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UNCTAD'S WORK ON ENVIRONMENTAL GOODS AND SERVICES: BRIEFING NOTE

Paragraph 31(iii)

The following Briefing Note is being circulated by UNCTAD as a background for the oral statement that it will make at the 12-13 October meeting of the CTESS.

1. There is a considerable body of work by UNCTAD that predates the WTO 4th Ministerial Conference, but is relevant to the negotiating mandate provided for in paragraph 31(iii) of the Doha Ministerial Declaration (DMD). For example, document WT/CTE/W/96 summarises the outcomes of the 1998 UNCTAD Expert Meeting on *Strengthening Capacities in Developing Countries to Develop their Environmental Services Sector*. Work on environmentally preferable products (EPPs), although not carried out with the negotiations in mind, has also been referred to in discussions and studies on the implications of paragraph 31(iii) of the DMD.

2. Following the DMD and requests for assistance from developing countries, UNCTAD has attempted to link its enquiry into environmental markets, trade flows and barriers to trade to issues more specific to the negotiations such as definitions, criteria, classifications, and the request-offer process. A series of technical cooperation activities, in particular studies and policy dialogues under the DFID¹-funded project on *Building Capacity for Improved Policy Making and Negotiations on Key Trade and Environment Issues*, were initiated with a view to helping developing countries assess their prospects and identify environmental goods and services of special interest to them, including in the context of the negotiations. UNCTAD's participation in WTO Regional Trade and Environment Seminars and national workshops organized by Member States has provided an opportunity to contribute to the exchange of views with and among developing countries on various approaches applicable to the negotiations as well as on the domestic front. The UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development (CBTF) provides yet another vehicle for capacity building activities. UNCTAD's work on environmental services benefits from ongoing cooperation with the OECD within the framework of a project on trade in services, which aims at producing sector-specific checklists to help WTO Members manage the request-offer negotiations under GATS.

3. Many of these activities contributed to, and benefited from, an Expert Meeting, entitled *Definitions and Dimensions of Environmental Goods and Services in Trade and Development*, organized by UNCTAD in July 2003. The UNCTAD secretariat had an opportunity to inform the Special Session of the CTE (CTESS) about the meeting in its statement of 19 April 2004 (TN/TE/INF/5, 6 May 2004). At the request of a number of delegations, the Chairman's Summary of the meeting has been made available to the present session of CTE (document TN/TE/INF/6).

¹ Department for International Development of the United Kingdom.

4. A monograph published in 2003 and entitled "*Energy and Environmental Services: Negotiating Objectives and Development Priorities*" and the first issue of the UNCTAD Trade and Environment Review, with its two articles on environmental goods and services, represent the most recent examples of analytical work by UNCTAD.

5. In its work, UNCTAD treats environmental goods and services as more than a trade issue, to be seen in the broader context of sustainable development. UNCTAD's eleventh quadrennial conference, UNCTAD XI, which took place in Sao Paolo in June this year, has re-confirmed this development-oriented approach to promoting the mutual supportiveness of trade and environment policies. It explicitly called for "efforts to identify and promote environmental goods and services of actual and potential interest to developing countries".²

6. At the UNCTAD Expert Meeting, experts outlined a number of potential benefits that improved access to environmental goods, services and technologies could bring for environmental conditions and resource management in developing countries. At the same time, they stressed the need for the negotiations to take fully into account the export interests of developing countries.. These arguments are in line with paragraph 16 of the DMD, which states that the negotiations "shall aim to eliminate barriers to products of export interest to developing countries". The Declaration also re-affirms the Guidelines for the services negotiations in that they "shall aim to increase the participation of developing countries in trade in services".³

7. This note describes some findings of UNCTAD's work that may be of relevance to the discussions in the CTESS on environmental goods (EGs), particularly with respect to product coverage, including issues specific to EPPs, tariffs and non-tariff barriers (NTBs), and the interface between definitions and modalities. It also touches on the subject of environmental services and future work.

I. PRODUCT COVERAGE: STATISTICS

8. By default rather than by design, the APEC and OECD lists have been used as a starting-point for discussions on product coverage. The APEC list lends itself more easily to these discussions as it has been compiled on the product-by-product basis and contains only those goods that can be distinguished by Customs.

