased awareness and concern for the environment has led to a number of responses by national governments. Many of these have been to address domestic environmental concerns — localised air pollution, river salinity, land degradation and loss of biodiversity. Regulations and resource management policies have been increasingly used to address these domestic environmental concerns. There has also been increasing recognition and support for coordinated action across nations to address a range of environmental issues which have inter-jurisdictional consequences. This has lead to a growing number of Multilateral Environmental Agreements (MEAs) — about 185 at present (with around 20 containing trade provisions) — including agreements on hazardous waste, greenhouse gases and ozone depleting chemicals.

Linking trade and the environment

The increased prominence of the environment in government, community and business activities, and the expansion of trade and its role in the global economic system, has generated several topical policy issues and highlighted some of the important 'fundamental' links between trade and the environment.

One policy issue of considerable importance at present is the use of trade policies to pursue environmental objectives. For some — including the Australian Conservation Foundation — trade sanctions are seen as an effective and appropriate

means of encouraging compliance with domestic and cross-jurisdictional environmental policies and agreements where other enforcement mechanisms are limited.

The potential (or actual) use of domestic environmental policies to restrict trade has also emerged as a topical issue, as has possible conflicts between environmental policies and agreements and WTO provisions. Issues regarding the jurisdictional limits of agreements which go beyond those generally accepted as part of the 'global commons' (which include issues such as ocean fish stocks and global air quality) have also raised some concerns.

At the same time, the expansion of trade has also highlighted the policy links between trade and the environment. In particular, questions have been raised over the ability of nations to maintain domestic environmental standards in light of expanded trade and trade agreements. Concerns have been expressed that a more open trading system may put some producers facing relatively high environmental standards at a competitive disadvantage, which may in turn create pressure for the migration of 'dirty industries' to pollution havens and/or global deregulation of environmental policies. Concerns have also been raised that the expansion of trade may stimulate the over-harvesting and depletion of natural resources, especially fish and forest resources.

These topical policy issues sit along side a complex array of what might be referred to as 'fundamental' inter-linkages between trade and the environment. As Tim Fisher highlights in his paper:

> ...[environmental standards and economic policies] are inextricably entwined. Ultimately, the degradation or destruction of environmental values will have an economic dimension, just as inefficient economic production will invariably have an environmental dimension. (Fisher in chapter 4).

As both trade and the environment continue to play increasingly significant roles in global and domestic policy making, and questions are asked about the future role of these policies, these 'fundamental' linkages become increasingly important. Some of these linkages are between:

- trade, economic growth and the environment — where there are a number of relationships. For example, while economic growth (which can be stimulated by trade) has a 'wear and tear' effect on the environment, it can also help provide the wherewithal to fund improvements in the environment. Increasing incomes associated with economic growth have also often been associated with growing preference for environmental quality. There are also dynamic effects of both strong economic growth and trade, particularly in terms of technological development and diffusion — some of which can improve the quality and

sustainability of the environment, while others can have adverse impacts. (The potential impacts of biotechnology are particularly relevant in this context with potential benefits and costs for the environment.[1]);

- trade and the efficient allocation of resources — where, in general, freer trade promises a more efficient allocation of the world's resources with consequential benefits for the environment. A central reason for this is because efficiently allocated production allows any given world output to be produced with fewer resources. Also, because highly subsidised agriculture tends to have adverse environmental effects, the reduction and reform of agricultural income support policies through free trade arrangements is generally seen as useful contributor to improved environmental sustainability. Ensuring these benefits of more efficient production — and free trade — are fully realised, however, also requires the full costing of resources, including natural resources, and as such the internalising of externalities; and
- domestic and inter-jurisdictional environmental policies and the pattern and location of production (and therefore trade) within and between countries.

These linkages are not new — the General Agreement on Tariffs and Trade (GATT) has always recognised them — but they are now broader and more complex (Thomson, chapter 2). There is, as mentioned above, a higher and expanded profile for environmental issues, expanded reach of trade negotiations, and increased trade in products and services which have environmental implications. There have also been changes in the conceptual frameworks surrounding the relationship between trade and the environment with the popularisation of the concept of sustainable development.

Recognising the increased significance of these linkages can be important for both trade and the environment. In the case of trade, appreciating environmental concerns can be important for maintaining public support for the trade reform process. In the case of the environment, appreciation and integration of trade issues is likely to further the case for environmental sustainability given the considerable potential impacts of trade on the environment.

This deepening of the relationship between trade and the environment has already been reflected in a range of policy and institutional responses at the multi-national level (Sampson 1999). For example, the WTO Agreement incorporates sustainable development in its objectives. The WTO has also created the Committee on

[1] Potential benefits of biotechnology include more efficient agriculture and pest resistant crops which require less chemical pesticide. Potential costs include the possible creation of new varieties of pest species and loss of biodiversity through the use of genetically uniform varieties of crops.

Environment and Trade to explore and make policy recommendations regarding the relationships between trade and the environment, and to bring such issues into the mainstream of WTO work. Also, a series of information sessions involving MEA Secretariats and WTO delegations have helped promote greater understanding between them.

Needless to say, these developments raise a number of interesting policy questions. One of the more fundamental of these which was raised in several of the papers given at the Workshop is how far integration between trade policy and environmental policy should go, and how it should be facilitated.

Institutional change

The debate on how to integrate trade and environmental issues has lead to a number of proposals for change. Some suggestions included in the papers which follow include:

- amending or clarifying Article XX of the GATT[2];
- changing the operating procedures and composition of GATT arrangements — including greater inclusion of Non-Government Organisations in decision making, greater use of environmental expertise in decision making and improved transparency;
- the use of a High Level Meeting to provide improved direction;
- greater coordination between trade and environmental agencies at the national and multi-national level;
- improved decision making processes — including the consideration of trade impacts in environmental negotiations and environmental impacts in trade negotiations; the consideration of a broad range of alternatives (including alternative enforcement regimes for MEAs and alternative policy instruments for environmental issues such as market based instruments); greater and more consistent use of risk assessments in both the development of MEAs and trade negotiations (particularly regarding technical standards); and more generally placing the decision making process within the broad framework of sustainable development; and

[2] Article XX provides exemptions from some of the general rules of the GATT for measures which are necessary to protect human, animal or plant life or health, or relate to the conservation of exhaustible natural resources, if such measures are made in conjunction with restrictions on domestic production or consumption. Other requirements for such exemption under Article XX include that the measure is not unjustifiably or arbitrarily discriminatory between countries where the same conditions prevail, or a disguised restriction of international trade.

- using the WTO framework to incorporate directly sector specific environmental objectives (such as water reforms).

While all these issues are important, the use of Article XX to support environmental policies and agreements is perhaps the most topical and relevant in the context of this workshop. Indeed, Ray Evans in his paper stated:

> The battle over Article XX is, in my view, now the key strategic issue for the Environmentalists. (Evans, chapter 1)

Those in favour of using Article XX to support environmental goals have argued that it can be a useful starting point to weave environmental considerations into both the agenda of the WTO and the enforcement of environmental policies and agreements (Fisher, chapter 4). The limited range of mechanisms for enforcing compliance with environment policies and agreements, and the close linkages between trade and the environment, have been seen by some as justification for the use of Article XX for such purposes:

> We don't have a global tax. We don't have a global police force. If you can't use trade sanctions to protect the environment what other enforcement mechanisms do you have? (Elizabeth May, Executive Director of the Sierra Club of Canada, cited in Evans chapter 1).

Those arguing against the use of GATT, and in particular Article XX, as a means to enforce environmental policies have raised several counter points. On the one hand, some argue that there is little point in using the GATT to legitimise measures which are seen as inappropriate, ineffective or inefficient instruments of environmental policy (particularly in light of the infrequent use of market based instruments) (Oxley, chapter 5). Others argue that the practical difficulties of incorporating environmental considerations into trade negotiations could stall the trade reform process and the benefits that come with it. Indeed, such moves can be seen as threatening the open global trading system as a whole by introducing exemptions which may encourage a range of self-interests which might either directly threaten freer trade, or hinder its accomplishment by adding complexities or potential disputes in the negotiation and implementation process (Snape and Gunasekera, 1997). Some have also raised concerns that trade policy can be a rather blunt instrument for enforcing environmental policies, particularly if it is not targeted on the products or processes causing the environmental damage (Snape, 1994). There is particular concern over the unilateral imposition of national environmental standards by one country on to others through the threat of trade sanctions, both on efficiency and equity grounds. This is especially the case regarding environmental issues for which there is debate about whether they are part of the 'global commons'.

A recent decision by the WTO Appellate Body in the Shrimp-Turtle decision (1998) [3] may prove significant in the context of the use of Article XX, and may have already tipped the scale in favour of expanding the use of trading policies to support environmental objectives. The decision expands, or 'evolves' in the words of the panel, Article XX to include living as well as non-living exhaustible resources, and appears to have extended possible exemptions to include measures which affect the process of production as well as the product itself (which had previously been a significant constraint on the enforcement of many environmental policies through trade sanctions). The decision also raised the applicability of the Preamble to the WTO, such that the trade effects of a measure may be subsidiary to more general considerations such as sustainable development. (Snape, chapter 6).

Further work

The linkages between trade and the environment are complex, and often significant. How the 'international community' and individual nations respond to these linkages will be important for both international trade and the environment. Improved coordination and integration may be an appropriate path, but caution is needed because of potential pitfalls and perverse outcomes.

The significance and uncertainties of these issues invites a challenging and necessary research agenda. Some of these areas for research include:

- a better understanding of the linkages between trade and the environment, and sustainable development more generally — including the development of improved indicators of environmental quality and sustainability, and a better understanding of the dynamic effects of trade (particularly regarding technological progress and diffusion), the scope of the 'global commons' and the income distribution effects between countries of trade and environmental policies;
- consideration of alternative enforcement mechanisms for MEAs (perhaps using the International Court of Justice, or picking up on Canada's use of its own court system rather than the trade provisions of NAFTA for the enforcement of NAFTA (Snape, 1994);
- a fuller understanding of the implications of the WTO Appellate Body's decision in the Shrimp-Turtle case, and consideration of appropriate institutional and other responses to ensure the outcomes of the decision are managed in the best

[3] More formally referred to as the United States - Import Prohibition of Certain Shrimp and Shrimp Products (AB-1998-4).

interests of global welfare, incorporating both trade and environment contributions to that end;

- appropriate domestic institutional arrangements for managing trade and environmental issues; and
- the identification of priority areas for 'win win' outcomes, where trade and environmental policies work together to help achieve both trade and environmental goals.

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Opening remarks

Neil Byron

This roundtable on competitiveness, trade and the environment has come at an appropriate time — not only in the context of the growing significance of trade and environment issues, but also in light of recent WTO rulings concerning these issues. The commencement of a new round of trade negotiations in 1999 also complements the timing of this event.

There have also been growing concerns in government, business and the community about the linkages between international trade policy and environmental policies. Some of these concerns have arisen in response to the increasing number of Multilateral Environmental Agreements (MEAs) and their possible implications for the competitiveness of domestic industry.

Other concerns have been in response to the effects MEAs may potentially (or actually) have on restricting trade, and the possible conflicts between them and trade agreements. A relevant question in this context is whether it is appropriate to use trade policy measures to actively enforce initiatives aimed at pursuing environmental objectives. If so, under what conditions should they be used, and with what safeguards, checks and balances? There certainly seems to be a consensus that the GATT/WTO does what it was set up to do quite well. Indeed, it may be argued that its success in the regulation and enforcement of agreed trade rules is attracting envious glances from those concerned with MEAs and who fear that MEAs lack enforcement mechanisms. The conceptual linkages being looked at extend from considering the environmental consequences of WTO decisions, to consciously using WTO mechanisms to pursue environmental (and human rights) objectives.

From an environmental perspective, effective tools which help meet environmental goals are desirable and should be embraced. On the other hand, there are fears that loading environmental requirements into trade negotiations could 'sink the WTO ship' — with the gains from trade liberalisation risked without any guarantees of significant gains in either the environment or human rights and social justice. The fundamental question may come down to whether trade restrictions are a legitimate means of pursuing environmental and social objectives, with the subsidiary question

being how the WTO might differentiate between legitimate environmental and social concerns and thinly veiled attempts to restore protectionism.

There have also been some concerns that the expanding scope of trade and trade agreements might impinge on a country's ability to introduce and enforce its domestic environmental policies.

Needless to say, complex and important policy issues have been emerging as a result.

Resolving these policy issues will not be easy. However, given their importance to achieving environmental and trade goals, and the formulation of appropriate government policies, understanding the linkages between them becomes an important task. Among other things, a better understanding of these linkages can complement a greater degree of integration between trade and environment policies, and avoid unnecessary conflict and uncertainty between the two. In 1995, the OECD urged countries to do just that in terms of their trade and environment policies.

The purpose of this roundtable is to look at some of these policy issues within the context of the topics that individual speakers have chosen. Hopefully, this roundtable, and the debate it encourages, can contribute to a better understanding of these issues and from that encourage better policies and better trade and environment outcomes.

PART A

LINKING TRADE AND THE ENVIRONMENT

1 The Political Economy of Article XX

Ray Evans

"We are all Socialists now-a-days."[1]

In order to make sense of this topic we have to understand how we got to this point. How is it that we are discussing, today, this issue, Trade and Environment, rather than one which was of concern to Western political and commercial elites from the C16 through to the C19, - Trade and Christianity.

The reason, simple enough, is that Environmentalism, as a more or less coherent and organised doctrine, has, over the last 30 years, become a powerful political force within Western societies.

The late American sociologist, Robert Nisbet, in 1983 wrote in a review article in the American Spectator,

> "As an historian, I am obliged by the record of the Western past to see Environmentalism - of the kind espoused by the Commoners and the Ehrlichs - as the third great wave of redemptive struggle in Western history; the first being Christianity, the second modern socialism."
>
> "The appeal of Environmentalism, in its more extreme manifestations at least, becomes irresistible to that permanent cadre of political and social radicals Western society has nurtured ever since the French Revolution. This cadre has never been primarily interested in the protection of nature, but if such a movement carries with it even the possibility of political and social revolution, it is well that the cadre join it; which, starting with the late 1960's, it did."

One of the most important insights into the place which Environmentalism has in our culture and history was written more than 30 years ago by Lynn White Jr.[2]

> I personally doubt that disastrous ecologic backlash can be avoided by applying to our problems more science and more technology. Our science and technology have grown out of Christian attitudes towards man's relation to nature which are almost universally held not only by Christians and neo-Christians but also by those who fondly regard themselves as post-Christians. Despite Copernicus, all the cosmos rotates around our

1 Prince of Wales, later Edward VII, Speech at Mansion House, 5 Nov 1895.

2 Lynn White Jr. Historical Roots of Our Ecologic Crisis, Science, March 1967.

little globe. Despite Darwin, we are **not**, in our hearts, part of the natural process. We are superior to nature, contemptuous of it, willing to use it for our slightest whim. The newly elected Governor of California[3], like myself a churchman but less troubled than I, spoke for the Christian tradition when he said (as is alleged) "when you've seen one redwood tree, you've seen them all." To a Christian a tree can be no more than a physical fact. The whole concept of the sacred grove is alien to Christianity and to the ethos of the West. For nearly two millennia Christian missionaries have been chopping down sacred groves, which are idolatrous because they assume spirit in nature."

I have brought in these considerations at the outset because in reviewing Gary Sampson's paper of July 1997,[4] and Richard Snape's paper of August 1997,[5] it was immediately apparent that the two authors were considering the problem we face as a technical problem, for which an appropriately adroit technical solution had to be found.

