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TRADE, ENVIRONMENT AND DEVELOPMENT

Background note by the UNCTAD secretariat**

This note focuses on selected trade and environment issues that have received considerable attention in recent international policy discourse, and related UNCTAD activities. The analysis of environmental goods and services builds on recent work carried out with a view to assisting developing countries in dealing with the implications of the mandate provided for in paragraph 31 (iii) of the Doha Ministerial Declaration as well as UNCTAD's contribution. The note also analyses the results of studies and policy dialogues concerning environmental requirements and market access for developing countries carried out under UNCTAD's capacity building programme and the Consultative Task Force on Environmental Requirements and Market Access for Developing Countries, and ongoing and future work on standards and related issues in the field of organic agriculture. The note also discusses trade and investment opportunities for developing countries emerging from the Kyoto Protocol and the Convention on Biological Diversity, and reports on UNCTAD's activities under the Biotrade Initiative, and the new BioFuels Initiative. Finally, it raises a number of issues that the Commission may wish to address.

*This document is re-issued for technical reasons

** This report is submitted on this date in order to reflect as fully as possible the work and activities that have occurred since the ninth session of the Commission.

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I. INTRODUCTION

1. At UNCTAD XI, member States agreed that “UNCTAD should continue to provide support to developing countries on issues at the interface between trade and environment, such as market access, agriculture, traditional knowledge, transfer of environmentally sound technology, environmental goods and services, environmentally preferable products, and issues concerning eco-labelling and certification costs, and follow up on trade-related issues contained in the Johannesburg Plan of Implementation. It should strengthen work on the BIOTRADE Initiative and the UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development (CBTF)”.¹

2. Issues at the interface between trade and environment have recently attracted public, political and market attention following the tsunami and tropical storm disasters, the energy-price increases and their pressure on enhancing energy efficiency, food scares and related demands for improved food safety and constantly high food quality, as well as the reaffirmation of the need for the protection of the environment at the 2005 UN World Summit. In international markets, environmental and related health requirements are becoming more stringent, complex and multidimensional and in many sectors they have become an integral part of product quality. Many Governments are using environmental requirements to encourage a shift towards more sustainable production and consumption patterns. Several recent bilateral trade and investment agreements include environmental provisions or have created a governance structure for reviewing specific environmental problems. Many developing countries, in turn, are increasingly integrating environmental issues into economic and social policies. A specific area for consideration includes opportunities for promoting trade in products derived from the sustainable use of biodiversity, in particular through the BioTrade Initiative, as well as the BioFuels Initiative.

II. LIBERALIZATION OF TRADE IN ENVIRONMENTAL GOODS AND SERVICES

3. WTO Members agreed to negotiations on liberalizing trade in EGS (environmental goods and services) with a view to enhancing the mutual supportiveness of trade and environment. The need for the negotiations to be faithful to the spirit of the mandate in paragraph 31(iii) of the Doha Ministerial Declaration (DMD) has become a leitmotif of interventions by Members, developing and developed. EGS trade liberalization should not be seen as an end in itself, but as a means to sustainable development. Undoubtedly, EGS trade liberalization offers a number of direct and indirect trade and development benefits for developing countries, such as more efficient resource use, lower pollution intensity, greater occupational safety, environmental preservation, access to environmentally sound technology, enhanced capacity to comply with more stringent environmental and related-health requirements in export markets, and higher export revenues. Many WTO Members advocate a balanced approach so that environmental and trade gains are shared between developed and developing countries.

4. There is a growing realization of the complex nature of the negotiations mandated by paragraph 31(iii) of the DMD as Members search for ways and means to ensure comprehensive treatment of the mandate, which encompasses environmental goods and

¹ São Paulo Consensus, TD/410, 25 June 2004, paragraph 103.

environmental services, tariffs and NTBs (non-tariff barriers). A significant handicap is that although there is a general definition of the environmental industry, neither environmental goods nor environmental services have been clearly defined on the basis of specific criteria. Rather, there seems only to be a general consensus that EGS should contribute to certain objectives, laid down in the Johannesburg World Summit on Sustainable Development (WSSD), when protecting the environment, addressing basic human needs (Millennium Development Goals) and promoting more sustainable modes of production and consumption. In addition, Agenda 21, international agreements addressing global environmental problems and national environmental policies provide scope for EGS.

5. In the run-up to the Sixth WTO Ministerial Conference, new submissions were made by countries and discussed in the CTESS (Committee on Trade and Environment Special Session), leading to two different negotiating approaches: the traditional, list-based approach, and an alternative, environmental project approach. Regarding the list-based approach, so far nine lists of environmental goods have been submitted by countries and compiled by the WTO for reference purposes. These national lists highlight environmental goods that are of particular export or import interest to the submitting WTO Parties. The goods comprise items for pollution measurement, management, abatement and prevention, most of them based on end-of-pipe technology. The environmental project approach would require that EGS be liberalized within the framework of environmental projects undertaken at the national level. The approach also seeks to promote opportunities for environmental technology transfer and adaptation. It has been suggested that the broad criteria to select these "environmental projects" could be agreed upon in the CTESS. Some countries have identified environmentally preferable products (EPPs) that they would like to be considered for inclusion within the scope of the negotiations.

