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Science and Precaution in the Trading System

Seminar Note

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Preface

This note is based on presentations and discussion at a seminar on *Science and Precaution in the Trading System*, jointly organised by the International Institute for Sustainable Development (IISD) and the Royal Institute of International Affairs (RIIA) during the third WTO Ministerial Conference in Seattle.

The meeting explored the meaning of the precautionary principle in the trading system; differences in the North American and European understanding of precaution; and ways to implement a precautionary approach in international trade. This note summarises the main strands of the presentations and discussion at the meeting.

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Introduction

Even before its creation in 1994, the World Trade Organization has faced charges that it is insufficiently sensitive to environmental concerns and to the realities of contemporary international environmental policy. It is by now self-evident that governments may exercise the right—even the duty—to protect health and safety and the environment. According to WTO rules, countries that are WTO members must do so without discriminating between products based on their country of origin or between 'like products.' Depending on the measure at stake, WTO rules may also require regulations to be the least trade restrictive. In some cases—notably those on food safety—WTO rules also require measures to be based on a risk-assessment exercise.

For environmental policy, the so-called precautionary principle or precautionary approach supports taking protective action before full scientific proof of risk. How does the WTO measure up against the precautionary principle? Ongoing arguments over genetically engineered foods; friction in negotiating a biosafety protocol; a dispute about hormones used to feed cattle; and discussions over the most appropriate ways to ensure species protection have all invited trade-related examination of precautionary action and the precautionary principle.

What is the Precautionary Principle?

The idea at the heart of the precautionary principle is that where human activities may have damaging effects, decision-makers should not wait for full scientific proof before taking appropriate protective measures. In short, the precautionary principle places a high price on inaction.

The precautionary principle offers a guide to decision-making after easy problems have been dealt with. Since scientific proof is so often lacking in the environment policy context, the issues underlying the precautionary principle are to some extent ones of every-day management. But it would be an exaggeration to suggest that the precautionary principle is triggered by—and therefore needs to be invoked in—every environmental policy-making situation. In any event, it is misleading to suggest that there is such a thing as scientific 'proof.' Science is by its very nature incapable of offering full proof in most cases. Scientific analysis involves working to disprove hypotheses—some stronger than others.

Because it focuses on situations with significant uncertainty, the precautionary principle should be distinguished from the principle of prevention, which tends to operate when there *is* sufficient scientific evidence. Certainly, the precautionary principle does have a scientific threshold—it does not preclude or downplay the value of sound scientific analysis. But discussion on the precautionary principle often paints a picture of environmental policy decisions as a simple choice between sound science and a precautionary approach. The distinction is particularly often adopted by industry lobbyists, yet fails to address the underlying complexities. The real point of distinction between sound science and the precautionary principle is that the meaning and significance of the precautionary principle do not end with scientific analysis. The precautionary principle invites a more overtly political decision about the balance of risks involved.

Deciding on the appropriate balance between burden and risk involves social choices. Thus, for example, in its more extreme formulations some argue that the precautionary principle is anti-innovation. By stifling risk-taking, they say, it can stifle potentially beneficial innovation. Whether this is the case, recognition is growing that if the precautionary principle is to be applied effectively and credibly, it is important to involve all key stakeholders, including the public, in the policy choices that surround its application. For dispute settlement, this is as much an issue for the EU as for the WTO—the European Court of Justice makes decisions on the proper application of the precautionary principle almost completely in the dark.

How does the precautionary principle relate to risk assessment?

If considered policy conclusions are to be drawn from an analysis of the relationship between the precautionary principle and trade, the most valuable starting point may not be to ask what *is* the precautionary principle, but rather to ask how different countries have gone about dealing with uncertainty.

Responses to uncertainty involve social choices that may themselves carry significant social consequences. For example, the 1920s saw the adoption of a White Lead Convention by many European countries—though not by the U.S. Although the Convention destroyed the European white lead market, white lead paint continued to be used in the U.S. marketplace for another 20 years or so. The result now is a serious crisis.

Governments often present internally inconsistent views of risk and precaution based on societal perceptions. It is striking, for example, that gene technology tends to be accepted in the medical field even by those countries that continue to want to bypass it when used for food products.

It is equally important to appreciate distinctions between different countries' approaches to risk assessment, since science plays an important role not only in the precautionary principle itself, but also in the disciplines of the WTO. Here we see some marked contrasts between countries. In the U.S. risk assessment is viewed very much as a tool of governance. Because of the fragmented structure of U.S. political power, there is a strong emphasis on the need to keep a record. Risk assessment was introduced as a discipline during the Reagan administration, paradoxically in an effort to slow down the environmental regulatory process. Since then it has become institutionalised in the process. In contrast, in the EU, risk assessment is viewed much more as an academic exercise than as an issue of governance.