9. UNCTAD has carried out a statistical analysis of trade in products on the APEC and OECD lists, at the 6-digit level of the Harmonized Commodity Description and Coding System (HS)⁴ and for the year 2000. There are caveats to this analysis. Statistics generated at the 6-digit level of the HS tend to overestimate significantly trade flows, as many EGs are defined through expositions ("ex" items). A few highlights from this analysis should nevertheless be of interest.

10. The EGs on the APEC and OECD lists, i.e. the part of the OECD list for which HS codes can be found, represent less than 6 per cent of the value of world trade in non-agricultural goods. These goods constitute no more than 3 per cent of developing country exports in value terms, and 6 per cent of their imports. All developing countries for which trade data are available are net importers of EGs

² Report of the United Nations Conference on Trade and Development on its eleventh session, paragraph 87.

³ Guidelines and Procedures for the Negotiations adopted by the Council for Trade in Services on 28 March 2001 form the basis for continuing the negotiations, with a view to achieving the objectives of the General Agreement on Trade in Services, as stipulated in the Preamble, Article IV and Article XIX of that Agreement.

⁴ For details see a Conference Room Paper (TD/B/COM.1/EM.21/CRP.1), prepared by the UNCTAD Secretariat for the Expert Meeting on Definitions and Dimensions of Environmental Goods and Services in Trade and Development, Geneva, July 2003.

on the APEC list. Only two developing countries are net exporters of EGs on the OECD list, but this is due to exports of one or two chemical products. Developed countries account for over 80 per cent of world exports, while the developing countries' share is only around 15 per cent. Exports from the top nine exporting countries represent 90 per cent of total developing country exports. African countries' exports of products on the APEC list are less than US\$ 80 million. South-South trade may be relatively more important, particularly in Asia.

11. A more detailed analysis shows that developing countries may have export opportunities in some items. Developing countries as a group are net exporters of 26 out of the 182 EGs on the OECD and APEC lists. However, the analysis of the 20 largest developing country export and import items, accounting for two thirds of their trade in products on both lists, reveals that in most cases HS descriptions start with "other" or "parts of", suggesting that the "environmental good" fraction of trade in these items may be small.

12. The high share of multiple use products in their imports implies that developing countries may face a difficult trade-off between reduced tariff revenues and not-so-certain environmental benefits. National consultations with the industry would be useful in this context. "Complementary" and "development" lists may provide some flexibility to developing countries in discussions on possible lists of EGs, in conjunction with issues relating to modalities (see below).

13. The average bound rates on listed products range from 30 to 40 per cent in developing countries; however, the average applied rates are considerably lower - approximately 10 per cent. Both bound and applied rates are uniformly lower in developed countries, with the applied rates being at a nuisance level.

II. PRODUCT COVERAGE: PROPOSALS

14. A number of proposals have been advanced in discussions at the WTO and at the UNCTAD expert meeting. One coverage-related issue that has come up repeatedly is the use of criteria based on processes and production methods (PPMs) in cases where other means of product differentiation are not available. There is a broad convergence of views that such criteria should be avoided.

15. Most proposals tend to favour EGs in the *pollution management* category: end-of-pipe pollution management equipment, except for items with significant other industrial uses; chemicals and catalysts for water and waste treatment; monitoring and testing equipment specifically designed and made for environmental purposes; materials and equipment for remediation and clean-up. This is not surprising considering that these EGs are derived from a stand-alone, absolute classification criterion (end-use), closely associated with environmental services and cover a great number of HS codes.

16. Some proposals include *cleaner technologies*, which are not necessarily associated with the delivery of environmental services, and cover fewer HS codes.

17. A proposal has been made to include within the scope of the negotiations *entire plants or technology systems*, which are, by definition, devoid of multiple-use and relativism in time problems. Examples of entire plants that could be considered are numerous: recycling plants, plants for waste management, sulphuric acid recovery plants, plants for co-generation of heat and power. The same approach could apply to entire technology systems, e.g. oil recovery systems. In many cases there appears to be a possibility to classify entire technology systems under a single HS heading. However, more work is needed to find the appropriate tariff headings or to create new ones.

