

GENERAL AGREEMENT ON

TARIFFS AND TRADE

RESTRICTED

TRE/W/13

29 June 1993

Special Distribution

Group on Environmental Measures and International Trade

THE TRADE EFFECTS OF ENVIRONMENTAL MEASURES

Note by the Secretariat

1. This note is intended to be used as one element of input into a case-by-case approach by delegations to examine consistently and from a suitably comprehensive perspective the trade effects of particular environmental measures in order to determine priority areas for further discussion.
2. It responds to requests from delegations for an outline analysis of the trade effects of new forms of packaging and labelling requirements which the Group has been examining under Item 3 of its Agenda. It was suggested that the analysis might also be used to examine the trade effects of other environmental measures which have been raised in the course of the Group's discussions under Agenda Item 2. The analysis is drawn from the discussions that have taken place in the Group.
3. An analysis of this nature responds to the terms of Agenda Item 3, but it is partial. As several delegations have noted, it does not take into account the effectiveness of particular policy instruments in achieving environmental objectives, and the potential trade effects identified should not necessarily be considered adverse or to be avoided.

General considerations

4. While many environmental measures are likely to have no significant effects on trade, those that do can have complex trade effects. Few generalizations can be made about the likelihood of any particular measure creating, diverting, or restricting trade in the absence of information about the particular circumstances under which it operates.
5. One reason is that few environmental measures are applied in the form of pure border restrictions. Those that are, of course, would appear unambiguously to restrict trade. However, most take the form of internal measures, such as taxes and charges or technical regulations and standards, which affect market access and the conditions of competition for all producers, both domestic and overseas.
6. The trade effects of such measures are hard to predict. For example, raising environmental standards in a small, open economy may encourage imports of products that already meet the new standards and reduce the market share of domestic producers who are unable to adjust their production quickly or cost-effectively enough. Alternatively, overseas suppliers may feel it is not commercially viable to adapt their products to meet the new standards, because of resource or scale constraints, and domestic producers would then gain effective control of the market.

7. Many factors can affect the outcome. Those that would appear to warrant particular attention are: (i) policy-induced discrimination against overseas suppliers; (ii) lack of full and timely transparency for overseas suppliers. This is of particular importance in the case of voluntary measures, such as eco-labelling; (iii) market characteristics, such as size and openness to trade (a small market may dissuade overseas suppliers from undertaking product changes to maintain market share, a large market may encourage them to make the effort, and a market of global importance may cause changes in standards in other markets), proximity to overseas suppliers (long-distance suppliers may be particularly vulnerable to restrictions on product packaging), industry concentration, product substitutability and consumer preferences; (iv) which specific products the measures apply to; (v) environmental resource endowments and constraints among domestic and overseas suppliers; and (vi) the availability of technology needed to meet new product standards.

8. The effects of economic instruments (such as taxes) are likely to be more predictable than those of regulatory measures. In a market economy, policies which seek to alter consumer or producer behaviour through prices are more efficient than regulatory measures for both environmental and trade purposes. They are more transparent, they are likely to have more uniform, less distorted trade effects, they are more likely to avoid problems of information failure, and they hold the important advantage of permitting market forces to allocate resources efficiently again, after the initial price adjustment has occurred and expectations have stabilized, so that changes in comparative advantage over time will be fully reflected once more in market conditions. By and large, they are less likely than regulatory instruments to upset existing market shares among domestic and overseas suppliers. Even so, their specific trade effects will depend upon a number of factors, including which products they are levied on and whether those products are supplied predominantly through imports.

9. In the case of regulatory measures, their sheer variety in different markets can act as a drag on trade growth. Their specific trade effects will depend crucially upon how they are formulated and administered; this is examined in more detail below. Among the more important factors to take into account are that environmental measures are normally designed with local environmental conditions and resource constraints in mind.

10. Policies applied in combination can result in particularly complex trade effects (e.g. a refundable deposit charged on re-fillable packages in combination with a disposal tax charged on non-refillable packages and a ban on certain types of packaging). It is difficult to take this into account in a general way, and it would be better handled at the stage of case-by-case analysis of particular measures by the Group.

Potential trade effects of certain categories of measures

11. The following paragraphs provide a more detailed analysis of the potential trade effects of a number of categories of measures that have been discussed in the Group in connection with Item 3 of the Agenda. Other measures could be taken up and analysed by the Secretariat in the same way if the Group feels that such an exercise would be useful.

I. Internal taxes and charges

12. Product taxes and charges do not create border restrictions as long as they are levied at the same level on domestically produced and imported products.

13. They will reduce demand for the product. However, other things being equal, imports will decline in proportion to the overall decline in domestic market sales. The scale of the effect will depend upon the product's price elasticity of demand; a high tax or charge may cause a large reduction in total sales, including imports.