In either case, risk assessment as a discipline addresses neither the outrage factor nor the ethical factors that are often associated with decision-making in the face of uncertainty. Neither is it capable of assessing effectively the risks associated with cumulative environmental effects.

A key issue for policy-makers is whose science to use? Risk assessment and indeed science can easily be bought or captured by political interest groupings. Public funding for research and targeting of public funds for research both have a real contribution to make to counter the dominance of industry research in some fields. But industry-funded research has also played an important role in some international environmental policy developments—for example, in the evolution of the ozone regime.

Even standards that are nominally science-based may reflect political deals. For example, for food safety, internationally developed Codex Alimentarius standards provide a basic reference point for domestic standards under relevant WTO rules. But many decisions in the Codex are a close, voted, call. In a different example, in a WTO dispute involving an EU ban over use of certain hormones in beef production, Canada and the U.S. clearly viewed the ban

as a trade issue. This was the case even though in Canada many toxicologists working for the regulating agency had objected to registering the hormones concerned. An internal scandal erupted when it emerged that the objectors had been put under pressure to change their reports to facilitate the approval of the hormones.

In conclusion, a strong case can be made for countries to develop guidance on who carries out risk assessments and how. Public confidence in the risk-assessment process needs to be enhanced. And beyond this, there is a need to recognise and outline a distinct step in the regulatory process. Developing this framework is an exercise that falls somewhere between science and governance—it is not the realm of science alone.

The legal effect of the precautionary principle

Outside the international context, the precautionary principle remains difficult to apply in domestic tribunals, and its effect as a legal principle at the national level should not be exaggerated. In contrast, the body of international environmental law and policy contains many formulations of the precautionary principle. In this international context, it can at the very least be claimed to constitute an emerging principle of international environmental law. And at best, a good argument can now be made that the precautionary principle has become a general principle of international environmental law.

The most far-reaching formulations of the precautionary principle can be found in international agreements that require proof of no harm before proceeding with a potentially harmful activity. In other formulations, the principle is defined so as to include a subordinate clause requiring precautionary action to be cost effective. The climate change convention, for example, contains this kind of formulation. Different interpretations of these kinds of subordinate clauses are possible—for example, by placing a high price on inaction, action now may become cost effective. Conversely, if a country places a relatively low price on inaction, the cost of taking precautionary action may be considered excessive. This range of possible interpretations of subordinate cost-effectiveness provisions makes it possible for states with very different perspectives on the substantive application of the precautionary principle to reach agreement.

WTO rules and applying the precautionary principle

The public concern now associated with decision-making in the face of scientific uncertainty has grown considerably in recent years. The fundamental principles of international trade law have not caught up. GATT Article XX for example—which includes environment-related exceptions to GATT rules—was written in the 1940s, at a time when scientific uncertainty was not such a key policy issue. Article XX was simply not designed to draw effective balances between trade and other policy objectives in the face of uncertainty.

The precautionary principle potentially interacts with the rules of the multilateral trading system in three main ways:

- When WTO rules have an impact on domestic regulation. Here the issue is one of finding the proper balance between trade and precautionary disciplines. To what extent will dispute panels in the future be prepared to look inside the national regulatory process? For the WTO, the best approach to tackling precautionary measures lies with the so-called deference principle, in the idea that the WTO should accord deference to the policy choices of its members.

- Via the link between the rules of the multilateral trading system and general principles of international law. Here the issue is to what extent the WTO rules and dispute settlement should take the precautionary principle into account on the basis that it has become a general principle of international law.

- In terms of the burden of proof applied in WTO dispute settlement. The precautionary principle tends to support a reversal of the burden of proof. The issue here is how to ensure that WTO rules do not provide incentives for exporting countries *not* to gather scientific evidence of risks associated with their exports—i.e., that there should be no presumption in favour of trade at the expense of proper science assessment.

An additional critical issue concerns the implications of WTO rules for new agreements based on precautionary approaches, such as the biosafety protocol negotiations or the Convention on Persistent Organic Pollutants. Here the concerns are currently largely political, recently demonstrated by the controversy surrounding proposals from the U.S., Canada and Japan that a biotechnology working group be established within the WTO. Some fear that this could transfer negotiations on genetically modified organisms from the biosafety protocol to the WTO. An additional concern arises from the insistence of countries exporting genetically modified crops that WTO rules should take precedence over any biosafety protocol. Many fear that this poses a threat to progress in clarifying the relationship between the WTO and multilateral environmental agreements.

Three areas of the WTO's rules are particularly relevant to the precautionary principle:
- The General Agreement on Tariffs and Trade (GATT) itself (mentioned above);
- The Agreement on Technical Barriers to Trade (TBT Agreement); and
- The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement).

The relationship between the TBT Agreement and the precautionary principle hinges on the requirement that measures be the 'least trade restrictive' necessary to meet desired policy objectives, taking into account the risks that non-fulfillment of those objectives would create. A dispute currently before a WTO dispute panel over a French asbestos ban will provide the first opportunity to interpret this requirement within the WTO's dispute-settlement system.