It is interesting and necessary to discuss the technicalities which make up the various threads of the tapestry of the problem, but if we do not understand the design of the tapestry, what it is all about, then whilst we may be much better informed, we will be none the wiser.

At issue here is the survival of the WTO (and the rules of the GATT), in the face of attempts by powerful political forces to either capture the WTO, or beat it into submission. The GATT was founded after the Nazi attack on Western Christendom had been beaten back, and much of Germany destroyed in the process. The GATT fathers were well aware of the political dislocation which accompanied the economic distress of the 1930s and of the part which competitive (beggar-thy-neighbour) protectionism had played in causing that distress. What they wanted was the ITO, but because US opinion became increasingly hostile to the ITO, they had to be content with the GATT. And in due course, as we know, the ugly duckling of the GATT became the glorious swan of the international constellation that we now know as the WTO.

The GATT was an agreement reached by the Western Allies (essentially the US and the UK) immediately after the War[6]. The basic principles were simple, they had

3 Ronald Reagan

4 Speaking notes, WTO Rules and Global Environmental Treaties, Melbourne Business School, July 1997

5 Problems of the Global Commons, Countdown to Kyoto Conference, Canberra, August 19-21, 1997

6 See for example "The Bretton Woods - GATT System, Retrospect and Prospect after Fifty Years" edited Orin Kirshner, 1996, M E Sharpe, New York. On the issue of imperial preference the following passage from a speech in the House of Commons is cited:- "If the Government tries to eliminate Empire Preference a number of us will conduct such a nationwide campaign in this

been talked about for some time, and the greatest difficulty which separated the two major players, the US and the UK, was imperial preference. These basic principles were, first the MFN principle (Art I), and second the equal treatment principle (Art III). Trade barriers were to be "tarrified" (Art IX) and the exceptions to these rules were set out in Art XX and Art XIV (imperial preference).

The value of the GATT, from a geo-political rather than an economic point of view, is best understood by asking the question "What benefit would a country with a long-term, firm and consistent free-trade policy obtain from GATT (or WTO) membership?"

The answer is that such membership has provided, and under the WTO provides more effectively, a high level of protection for the sovereignty of the member state. This result was built into the GATT from the very beginning because, during the thirties, specific trade sanctions had been used as easy alternatives to military force, and these measures later came to be regarded as having been counterproductive.[7] Further, the existence of effective appeal mechanisms to which aggrieved member states could turn for remedy, was the crucial differentiating element which distinguished the GATT from every other international body. And it was this distinguishing characteristic of the GATT which has aroused the deep and unrelenting hostility of the Environmentalists. For example, Jessica Mathews, Vice President of the World Resources Institute, columnist for the Washington Post, Senior Fellow at the Council on Foreign Relations, and close confidante of VP Al Gore wrote

> "Meanwhile, climate change, other environmental trends, and growing economic interdependence are undermining sovereignty in ways we cannot restore. **The United Nations Charter may still condemn outside interference in the domestic affairs of member states,** but unequivocally "domestic" concerns are becoming an endangered species."[8]

Just prior to the WTO Ministerial held in Singapore in Dec 1996, Ms Mathews let fly again with a broadside at the WTO and the Committee on Trade and Environment particularly.[9] She began with an attack against the GATT decision in the tuna-dolphin case.

> The task of untangling the intricate links between trade and environmental protection had just begun when a 1991 GATT ruling on a dispute between the US and Mexico

country as will light the very beacons on the hills. We will attack them in the marketplace, in the towns, and the cities, we will rouse this country against them in such a crusade as will overcome this Government, because we will not have it."

7 See for example, Geoffrey Blainey "The Causes of War".

8 Washington Post, 2 Feb 1991

9 Washington Post, 14 Oct 1996

over tune fishing methods threw the scene into chaos. Nations can use trade measures to protect natural resources - for example, air quality -said the GATT judges, but only within their own borders, not beyond. So what happens when the wind blows?

While perhaps a legally valid interpretation of the 45-year-old GATT agreement, the ruling was obviously preposterous.

She went on

With the signing of the Uruguay Round in 1994 came the next opportunity; the creation of an environment committee in the new World Trade Organisation. As will be clear at Singapore, this group, too, has achieved nothing. Even the simplest issue - the legitimisation of multilateral agreements that use trade measures, a step that should have taken no more than a week - proved to be beyond it.

And finally

Five years of backsliding is enough. As the administration begins to establish its second-term priorities, this issue belongs on the list. As for the GATT/WTO, the message is: Get going or get out. If neither institution can meet the need, a new one may have to be created.

Summarising the situation, then, the WTO is a club with a membership made up of nation-states. The nation-state is a political institution which developed out of Western Europe during the Middle Ages and the ubiquity of which, in Europe, provided fertile ground for the development of those crucial institutions which provide the fabric of successful market economies. The essential characteristic of the nation-state is sovereignty,[10] the exercise of legitimate political authority within a defined geographic area, and the capacity to relate to other sovereign states on a basis of mutual recognition.

Since the War, international bodies such as the UN and its agencies, the IMF, the World Bank, the OECD, have together brought into being something described as the "international community". It is interesting to note that the GATT Secretariat was never located in this constellation and the WTO is seen by most "internationalists" as a rogue organisation. The reason is obvious. The GATT was a club whose purpose was not only to advance the particular economic interests of the members, but also to safeguard the sovereignty, and the national interests, of those same members. The WTO has the same purpose, but perhaps more so. And since Environmentalism, as an organised doctrine, has in large measure captured the centres of power in Western Europe, and has arguably reached the limits of its political potential in the US, then these international organisations are automatically targets in the power game. Thus the World Bank, the IMF, the UN, the OECD, have

10 For one of the best contemporary discussions on sovereignty see Noel Malcolm "Sense on Sovereignty", 1991, Centre for Policy Studies, London

been infiltrated to a greater or lesser degree. (A good example of capture was the near successful attempt in 1995 to pass an OECD Council Act banning lead in OECD member states.)

Environmentalism is an ideology or a religion which appeals to elites. Within Europe, where hierarchy is dominant, Environmentalism is hardly ever challenged, and Global Warming is accepted orthodoxy. In the US, where "every man (is) a king", Clinton's BTU tax was killed in Congress, and Rush Limbaugh mocks greenhouse science as part of his daily talk-back routine.

Australia is more democratic than Europe, but more heirarchic than the US. Thus the Environmentalists are less powerful here than in Europe but mainstream Australian opinion is not as well articulated here as mainstream American opinion is in the US.

Article XX and sovereignty.

Article I forbids the use of specific trade sanctions against particular countries as a method of enforcing environmental (or labor market) policies extraterritorially. Article XX is the exceptions clause which legitimises the banning of particular imports from particular countries. The Uruguay Round tightened Article XX procedures and definitions as our salmon and pig producers have discovered. It has been the long-standing ambition of the Environmentalists to expand Article XX so that trade sanctions can be used as an instrument of extraterritoriality in pursuit of their policy objectives. Their ambitions were frustrated in December 1996 but they are back (with President Clinton's support) for another go next year. The battle over Article XX is, in my view, now the key strategic issue for the Environmentalists.

Recall that twelve months ago, in the run-up to Kyoto, the protagonists for an international protocol of enforced carbon withdrawal warned our Government of two consequences of refusal to accept the European and US demands. The first was that Australia would, if it refused to sign the protocol, become an international pariah. The second was that trade sanctions would, as the manifestation of international disapproval, be used against us. This latter claim appeared in print a number of times, perhaps twenty times, and I thought at the time that it was an adverse reflection on the Government's handling of the debate that it was never officially rebutted. It was surprising at the time to discover that a number of people, who should know better, readily accepted the argument that trade sanctions could be used against us if we do not accept the carbon withdrawal policies demanded by the Environmentalists.

Sampson rightly emphasised the significance of Kyoto in his discussion on the incompatibility between Article XX and Environmentalist ambition.[11] The three GATT-incompatible MEAs, CITES, Montreal and Basel are, economically speaking, minnows compared to Kyoto. Wildavsky's comment is apposite in this context.[12]

> "Global Warming is the mother of all environmental scares. In the scope of its consequences for life on planet Earth and the immense size of its remedies, global warming dwarfs all the environmental; and safety scares of our time put together. Warming (and warming alone), through its primary antidote of withdrawing carbon from production and consumption, is capable of realising the environmentalists dream of an egalitarian society based on rejection of economic growth in favour of a smaller population eating lower on the food chain, consuming a lot less, and sharing a much lower level of resources much more equally."

The wealth transfers implicit in Kyoto are historically unprecedented and once that fact becomes more widely appreciated the political pressures will increase commensurately. From the Environmentalists' perspective the early establishment of effective control mechanisms, capable of suppressing widespread resentment, is essential.

If we exclude military treaties such as the Hitler-Stalin Pact from consideration, no international treaty in the past has had the impact on daily life in the West that is embedded in Kyoto. Our civilisation is based on the abundant supply of cheap energy, and every institution which underpins our lives will be affected by ideologically imposed energy rationing. Most significantly, the nation-state will find its sovereignty deeply compromised. And this is where Article XX moves into the front-line. Article XX sets the limit to extra-territorial power through the use of trade sanctions. And since the Environmentalists are unable, as yet, to argue for the use of military power as a policing mechanism for Kyoto or other environmental

11 Ibid. "The Climate Convention raises questions about the overall compatibility between legal obligations assumed by governments which are members of the WTO - there are currently 131 WTO members - and commitments taken under MEAs, and the measures used to achieve the emission targets, if such targets are agreed to. For example, what will the implications be if the Climate Convention follows the example of other MEAs, such as the Montreal Protocol, and employs discriminatory trade measures against non-parties to the MEA? Given that such an approach is in theory against the spirit of basic GATT law covering most favoured nations (MFN) and national treatment, how can potentially incompatible policy goals - a legal commitment under the WTO towards further trade liberalisation on the one hand and the possible use of trade restrictions in an MEA on the other - be reconciled? And if a formal dispute arises involving trade measures in an MEA, where should they be resolved? Under the currently loose and untested dispute settlement provisions of the MEAs or under the binding provisions of the WTO?"

12 Aaron Wildavsky, Introduction to Robert Ballings' "The Heated Debate", 1992, Pacific Research Institute

policies, Article XX, and the integrity of the WTO as a club, not a cartel, of sovereign states, stands between them and their ambitions.[13]

Economists, taking Environmentalist propaganda at face value, are wont to pop the global warming issue into the pigeon hole labelled "problems of the commons", and then proceed to prescribe market mechanisms, such as permit trading which will lessen the pain of solving this alleged problem.

There are real global commons problems, the most pressing, as I understand it, being fishing on the high seas. (Greenpeace has set itself the task of banning all such fishing). Every economist knows that the most effective solution to commons' tragedies is allocation of property rights and their continuing defense.[14] But significant expansion of national sovereignty beyond the 200 mile limit, whilst highly desirable, is not going to happen soon. And so the only alternative is promoting contractual relationships amongst all the users of the commons about the use of the commons.

It is important in this debate to confine our attention to real commons' problems. Some thought should be given to criteria which could be applied to claims demanding recognition as a commons' problem.

13 "We don't have a global tax. We don't have a global police force. If you can't use trade sanctions to protect the environment what other enforcement mechanisms do you have?" Elizabeth May, Exec Director of the Sierra Club of Canada, Edmonton Journal, May 4, 1997.

14 "The prime element in the value of all property is the knowledge that its peaceful enjoyment will be publicly defended. Without this legal and public defence the value of your tall buildings would shrink to the price of the waterfront of old Carthage, or corner lots in ancient Babylon." President Calvin Coolidge in a speech to the New York Chamber of Commerce, in Oct 1925.

2 A Trade Negotiator's Perspective of the Links between Trade and Environmental Policies

Graeme Thomson[1]

Introduction

The issue of the relationship between international trade and the environment has received significant public attention in recent years. Some have expressed concern that the multilateral trade rules of the WTO may place inappropriate constraints on the ability of governments to respond to environmental problems. A key focus for some of these concerns have been several GATT or WTO disputes particularly the tuna/dolphin and shrimp/turtle cases. Others have expressed concern that new and emerging environmental measures may adversely affect market access opportunities and erode some of the benefits expected from the WTO.

It would be a mistake to think that environmental concerns are a totally new issue for the multilateral trading system. When the General Agreement on Tariffs and Trade (GATT) was first drawn up there was explicit recognition of the potential intersection between trade policy and a range of other important public policies. The general exceptions provision of Article XX of the GATT was designed to ensure that GATT disciplines would not prevent countries from continuing to give priority to these other public policy objectives.

Policy objectives identified in Article XX that are clearly relevant to the environment are XX(b), covering measures necessary to protect human, animal or plant life or health, and XX(g), covering measures relating to the conservation of exhaustible natural resources. Article XX states that nothing in the GATT shall be construed to prevent the adoption of such measures subject to compliance with a number of safeguards to prevent the abuse of this provision.

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However, the issues posed by today's trade and environment debate are much broader and more complex than when the GATT was negotiated some fifty years ago. In part, this change is a reflection of the higher profile which environmental issues have assumed in public policy making in the last twenty-five years. There have been considerable developments in environmental policy making at both the domestic and international levels, involving an expansion in the activities affected by these policies and in the range of policy tools used. This has implications for the multilateral trading system, whether directly through the use of trade or trade-related measures for environmental purposes or indirectly through possible impacts of environmental policy on the structure, scale, intensity and location of economic activity.

The greater breadth and complexity of today's trade and environment debate is also a reflection of the expansion in the reach of the multilateral trade disciplines, especially in the Tokyo and Uruguay Round negotiations. One of the significant features of the WTO is the greater detail of its disciplines in traditional areas of trade policy rule making, and the range of domestic policy areas which are touched by its disciplines. In particular, there are its rules on technical standards and regulations, sanitary and phytosanitary measures, subsidies, agricultural support, trade in services and trade-related intellectual property rights. There are references to the environment in all of the WTO agreements covering these issues. This extension in the sphere of interest of the trade community is a response to a number of developments. These include the greater impingement of some non-trade policy areas on trade and the increased importance of non-tariff and domestic barriers to trade as tariffs have been reduced through successive rounds of trade negotiations.

It is important, therefore, to recognise that the trade and environment debate is a product of developments in both environmental and trade policy. However, there is another dimension to the current trade and environment debate. This is to be found in fundamental changes in the conceptual understanding of the relationship between economic activity and the environment, and in the relationship between environmental policy, development policy and trade policy. The change in conceptual understanding was most strikingly represented by the introduction of the concept of "sustainable development" into policy debate, especially with the Brundtland Report in 1987.

The international community's increasing acceptance of the notion of sustainable development was part of the international context to the Uruguay Round negotiations. The objectives of the WTO, as set out in the preamble to the Marrakesh Agreement Establishing the WTO, are largely based on those of the GATT. But, significantly, these have been modified to make direct reference to the objective of sustainable development and the need to protect and preserve the

environment. The objectives of the WTO also recognise the need for positive efforts to ensure that developing countries, and especially the least developed, secure a share of the growth in international trade in proportion to their economic development needs.

In line with this recognition of the objective of promoting sustainable development, the Marrakesh Ministerial Meeting which concluded the Uruguay Round agreed that the WTO should initiate a work program on trade and environment. This paper firstly provides an overview of the issues included in this work program and progress in the WTO's consideration of them. It then briefly examines two of these issues: the relationship between the WTO's disciplines and the use of trade measures in multilateral environmental agreements (MEAs); and the interaction between trade liberalization and the environment. Finally, the paper summarises key issues involved in the tuna/dolphin and shrimp/turtle dispute settlement cases.