14. More significant trade effects may derive from product substitution. If the taxes fall mainly on products that are imported, and domestic producers hold the major market share for untaxed product substitutes, consumption patterns are likely to shift away from imported products. An important consideration will be underlying rates of border protection for the products in question.

15. Taxes and charges on components (including packaging and waste handling services) will have broadly similar effects, but on trade in components as well as in products, if they are passed on to consumers as a product tax. The trade effects may be more significant because of the close relationship that can exist between the use of certain components and national resource endowments, but this may be tempered by the greater scope that exists in general for substitution of components than of products.

16. Circumstances that may lead to a reduction of imports are if the taxed components are more readily available and less expensive for overseas suppliers (e.g., new rather than recycled material), they are specifically needed by overseas suppliers (e.g., long distance transport packaging), the tax is high in relation to the total value of the product (e.g., plastic beverage bottles), or alternative and cheaper means to meet environmental standards are available more readily to domestic producers (e.g., gaining access to local waste recycling systems, or using untaxed, refillable product containers).

17. Fixed fees and charges that are paid by domestic producers and importers (e.g., disposal charges, administrative and testing charges, membership fees in labelling or waste handling schemes) may be high in relation to any individual supplier's share of sales on the market. To the extent that overseas suppliers are at the small end of the scale in this respect, the per unit cost may be prohibitive, particularly where they face similar fees and charges in their other export markets.

18. Taxes and charges levied on the production process in order to reduce production pollution would not normally be levied on overseas suppliers. Levying them instead on imported products as a surrogate process tax could have significant trade effects. Imports of products made using the taxed production process would be displaced by untaxed substitutes from other overseas suppliers or domestic producers. Which of those two would gain the greater market share will depend upon how costly it is for overseas suppliers to adopt and compete effectively with a production process that is likely to be the dominant industry standard for domestic producers.

That may involve access to specialized inputs, patented technology, or a particular mix of other factor endowments.

19. Finally, product or process taxes and charges may be rebated at the border on exports. In the case of product taxes this will ensure that exports do not fall below their pre-tax levels. In the case of process taxes, however, it may encourage a shift by domestic producers away from domestic market sales and towards export sales.

II. Deposit-Refund Systems

20. If a product or package is not returned and the deposit is foregone (or if the consumer views the deposit as a one-time tax), these systems can have the same trade effects as taxes on products or components.

21. Otherwise, their trade effects will derive primarily from the availability of access for and costs to overseas suppliers of participating in domestic waste retrieval and recycling schemes. These can be significant and are discussed further below. One factor specific to a DRS is that brand name producers with distinctive packaging (e.g., fizzy drink bottles) may be forced to set up their own retrieval and recycling systems. The trade effects of a DRS can also be significant if non-returnable product containers and packages are an important condition for the competitiveness of imported products (e.g., allowing lower transport costs and avoidance of costly retrieval systems).

III. Technical regulations and standards

22. A wide variety of environmental measures are applied in the form of technical regulations and standards. The most relevant here are product standards, which concern the physical characteristics of a product and its components, including packaging, labelling and handling as waste, and process standards which concern how a product is made.

23. The potential trade effects of product standards are generally well understood from the operation of the Technical Barriers to Trade Agreement. Most obviously, the enforcement of technical regulations, which are mandatory, will create a border prohibition on imports of sub-standard products; standards, which are voluntary, do not create direct border restrictions, but may nevertheless create market access constraints if consumers are hesitant about buying non-standard products or if non-standard products cannot be used with other products as part of a system or as components in final goods.

24. Beyond that, their trade effects will depend largely upon how they affect the conditions of competition between domestic and overseas suppliers, in particular by creating obstacles to entry into a market. That can be influenced by many factors, in particular how products are tested to establish their conformity with standards and how product standards are set and administered.

25. Common to all forms of technical regulations and standards is the significance of the trade effects that will result from policy-induced discrimination and lack of full and timely transparency.

26. Excessively strict product testing and certification procedures can dissuade overseas suppliers from entering a market because of their uncertainty about prospects of gaining market share and maintaining it over the medium term, and cause shipment delays or interruptions which may result in the deterioration of perishable products, reduced deliveries to the market, and loss of consumer confidence and goodwill. Testing and certification procedures can also be costly, especially when repeated testing is required to maintain market access.

27. The way in which product standards are set can affect trade to the extent that it proves less costly or otherwise easier for domestic producers than for overseas suppliers to meet them. Local conditions are likely to be reflected to some extent in national product standards, and that alone may enhance the competitive edge of domestic producers. The possibilities for standard setting procedures to create market entry barriers for overseas suppliers can be increased when input from local industries is a dominant part of the process; in the extreme this can lead to deliberate lobbying to create entry barriers.