18. Low carbon (*natural gas*) or carbon-free (*renewables*) technologies and equipment constitute another important dimension. As generating sets based on natural gas or renewable energy

increasingly replace the coal- and oil-fired capacities, they are set to become the fastest growing "environmental sector". PPM-related concerns are not necessarily a problem in including these goods and technologies within the scope of the negotiations as some of them are already classified in the HS, while for others environmental claims may be supported by the fact that they offset a lot of the coal and oil energy.

19. At the July 2003 expert meeting by UNCTAD, arguments were made for the inclusion of clean fuels such as methanol and ethanol and a broader range of renewable energy goods than the OECD and APEC lists indicate, including devices, products and systems related to the production, use and maintenance of renewable energy equipment. The only exception made was large hydraulic turbines, known for their adverse environmental implications. These arguments tally with the findings of the International Energy Agency Secretariat. Its Renewable Energy Unit has identified certain HS codes on the APEC list as currently valid for renewable energy equipment, e.g. solar collectors, PV panels, wind-chargers, and argued for the inclusion of other items, e.g. small hydro-electric plants⁵, photovoltaics⁶ and biomass⁷. These other technologies and equipment might have been omitted from the APEC list as they relate to the updated HS codes introduced at the beginning of 2002.

20. There is no universally accepted understanding or concept of *environmentally preferable products* (EPPs). UNCTAD has defined EPPs as products that cause significantly less "environmental harm" at some stage of their "life cycle" than alternative products that serve the same purpose.⁸ As mentioned above, UNCTAD's work has not been carried out with the negotiations in mind, but focused on identifying trading opportunities for developing countries and strengthening their capacity to sell in niche markets.

21. Experts have made claims for a broad range of EPPs: organic agricultural products; tropical produce (link between geographical areas and biodiversity); certain forestry products (environmentally friendly PPMs, biodiversity conservation); natural fibres such as jute, coir, ecological packaging products (based on bio-resources, biodegradable); recyclable products (environmental protection); bio-pesticides (environmental protection), non-timber forest products (based on bio-resources and traditional knowledge), and products made using natural dyes (non-toxic).

22. If made in the context of the WTO negotiations, some of these claims may give rise to problems: recourse to PPMs as the sole criterion (sustainable agriculture, fishery and forestry), the absence of a negotiating track (agricultural EGs, e.g. organics, ethanol); and difficulties in transposing product characteristics into HS codes (most EPPs). Another limiting factor is the capacity constraints of customs to administer products subject to special treatment.

23. Certain categories of EPPs, such as "inherently environment-friendly products" (i.e. those not based on PPM-related criteria), could be included within the scope of the negotiations, provided this does not lead to new NTBs and additional costs, e.g. for certification. Discussions at the UNCTAD

⁵ Hydraulic turbines and water wheels of a power not exceeding 1,000kW or 10,000kW.

⁶ Photovoltaic generators DC and AC.

⁷ Mechanical stokers, including their mechanical grates, mechanical ash dischargers and similar appliances.

⁸ Less environmental harm is generally established according to the following criteria: (a) use of natural resources and energy; (b) amount and hazardousness of waste generated by the product along its life cycle; (c) impact on human and animal health; and (d) preservation of the environment. For more information on the concept and criteria of EPPs.

expert meeting provided examples of tariffs and NTBs affecting trade in EPPs, with NTBs being relatively more important.⁹

24. Ongoing UNCTAD work covers biotrade and trade in organic agricultural products. The Biotrade Initiative seeks to promote trade in goods (and services) derived from the sustainable use of biodiversity, including natural products used as inputs for cosmetics and pharmaceuticals, medicinal plants, natural fibres and essential oils, among others. The Initiative is linked to the call for incentive measures in the context of the Convention on Biological Diversity. The International Task Force on Harmonization and Equivalence in Organic Agriculture, created jointly with the Food and Agriculture Organization of the United Nations (FAO) and the International Federation of Organic Agriculture Movements (IFOAM), focuses on the existing organic agriculture standards, regulations and conformity assessment systems with a view to facilitating trade and access of developing countries to international markets.