An Overview of the WTO's Work on Trade and Environment

The 'Decision on Trade and Environment' agreed by Ministers at Marrakesh echoed chapter 2 of Agenda 21 in its emphasis on 'making international trade and environment mutually supportive'. It provided for the WTO to establish a Committee on Trade and Environment (CTE) to carry out an analytical work program and to make recommendations on whether any modifications are needed to the WTO rules to enhance positive interaction between trade and environmental measures and avoid protectionist trade measures.

Some ten issues were identified in the CTE's work program. Key issues included:

- the relationship between the WTO rules and the use of trade measures for environmental purposes, including measures taken pursuant to multilateral environment agreements (item 1 of the work program)
- the relationship between the WTO rules and environmental measures which may affect trade, including eco-labelling, packaging and recycling requirements (item 3)
- the effects of environmental measures on market access (item 6)
- the environmental benefits of removing trade restrictions and distortions (also item 6).

The CTE presented a major report on progress in its consideration of the ten items to the WTO's first Ministerial Conference held in Singapore in December 1996.

The report summarised the state of debate in the Committee, including some areas where there were marked divergences in views. Since 1996 the focus of the CTE's work has been on improving its analytical understanding of the issues on its work program, as well as on improving dialogue with MEAs and on supporting outreach activities by the WTO. The WTO Secretariat has organized symposiums on trade, environment and sustainable development in May 1997 and March 1998 involving a wide range of business, environment, and development NGOs as well as WTO Members. The symposiums, which built on an earlier symposium in 1994, have provided a forum for Members to contribute to a more informed public debate on trade and environment issues and to receive input from the NGO community.

An important part of the CTE's work has been examination of the trade implications of a range of policies and mechanisms which have emerged in response to environmental problems and which may impact on market access. These include environmental taxes and charges, eco-labelling, packaging and recycling programs.

Much of the focus has been on eco-labelling, which is recognised as offering potential to inform consumers about the environmental impacts through the life-cycle of products. As this means changing consumption and production the trade impacting potential of these schemes is under scrutiny.

A key issue has been exploring ways to promote best design principles that will minimise the creation of ineffective, counter-productive or protectionist eco-labelling schemes. Principles discussed include: the need for transparency, adequate consultation processes, consideration of market and trade impacts, the special needs of developing countries, sufficient allowance for adaptation, harmonization of standards, scientific and technical evidence, and acceptance of equivalency and mutual recognition

The most recent development in the WTO on trade and environment is the proposal by the European Community and the United States for a High Level Meeting (HLM) on trade and environment to provide direction for the WTO's future work in this area. While the proposal is still under discussion, it appears likely that the HLM will be held in the first half of 1999 and that its focus will be on promoting improved dialogue between the trade and environment communities. It is envisaged that the meeting would involve NGOs, building on the format and experience already gained from the Secretariat-held symposiums.

The Use of Trade Measures in Multilateral Environmental Agreements

MEAs have been negotiated to address a wide range of environmental issues. Most MEAs do not contain trade provisions. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is one MEA which does contain trade provisions and it has co-existed with the multilateral trading system since 1975 without apparent problems. However, the important role of trade measures in some MEAs, and the significant economic implications of some other MEA negotiations, have led to greater interest in the relationship between the WTO and the use of trade measures to meet MEA obligations. A key concern on the part of the trade community has been to ensure that trade and economic considerations are fully taken into account in significant environment negotiations such as those on climate change and a biosafety protocol.

Some WTO Members have proposed changes to the WTO rules to explicitly identify situations in which trade measures taken pursuant to an MEA would be considered WTO-compatible. Some have suggested that this could involve the development of criteria or principles to help identify when trade measures may be appropriate. Suggested principles include: the necessity of the trade measure for achieving the MEA's objectives; its effectiveness; and whether it is the least trade restrictive measure available.

The CTE's report to the Singapore Ministerial Conference noted that views differed on whether any modifications to the WTO rules were required to address this issue. However, the report set out a framework for further consideration which:

- highlights Principle 12 of the Rio Declaration on Environment and Development on avoiding unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country;
- emphasises the complementarity between the work of the WTO in seeking cooperative multilateral solutions to trade concerns and multilateral cooperation to tackle transboundary and global environmental problems;
- points out that trade measures have been included in a relatively small number of MEAs, that to date there have been no GATT or WTO dispute about such measures, and that a range of provisions in the WTO including Article XX of GATT 1994 can accommodate the use of such measures;
- calls for particular care to be taken over any consideration of applying trade measures to non-parties in the negotiation of future MEAs;
- stresses the importance of policy coordination at the national level in reducing the possibility of legal inconsistencies arising.

While discussion in the CTE has continued on proposals for possible changes to the WTO rules in relation to the MEA issue, the current focus is on improving dialogue between the trade and environment communities. At CTE meetings in September 1997 and July 1998 a broad range of MEA Secretariats have been invited to report on developments in their respective MEAs and environmental negotiations, and to hear views from WTO delegations. These information sessions have helped ensure that trade officials are aware of MEA negotiations and that MEA Secretariats can assist their policy bodies take account of concerns from a WTO perspective. The success of this initiative will, however, critically depend on the extent to which it contributes to enhanced coordination among relevant ministries at the national level to ensure that negotiating positions in both trade and environmental fora represent whole of government positions.

The Interaction between Trade Liberalizaton and the Environment

The relationship between trade liberalization and the environment has received considerable attention in the CTE's work. In part this reflects recognition of public interest in the subject and the need to be seen to be addressing concerns about the potential environmental impacts of trade liberalization if public support for the work of the WTO is to be maintained. But there is also interest on the part of many WTO delegations in the potential to identify "win-win" opportunities by which trade reform could contribute to both trade and environment benefits.

The CTE's 1996 report highlighted the close link between poverty and environmental degradation and the role that trade can play in assisting in the eradication of poverty. The report pointed to the potential contribution of trade liberalization in facilitating a more efficient allocation and use of resources, and in providing resources to support countries in their efforts to promote sustainable development. The importance of implementing appropriate environmental policies at the national level was emphasised to ensure that the benefits of trade liberalization are realized and trade-induced growth will be sustainable. The report also noted the inappropriateness of relaxing existing national environmental standards or their enforcement in order to promote trade, while recognizing that governments have the right to establish their national environmental standards in accordance with their respective environmental and developmental conditions, needs and priorities.

During 1997 and 1998 the CTE has concentrated on exploring these themes in relation to a range of sectors, including agriculture, forestry, fishing, energy, textiles and clothing and environmental services. A major focus for the CTE's discussions

has been the role of subsidies and market access barriers in stimulating high levels of resource use and wasteful processes, particularly in sectors like agriculture, fishing and energy. Another key area for consideration has been the extent to which tariff peaks and tariff escalation in export markets may limit the ability of primary producing countries to diversify their economic structures. It has been argued that such diversification may reduce pressures to earn needed foreign exchange through increased exploitation of the nature resource base.

A major area where there are diverging views is in relation to arguments about the multifunctionality of agricultural production, and the potential environmental benefits of some subsidy policies. CTE discussions have recognized concerns that trade liberalization and increased economic growth might exacerbate environmental problems in some circumstances. Many delegations have emphasised the need to address these concerns through targeted environmental policies and not by foregoing the benefits of enhanced trading opportunities.

GATT/WTO Disputes

There have been only a handful of disputes in the GATT or WTO concerning the use of trade measures for environmental purposes. However, several of these have attracted considerable public attention and have formed the basis for claims that these agreements are do not adequately cater for environmental considerations.

A major focus of attention has been the two GATT dispute settlement panels which concluded in 1991 and 1994 that a U.S. ban on imports of certain imports of yellowfin tuna designed to reduce incidental kill of dolphins was in violation of GATT obligations. The U.S. measure banned the import of yellowfin tuna harvested with purse-seine nets in the Eastern Tropical Pacific Ocean unless U.S. authorities certified that the government of the harvesting country had a program regulating taking of marine mammals that was comparable to that of the United States. In addition, U.S. authorities had to certify that the average rate of incidental taking of marine mammals was comparable to the average rate for U.S. vessels.

Both panels found that the U.S. measure was an import prohibition inconsistent with Article XI of the GATT and could not be justified by the general exceptions provision of Article XX. The reasoning adopted by the two panels in relation to Article XX differed in a number of respects. An important consideration was the fact that the U.S. measure posed unpredictable conditions on exporters that could not be regarded as necessary to, or primarily aimed at, the protection of dolphins. Specifically, the exporting country could not know in advance whether its policies met the U.S. requirements as the latter required the exporting country to have the

same incidental taking rate as actually recorded by the U.S. for the period concerned.

However, a broader consideration for both panels was the fact that the U.S. measure imposed trade restrictions based on the fact that the governments of exporting countries followed different environmental policies. Both panels concluded that Article XX did not justify such a measure. The second panel emphasised that the dispute was not about the validity of the U.S. environmental objective but its use of a trade embargo to secure changes in the policies pursued by other GATT contracting parties in their own jurisdiction.

Neither of the panel reports were adopted by GATT Council due to U.S. opposition.

It is likely that the prominence of the trade and environment issue in the WTO will be significantly increased in the light of the recent outcome to the dispute settlement action taken by India, Pakistan, Thailand and Malaysia over a U.S. ban on shrimp imports. The dispute centred on the U.S. ban on imports of shrimp from countries that did not have a national regulatory program in place requiring the use of turtle excluder devices (TEDs) in shrimping vessels. The U.S. measure was found to be a violation of its WTO obligations by the panel which examined the case. The U.S. appealed this finding to the WTO's Appellate Body which found that the panel made a number of errors in its legal reasoning, but also concluded that the U.S. measure was not in conformity with WTO provisions.

There will be a major challenge to the WTO and its Members to promote a balanced public debate on these findings. A fundamental point is that the findings by the WTO's Appellate Body do not call into question the legitimacy or importance of the environmental objectives of the United States in conserving sea turtles. Indeed, they confirmed the ability of Article XX of the GATT 1994 to accommodate such objectives in finding that the U.S. measure related to the conservation of an exhaustible natural resource as required by Article XX(g).

However, the findings highlighted major concerns about the means by which the United States sought to advance these objectives which should be of concern to both the trade and environment communities. The Appellate Body concluded that the U.S. measure was applied in a manner that constituted arbitrary and unjustifiable discrimination and therefore did not meet the requirements of the chapeau of Article XX.

In particular, the findings focus on the fact that the United States engaged in a unilateral and non-consensual procedure in its resort to an import ban rather than seeking to work through cooperative and diplomatic approaches to other countries. Further, the U.S. measure did not provide any flexibility to consider the

appropriateness of the different conservation programs that might be followed in exporting countries. Its process for certifying countries to continue to export to the United States was not transparent or predictable and denied basic fairness and due process to countries whose applications for certification were rejected.

Concluding Comments

The WTO has a comprehensive work program on trade and environment activities encompassing a range of complex issues. It would be illusory to think that there are simple solutions waiting to be found to address these issues and the WTO's work in this area will continue to have a major analytical focus. There appears to be strong support from a broad range of WTO Members for the CTE's work and agreement that trade and environment will continue to be an important issue for the WTO.

Three considerations are likely to shape much of the WTO's future work on trade and environment. The first is the need for enhanced coordination at the national and international levels on trade and environment issues, including the need to ensure that trade, economic and environmental considerations are all taken into account in both environmental and trade negotiations. The proposed high level meeting may provide an important vehicle for progressing this objective.

A second consideration is the extent to which the trade and environment debate can feed into and support future trade negotiations in areas like agriculture where there may be opportunities for "win-win" outcomes. There may be a significant role for the CTE in this regard, both in its own examination of the issues and as a catalyst for further research and analysis in other international fora.

A third consideration is the fact that trade and environment is likely to continue to be one of the key components of the public image of the WTO and an important influence in shaping public perceptions of the value and impact of trade liberalization. This suggests a continuing role for the WTO in contributing to informed public debate about the issues, including in relation to disputes such as the shrimp/turtle case, and a need to demonstrate that it is making a constructive contribution to international efforts to promote sustainable development.

3 Trade and Environment in Sustainable Development

Margaret Clarke

> "From an economic perspective, neither trade liberalisation nor environmental protection is inherently or inevitably more important.....On balance...there is no strong a priori economic case that trade policy should take precedence over environmental policy or vice versa."
>
> Repetto, R (1993) Trade and Environment Policies : Achieving Complementarities and Avoiding Conflicts, Washington DC : World Resources Institute.

Introduction

The concept of sustainable development as embodied in Agenda 21, recognises that trade liberalisation and environment protection are mutually supportive provided effective environmental policies are implemented. This is premised on the assumption that maximising the economic efficiency of resource allocation and national welfare through free trade should also maximise the efficiency of natural resource allocation and use. This will only be achieved however if environmental externalities are properly valued and internalised. In this context the natural resource base includes biodiversity, ecosystems and the absorptive capacity of the environment to take pollutants, including CO2 ie it covers both living and non-living natural resources. It is generally the instruments that are applied to correct the market's failure to adequately value natural resource use, that create perceived conflicts between trade and environment policies.

The Principles of Sustainable Development

The interaction of trade and environment policies should be seen as a sub-set of the many interactions that are a part of achieving sustainable development.

Sustainable development is a relatively recent concept; it appeared in an embryonic form in some key international documents of the 1970s, was clearly articulated in

the 1980s, and accepted in the 1990s, through Agenda 21, as an objective of the United Nations system. However, while the basic conceptual framework is firmly established, there is still work to be done in refining its application to some areas of public policy and administration.

For example, the precautionary principle states that "if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation". The Kyoto agreement is a good example of the precautionary principle in practice. Applying the precautionary principle to some proposed developments can be challenging, since careful judgements must be made about the degree of risk and the scientific evidence cautiously weighed. The twin dangers of taking unacceptable environmental risks and stifling development must be avoided. The task should become easier as decision-makers grow more accustomed to, and develop better tools for, applying the precautionary principle to projects with a high degree of economic and ecological uncertainty.

Uncertainty about long-term economic, environmental, and social outcomes of a particular course of action can also make application of the principle of intergenerational equity difficult. At present, scientific models are more successful in predicting long term outcomes (eg ozone depletion, land salinization), while social and economic models arguably provide better short term projections. Improvements in modelling will help decision-makers to balance the interests of current and future generations. Continuing debates about the interchangeability of natural and manufactured capital will also have a bearing.

The current initiative for achieving ecologically sustainable forest management in Australia (the Regional Forest Agreements process) could not have worked without the very significant investment (around $60million) in data and knowledge about the forest values which allowed for informed decision making about resource use. While the RFA process can be regarded as a model for defining ecologically sustainable natural resource management, the high cost of a such a comprehensive and inclusive process needs to be recognised. Where that investment is not achievable, surrogate measures are needed, such as restraint on logging through woodchip export licences.

Trade and environment and development

The social dimension of ecologically sustainable development also has important ramifications for both trade and the environment. This is through the indirect effect of rising incomes. Research has shown that societies' demand for environmental

protection rises with wealth. For developing countries, the amount of environmental regulation increases with growth in income per capita. Governments respond to community concern for improved environmental quality through improved resource allocation and the development of enforcement capacity to implement environmental policies and laws. Trade driven growth in least developed countries can therefore lead to environmental degradation where the domestic pressures for environmental protection are not well developed and the market fails to account for the environmental externalities and does not adequately define property rights.