28. Even assuming that standards are non-discriminatory and fully transparent, their trade effects can be exacerbated if they require particular inputs of goods, services or technology which are available on more favourable terms to domestic producers. Secondary trade effects may arise if overseas suppliers are forced to source inputs from domestic producers in order to meet local product standards.

29. Trade effects can be exacerbated also if national product standards differ so widely or in complexity from product standards elsewhere that overseas suppliers are deterred on technical or economic grounds from establishing special production runs to serve the market. This is likely to be of more importance the smaller is the overall size of the market or the share of it that overseas suppliers can hope to win. However, the size of production runs is only one element of production costs, and not necessarily the decisive one. The presence of high underlying border protection of the domestic market will also be important in this context.

30. Differentiated standards at the national, regional and local levels can magnify compliance costs for overseas producers.

31. Process standards will create trade effects for overseas suppliers if market access for their products depends upon them meeting process standards. The trade effects will be broadly the same as those of product standards, but with the additional possibility that it may not be feasible or cost efficient for overseas suppliers to meet certain process standards, for technological or resource availability reasons. Even if they can meet the standards cost-effectively, they may encounter high compliance costs from testing and certification through on-site inspection. Secondary trade effects can result from process standards where overseas suppliers have to change their process and production methods.

32. More details of certain specific technical regulations and standards are given below.

(i) Voluntary eco-labelling programmes

33. Voluntary eco-labelling schemes are generally sponsored privately, and may affect trade if they are not made fully transparent in a timely fashion to overseas suppliers.

34. They operate as marketing tools and are designed to give a competitive advantage to labelled products by drawing attention to their environmental qualities; they may convey indirectly the impression that unlabelled products do not have positive environmental qualities whether or not such products have been assessed in that regard.

35. The trade impact will depend substantially on how the schemes are administered. Most depend upon producers and consumers selecting which product categories will be labelled and what environmental criteria the products must meet to be eligible to use the label. Trade can be affected by the extent to which the selection process favours product attributes that can more easily or cheaply be met by domestic producers. Effective access to labelling schemes is essential to overseas suppliers, both in respect of their having the opportunity to participate in the selection process and their products having access to testing and the awarding of labels on the same terms as domestically produced goods.

36. The criteria that a product must meet to obtain a label are generally the most important aspect of a labelling programme. While many schemes are based in principle on life-cycle analysis of a product, in practice most tend to highlight only a few of its environmental qualities. The selection may (deliberately or not) favour product characteristics that can be met more easily by domestic producers since the criteria will normally reflect local environmental conditions such as raw material availability, local environmental resource constraints, and local preferences for specific environmental attributes of products.

37. Criteria based on process standards may prove particularly difficult (and even environmentally inappropriate) for overseas suppliers to meet, and they raise a number of complex issues. They may restrict overseas suppliers' access to the label if their own preferred process methods do not coincide with those desired in the domestic market, or if establishing that they meet the process standard involves them in substantial additional cost.

38. Fees charged for the award of eco-labels may be costly per unit of sales for small overseas suppliers.

39. A proliferation of national eco-labelling programmes, each with different criteria, may lead to such market fragmentation that overseas suppliers may be unable, for resource or capacity reasons, to adjust products or production methods to satisfy all the different criteria. They may then be forced to abandon certain of their export markets.

(ii) Waste handling requirements

40. Overseas suppliers may encounter several disadvantages in meeting waste handling requirements.

41. In view of the generally longer distances to markets that they face, they are likely to find it necessary to use greater quantities of transport packaging than their domestic competitors, and this will impose additional costs on them which may result in significant differences between their product prices and those of their domestic competitors.

42. Overseas suppliers may have to meet a variety of different packaging requirements in the different markets they supply. Important differences can exist in such areas as specifications of materials of which packaging can be made, recovery, re-use and recycling targets, and the characteristics of recovery or return systems. This may lead to the same effects as in the case of eco-labelling (paragraph 39).

43. Trade may also be affected by the particular packaging requirements that are chosen, the way they are formulated, or the way they are applied in practice.

44. Packaging requirements are likely to be chosen and formulated with the most common forms of domestically-generated packaging waste and with domestic waste disposal facilities and priorities in mind. Where these do not correspond to the preferred form of packaging of overseas suppliers, they may result in restrictions on imports of products.

45. This would arise most obviously where the kinds of packaging used or preferred by overseas suppliers, for reasons of national resource endowment, technological capacity, or production or transport costs, are banned in the domestic market. Also, differences in dimensions, design and technology may prevent the re-use of imported packaging locally. The result may be that the products of overseas suppliers are also banned effectively from the local market, or overseas suppliers may be forced to incur the additional costs of recovering and "taking-back" all of their banned or non-reusable packaging.