25. In principle, certification and eco-labelling schemes lend themselves to a positive list approach and, in some cases, constitute the main or the only mechanisms for product differentiation. However, they give rise to concerns about NTBs, eco-labelling being seen as more of a problem.

III. PROCESS AND MODALITIES

26. So far there is no agreement regarding the sectorial modality. Possible negotiations on EGs are bound to be different from other possible sectorial deals in the NGMA, which require the reduction of tariffs in the same and proximate HS chapters. Any agreement on EGs will necessitate dealing with very diverse product groups, based on the recognition of their enabling, service-like role, a recognition supported by the link with the negotiations on environmental services made in paragraph 31 (iii) of the DMD. Certain inherently environment-friendly products of export interest to developing countries may also need to be considered.

27. This may make the negotiations on EGs similar to, but more complicated than those that led to the Information Technology (IT) Agreement. Unlike the IT Agreement, where a large number of developing countries that had eventually signed on were not, and did not expect to become exporters in the near future, the negotiations under paragraph 31 (iii) are implicitly linked to paragraph 16 of the Declaration, which states that the negotiations "shall aim to eliminate barriers to products of export interest to developing countries". This dualism is at the heart of negotiating problems such as product coverage and customs classification.¹⁰

28. Some developing WTO Members have been proposing special arrangements that would take into account their development status, their interests as exporters, and ambitions to develop environmental industries of their own. Product coverage may be part of these arrangements, and so can tariff phase-outs, where it may be agreed that longer phase-out periods could be granted on a product-by-product and country-by-country basis. For instance, WTO Members can designate an appropriate number, to be negotiated, of tariff lines to be treated as sensitive products. These products can be put on a *development list* or a *complementary list*.

29. For practical reasons, liberalization at the HS 6-digit level seems the best option for those categories where EGs prevail. For those tariff lines where the picture is mixed, WTO Members could,

⁹ For illustrative purposes, report TD/B/COM.1/EM.21/CRP.1 examines trade data for products that may qualify as EPPs based on consumption and disposal characteristics; i.e., not based on their PPMs.

¹⁰ One lesson that can be drawn from the IT Agreement is that for customs purposes any EGs that make a possible list for tariff reduction have to be described in both physical characteristics (not end use) and HS codes. Therefore, modelling the common list of EGs for the negotiations will increasingly require – and rely upon – inputs from producers of EGs and customs authorities.

in principle, approach the World Customs Organization (WCO) with a request to establish new 6-digit codes that would be more specific to the EGs in question. The WCO is currently considering ways of shortening the implementation period for changes in the HS, and with time such requests may become easier to accommodate. Specifying EGs through "expositions" or at lower, e.g. 8 or 9-digit level, is bound to create problems at the implementation stage on account of the lack of harmonization and the risk of misclassification. This is the reason the ITA is moving away from this practice. In any case, the WTO can only encourage the use of codes at a level lower than the 6-digit, but cannot mandate it.

30. There are questions that would need to be addressed in including the various EPPs within the scope of the negotiations. Should they be treated the same way as other EGs, or is there a need for a different approach? Where to deal with agricultural EPPs - ethanol, organics, certain bio-trade products? The "July package" refers explicitly only to "... non-agricultural environmental goods covered in paragraph 31(iii) of the Doha Ministerial Declaration. (Annex B, paragraph 17). However, nothing prevents WTO Members from establishing a negotiating track for agricultural EGs if they choose to do so.

31. Given the developing countries' interest in EPPs, difficulties in capturing some of these in the HS, and the low tariffs that prevail with respect to these products, it may prove easier and more productive to refocus the negotiations on EPPs largely on NTBs.