The agriculture sector provides ample example of market and intervention failures. In developing countries both output and input prices are manipulated by governments to provide subsidies to farmers or cross subsidies to other sectors. Of particular environmental concern are those pricing policies which encourage deforestation and the use of marginal lands.

Trade provisions in Multilateral Environment Agreements

The range of international instruments that have been put in place through multilateral environment agreements (MEAs) to attempt to correct market and intervention failures and commit the international community to sustainable development in particular areas are many and varied. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is perhaps one of the best known and long standing examples of the accepted use of trade controls to redress market and policy failures to protect the environment (in this case endangered species). Product bans, binding targets for pollutant emissions and national reporting are other approaches.

OECD 1995 Report

The 1995 OECD report from trade and environment experts, which was endorsed by OECD governments, represents a valuable consensus view on a number of trade and environment issues. The report has guided international discussion since then. In particular OECD governments have accepted the recommendation that

‘international cooperation may involve the use of specifically agreed-upon provisions for trade measures in MEAs to achieve the environmental goals of the agreement. There is a need to develop further internationally agreed principles to guide the use of trade measures within the context of MEAs, while avoiding protectionism and disruptions to trade’.

The main forum for discussion on these principles has been the committee on trade and environment of the WTO, and that discussion is continuing, although the recent proposal for a High Level Meeting by the EU may indicate impatience by some with the pace of progress.

A second general recommendation in the report was on the importance of integration in policy consideration between trade and environment officials and interests, on this subject. Since that time there has been greater integration, for instance in the last year or two the WTO has organised or participated in several symposia with a wide range of NGOs on this subject. Possibly more significantly there have been exchanges of views by the WTO with the secretariats of several of the MEAs that incorporate or may incorporate trade measures. The general effect of this dialogue has been to narrow down areas of possible disagreement, and promote greater understanding on both sides. This is very welcome and will help to take the heat out of the debate, and lead to greater mutual supportiveness of measures in the future.

Australian interests

Australia has particular interests in a number of international environment issues. The Framework Convention on Climate Change, the Montreal Protocol and the Biodiversity Convention are well known areas. Other areas of particular concern for Australia and which provide opportunities for Australia to advance solutions include:

- support for a global ban on the use of tributyltin (TBT) anti-fouling paints through the International Maritime Organisation
- nomination of the Great White Shark for listing under(CITES)
- assessment of a possible role for CITES in protecting stocks of the Patagonian toothfish and, if other international mechanisms prove unsuccessful, Southern Blue Fin Tuna
- work with other nations to stop illegal fishing in the Southern Ocean and promotion of strong measures through the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR)
- work with the World bank and the World Wide Fund for Nature forest alliance to protect forests in the Asia Pacific region. The principal objective of the alliance is the protection of an additional 50 million hectares of forests by 2010
- continue to pursue an international ban on commercial whaling through the International Whaling Commission and the establishment of a global sanctuary

- completion of a regional plan to implement the decision under the Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention) to list all southern hemisphere albatross species
- nomination for listing under the Bonn Convention of all dolphin and porpoise species inhabiting Australian waters which satisfy the prerequisites for listing and development of regional plans for those species successfully listed
- promotion of international efforts to develop national halon management strategies and elimination of halon 1202 through the Montreal Protocol
- leading the development of a multilateral Migratory Waterbird Agreement for the Asia Pacific region

Conclusion

These specific Australian interests and proposed initiatives are in addition to the ongoing work and advancement of Australian interests across the full range of environment related international fora. The essential global environmental challenge is to sustain the natural resource base for future generations in a way that is in harmony with economic and social goals. The instruments that are chosen to achieve these goals need to be tailored to the issue being addressed. In some cases a trade related instrument is the most appropriate and effective. It is important that such trade measures work as instruments to promote ecologically sustainable development. In that way they will work as much in the interests of global trade as in the interests of the global environment.

PART B

INSTITUTIONAL CHANGE

4 Role of the World Trade Organisation in Influencing the International Environment Agenda

Tim Fisher

Introduction

Notwithstanding that trade *per se* can improve economic well-being, the ACF strongly argues that international trade agreements must incorporate, and provide for, environmental and sustainable development considerations. How to achieve this both effectively and efficiently, and without unduly compromising prospects for international agreement on trade issues, is not a simple issue.

From a perspective of ecological sustainability, current indicators of economic performance are not value-free. Indicators such as GDP, GNP, current account, balance of payments, market indicators, inflation, employment and interest rates are of course very important, but they do not provide an accurate measure of things like:

- the economic values of natural processes, both now and (discounted) into the future
- the non-economic values provided by the natural environment (which invariably have an economic dimension)
- the rate at which renewable and non-renewable resources are being depleted or degraded (plus causal links to the activities which contribute to that degradation)
- climate change (and associated ecological and economic costs)
- inter-generational equity. (As economics is fundamentally about the distribution of resources, how resources are distributed temporally is a critical issue which cannot be ignored any longer)

Having said this, it must be recognised that providing for indicators of performance across these parameters is not an easy task. Nor is it exclusively in the domain of economics to furnish such indicators.

As is the case with trade within national boundaries, international trade impacts on the environmental parameters listed above. In doing so, international trade (and trade generally) can have a (sometimes profound) impact detectable using conventional indicators of national economic performance and stability. For example:

- Trade in products made from endangered plants and animals, or sourced from endangered ecological communities, can contribute to species decline, population (and/or habitat) fragmentation, and ultimately extinction. (Hence the need for the CITES convention)
- Importing minerals or manufactured goods (eg. batteries, metal components), extracted or manufactured using technologies which are unacceptable to most trading nations; this may not only undercut the prices of similar products produced elsewhere, but may incur external costs on the producing nation. Such activity may also, in a political sense, contribute to pressure to erode production and environmental standards elsewhere.
- Trade in prawns produced from *temporary* prawn farms carved from SE Asian mangroves is only possible *at the price* where the producing nations fail to recognise the economic value of the mangroves themselves. (the Commonwealth State of the Environment Report cites research which valued mangroves in Queensland's Moreton Bay as being worth over $7,000 per ha, per annum.)
- Australia's recent decision to proceed with the production (and potential export) of shale oil is not only highly inefficient in terms of greenhouse emissions, but was subsidised by a significant Commonwealth capital subsidy.
- Trade in *brassica* varieties of vegetables genetically engineered to resist herbicide presents a significant risk of gene transfer to naturalised *brassica* weed species (such as wild mustard), thereby imposing a more costly weed management problem on others.
- Trade in timber sourced via large scale land clearing operations (eg. Honduras) or by ignoring forestry management prescriptions (eg. Indonesia) can have major implications for future economic activity (eg. unprecedented erosion and flood damage in Honduras; major fires, soil erosion and river degradation in Indonesia.). At issue here is whether the true costs (including risk) are factored into the price of the timber.

Article XX

At present Article 20 stands as the single provision in the GATT which can be used to restrict trade on environmental grounds.

Without doubt, Article 20 has a number of problems which raise serious questions about its efficacy (or its *potential*) as a tool to weave environmental considerations into both the agenda of the World Trade Organisations, and the enforcement provisions of the GATT.

GATT Article 20 is in some ways loosely expressed, and perhaps that is the reason why not much seems to have been challenged via this clause. For example, what precisely is an *exhaustible resource*? Does this term embrace "renewable" resources? Similarly, when does an environmental protection policy become "arbitrary"?

Of course one would expect that individual nations would only challenge other nations under Article 20 if it were in their trade interests to do so. Given especially that most (if not all) nations may in some way be vulnerable to such action, perhaps this is a case of people who live in glass houses being reluctant to throw stones.

I reject pretty much out of hand criticisms of the *need* for something like Article 20 (along with similar criticisms that international environmental agreements and treaties restrict trade unreasonably). I accept that there is some potential to abuse Article 20, but that applies to just about every law or agreement that ever existed. So the potential for abuse is not in itself a reason to water it down or get rid of it altogether, particularly as specific instances of its abuse appear to be pretty thin on the ground.

Where Article 20 has been invoked successfully, it is difficult to demonstrate that good environmental outcomes have ensued.

Furthermore, there can be no doubting that Article 20 is, on its own, a fairly crude and blunt instrument for protecting the environment.

To summarise, our concern is that Article 20 is, as a stand-alone instrument, barely even starting to address the concerns within the environment movement that international trade is a factor in hampering progress towards ecologically sustainable development. We suggest that a new approach is needed.

Observations about the WTO and WTO Processes

First, a few points and observations (made from a distance) about the WTO:

- The WTO is not effectively "hooked-in" to international processes on the environment, including Agenda 21. Agenda 21, for example, clearly acknowledges the complex links between economics and the environment. In

contrast, the WTO appears to have very little expertise on environmental issues. It's not their core business if you like. As such there is an urgent need for the WTO to develop this expertise.

- On environmental issues, there is no logical reason why the GATT, or the proposed MAI, should take precedence over environmental treaties and conventions, or should override environmental considerations.
- WTO has no formal opportunities for non-government representation.
- WTO decision making processes are not transparent, and processes are remote and difficult for NGO's to provide input into
- Dispute resolution processes are unclear
- WTO does not appear to have a rational vision for achieving longer-term, incremental reform on **both** economic and environmental issues across different industry sectors.

I believe that there is a strong case for Australia and other WTO member states to address these concerns.

Economic Dimensions to Environmental Degradation

For the most part, ACF's concerns about international trade can be expressed very simply as a desire to internalise externalities; both economic and non-economic externalities, together with other un-accounted or un-priced inputs (such as subsidies).

If some countries can trade goods and services produced in the absence of adequate environmental standards, then they are likely to be undercutting the efforts of other countries to improve their own environmental standards, while at the same time compromising current and future standards of economic well-being.

For the ACF, exactly the same concerns exist regarding subsidies; subsidised agricultural products and natural resources exported from some (indeed most) countries undercut the efforts of other countries to remove such subsidies and encourage more efficient and ecologically sustainable use of natural resources.

Unlike some economists, perhaps, we can't see too much of a distinction between environmental standards on the one hand, and economic policies on the other; the two are inextricably entwined. Ultimately, the degradation or destruction of environmental values will have an economic dimension, just as inefficient economic production will invariably have an environmental dimension.

Here are just a few examples:

- Groundwater exploitation in Florida has been causally linked to seagrass decline, and hence to the decline of marine (and fisheries) productivity, and of rare species such as the manatee. Similar causal relationships may well be associated with some seagrass decline in Australia.
- Direct and indirect subsidies for logging native forests in Victoria compromises other economic values including
  - tourism (eg. Ontos P/L submissions re the East Gippsland Forest Management Plan)
  - water production (eg. the scientifically proven impact of forestry on water production in the upper Thomson catchment, where two independent economic analyses demonstrated that the future water production lost to (or consumed by) forestry *free of charge* is worth more than the timber.
  - logging mature stands of high pollen-yielding forests and woodlands compromises *licensed* apiary (honey production) activities without compensation. Here, apiarists contend that the value of their enterprise is, on a hectare for hectare basis, greater than the value of timber production
  - some of the most heavily subsidised forestry activities (eg. box ironbark woodlands) are also the most significant for the conservation of rare and threatened species of flora and fauna
  - subsidies in native forests, (including a failure to generate commercial return, pay dividends, or to pay tax equivalents), represents unfair competition to commercial hardwood plantations and farm forestry
  - subsidised (and cross-subsidised) pulpwood prices create an artificially high level of demand for eucalypt woodchips, undercutting prices payable for commercially-produced wood fibre overseas.
- Dryland salinity is most widespread in temperate Australia where native perennial vegetation overlying saline geology has been (and, in some cases, continues to be) cleared for dryland cropping and grazing. In the Murray Darling Basin alone, this problem has the potential to take over 5 million hectares out of agricultural production. Furthermore, as a result of dryland salinity (and, to a lesser extent, irrigation salinity), average salt concentrations in Murray River water is rising at around 1 to 2 percent annually (possibly more). This means that Adelaide's drinking water will exceed WHO water quality guidelines on salinity 100% of the time before the middle of the next century.

This same phenomenon will ultimately make irrigated agriculture non-viable through much of the Murray "riverland" region.

The Need for Integrated and Systemic Reform

Last year, as part of ACF's submission to the Productivity Commission's ESLM inquiry, we argued that the Australian Government pursue water industry reforms onto the international agenda via the WTO.

COAG Water Resources Policy is an inter-governmental agreement which is *enforceable* under the National Competition Policy payments program. Its key reform requirements cover:

- full cost pricing in water resources, with cross subsidies removed
- subsidies transparent and paid as Community Service Obligations (eg. pensioner rebates, but NOT massive irrigator subsidies)
- no new infrastructure unless both economically viable (ie. no subsidies) and ecologically sustainable
- provision for maintenance and refurbishment costs in water prices
- positive real rate of return on assets
- improved definition of water access and use rights
- allocation of water to the environment as a "legitimate use"
- use of best available science in determining environmental allocations
- where rivers are flow stressed, take steps to redress the imbalance between consumptive and environmental allocations
- provide for trade in water access rights
- reform in groundwater allocation and pricing processes (incl environmental requirements)
- public consultation
- public education
- progress on water quality and water quality standards
- implementation timeframe

Four years or so after the formal adoption of this policy, the overwhelming consensus amongst experts involved in land and water management generally is that this COAG reform package has achieved significant reforms which are not only far-

reaching in their scope, but have been taken-up within a very short space of time. These changes have involved significant gains for the environment (ie. riverine and estuarine ecosystems).

The development of water resources, particularly for agriculture and hydro power (as well as for towns and cities), is characterised by the widespread use of subsidies (and indeed, foreign aid) towards the construction of large dam and associated infrastructure, and associated water price subsidies, primarily aimed at subsidising irrigated agriculture.

Essentially such subsidies undercut Australian prices for irrigated (and in some cases, non-irrigated) farm exports, while at the same time causing environmental degradation (and often social upheaval) in the countries concerned. (Note, however, that Queensland is now strongly resisting the COAG water reform agenda, as it hopes to provide over $1 billion in capital subsidies to new irrigation schemes which equate to around $½ million *per irrigator!*)

It is worth mentioning here that water and water infrastructure subsidies incur significant economic and environmental costs. In my Australian experience, the following examples are relevant here:

- a profound decline in commercial fish in the Lakes and Coorong region, involving the total collapse of some fisheries (eg. barracouta)
- undercutting farm productivity elsewhere in Australia (eg. irrigated dairy produce undercutting dairy farmers in rain-fed districts)
- in Queensland, impacts on riverine and estuarine fisheries and tourism in the Great Barrier Reef
- long-term public liabilities for maintenance and refurbishment costs (eg. $12 million of Commonwealth Natural Heritage Trust funds used to repair Hume Dam on the Murray)
- irrigation salinity, together with the subsidised costs of irrigation surface drainage schemes
- acid sulfate soils caused by inappropriate draining of iron sulfate soils for sugar, etc.
- markedly increased incidence of toxic blue green algal blooms (irrigation nutrient exports; irrigation-related weir pools)
- unfair competition for producers of water efficiency technology
- diversion of Government funds from other priorities
- AS WELL AS profound impacts on freshwater ecosystems

ACF contends that the need to develop (and over time, refine) a water resource and infrastructure pricing and management policy be placed on the WTO agenda by the Australian Government.