46. Beyond that, adapting the packaging to local requirements may impose additional costs on imported products in excess of those imposed on domestically produced products and leave them at a price disadvantage in the domestic market.

47. Overseas suppliers are likely to have to rely upon their local distributors or independent local waste disposal services to undertake waste recovery and disposal for them. In this respect, they may find themselves at a disadvantage because their local distributors are unwilling to undertake waste disposal services for them (particularly when they do not have to do so for domestic suppliers who dispose of their own packaging waste), or because they face greater difficulties and/or higher costs in accessing local waste disposal services.

48. Difficulties in accessing local waste disposal services may arise for several reasons. First, there is a large variety of non-standard export packaging in use in international trade, and no realistic prospect that some varieties will find the necessary facilities for collection, sorting and recycling at their final destination. Without access to the right to indicate to distributors and consumers by a label on their packaging that

it will be recovered (e.g. with a "recirculating arrow" label), overseas suppliers may find that they face a considerable disadvantage in marketing their products.

49. Even where the necessary local facilities exist, there may be conditions associated with using them that are more difficult for overseas suppliers to meet. Collection, sorting and re-use or recycling programmes, whether operated by public or private concerns, tend to have the following features: they deal with only certain types of packaging waste (other types may be banned altogether, or remain the responsibility of suppliers to dispose of, or otherwise face dissuasively high disposal charges); a fee is charged for access to the programme, which involves typically the right to carry on the packaging a label that indicates it will be accepted in the programme; samples of packaging must be tested and approved before being accepted into the programme. In many instances, the programmes are run by domestic industry associations, which it may be more difficult for overseas suppliers (particularly small ones) to access effectively.

50. As was noted in TRE/W/9, the particular problems that may arise for overseas suppliers are:

- (i) small suppliers may find that the costs associated with joining such a programme (membership subscription and fees, as well as any additional production costs involved in making their packaging acceptable under the programme) are high in relation to their total sales in that market;
- (ii) overseas suppliers who use more packaging per unit of product than their domestic counterparts because of the longer transport distances involved may find the programmes more costly, since charges typically depend upon the volume or weight of packaging handled;
- (iii) packaging production industries on which overseas suppliers rely may not be able to meet the standards set by the programmes. Meeting requirements that packaging be made fully or partly from recycled material, for example, may be difficult for overseas suppliers. Similarly, programmes may accept only those types of plastic or metal packaging that are customarily used by domestic suppliers, but which may not be readily available to overseas suppliers;
- (iv) programmes may require that packages be bar-coded to identify their constituent materials. As these codes typically vary from country to country, it may be difficult and expensive for overseas suppliers to apply the correct bar-codes in each case;
- (v) overseas suppliers may face greater difficulties in submitting their packaging for evaluation and certification, and in obtaining acceptance of it in the programme. This may be true particularly for certification schemes which require on-the-spot inspection of production and packaging facilities;

- (vi) it may be felt that confidential business information would have to be disclosed in order to gain access to a labelling scheme or recovery programme;
- (vii) by and large, it would appear that packaging programmes do not make any special provisions for dealing with packaging waste from developing country suppliers, who are likely to be the source of much of the non-standard types of packaging that end up in the marketplace.

51. A significant proportion of packaging, and particularly export packaging, will not be recovered, re-used or recycled at its final destination. In order to keep the need for final disposal of such waste to a minimum, dissuasively high charges may be imposed for incineration or landfill. These will fall most heavily on overseas suppliers to the extent that their packaging is of a non-standard variety for which alternative disposal possibilities are not available.

52. In summary, recovery, re-use and recycling requirements, as well as handling and return systems, hold significant trade-distorting potential. The competitiveness of imports may be undermined either by the cost of returning waste material to its country of origin, or the costs of participation in, and the factors hindering access to, the importing country's handling and recycling systems.

53. Recovery and recycling laws may lead to increased exports of waste packaging materials for disposal or re-use if the recycling industry in the country applying the laws has insufficient capacity to recycle all of the recovered wastes. One concern in this regard involves increased exports of waste to developing countries.

54. They may also lead to increased trade in packaging material from producers in countries applying new forms of packaging requirements to suppliers in other countries who need the packaging to gain market access for their products.

(iii) Content requirements

55. Regulations specifying materials that must be present in products or product components (including packaging) will cause border trade restrictions on products that do not contain the required materials.

56. More generally, the materials specified are likely to be tailored to domestic resource availability, technology, or preferences, and this will not necessarily or even probably correspond to materials which overseas suppliers would prefer to incorporate in their products by virtue of their own resource endowments, technological capabilities or economic situation. In particular, the materials (e.g., recycled material in packaging) may not be physically or economically available in the country of export, and in order to retain market share the overseas supplier may be forced to import them, including from the country imposing the legislation. This may cause secondary effects on trade in the materials concerned.