6. Given the large number of goods that may enter the scope of the negotiations, "dual use" has remained a major problem in defining the product coverage. UNCTAD's statistical analysis indicates that the most dynamic (in trade terms) goods on the proposed lists are those with significant other industrial uses. In fact, this is the reason trade in these goods is so dynamic. The dual use problem is not specific to – but much more acute in the case of – environmental goods as they span the entire Harmonized System and the producers are many. There is room for discussing the environmental claims and value propositions made with respect to the proposed EPPs. Some countries have referred to NTBs as an important aspect of the mandate, including with respect to EPPs.

7. Some countries felt that Members should be given an opportunity to investigate the relationship between the proposed goods and the protection of the environment in a series of information exchange sessions. Two such sessions, convened by the Chairman, focused on particular environmental areas, more specifically wastewater management, air pollution control and renewable energy, with the Members taking turns in discussing the various environmental applications and explaining what had guided their decision to propose particular goods or groups of goods. This discussion might also enable countries to consider examples of relevant environmental goods, services and technologies in the context of ongoing environmental projects, especially since a number of countries have expressed an interest in sharing their national experiences with respect to the implementation of such projects or initiatives. In this context, countries agreed to pursue this more technical discussion, without prejudice to issues of procedure or approach, or to their negotiating positions.

8. Finding common ground in the negotiations, and defining an approach that would reconcile the various environmental, developmental and trade interests in the negotiations remain a task for the future. Much will depend on how successful Members are in making the negotiations more manageable, and this may require focusing on the environmental areas of special interest to, and ensuring effective S&DT (special and differential treatment) for, the developing Members.

9. A constructive engagement of the developing countries augurs well for such future work, and it is such an engagement that UNCTAD sought to promote as an ad hoc invitee to the negotiations conducted in the CTESS. UNCTAD has maintained a steady stream of activities with a view to building developing countries' capacity to deal with this new negotiating mandate. Alone and with its CBTF partner, UNEP, UNCTAD has conducted a number of national workshops (Philippines, Honduras, Nicaragua and Cuba) and subregional workshops (Dominican Republic, Peru and Nicaragua) as well as advisory missions (China and Jordan) in recent months to help the developing countries deal with technical issues relating to the product coverage, negotiating modalities and implementation problems to be handled by the Customs. These activities have been instrumental in promoting a better understanding of the proposals made to date in the CTESS.

III. ENVIRONMENTAL REQUIREMENTS AND MARKET ACCESS

A. Environmental requirements and market access for developing countries

10. Although the theme – environmental requirements and market access for developing countries – is not part of the current WTO negotiations, it is an important part of the Doha work programme (paragraph 32(i)) and partly included in NTB-related NAMA (non-agricultural market access) negotiations.² Furthermore, issues of market access are part of developing country concerns in the negotiations on implementation and S&DT related to the TBT (technical barriers to trade) and SPS (sanitary and phytosanitary) Agreements. They are also an area in which UNCTAD has been particularly active through all three pillars of its work.

11. In recent years, environmental requirements (ERs) – comprising governmental regulations as well as voluntary private-sector or NGO-created standards and their associated conformity assessment systems – have become more stringent, complex and multi-dimensional in many sectors. Discussions in the CTE, UNCTAD and the OECD have highlighted the fact that ERs should be developed and applied in such a manner as to minimize possible adverse effects on market access for developing countries, while achieving the objectives of environmental policies. Although only a few international standards on ERs exist, many mandatory and voluntary ERs in key export markets are becoming “transnationalized” through supply chains, thus imposing requirements that were created with little or no regard to developing country environmental situations, developmental priorities and trade concerns.

12. Meeting ERs in export markets has not only a market access aspect, but also a catalytic function for sustainable development. There are many ERs whose implementation can enhance material and energy efficiency, overcome serious national or transboundary

² More than 200 environmental and health measures have been notified as NTBs by WTO Members.

environmental problems or improve public health in exporting developing countries. But meeting such ERs often leads to competition for scarce resources and capacities at national level, in particular in least developed and small island developing countries. ERs may also pose a serious development challenge to small and medium-sized enterprises (SMEs). To achieve win (for trade) – win (for development) – win (for environment) outcomes in meeting ERs in export markets, a more holistic (development-oriented) and proactive (anticipatory) approach needs to be pursued, based on a "shared responsibility" between developed (ER-setting) and developing countries.

13. Least developed countries (LDCs) are particularly hard hit by new environmental and related health requirements (ERHRs). Such measures prevent them from taking full advantage of preferential market access to many developed country markets. Their resource-based industries in particular, such as timber, but also agriculture as well as the textiles and clothing sectors, are faced with a wide spectrum of mandatory and voluntary ERs. Because of the lack of institutional, technical and managerial capacity, adjustment costs for new ERs in export markets are higher than in other developing countries. However, the overall share of exports exposed to ERs in export markets is lower than in other developing countries, and much lower than in rapidly industrializing countries.