While the COAG Water Resources is not "tailor made" as a potential international agreement on water industry reform, the concept of having sector-based reform programs is a sound one, embracing a raft of reform issues covering economics, finances, environmental considerations, structural considerations, regulatory issues, and public participation in decision-making.

Strategically, I suggest that water is a particularly important one from Australia's perspective.

Water is an area where Australia already claims to be "ahead of the pack", (even if not entirely true!).

- Water is also key to much of the world's agricultural produce.
- Freshwater and estuarine ecosystems worldwide are under development pressures which are simply staggering in their scale and scope.
- Water is also a key to regional stability in many parts of Europe, Asia and Africa in particular.
- An international agreement on water will help to "bed-down" COAG water reforms domestically.
- Water integrates, or touches on, many of the issues covered under Agenda 21, and hence helps to integrate Agenda 21 into the trade arena.
- And finally, Australian experience is that such a sector-based reform agenda can, once agreed upon, realise major positive reforms in a short timeframe.

As an inter-governmental agreement, the COAG Water policy is subject to all of the carrots and sticks available under the National Competition Policy payments program. This is critical, and obviously work is needed on the sorts of carrots and sticks appropriate for the WTO.

So, rather than rely on single clauses to protect the environment (like Article 20), the WTO needs a more sophisticated approach to encouraging improvements in both economic policy and environmental performance. A whole range of sectors – *agriculture, forestry, mining, energy, fisheries,* as well as *environmental standards* (eg. *pollution; greenhouse* emissions), can conceivably be addressed in this way.

The approach I am proposing here, while it undoubtedly adds further uncertainties into WTO processes, does promise both to accelerate the pace of reform, and to better integrate environmental issues into the world trade agenda.

5 MEAs and the WTO - The real trade and environment issues

Alan Oxley

Summary

The overwhelming focus of discussion about trade and environment issues is over the conflict of obligations between Multilateral Environment Agreements (MEAs) and the Agreements of the World Trade Organisation, principally the General Agreement on Tariffs and Trade (GATT). The overwhelming preoccupation in turn is how to adjust the rules of the WTO to accommodate the trade provisions of the MEAs. This supports a contention widely held among environmental groups that changes need to be made to the WTO to enable it to better support measures to protect the environment. A number of Governments, particularly in Europe have adopted the position that some amendment should be made to the WTO to allow provision of the MEAs to coexist as exceptions to the rules of the GATT, where they conflict with GATT provisions.

These descriptions of the trade and environment "issue" are leading to poor public policy results. Ineffective public instruments for environmental management are being developed and consideration is being given to proposals which could well undermine the authority of the global trading system. The overall result is a "lose/lose" paradigm.

The cause of this state of affairs is that inadequate consideration has been given to the effectiveness of international instruments for managing the environment. This is the source of the conflicts between the trade provisions of some MEAs and the provisions of the WTO. If attention was focussed on how effectively the MEAs meet their goals, then the real source of the problem would be perceived: - trade instruments in MEAs are ineffective instruments for environmental management and, in some cases, are counterproductive to the purposes of the agreement. This understanding would then widen perceptions to enable contemplation of the appropriate solution: - remove the trade provisions from the environment agreements. It also reveals the inappropriateness of the idea of amending the GATT to allow the provisions to legally co-exist with the GATT provisions. Why amend

the GATT to legitimise measures which themselves are inappropriate, ineffective and poor instruments of environmental management?

The trade provisions of MEAs.

The trade provisions, which are the problem, are those that breach the fundamental commitment which parties to the GATT have made to treat the trade of other parties in a non-discriminatory way. The treaties which are the core of the problem are CITES, The Montreal Convention on Fluorocarbons and the Basle Convention on Transboundary Movement of Hazardous Waste.

In all three of those treaties, there are obligations to ban trade with non-parties to the treaties. This is a form of international coercion which is based on a principle otherwise generally regarded as odious.

In all three, as well, there are provisions which require parties to use trade restrictions in order to protect the environment. In the case of CITES it is based on the presumption that banning exports and imports will restrict demand for the endangered species and that this will lead to their conservation. In the case of Basel, the presumption is that requiring exporters to be responsible for how exports are handled in the country of import will prevent the dumping of toxic waste. In the case of the Montreal Convention, the presumption is that the trade ban will stop countries outside the convention from producing CFCs and that there is benefit in a measure to ban imports and exports when there are pre-existing obligations under the agreement to ban production and consumption.

The case for not using trade measures for environmental, or for that matter any other non-trade interest, is widely accepted among economists and is endorsed by the United Nations. The key principle in the trade and environment principles which were adopted at the Rio UNCED Summit was that trade restrictions should not be used to protect the environment.[1] The three MEAs concerned all breach the UNCED trade and environment principles.

[1] UNCED endorsed the concept concept of cohabitation between systems for management of the environment and management of an open trading system. Each system operates independently, but with regard to economic principles which ensured that instruments used did not impede the interests of the other. In the environment systems, instruments should address the root of the environmental problems. The trade system was to support growth to enable sustainable development. Discriminatory restraints on trade were formally discouraged. The summary conclusion was that measures to open up international trade and measure to protect the environment should be "mutually supportive".

The fact that measures had been used which were inconsistent with the foregoing was recognised. UNCED treated these measures as exceptions or instruments of last resort. Where trade measures

There are now a number of analyses which demonstrate the ineffectiveness of the trade provisions of these MEAs. Julian Morris of the Institute of Economic Affairs, London, has recently prepared a comprehensive analysis. [2]

The trade ban in the CITES Treaty has not stopped the decimation of endangered species. Zimbabwe's success at managing its elephant population illustrates the point that the most effective economic instrument is to attribute an economic value to the preservation of the species concerned. In fact Zimbabwe argued successfully at the last conference of the parties to the CITES Treaty that the trade ban in fact impeded efforts at conservation and secured a waiver from the ban to export ivory, collected from culling, to use the proceeds from international sales to support the conservation program.

The trade bans in the Montreal Convention have not prevented production of CFCs in parties outside the Treaty. There is no reason why they should. They also had no impact on those parties to the Treaty which made bans on production and consumption effective.

The trade bans in the Basel Convention have stopped trade in a number of low hazard products and impeded recycling of a number of low hazard products. (None of these were the "toxic wastes" the treaty was supposed to control). It has redirected economic activity from developing to industrialised economies. Recycling of lead acid batteries and computer scrap in the Philippines has declined. The Basel Convention is an outstanding example of the wrong solution because of the wrong diagnosis of a problem. Toxic waste was being dumped in African countries. The problem was lack of enforcement of national laws which anyway prohibited this. The solution in the Basle Treaty has stopped trade in a number of low hazard products, not improved the environmental condition, and has removed business from developing countries.

All these agreements would be improved instruments for environmental management if the discriminatory trade provisions in them were removed.

Impact on the WTO

There is no logic to the idea of amending the WTO to remove the conflict between the provisions of the WTO with the discriminatory trade provisions of the MEAs.

were used in environmental agreements, they had to satisfy rigorous criteria, in particular the principle of non-discrimination.

[2] Draft paper presented to a Hoover Institution conference in October 1998.

Why amend the GATT to legitimise discriminatory trade provisions to manage the environment when those provisions are poor and defective public policy? The GATT has been an extremely effective instrument for promoting the economic welfare of countries. Its success depends upon the universal application of its basic rules by its members. As a general principle, the occasions upon which members have the right to apply trade measures that are exceptions to those general principles should be kept restricted.

The proposals to amend the WTO are to expand the exceptions provisions (which are set out in Article XX) to permit discriminatory restrictions on trade for environmental reasons. Any proposal to widen the exceptions should be treated very seriously. It would be folly to expand the exceptions for provisions which themselves are ineffective or defective. The effect would be to create two international regimes with poor, public policy instruments.

Nevertheless, amendment of the WTO rules is virtually a standing position of environmental groups. It has also been proposed by the EU.[3]

Attitudes to the WTO.

Environmental groups have developed a set of policies towards the WTO which go beyond amending Article XX. As well as proposing that the objectives of the WTO should include sustainable development, they relate mainly to providing a formal right of participation in the proceedings of the WTO of "civil society" as well as greater transparency in the dispute settlement proceedings of the WTO.

It is a little odd that environmentalists have made these issues such a "cause celebre" since there is nothing about them that is inherently related to the environment. Environmentalists are not the only non-government parties who have an interest in the work of the WTO, indeed they are likely to have much less of an interest than the myriad of parties involved in international trade throughout the world.

[3] In 1996, the European Commission circulated a proposal to this effect in the Committee on Trade and the Environment in the WTO. The EU paper was described as a "non-paper". This is a device which the EU employs to circulate proposals which are draft concepts. They may not be fully endorsed by the members of the EU, but they represent fully developed proposals which the European Commission wants discussed. The aim of the EU was to seek agreement at the meeting of Ministers of the WTO in Singapore in December 1996 to the change. The idea was strongly opposed, particularly by developing countries. The EU did not to press the proposed change, but has not also not formally eschewed it. The position received informal support from the US. It tabled an informal paper in which it stated that the operation of the trade provisions of the MEAs should not be impeded.

The proposals for giving rights to non-state parties to participate in the proceedings of the WTO disregards a fundamental feature of the constitution of the WTO. It is unique among international organisations in that its primary purpose is the regulation of measures that governments impose by establishing a set of commitments that governments enter into between themselves. The WTO is the business of governments. Unlike the UN and some other international institutions, it has never sought or been given a wider interest.

The natural place for non-state interests to make input into developments in the WTO is in national capitals where governments develop positions. There is no community of interest which NGOs represent which is not recognised in the processes of national administrations. This applies to business and consumers as much as to environmentalists.

There is a case for greater transparency of the proceedings of the WTO. But this is not a very significant issue. There is no logical place for direct participation by NGOs in any of the formal proceedings of the WTO.

Broadening Perspectives

No serious progress will be made in the trade and environment debate until the question of what are effective instruments for the management of the environment is considered. The problem is not in the WTO, it is in the MEAs. This is not a matter for the WTO, but for the United Nations and for environmental policy makers in national governments. The quality of international environmental policy making is poor. International agreements are being negotiated without adequate regard to the ultimate purpose they are supposed to serve, or to adequate consideration for how their provisions should work. They do not even have regard for the basic principles which have been adopted in the highest organs of the United Nations which should govern these issues.

There is nothing in the WTO which impedes effective management of the environment. Its instruments already give considerable latitude to national governments to use trade measures as exceptions to the rules of the WTO for national environmental management programs.

The solution to the trade and environment issue lies not in considering how to broaden the exceptions clauses of the WTO to legitimise the discriminatory trade provisions in the MEAs, or to provide opportunities for direct input into the processes of the WTO of 'civil society', but in improving the effectiveness of the provisions of the MEAs as instruments of environmental management, in particular

by removal of the provisions which contain discriminatory trade provisions. This will result in more effective protection of the environment and a better international system for the expansion of international trade.

6 Some Implications of the Shrimp-Turtle Decision

Richard Snape

The following are some notes on the report by the World Trade Organization's Appellate Body on what has been termed the Shrimp–Turtle Dispute, more formally, *United States -- Import Prohibition of Certain Shrimp and Shrimp Products (AB-1998-4).*

1. Article XX(g) of GATT 1994 refers to "conservation of exhaustible natural resources". The Appellate Body finds that living as well as non-living exhaustible natural resources are embraced — that is those living resources that are threatened with extinction.

2. The case has been decided on the basis of Article XX(g). In passing we can note that XX(g) does not include the word "necessary" as does XX(a) and (b). Article XX(b) refers to measures "necessary to protect human animal or plant life or health" and in the past "necessary" has been interpreted strictly, to disallow a measure if another measure was available. Under XX(g) there is no requirement that the measure used is necessary (in the sense of being the only one available).

3. On the basis of the Appellate Body's report, it would appear that trade measures can now be applied in a way that distinguishes between "like" products according to the mode of production, so long as this distinction — and a comparable (not necessarily identical) measure — is also applied to domestic production, presumably even if there were no actual domestic production.

4. The Appellate Body has ruled that NGOs can make submissions directly to a Panel but:

    (a) It is up to the Panel whether to accept the Submission or not, and to what extent notice is taken. (Under Article 13.2 of Dispute Settlement Undertaking (DSU) a Panel has a right to "seek" information from whomever it wishes -- the Appellate Body decided that the Panel does not have to take the first step.)

(b) To be taken into account, the Submission would have to address the matters within the Terms of Reference, and these are restrictive.

(c) The Parties have a right to respond.

(d) There is a risk that the Appellate Body could decide that a Panel *should* have taken account of a Submission which it did not, but I think this is unlikely as the DSU clearly gives the "right to seek information" to the Panel.

(e) The Panel, before it "seeks information or advice from any individual or body within the jurisdiction of a Member" has to inform the authorities of that Member.

5. **On the unilateral application of measures**. The Appellate Body found that the US *applied* a measure — a measure that was legitimate under XX(g) — in a manner that constituted "arbitrary and unjustifiable discrimination between Members of the WTO". It stated that, *inter alia*, the US had not tried to secure agreement with all parties and therefore was discriminatory. What is unclear is what the situation would have been if the US *had* attempted to negotiate with all parties and had failed to secure agreement. I think the decision could be interpreted to say that the US *may* then have been able to apply the measure so long as its *application* was non-discriminatory. This then opens up the possibility of different countries having different production requirements for their imports from the same exporting countries, and it was *this* fear that led to the Panel's decision (that the US measure should be disallowed because it could undermine the multilateral trading system) that the Appellate Body overturned.

6. The Appellate Body's process is to address the exception in Art XX *first* — in this case (g) — and then the *chapeau*. (The Panel worked in the opposite direction.) That is, it asked whether a measure relates to the conservation of exhaustible natural resources — and in addressing this considered the Preamble to the WTO Agreement. In the Preamble to GATT 1947, the words "developing the full use of the resources of the world" appeared. These are not in the Preamble to the WTO. Instead it states, in part, "allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so ...".

   Having adopted an evolutionary (its term) interpretation of "natural resources", so as to embrace living resources, the Appellate Body addressed the legitimacy of the measure in the context of the Preamble to the WTO, and then addressed the manner in which it was applied. In essence, this could make the trade effects

of a measure subsidiary to the more general consideration covered by the Preamble of the WTO. That is, if a measure has made the conditions of trade uncertain — for example because exporters could face different requirements for production processes by different importing countries — that may be of secondary relevance to sustainable development for example.

7. The Appellate Body's decision has caused concern to some delegations in Geneva, in relation to points addressed above, but also regarding the role which some see the Appellate Body as having adopted, in determining the meanings of the WTO Agreement beyond what the Members (or some of them) intended.

PART C

OTHER ISSUES

7 Implications for Gains from Trade of Changes in Methods of Support Overseas

Apelu Tielu and Ivan Roberts

Agricultural income support policies in countries around the world have distorted world trade in agricultural products, imposing major costs both on countries that provide the support and on efficient agricultural exporters such as Australia.

In recent years, methods used to support agricultural incomes in developed countries, in particular the United States and the European Union, have been changing toward so-called 'decoupled' arrangements. By decoupling support from prices and production, these arrangements are intended to be less market distorting than previous arrangements.

Decoupled support arrangements

The move to decoupled support has been encouraged by WTO (World Trade Organisation) rules and has been occurring in parallel with the application of the WTO Agreement on Agriculture. Efforts to reduce distortions to world trade by implementing decoupled support arrangements can have many benefits in principle (box 7.1).

Wise use of decoupling can reduce distortions and therefore provide benefits. However, there remain practical concerns.