32. Addressing regulatory impediments to trade in EGs, and more specifically EPPs, will certainly give greater complexity to the negotiations. NTBs are governed by various WTO disciplines.¹¹ Their incidence typically extends to several sectors. Barriers to trade relating to standards and technical regulations are often product-specific. WTO Members may choose to categorize NTBs affecting EPPs into those that are more issue-specific, e.g. TBT, customs procedures, rules, or more sector-specific, e.g. renewables, organics. In the short-term, there may be a need to focus the NTB dimension in the negotiations, e.g. to simplifying certification procedures for select few categories of EPPs or to trying a multilateral approach to some existing mutual recognition agreements. Discussions in the CTESS may help identify which NTBs need to be addressed in the negotiations as a matter of priority.

33. Some developing countries have argued for the need to clarify links between trade in EGs and transfer of environmentally sound technologies. Matters relating to technology transfer may be seen in conjunction with incentives provided for in Articles 66:2 and 67 of the TRIPS. The Working Group on Trade and Technology Transfer could look into the relationship between trade in EGs and the transfer of clean technology.

34. Discussions under paragraph 51 of the DMD could perhaps provide some guidance in dealing with specific concerns of developing countries relating to EGs that - for practical or systemic reasons - could not be adequately addressed under the mandate of paragraph 31(iii).

IV. ENVIRONMENTAL SERVICES

35. Environmental services differ greatly in market structure and behaviour, regulatory frameworks and technological development. In its work, UNCTAD distinguishes between (a) environmental infrastructure services, mainly related to water and waste management, (b) non-infrastructure, commercial environmental services, comprising most of the activities in CPC¹²

¹¹ In the case of certain EPPs, such as organic agricultural products, it may be difficult to reduce tariffs because tariff schedules do not separate organic and conventional products. However, organic programmes and standards have been notified under the TBT Agreement and standard-related concerns could be addressed in the WTO.

¹² United Nations Central Product Classification.

Division 94¹³, and (c) related services with an environmental component, classified under different divisions in the CPC, such as construction or engineering services.

36. For *environmental infrastructure services*, the overriding objective is building domestic regulatory capacity. *Commercial environmental services* are generally not subject to market access and national treatment limitations. These services tend to be knowledge-intensive and provided on an integrated basis, and the key issues here are: access to technology and know how, capacity building, certification and recognition of qualifications; and tied aid as a restriction on trade. *Services related to the environment* have multiple uses, and the questions of definition and coverage are as relevant to these services as they are to EGs.

37. At the current stage, the negotiations raise the following issues: progressive liberalization, especially for mode 3 and mode 4; assessment, updating the classification of environmental services; a common understanding of what is meant, in a commercial sense, by some proposed new categories of services such as biodiversity protection, remediation and clean-up of soil and water; a need for a clear picture of the extent and scope of subsidization of environmental services; government procurement; qualification and certification requirements for individual service providers; tied aid; and technology transfer. Proposals have been made to develop a model list that would include certain services not covered by W/120¹⁴, e.g. implementation of environmental auditing and management systems, evaluation and mitigation of environmental impacts, advice on the design and application of clean technologies. These proposals are accompanied by a call for dismantling regulatory barriers to the temporary movement of natural persons. Issues relating to *ecosystem services* have also been raised.

38. The UNCTAD expert meeting in July 2003 devoted an entire session to the liberalization of trade in environmental services and dwelled on issues of particular importance to developing countries such as classification, regulatory capacity, public monopolies and public-private partnerships. National studies have emphasized the importance of a strong regulatory framework as a pre-condition to liberalization.

39. Discussions at the expert meeting and project-based activities in Central America have revealed export potential in some developing countries in certain professional environmental services.

V. ONGOING AND FUTURE WORK

40. In accordance with its mandate, UNCTAD will continue assisting developing countries in identifying EGs representative of their developmental, environmental and trade interests. Special attention will be paid to the categories of that are most likely to provide "win-win" opportunities for developing countries, e.g. renewable energy goods and certain other categories of EPPs. This work will include the identification of NTBs affecting trade in these products. UNCTAD will also continue with its analytical and statistical work on general issues underpinning the negotiations.

41. With regard to environmental services, UNCTAD will continue to facilitate consultations at the national and regional level as well as with Geneva-based delegations. Such consultations, supported by national studies, have proved very useful as detailed knowledge of regulations, demand for environmental services and supply capacities is becoming more and more important to policy makers. In the medium term, and given the strong interest in Latin America, discussions on ecosystem services are also foreseen.