Unlike the TBT Agreement, the SPS Agreement's approach to curbing protectionism is based on science. The WTO SPS Agreement allows members to take protective measures in the face of threat from one of a number of specific causes (e.g. disease-causing organisms) so long as certain conditions are met, including that the measure is based on a risk assessment. The Appellate Body in the beef hormones case said that there must be a 'rational relationship' between a risk-assessment process and the measure under consideration. If this simply reflects a procedural requirement, it potentially accommodates the precautionary principle. If on the other hand it expresses a substantive requirement, it could have a chilling effect on precautionary measures for the future.

The SPS Agreement also foresees temporary measures in cases of scientific uncertainty. In circumstances where there is inadequate scientific evidence on which to base a measure, Article 5(7) of the SPS Agreement allows members to introduce measures under certain defined circumstances that effectively reflect a qualified approach to the precautionary principle. The substantive requirements that must be met by a measure falling within Article 5(7) were outlined by a WTO panel in the Japan Varietals case, including that the measure must be based on available pertinent information and that it must be reviewed within a reasonable period. Whether the restrictive requirements set in this case are appropriate remains to be seen.

Is the precautionary principle only relevant to the North?

The principle of 'common but differentiated responsibility' is familiar in the international environmental policy field, particularly in multilateral environmental agreements where funding for developing countries is often an important negotiating issue. But a real challenge is how to apply this principle in the WTO, where the related notion of 'special and differential treatment' has not been effectively operationalised.

The SPS Agreement places considerable emphasis on risk assessment and therefore on scientific evidence. But can it be assumed that all WTO members have the same capacity to access and assess science? Ensuring that developing countries have access to science and risk assessment presents a huge challenge. Without that access, developing countries may have real difficulties taking advantage of the opportunities that the SPS Agreement offers for precautionary action.

Where should disputes be settled?

The interests at stake in any given dispute over the relationship between the precautionary principle and trade are likely to be the same irrespective of where the dispute is settled. But different dispute-settlement processes may bring different instruments to bear. In the WTO the distinguishing feature is the possibility of recourse to trade sanctions by a 'winning' complainant against the country imposing the WTO-illegal, trade-restrictive measure.

Choosing the WTO as the forum in cases involving environment or health and safety (as the U.S. and Canada did in the beef hormones case) may do the WTO a disservice, by forcing its dispute-settlement system to tackle cases that its rules are ill equipped to deal with.

Nonetheless, the environment and trade interface remains fraught with 'Baptist/bootlegger' coalitions—relatively few environmental cases have no real economic interest behind the disputes, or no genuine advocates of environmental protection. For example, the potential disputes around genetically engineered food—highly significant from an environmental perspective—can from an economic perspective be characterised as disputes about segmentation or non-segmentation of markets.

There is currently no rational basis for allocating jurisdiction between different tribunals—for example, multilateral environmental agreements, the WTO, and the International Court of Justice. Within the WTO, one way to address the issues is to make more use of mediation and other alternative dispute-resolution techniques that allow a broader range of considerations to be taken into account than in more adversarial approaches to dispute settlement.

Is there a need for guidelines on the precautionary principle and trade?

Some people argue that guidelines need to be developed on the precautionary principle and trade to prevent it from being invoked in support of protectionism. Others are nervous of moves to negotiate the proper delineation of the precautionary principle in the WTO. Instead, they suggest that WTO dispute settlement should consider the wealth of existing material on the precautionary principle case by case.

Eventually, many consider that it will be essential to the operation of the WTO to contain an effective set of provisions on the environment. But, for the time being, many of the same commentators see a real risk of abuse if guidance or rules on the application of the precautionary principle are developed solely within the WTO. For the future, a major challenge for the WTO will be to avoid having to effectively make determinations on 'right' and 'wrong' on the scale from risk identification and assessment through to risk management and scientific assessment.

In the run-up to the Millennium Round, the EU proposed seeking clarification between a number of environmental principles and the rules of the multilateral trading system, including between the SPS Agreement and the precautionary principle. If one accepts the argument that there is a need for simple, well thought-out, practical guidelines on applying the precautionary principle, suggested criteria for the application of the principle might address:

The role of science: that measures need to be based on a risk assessment.

Proportionality: that action should be proportionate to the seriousness of the risk, and moderated by the degree of uncertainty. Severely restrictive action should not be automatically justified.

Erring on the side of safety or caution: that where there is scientific uncertainty, there should be a tendency to err on the side of caution.

Cost-benefit analysis: that the costs and benefits of taking or not taking action should be considered.

Review: that action should be reviewed in the light of scientific developments.

Transparency: that it is essential that measures and the processes leading up to their adoption are transparent.