- Even with care to minimise them, distortions from decoupled support arrangements can be appreciable.
- Most current efforts to decouple support in line with WTO arrangements fall well short of full decoupling.
- There are potential dangers in countries claiming that their support arrangements are decoupled when in fact they are not fully decoupled and therefore remain substantially market distorting.

These concerns highlight the need to design strict rules, definitions and monitoring arrangements for decoupling.

Box 7.1 **What does 'decoupling' mean?**

The notion of decoupling is the provision of income support in ways that are 'decoupled' from production and prices. An objective of decoupling is to reduce costly market distortions that arise through links between support and production, consumption, trade and prices.

Market distortions from support

In competitive markets, resources are drawn to produce items for which returns are greatest and are drawn away from items for which returns are lower. Efficient operation of such markets maximises the returns from economic activity to society as a whole.

Only where there are marked differences between private and public values of economic activities might government intervention provide additional benefits. However, governments often intervene not to overcome these factors but to support special interest groups, including farmers.

These interventions produce costs to their economies.

Traditionally, most farm support policies have involved maintaining domestic prices above world levels by using tariffs, other import restrictions and production and export subsidies (OECD 1996, p. 13).

Such measures reduce aggregate incomes in the countries providing the support by maintaining or drawing resources into agriculture where returns would be low in the absence of support, and away from more profitable sectors. This leads to increased production, and in many cases lower domestic consumption, reduced imports and increased exports. In turn, this depresses world market prices, penalising efficient producers such as Australia and reducing global income.

Decoupling farm support

'Decoupling' support from production and prices emerged as a key issue in reforming agricultural policies in the Uruguay Round. It provided a way out of an

impasse from differences in US and EU proposals (Franklin 1988), and was a key ingredient in reaching the WTO Agreement on Agriculture.

The main advantage of decoupling is that it promises to be less distorting than other forms of support. As some governments providing highly distorting support might be reluctant to withdraw the support quickly, they may prefer to reorient it to decoupled support that would distort markets and depress world prices much less.

With fully decoupled support, farmers receive payments that are not linked to their current or future production decisions, their input use or to world prices at all (Collins and Vertrees 1988). They receive it even if they do not produce anything. An example of such support is predetermined, fixed lump sum payments.

Farmers' decisions about what and how much to produce are determined by two things — the returns from additional units of production (marginal returns) and the costs of producing additional units (marginal costs). If income support is independent of these two variables, then production and selling decisions will be determined by world market prices for outputs and inputs. This is the conventional theoretical reasoning behind claims that decoupled support is nondistorting or minimally distorting.

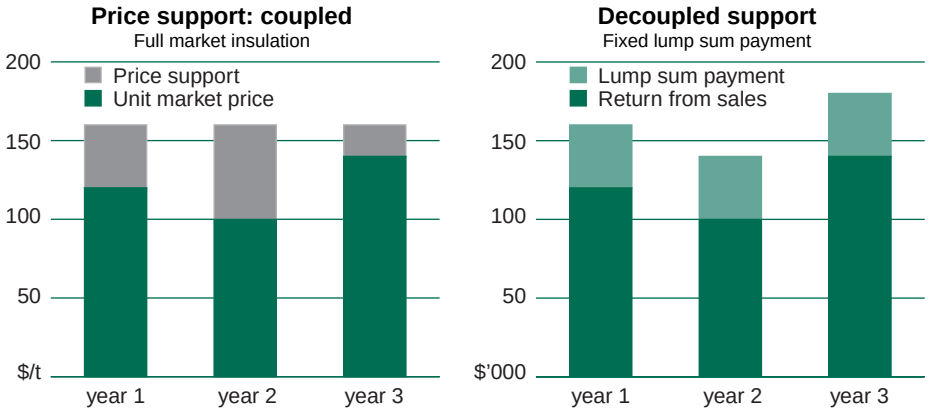
Another advantage of decoupled payments is their transparency. Since decoupled payments involve budget outlays, information on them would be open to public scrutiny, thereby exposing governments to further pressures to limit farm support.

A comparison between fully market insulating price support and decoupled support — assumed here to be through fixed predetermined payments — is given in box 7.2.

The conventional theory of decoupling implies that it is possible to disengage farm production decisions from support.

In practice, however, it is virtually impossible to break the links between income support and marginal costs and returns — which, in turn, influence production and create market distortions (Roberts and Andrews 1991; Blandford and Dewbre 1994; Roberts 1997). This is because of the additional effects on production of farm policy induced changes to farm income, wealth and risks — often ignored by commentators. All of these effects are influenced by decoupled payments in ways that increase production.

Box 7.2 **Examples of coupled and decoupled support**



As shown, coupled price support for a market that is fully insulated from competition maintains unit producer returns at $160 a tonne, irrespective of world market prices. There is no incentive for producers and domestic consumers to respond to changing market conditions.

In contrast, where support is through decoupled fixed payments, total returns vary with market prices. Producers and consumers have incentives to respond to changing market prices.*:*

Decoupled payments increase farm incomes and farmers' wealth over returns from the market alone. Given a farmer's specialised skills and knowledge in farming, and the absence of perfect capital and information markets, significant amounts of decoupled payments are likely to be invested in the farm (Roberts 1997). These payments would increase farm input use and allow access to improved technology, which would increase production and distort agricultural markets.

The payments increase income and wealth and, depending on how the payments are structured, can reduce risks from income variability. If, for example, the payments are large and stable relative to market earnings, aggregate incomes will be higher and less variable than from market earnings alone.

The reduction in income risk can reduce costs of borrowing by exposing lenders to lower risks of loan default, thereby increasing farm investment and production.

Also, decoupled payments are often provided in a way that increases land values and are linked to the status of landholders as farmers. This would maintain land in farming that might otherwise be used for other purposes.

Further, based on past experience, farmers may be justified in believing that establishing a basis of high production may provide the basis for higher payments under future support arrangements. This would give them an incentive to expand output. Expectations about the impact of current production decisions on future support could therefore reduce the extent of possible decoupling and lead to market distortions.

Another disadvantage with decoupled payments is that they involve costs of collection, administration and policing. More importantly, they add to costly distortions in resource use through the need to raise additional taxes to fund the payments.

A study of US acreage responses by Chavas and Holt (1990) incorporated wealth into their model and found that both wealth and risk perceptions were important determinants of acreage allocation decisions for corn and soybeans. Their estimated responses of plantings to changes in wealth were more than half those of the responses to direct price changes for each crop (box 7.3).

These results imply that even if payments to farmers were decoupled from production and prices, the impacts of the payments on wealth would still influence production significantly.

In their study of white beans, corn, soybeans and winter wheat in Canada, von Massow and Weersink (1993) found that wealth and risk variables were important in explaining variability in plantings, but the effects of both were relatively small.

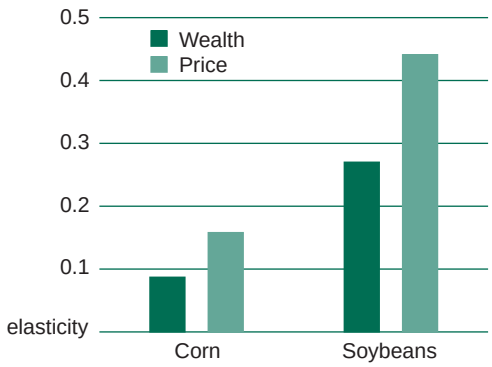
Hennessy (1998) concluded that the wealth and insurance effects of many support programs increased input levels 'even for supposedly decoupled programs'.

WTO 'green box' and 'blue box' exemptions

The WTO Agreement on Agriculture obligated members to reduce the total value of domestic support for agriculture overall by 20 per cent from its 1986–88 level.

However, some forms of support — termed either 'green box' or 'blue box' exemptions (box 7.4) — were excluded from the cuts on the basis of decoupling and related arguments. The amounts of support by major countries in these exempt classes are substantial and affect key commodities of interest to Australia, including cereals and meats.

Box 7.3 Change in US acreage in response to changes in farmers' wealth and market prices



Elasticities show the percentage change in area that results from a 1 per cent change in farmer's wealth or in market prices. So, for soybeans, a 1 per cent increase in a farmer's wealth results in a 0.27 per cent increase in the area planted to soybeans.

Source: Chavas and Holt (1990)

Blue box support

The risk with this approach is that WTO members may see decoupled and blue box payments as sufficient to correct trade distortions, and use loosely defined decoupling and blue box criteria to avoid reducing support payments.

They could therefore be undiscriminating in defining acceptable decoupling, and so-called 'decoupled' or 'production limiting' payments could become a new form of institutionalised market distorting protection.

If that occurs, the political will to institute fundamental market based policy reforms, or even well designed genuinely minimally distorting arrangements, could be weakened.

Blue box programs based on limiting production may appear to be less market distorting than price supports. However, if the measures to limit production are not very effective, market distortions may not be reduced.

For example, where governments pay producers to 'set aside' a proportion of their crop land for production control reasons, farmers may be free to set aside their poorest land thus minimising the effect on production.

Also, the proportions of base areas to be set aside are determined by the government of the day. Under the WTO Agreement on Agriculture, no rules are indicated for setting them. If the set aside percentage is low, reduction in output distortions may be small.

Box 7.4 **'Green box' and 'blue box' exemptions**

'Green box' exemptions

Green box exemptions were generally considered to be minimally market distorting. They include general services such as research, pest and disease control, training and facilities, extension and advisory services, inspection services, marketing and promotion services, infrastructure services, public stockholding for food security purpose, domestic food aid, environmental payments and direct payments to producers if they meet specified criteria for being decoupled. The specified criteria include the status of recipients as farmers, the delinking of payments from production, prices and inputs, and the condition that no production shall be required in order for payments to be received.

'Blue box' exemptions

Blue box exemptions were not considered to be decoupled but were required to be production limiting, with payments based on fixed area and yields, or made on 85 per cent or less of the base level of production, or, for livestock, with payments made on a f*ixed number of head (WTO 1994).*

Green box support

Although the green box measures are supposed to be minimally production distorting there could be substantial scope for reorienting support toward these measures in ways that could markedly increase production.

Many green box payments have no direct links to product prices, but affect production indirectly. For instance, public purchases for food security, domestic food aid and marketing and promotion services increase product demand, so farmers benefit from higher prices and world markets may be distorted.

Also, payments for providing 'environment goods' along with food production could substantially distort markets if they are paid on a large enough scale.

In some countries maintenance of a 'lived in' rural environment is advanced as an argument for substantial agricultural support. Since 'environment goods' can be joint products of farm production, payments based on 'environment goods' would

affect production directly. If many, or large, countries use 'environment goods' to justify substantial support, it could stifle market based reforms.

Therefore, although green box support seems less distorting than price support, it is often not free of distortions, and there is potential for some green box measures to be as market distorting as traditional forms of support.

However, some green box exemptions may be justified on welfare grounds, such as food aid to help poor people to purchase adequate food.

Others may be justified on grounds of public good benefits where activities might be unprofitable for individuals but would benefit society as a whole. For example, research into farming methods might not be undertaken by individuals or groups of farmers because relatively costless application of the results by others could prevent those undertaking the research from obtaining most of the benefits. In this case public research funding could be justified since society may benefit through cheaper, better food, by more than the cost of the research.

Changing forms of support

The United States and the European Union were key players in the Uruguay Round, and are expected to remain so in future WTO agricultural negotiations.

The European Union significantly reformed the Common Agricultural Policy (CAP) for cereals, oilseeds, protein crops and beef in 1992. The EU Commission has proposed further reforms in *Agenda 2000* (European Commission 1997), which were refined in a proposal in March 1998 (European Commission 1998).

The United States, in *The Federal Agricultural Improvement and Reform* (FAIR) *Act of 1996,* introduced changes toward decoupled support for some major crops.

European Union

The European Union's Agenda 2000 proposes strengthening the 1992 reforms (box 7.5) by extending them and by extending domestic support measures such as environmental and regional payments which might be construed as green box measures.

Box 7.5 **The European Union's 1992 reforms**

The 1992 reforms made policies somewhat less market distorting than the former highly market insulating arrangements.

High internal prices for cereals and, to a lesser extent, beef were reduced, with the reduction being replaced by direct compensation payments and payments per head of livestock held (headage payments).

Support for cereals, oilseeds and protein crops was brought under a common system for arable crops and area reduction programs were applied to these crops.

Compensation payments were based on past regional yields, regional area bases and animal numbers, but the yield based compensation payments for oilseeds differed from those for cereals.

Other support through border measures and export subsidies remains, although levels of export subsidies to bridge the gap between EU and world prices are lower than previously because of the lower domestic support prices.

The reforms reduced internal prices to closer to world levels for cereals and beef. They changed the form rather than the level of support. The reforms for arable crops partially decoupled support, as compensation payments are based on fixed regional yields, not on individual farmers' yields. Consequently, incentives to raise yields to increase benefits were reduced.

Payments on areas are limited to a fixed regional base area. However, each farmer receives direct payments on the actual area planted and the area set aside, and proportional reductions are applied if the regional base area is exceeded.

Member countries have the option to allocate total area quotas to each farmer. This could cap payments per farm but still allow farmers to increase areas planted in response to support, within that limit.

Under this reform policy, therefore, a link between areas planted and support payments persists.

Headage payments are similarly determined on a regional basis and subject to proportional reductions if there is an overrun in regional claims. They are subject to limits per individual farm on the number of animals for which farmers can receive payments and to limits on stocking rates.

So, while constrained, they are also not decoupled at the individual farm level. Further, receipt of compensation payments by arable crop and beef producers is contingent on them planting such crops or holding bovine animals, so production and support are still partly coupled.

The support for arable crops and livestock headage payments does not meet the green box decoupling criterion that 'no production shall be required in order to receive such payments' (WTO 1994, Annex 2, para. 6e). Nevertheless, these payments have been exempted from reductions in domestic support under the blue box provisions for production limiting schemes.

While such payments *might* technically satisfy those provisions, it is open to interpretation. For example, one condition of the blue box exemption is that payments are on fixed areas. However, as indicated above, the payments are subject to regional fixed areas, but not necessarily to individual farm areas. In fact, the regional area bases have been exceeded in several instances and the penalties in the legislation have not been fully applied (Agra Europe 1998).

Agenda 2000

To deepen the 1992 reforms, *Agenda 2000* proposes further reductions in the support prices for cereals. It also proposes reductions in support prices for some dairy products and beef. The reductions would be compensated for by higher or new direct payments. It also proposes harmonising the oilseeds payment with those for cereals. But there was no proposal to cut prices for other major commodities, including sugar, or to reduce tariffs.

There are aspects of the restructuring of EU support arrangements for cereals and beef that are potentially significant for multilateral trade rules under the WTO Agreement on Agriculture. These relate primarily to reorientation of EU support toward currently exempt blue box domestic support and away from export subsidies, by replacing the latter with compensation and headage payments.

The recommended reductions in cereal support prices could take them below world prices in some, if not most, years, with EU producers being compensated by higher direct payments. When internal prices fall below world prices, EU exports would no longer technically be subsidised and would not need to heed WTO limits on subsidised exports (Gardner 1998).

But, with the proposed *Agenda 2000* increases in compensation payments, EU producers would be receiving even larger direct payments than under the 1992 reforms, instead of the export subsidies.

In effect, the pre-1992 export subsidy and domestic price support would be fully replaced by a production subsidy. Currently, because these subsidies are provided in conjunction with production constraints they are exempt from domestic support reductions under the blue box arrangements.