¹³ For example, site clean-up and remediation, cleaning of exhaust gases, noise abatement, nature and landscape protection.

¹⁴ The WTO Services Sectoral Classification List.

42. UNCTAD will also continue to promote opportunities for developing countries to produce and trade in environmentally preferable products and services, through capacity building, trade promotion and trade facilitation measures. This work is in line with the World Summit on Sustainable Development's call for actions to “[S]upport voluntary WTO compatible market-based initiatives for the creation and expansion of domestic and international markets for environmentally friendly goods and services, including organic products, which maximize environmental and developmental benefits through, *inter alia*, capacity-building and technical assistance to developing countries.” Work on the BioTrade Initiative, the International Task Force on Harmonization and Equivalence in Organic Agriculture, and the CBTF activities are especially relevant in this context.

VI. REFERENCES

Meetings and projects

- Expert Meeting on Environmental Preferable Products as a Trade Opportunity for Developing Countries, Geneva, December 1995
- Expert Meeting, Strengthening Capacities in Developing Countries to Develop their Environmental Services Sector, Geneva, July 1998.
- Seminar on Environmental Goods and Services, New Delhi, May 2003
- Regional seminars in Cuba, March 2003 (jointly with the Economic Commission for Latin America and the Caribbean), Dominican Republic, April 2004
- National workshops: Panama and Nicaragua, June 2003
- Materials at: www.unctad.org/trade_env/test1/projects/field.htm
- Expert Meeting on Definitions and Dimensions of Environmental Goods and Services in Trade and Development, Geneva, July 2003
- Roundtable on Trade for Sustainable Development, 17 June, during the 11th Conference of UNCTAD in Sao Paulo,
- BIOTRADE Initiative (promotes trade and investment in biodiversity-based products and services in developing countries to further sustainable development. (www.biotrade.org))
- Carbon Market Programme
- (http://r0.unctad.org/ghg/sitecurrent/carbon_mi/glossaries.html)
- The International Task Force (ITF) on Harmonization and Equivalence in Organic Agriculture
- (http://r0.unctad.org/trade_env/test1/openF1.htm)

Publications and studies

- Environmental Preferable Products (EPPs) as a Trade Opportunity for Developing Countries, Report by UNCTAD Secretariat, UNCTAD/COM/70, Geneva, December 1995
- Strengthening Capacities in Developing Countries to Develop their Environmental Services Sector, report by the UNCTAD secretariat, Geneva, July 1998
- Environmental Goods and Services in Trade and Sustainable Development, TD/B/COM.1/EM.19/2
- Report of the Expert Meeting on Definitions and Dimensions of Environmental Goods and Services in Trade and Development, TD/B/COM.1/59, TD/B/COM.1/EM.21/3
- Developing Countries' Trade in Environmental Goods, Conference Room Paper for an Expert Meeting on Definitions and Dimensions of Environmental Goods and Services in Trade and Development, UNCTAD, 9-11 July 2003, (TD/B/COM.1/EM.21/CRP.1)
- Other materials of the July 2003 Expert Meeting are available at: www.unctad.org

- UNCTAD Trade and Development Review, 2003-2004, two articles: (1) Environmental Goods and Services: Defining Negotiations or Negotiating Definitions? and (2) Environmental Goods and Services: Challenges and Opportunities for Central American and Caribbean Countries, UNCTAD/DITC/TED/2003/04
 - Monograph: Energy and Environmental Services: Negotiating Objectives and Development Priorities, UNCTAD/DITC/TNCD/2003/3, 2003
 - A series of national studies, carried out by experts engaged by UNCTAD in Central America (available only in Spanish):
 - "Environmental goods and services in Cuba"
 - "Environmental goods and services in Dominican Republic"
 - "Environmental services in Guatemala"
 - "Environmental services in Honduras"
 - "Environmental services in Nicaragua"
 - "Environmental goods in Panama"
 - "Regional (Central America) overview of the national studies on EGS"
 - Monograph on environmental goods and services in Central America and the Caribbean (in the pipeline), Spanish only.
-