Also, under *Agenda 2000*, compulsory area reduction programs are recommended to be zero. Swinbank (1998) concluded that the European Union's proposed set-aside of zero per cent satisfies the blue box requirements if the 1992 compulsory set-aside is retained (European Commission 1997; Swinbank 1998).

This illustrates how weak the production limiting arrangements for blue box support are. Because an area reduction program exists, some might interpret the program to be production limiting, even if the percentage reduction is zero, as the area would be limited to that in the base period, 1989–91.

As EU systems of support for grain are only partly decoupled, setting the variable set-aside percentage at zero would increase EU production and depress world prices further. Under such conditions, it becomes critical if substantial depression of world prices from EU protection is to be avoided that EU support is, in fact, minimally market distorting. It becomes even more important with potential EU expansion to incorporate the land rich eastern European countries.

In a WTO context, *Agenda 2000* appears to be based on the premise that blue box exemption for cereals and beef will be extended. The support is only partly decoupled and, additionally, its risk reducing, income and wealth effects will continue to encourage production, part of which will be exported. It would remain market distorting and other WTO members could be sceptical about accepting continuation of the blue box exemption for EU direct payments.

Agenda 2000 would increasingly reorient traditional supports to green box measures by linking support payments to production of 'environment goods' and other social benefits from farming. Such payments include support for farming in less favored areas, agri-environment activities, marketing facilities and forestry.

Shifting support toward production of environment goods and other social benefits is likely to sustain many market distortions since agricultural production and these other benefits (they may be negative as well as positive) are joint products of farming (OECD 1998, p. 45).

The stated criterion for green box exemptions is that they have 'no, or at most minimal, trade distorting effects or effects on production' (WTO 1994). If subjective 'environmental' benefits are widely used to justify green box support, there is a danger of institutionalising highly market distorting policies.

Agenda 2000 claims that 'the European model of agriculture is not the same as that pursued by our major competitors elsewhere, and that care will accordingly need to be taken to provide proper compensation for natural constraints and disadvantages' (European Commission 1998).

This subjective statement suggests that Europeans value agriculture and the agricultural environment more than others. Swinbank (1998) dismisses it as 'protectionist poppycock' and adds that 'the benefits of trade stem from the ability to take advantage of differing cost structures around the world'.

United States

The US FAIR Act of 1996 contained changes in the form of support for some crops. It replaced traditional crop-by-crop deficiency payment subsidies with seven-year contract payments based on a merged acreage base for selected program crops.

Specifically, producers of program crops (barley, cotton, maize, oats, rice, sorghum and wheat) have merged commodity specific base acreages into a single 'whole farm base' (US Department of Agriculture 1996).

Farmers receive payments for 85 per cent of their 1996 base acreage computed under the 1990 farm bill determined payment acres, regardless of what crops they plant or whether they plant at all (except that conditions apply for vegetables and fruits). In addition, the budgetary commitment is capped at US$35.6 billion for seven years. Importantly, FAIR removes the acreage reduction policy that was used to control supply.

The changes in the FAIR Act have characteristics of decoupled support and represent important breaks with tradition (Stuart and Runge 1997).

They eliminate the direct link between income support payments and current prices and allow farmers of program crops to respond more to market signals. As such, these policies are exempt from support reduction requirements under green box arrangements.

Nevertheless, other market distorting measures, including cotton competitiveness subsidies and export subsidies, still apply for some of these crops and the contract payments will indirectly affect production through supporting land prices. So, although the contract payments should result in lesser market distortions than deficiency payments for some commodities, significant systemic distortions remain.

To the extent that wealth and risk reducing effects from the contract payments stimulate production, these distortions would be exacerbated.

Also, other important commodities (dairy products, sugar, peanuts and tobacco) were largely excluded from the decoupled program (Stuart and Runge 1997).

An important consideration concerning the degree of decoupling under the FAIR Act is that the arrangement expires in 2002. If US producers of the affected crops anticipate that the arrangements could change or be changed to coupled support, they could expand plantings to increase future support base levels. This would weaken the degree of decoupling with current arrangements.

Conclusion

The goal of future WTO negotiations is to advance the benefits of trade through reducing market distortions imposed by farm income support policies. Decoupling may be a means toward this end but it is not an end in itself.

Decoupled arrangements provide opportunities to make national agricultural support policies less market distorting. They also increase flexibility for reaching agreement in multilateral trade negotiations.

However, they have definite limitations. First, they still distort markets to some extent. Second, efforts to decouple existing support arrangements have proven to be far less than complete. Indeed there are many instances where substantial decoupling is claimed but, in fact, little or no decoupling has occurred. This highlights that decoupling arrangements must be rigorously defined and applied or they may form the basis for institutionalising highly market distorting support systems.

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8 The Biotechnology Action Agenda: Implications for Trade and the Environment

Donn Corcoran

Summary

Short/medium term issues

In the short to medium term, biotechnology :

- Offers the prospect of new investment and employment opportunities in a key emerging technology
- Builds on Australia's research in sectors in which we are world competitive
- Will have substantial impacts on the productivity and competitiveness of established industries such as agriculture including food production and pharmaceuticals, and on activities such as environmental management
- Requires regulation for the purposes of environmental protection and as an enabling measure for investment and trade
  - Australia has a voluntary system of regulation but a comprehensive statutory system is being developed
  - trade concern is already occurring as a result of disagreements on regulatory approvals
- Involves both potential benefits and risks
  - the risk factors raise questions of public acceptance of biotechnology
  - niche markets may arise as a result of rejection of gene technology by a section of the population
  - as has been experienced with antibiotics, the benefits can be dissipated if its use is not carefully managed.

Biotechnology is knowledge intensive and subject to intellectual property laws. Vertical integration and concentration of ownership of intellectual property are creating challenges in sectors that are biotechnology-dependent, such as agriculture and food. Accordingly, Australia needs to have an adequate involvement in the development and ownership of gene technology.

Policy responses

Biotechnology adds a new dimension to a number of issues in public policy, including investment and R&D promotion, regulation, ethics, privacy and public awareness.

The Commonwealth Government has announced a Biotechnology Action Agenda and Agricultural Biotechnology Strategy with the objectives of developing an internationally competitive biotechnology sector which generates new investment and employment and supports traditional biotechnology-dependent industries including agriculture, food production and pharmaceuticals.

Long term issues

In the longer term, biotechnology is likely to have impacts that are difficult to predict at present but which will be as far-reaching as previous technological revolutions such as information technology. Intellectual property will become increasingly important in international competitiveness and the generation of profits.

Introduction

Biotechnology is the 'application of scientific and engineering principles to the processing of materials by biological agents to provide goods and services.'(Biotechnology -- International Trends and Perspectives, OECD, 1982)

Gene technology, a major technique of modern biotechnology, involves techniques of controlled insertion of genetic material into living organisms so as to alter the characteristics of the organism. This provides opportunities to enhance, switch off or otherwise modify existing characteristics, to introduce entirely new characteristics, and to enable large-scale production of biological molecules that would otherwise be impossible. In some instances gene technology simply speeds up and provides greater control over changes that can be achieved through conventional breeding practices. However, it also enables the exchange of genetic material between species that would not do so in nature.

Benefits of biotechnology

Some current examples of beneficial products of biotechnology are:

- the production of human insulin by microorganisms, replacing the extraction of insulin from pigs; the product is both safer and cheaper
- the production of human growth hormone by microorganisms, replacing the extraction of the hormone from cadavers; again the product is safer and cheaper
- slow-ripening tomatoes; less waste and better flavour
- Bt cotton; insertion into cotton of the capability to produce the Bacillus thuringiensis toxin provides resistance to insect attack and thereby reduces the need for chemical pesticides, with environmental and cost benefits

Risks

Some applications of gene technology can result in risks to human health, economic production and the natural environment. These risks are considered in Australia by the Genetic Manipulation Advisory Committee (GMAC) and other regulatory bodies to ensure appropriate safeguards are in place.

It is important not to overstate the risk factors from gene technology; many of these risks exist in conventional cross-breeding processes and in some instances can be reduced by gene technology. However, the level of certain risks, such as the development of resistance by weeds to herbicides, can be increased, and entirely new risks can be introduced. One example of such a risk was the proposed introduction into a rumen bacterium of the capability to detoxify fluoro-acetate, a toxin found in a number of native plants and also used in the poison 1080 used for control of vertebrate pests, including rabbits. GMAC considered that there was a risk of the immunity to fluoro-acetate spreading from cattle to feral animal, with the potential for devastation of much of the floral of arid regions in Australia, and the project was not approved.

Trade issues

One of the most important trade issues for Australia is the ability of biotechnology to increase the range and quality of products, with particular relevance to the pharmaceutical and agricultural sectors, and the ability to increase the efficiency of production. It is also apparent that failure to take advantage of the opportunities

would result in Australian industry becoming less competitive on world markets, particularly in agriculture.

Another important aspect of gene technology is that it introduces to agriculture in a much more comprehensive way intellectual property issues, with long term implications for management and profitability. As IP becomes more important to agricultural output, a greater share of the value of production will accrue to the owners of the IP. While this will not directly affect the export value of agricultural production, the high level of foreign ownership of the IP may tend to reduce profitability of the farm sector and the net economic benefits to Australia.

Recognition of the importance of IP has resulted in a substantial concentration of IP ownership by a small group of multinationals and a focus on vertical integration, with agricultural chemical companies acquiring ownership of gene technology IP, seed companies, and possibly further stages in the production process. The concern over pricing of Bt cotton seed, where there is a significant price differential between Australia and the US, is an early example of the potential for shifts in the competitive position of industries.

Concern has also been expressed that smaller economies and sectors of economic activity will be disadvantaged because of restrictions on the availability of patented technology. For example, the prime focus of companies owning agricultural IP is its exploitation in those areas where the highest returns can be made. The need for environmental assessment of genetically modified crops on a regional basis because of differing regional environmental factors has resulted in concern that some crop varieties will be slower to obtain the benefits of genetic modification or will be ignored because of the substantial regulatory and legal load experienced by the owners of the IP.

To some extent, these problems result from the granting of excessively broad patents in the early years of development of gene technology, and this may be overcome over a period of time by legal clarification of the scope of patents. However, the fact that the technology will continue to develop is likely to make problems of this nature a long term consideration. However, there are differing views within the scientific community over the appropriateness of allowing patents on genes and techniques for the insertion of genes. Some support patenting as a providing an incentive for research while others consider that it can inhibit research and create undesirable monopolies.

Ownership of IP also introduces control over farming practices, including practices such as annual contracts for the sale of seed, prohibitions on seed saving, and inspection rights on the part of seed companies.

The application of biotechnology is also leading to new types of trade concern over genetically modified products. Some bulk commodities such as corn and soy have been approved by US and Canadian regulatory agencies but have not been approved in Europe because of a differing assessment of the risks associated with anti-biotic resistant marker genes. These differences are likely to be referred to the World Trade Organisation for resolution.

Finally, there is the possibility that regulatory arrangements for genetically modified organisms and derived products could be used in some instances as a disguised non tariff trade barrier.

Environmental issues

Most of the current discussion of the relationship between biotechnology and the environment falls into two broad categories.

- The potential beneficial and adverse effects on the environment of the application of biotechnology
- The need to preserve biodiversity in the interests of the development of biotechnology (in addition to other social and ethical arguments for the maintenance of biotechnology)

The application of modern biotechnology, and particularly gene technology, offers potential environmental benefits

- More efficient agriculture (higher yields, lower waste) could feed growing populations with less clearing of new land for farming, allowing maintenance of biodiversity
- Pest resistant crops will permit reduced use of chemical pesticides

There are also risks that need to be addressed and managed though appropriate regulatory arrangements. These include:

- Creation of new varieties of pest species with resistance to pesticides or to natural predators, such as herbicide-resistant weeds
- Loss of biodiversity through general use of genetically uniform varieties of crops

Policy responses

Regulatory arrangements for gene technology

Gene technology has been subject to voluntary regulation in Australia for about 20 years through the operation of the Genetic Manipulation Advisory Committee (GMAC) and its predecessors. GMAC's voluntary system covers both contained research and the public release of genetically modified organisms (GMOs). The release of some products which are either GMOs or derived from GMOs is covered by existing regulatory bodies, including the Therapeutic Goods Administration and the National Registration Authority for Agricultural and Veterinary Chemicals.

These arrangements were satisfactory while the technology was largely in the research phase but the increasing level of public release is widely regarded as requiring a comprehensive system of legislation. This view is generally supported by the research community as providing safeguards for human health and the environment and by most companies in the industry as an enabling measure which will provide consumer confidence and, consequently, investor confidence.

The Commonwealth has proposed the establishment of a Gene Technology Office to regulate research and the release of GMOs not covered by other regulatory bodies. This position is currently being discussed with the States and Territories and cooperative legislation is expected to be introduced in 1999.

Biotechnology Action Agenda

The need for a strategy for biotechnology has been considered at some length in policy forums, including the Prime Minister's Science, Engineering and Innovation Council and the Supermarket to Asia Council. The Gene Technology/Germ Plasm Steering Committee of the Supermarket to Asia Council has made a number of recommendations on maximising the benefits of gene technology to Australia.

These and related concerns led to a commitment by the Government in the context of the recent federal election, to a Biotechnology Action Agenda and, within this whole-of-government approach, an Agricultural Biotechnology Strategy. The establishment of the Action Agenda recognises that, while the biotechnology sector has clear potential to generate economic and social benefits, it also faces a number of challenges. Measures by industry and government to address these challenges will be important for the development of an internationally competitive biotechnology sector and as a consequence to our international trade.

The Action Agenda will be supported by a Biotechnology Task Force within the Department of Industry, Science and Resources and will involve broad-based consultation within the Commonwealth, with States and Territory Governments, and with stakeholders. As part of this process a high-level industry-government Biotechnology Consultative Group is being established, to advise Government on policies for the development of an internationally-competitive biotechnology sector.

The issues and priorities to be addressed under the Action Agenda will be subject to consideration by the Biotechnology Consultative Group. However, on the basis of preliminary consultation with industry and other stakeholders the Task Force has identified the need for strategies to address issues such as:

- Technology development and diffusion
- Intellectual property management and ownership
- Access to venture capital
- Market access and promotion
- Regulation, biosafety and biodiversity
- Public awareness
- International agreements on intellectual property and other issues.

Two initial projects which the Biotechnology Task Force will support are:

- preparation of an industry directory for investment promotion and marketing purposes
- support for an Australia-California Biotechnology Partnering Meeting in San Diego in May 1999.

Access to venture capital has been identified as a significant industry concern. Institutional investment from the US is regarded by many within the high technology sectors as being inhibited by current levels of Capital Gains Tax. While not taking a position on the issue, the Task Force is seeking to facilitate the presentation of the biotechnology sector's views on investment issues to the Review of Business Taxation. As part of this process, planning is underway for an industry forum to be held in Sydney on 14 December.

While foreign investment is widely accepted as necessary for development of Australian biotechnology, there is also a concern that Australia maintain a strategic position in the development and ownership of intellectual property. One of the challenges facing the sector is achieving the appropriate balance between foreign investment and management of Australia's trade and economic interests.

Long term issues

A brief mention should be made of some of the long term implications of biotechnology for both trade and the environment. Just as the substantial impact of the personal computer was not expected by manufacturers of early mainframes, it is difficult to forecast the impact of biotechnology.

Just a few examples will illustrate the point. In the medical field, research is now being undertaken on the use of undifferentiated human cells to produce whole organs, including complex organs such as hearts. This research may achieve outcomes in as little as ten years, with the prospect of commercial production and trade in live organs. With the development of a wealthy and aging population of in a number of countries, a whole new field of economic activity in the medical field may open up.

Through the application of gene technology, a number of biologicals such as human insulin and human growth hormone are already being produced by microorganisms. Some plastics are now being produced by biological processes. Research currently underway may lead to the mass production through biotechnological processes of some basic chemicals and agricultural products.

It is possible that cotton and other natural fibres may be produced in the longer term by microorganisms in large saline ponds, making some forms of agriculture redundant. As a by-product of these developments, there could be benefits to the environment in that some forms of pesticide intensive agriculture will be eliminated.

The impact on trade of these developments is hard to predict but could be substantial. However, it is likely that competitive advantage, trade flows, and the distribution of profits from production will be determined more and more by ownership of the relevant intellectual property rather than of factors of production such as land.

This has the potential to work to Australia's disadvantage unless the appropriate decisions are made on investment in and management of IP. Developing the right policies requires early and effective cooperation between government, industry, the investment community and the research community.

9 Incorporating Risk Assessment in Trade Policy

David Robertson

International commercial relations are becoming increasingly complex as political leaders thrust more and more burdens on the fragile trading system, while *non-government organisations* (NGOs), unable to force their ideas through domestic political institutions, attempt to exploit opportunities in international agencies. Governments unwilling to confront interest groups at home even subscribe to vague concepts, such as "the civil society" (President Clinton, 1998).

The WTO has become a target for NGOs since the Uruguay Round was concluded (Robertson, 1994). The Uruguay Round Final Act provided new opportunities for NGOs to intrude their single issue politics into WTO affairs because it expanded the scope of GATT principles to cover trade in agriculture and services, strengthened trade rules, increased membership, established links between trade and investment and competition policy (TRIMs), reinforced protection of intellectual property rights (TRIPs) and incorporated new rules on product standards. Above all, the adoption of the Understanding on the Settlement of Disputes introduced a process, using the *Dispute Settlement Board* (DSB) that offered a pseudo-legal mechanism and an international platform where lobby groups can seek to emancipate their interests.

Encouraged by governments' acceptance of a link between trade and the environment in the closing stages of the Uruguay Round, embodied in the Decision on Trade and the Environment in the Marrakesh Declaration (April 1994), 'green groups' have besieged WTO processes. In its original GATT context, 'transparency' referred to publication of trade barriers and schedules to keep traders informed about commercial regulations. More recently, transparency has expanded to cover release of WTO documents and reports to facilitate surveillance of policy commitments, and public symposia with NGO participation, leading, increasingly, to NGO intrusions into some WTO processes. In fact, there is a 'cultural clash' between the confidential process of trade negotiations and the publicity-seeking objectives of green lobbies and other NGOs. Managing this conflict will require delicate balancing by the WTO Council, because the WTO is designed to be an

inter-governmental organisation (unlike the *International Labour Office* (ILO) which is a tripartite agency comprising governments, trade unions and business).

The evolution of the WTO since 1994, based on its increased scope and its new rules-based system, has been complicated by two other developments:

1. the adoption of new *multilateral environmental agreements (MEA)* that contain provisions that may not accord with WTO rules (although only in their application will this be tested);
2. new national measures that contravene WTO provisions, but are regarded as an exercise of sovereignty, such as unilateral measures to protect the environment and animal, plant and human health, but which have extraterritorial effects.

The first category has provided the substance in discussions and reports of the WTO *Committee on Trade and Environment* (CTE), especially relating to proposals to amend GATT article XX. This debate has been rejuvenated by new amendments proposed since the 50th Anniversary of GATT in May 1998, where emphasis was given to 'the civil society' (WTO 1998 (a) and (b)). More recently, the Appellate Body's decision in the Shrimp-Turtle case has reopened the debate on article XX, in terms of clause (g) and the interpretation of the Preamble to the WTO (WTO 1998 (c)).

The second category comprises two types of difficulties:

1. Strengthened rules on non-tariff barriers, such as *The Agreements on the application of Sanitary-Phytosanitary Measures* (SPS) and *The Agreement on Technical Barriers to Trade* (TBT), result in complaints to the DSB when interpretations of the rules differ (eg, Canada/US complaints against Australia's quarantine regulations preventing imports of uncooked salmon, and US/Canada complaints against the EU embargo on imports of hormone-enhanced meat and meat products);
2. Unilateral adoption of restraints on imports as part of environmental or health protection, which contradicts WTO agreements (eg. European governments' proposals the EU Commission that imports of genetically-modified cereals or meat of animals fed antibiotics should be banned).

Although DSB complaints may be honestly initiated, changes to provisions in WTO agreements depend on providing scientific evidence. Assessing the risk that allowing market access for foreign produce will endanger domestic production is at the centre of most SPS cases presently before the DSB (see Table 9.1). Similarly, EU demands for measures of 'biosafety' require more substantiation than consumers'suspicions and a mood of distrust engendered by recent outbreaks of BSE, ecoli strains and viruses.

Table 9.1 **WTO disputes requiring risk assessments**

Complaint	*Complainants*	*Status**
US gasoline standards (TBT)	Venezuela, Brazil	US implemented DSP recommendations 19 August 1997
EU meat and meat products (hormones)	US, Canada	EU undertakes to comply with DSB recommendations by 13 May 1999
US shrimp/turtle	India, Malaysia, Pakistan, Thailand, Philippines (plus 3rd country rights)	DSB report appealed by US 13 July 1998
Australia salmon/salmonids (SPS)	Canada, US	DSB report appealed by Australia 22 July 1998; Appeal Board decision 20 Oct. 1998.
Japan agric. quarantine (SPS)	US	Panel established 18 Nov 1998
EU barriers to imports of conifer woods	Canada	Complaint 17 June 1998, panel requested.
EU asbestos and products thereof (TBT)	Canada	Complaint 28 May 1998
US poultry (SPS)	EU	Complaint 18 Aug 1997
Japan pork and pork products (SPS)	EU	Complaint 15 Jan 1997
Korea quarantine on food and ag. (SPS, TBT)	US	Latest complaint 24 May 1996

Source: *WTO summary, 12 August 1998

In SPS cases, there is interest in promoting a commercial income stream by avoiding risks from disease, while at the same time achieving economic rents from this protection. Similarly, the TBT seeks to avoid discriminatory barriers to trade, from unnecessary technical regulations (mandatory), standards (voluntary), testing or certification procedures, by encouraging the use of international standards and obliging consultations with interested foreign suppliers when different standards are set. This recognises the commercial interest.

Risk assessment

The GATT (1947) was based on negotiated agreements. Comparatively few disputes were notified under its 'nullification and impairment' provisions (articles XXII and XXIII). Most were resolved during consultations. Out of 233 disputes notified before 1988, only 73 panel reports were completed and forwarded to the GATT Council. Several reports were not adopted by the GATT Council under the consensus provisions (mainly subsidy complaints). General acceptance of panel reports, however, indicated support for GATT principles, considering the Council had no enforcement powers (Jackson, 1990; 98-101). Any evidence proffered in

such disputes was largely anecdotal or based on trade statistics, not scientific evidence.

Adoption of the WTO dispute settlement process, together with strengthened rules against NTBs, has introduced a legalistic approach to disputes, particularly with the Appellate Body to give definitive verdicts to the WTO Council (Jackson, 1997). Moreover, the SPS and TBT agreements call specifically for scientific evidence to be considered. In many instances, this requires an assessment of risk (eg. Canada/Australia salmon dispute). Such assessments will become increasingly important in DSB cases (see Table 1).[1]

MEAs require more difficult assessments of risk and burden sharing in finding collective solutions to cross-frontier environmental problems. Nevertheless, reaching agreements depends on scientific studies and acceptance of evidence on risk to decide whether collective actions are necessary. Negotiating an MEA requires some ceding of sovereignty that corresponds to perceptions of the problem (including the economic efficiency of alternative proposals).

At the Kyoto Conference (1997) the proposal for a proportional reduction in emissions for Annex I countries was not an efficient solution. The scientific evidence alone did not point to an efficient solution, because other considerations were relevant. Yet such qualifications were widely rejected before Kyoto (Paterson and Grubb, 1996).

Similarly, the *Basel Convention* on shipments of hazardous chemicals restricts movements of chemicals to developing countries without *prior-informed consent* (PIC), on grounds that developing countries are not equipped to evaluate the effects of such imports. This presumption against shipments follows the precautionary principle. Properly administered PICs provide information that may facilitate trade once they are agreed. If PICs are required for each shipment, of course, they could become an administrative barrier. Ultimately, the trade effects will depend on how the system works and the motives of participating countries. As a regulatory device, however, PICs have created a precedent that green lobbies will continue to exploit.

New campaigns against health/environment 'hazards' are appearing. European agricultural and food lobbies are attacking *genetically modified organisms* (GMOs),

1 Recently, the Appellate Body has ruled that NGOs always have a right to submit briefs to DSB panels. It is a decision for each panel to decide whether to seek formal and proper submissions (under the power of panels to obtain information from any source (see DSU article 13)). For NGOs this is a major victory and a flood of NGO submissions is expected in future disputes involving the environment, SPS, TBT and other areas where NGOs have interests.

and the SPS agreement. This is also apparent in the draft UN Biosafety Protocol. The SPS agreement states:

> "Members shall accept the sanitary or phytosanitary measures of other Members as equivalent, even if these measures differ from their own or from those used by other to the Members trading in the same product, if the exporting Member objectively demonstrated importing Member that its measures achieve the importing member's appropriate level of sanitary or phytosanitary protection". (SPS Agreement, 1994).

In many countries, quarantine standards are subject to political decisions which introduces a degree of arbitrariness, and promotes lobbying over scientific analysis. This indicates the role of international standards organisations will be crucial in holding back 'consumer sentiment' against scientific evidence. The use of risk assessment in setting standards will become increasingly important and require careful review. The standard-setting processes are important –

- FAO/WHO Codex Alimentarius
- International Office of Epizootics
- International Plant Protection Convention.

The SPS agreement means that WTO members have to adopt international standards or be prepared to justify any stricter approach they choose. Biosafety issues should be judged in the same way. Genetic modification does not in itself make an organism dangerous. Proper analysis is essential.

Risk assessment based on scientific evidence will become increasingly relevant in WTO disputes relating to technical standards and environment issues. For consistency such assessment and risk management should also be applied in MEAs. Five principal areas appear to need risk assessment as part of any agreement:

1. WTO disputes relating to agreements drawing on scientific evidence to establish technical or environment standards (SPS, TBT)
2. Unilateral implementation of measures that impede trade (or investment) on environment or technical grounds, such as biosafety, 'green' standards and labelling, etc. (These issues are still under review in the CTE.)
3. Identifying hazardous chemicals in terms of risk management for issuing PICs or shipment permits; for example, scrap metal is a necessary input to metal production in many developing countries and restrictions on trade in scrap could hamper commercial activities.
4. Controlled testing and cultivation of GMOs is an important step in plant breeding experiments, and patenting new varieties; aspects are subject to review under the TRIPs agreement.

5. Alternative methods of safeguarding species claimed to be 'endangered' (eg. turtles and dolphins) and other environmental threats, such as GHG emissions. , require risk assessments.

[An important unresolved problem about disputes is who should pay the expenses associated with preparation of positions and appeals before the DSB? Risk assessments and legal advice are expensive and benefit specific industries. At present, tax-payers meet the bill of government representation, but it could be argued that the interested parties should foot the bill. This 'user-pays' approach should also be applied to environment groups pursuing DSP cases.]

Experience with risk assessment

Risk assessment methodology should be appropriate to circumstances, which means scientific information is the key. If risk is negligible, there is no need to draw on scientific measures of risk. Quantitative risk assessment requires establishing risk factors and then estimating probability of an adverse event. The only 'no risk' option may be to ban trade, but identifying risk will require measurements to make such an assessment. Since a full set of data is unlikely, some model building may be necessary. This raises the question of what judgements can be made; inadequacies will even apply to qualitative assessments. It is important to separate risk assessment (analysis) from risk management, which is a secondary judgement.

An assessment might proceed as follows:

1. identify hazards
2. assess degree of danger (exposure)
3. characterise risk and identify the most serious.
4. assess possible responses

The analysis can be based on the most serious risk, but more complete or precise data on other elements of risk may influence the measurement stage, and hence the assessment. Qualitative assessments can be more significant than quantitative measures where scientific research can establish dominant risks. Several WTO disputes have shown that scientific measurement of risk may not always be feasible.

Some participants in the UN Biosafety Protocol want to take account of social and economic consequences. Cost-benefit analysis may show that elimination of scientific risk would impose social costs, either directly or indirectly. On the other hand, these outcomes may not point in one direction. Some would claim that new high yielding crop varieties may jeopardise traditional agriculture (ie cultural

values). Restricting matters to scientific risks to health of plants, animals and humans is difficult enough. Allowing for political economy would create insuperable barriers.

Risk assessment is also relevant to evaluation and ranking of environmental issues, and as a guide to setting necessary standards. Setting priorities on a national basis is the first step to managing risk. Risk comprises the likelihood of a happening and the consequences if it happens.

Assessment of risk is evident in everyday events that include environmental considerations. Insuring against damage from freak weather or an accident (eg. a ship or road tanker crash) takes account of both risk and the costs of reparation. Insurance premiums have been rising as the commercial world has recognised the consequences of carelessness that might damage environmental assets. Evidence from insurance companies is relevant to some environmental risks. Such data would be more useful in risk assessments than purely subjective results from surveys of public opinion.

Separating interests

Different perceptions have to be reconciled in reaching any risk assessment. Officials/regulators seek to minimise to limit damage to their reputations that occurs if an unacceptable event occurs. Consumers are similarly risk averse, as are lawyers fearful of large damages imposed in the courts. These risk-averse groups are taking the lead in the GMO/biosafety debate and in trade disputes based on quarantine and environmental issues. Commercial interests rely on risk-taking for profits, but even they will favour rent creation using protection if an opportunity offers. Assessing risk in trade is multidimensional and requires balancing divergent interest, but information and education is the principal route to enlightenment.

Even scientific evidence is open to prejudice and self-interest. Declaring a new kind of environmental threat will require research, which is in the interest of specific researchers, in the same way that tight quarantine laws or technical standards protect the commercial interests of domestic producers. 'Rent-seeking' is a general phenomenon, not simply economic. Hence, scientific evidence is only part of the story (eg. GHG emissions). The EU support for biosafety standards to be applied to GMOs, for example, carries a strong flavour of agricultural protection and vested interests.

Developing countries will be suspicious about new standards wherever multilateral trade restraints may be employed or threatened. It suggests eco-imperialism unless

sound scientific proof and risk assessments are involved. In the same context, any changes to GATT article XX (General Exceptions) which would facilitate discrimination on environmental or health grounds, would be opposed by developing countries – unless they were compensated by a scientific trade-off (technology transfer, amendments to TRIPs or improved market access).

Risk assessment (and management) is becoming important in WTO disputes, particularly in areas involving environment issues. Establishing an acceptable framework for making these assessments is important for the trading system and for meeting environmental concerns – in the WTO and MEAs.

No uniform practice exists on risk assessment, comprising the scientific process of identifying hazards, measurement of risk, and how to assess risk and risk management options. Ultimately, judgements have to be made about 'acceptable risk' (an exercise of sovereignty), or in MEAs an international judgement on acceptable levels of risk, which becomes a matter of negotiation (ceding sovereignty). Both these require valid assessments of risk at the national and international level.

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