14. Those countries, companies or NGOs developing new ERs can reduce many (though not all) potentially adverse effects by ensuring a transparent and inclusive consultative process with potentially affected parties, based on a comprehensive *ex-ante* impact analysis. Moreover, through better coordination among the actors – Governments, NGOs and developing country exporters – a more systemic approach to the identification of potential hurdles and good practices can develop. In response to environmental degradation, ERs can function as important catalysts for greater environmental sustainability, while being not more trade restrictive than necessary.

15. To effectively and efficiently deal with ERs requires a more proactive and strategic policy approach by developing countries, especially at the national level, in addition to external actions or assistance. By anticipating change, it is important for developing countries to harness the catalytic sustainable development benefits for the national economy in terms of enhanced resource efficiency, lower pollution intensity, higher occupational safety and better public health, and thereby increase productivity and welfare gains. Many developing countries have the political will to comply with ERs in key export markets. However, they often face serious technical and human resource problems and fundamental institutional weaknesses.

16. There are high hopes as regards WTO rules and disciplines for limiting the trade-restrictiveness of ERHRs. Apart from the fact that the disciplines of the TBT Agreement on the justification, legitimacy and the role of science related to ERs are not very strong, a lack of institutional capacity prevents many developing countries from effectively using their WTO rights. Hence developing countries have included some of these concerns in implementation and S&DT issues related to the effective implementation of the TBT and SPS Agreements. Moreover, the majority of currently applied ERs are voluntary in nature and applied by the private sector and NGOs. They are sometimes guided by WTO disciplines, but the WTO cannot directly address specific problems arising in the preparation, setting and implementation of such ERs. Additionally, the challenges created by ERs for developing countries cannot be solved through trade policy alone: complementary industrial, agricultural

and finance policies are of fundamental importance. In particular, the formation of strategic partnerships between the entire range of actors affected by ERs is required. Lastly, developing countries need to start looking at strengthening the institutions needed to deal with ERs – that is, by establishing early-warning systems, inquiry points, standards bodies, specialized consultants, testing and metrology laboratories, and accreditation agencies, which underpin a coherent system of standards, metrology, testing and quality assurance – much as they seek to improve their road networks, ports and telecommunications.³

B. Consultative Task Force on Environmental Requirements and Market Access for Developing Countries (CTF)

17. The CTF, UNCTAD's new Task Force, is a step in the direction of a more holistic, development-oriented and all-stakeholder-embracing approach. It integrates voluntary ERs and their advocates, the private sector and NGOs, into analysis and provides a formal exchange mechanism between these stakeholders and Governments. Also, the CTF is a forum for exchanging national experiences among developing countries on proactive adjustment policies to new ERs. Against this background and through its business-oriented sectoral initiatives, the CTF can also provide useful input into WTO debate.

18. The WTO CTE has already discussed a proposal to structure its discussion on paragraph 32(i) of the DMD very much along the lines of UNCTAD's recent sector- and country-focused approach to the analysis of ERs and related technical assistance and capacity-building activities. There has been support for moving forward the CTE discussion on the basis of the sharing of national experiences with regard to concrete sectoral cases, focusing on (i) the effects of ERs on market access by developing countries; (ii) "process issues" in the area of transparency, notification and consultation procedures to facilitate the flow of information on new ERs to exporters in developing countries and thus enhance their awareness; (iii) designing new ERs in a manner consistent with WTO rules and in the least trade-restrictive manner; and (iv) technical assistance to developing countries in complying with new ERs. At the meeting of the CTE on 6 July 2005, UNCTAD made, at the invitation of that body, a presentation on key findings of its recent sector- and country-focused activities. At the same session, Thailand reported on the findings of a recent UNCTAD–UNESCAP subregional workshop on environmental requirements and market access with regard to electrical and electronic equipment (held in Bangkok from 25 to 27 May 2005).

19. At its first substantive session in early November 2004, the CTF decided to launch two clusters of activities under its umbrella, namely the preparation of an in-depth feasibility study for the creation of an online portal that guides users in developing countries on, and facilitates access to, existing online clearing houses for information on ERs; and sector-focused project activities regarding proactive adjustment strategies for meeting ERs in export markets for (i) electrical and electronic equipment; and (ii) horticultural products. As regards the feasibility study, a CTF working group was created to guide the preparation of the study. After an in-depth discussion of the draft outline, UNCTAD commissioned the study.

³ See U. Hoffmann and T. Rotherham, *Environmental Requirements and Market Access for Developing Countries: Ideas for Promoting Environmental – Not Trade Protection*, UNCTAD Trade and Environment Review 2005.

20. The sector-level activities for electrical and electronic equipment (EEE) exported from developing countries focus on new mandatory requirements and related voluntary initiatives in the EU, Japan and other developed countries on sound recycling of waste EEE and the associated removal of heavy metals and other hazardous substances from EEE. The activities aim at exchanging national experiences on proactive adjustment strategies to comply with new ERs in key export markets, including China, Malaysia, the Philippines and Thailand, the four countries that account for almost half of total EEE imports of OECD countries (excluding intra-EU trade). The first workshop on strategic adjustment policies was held jointly by UNCTAD and UNESCAP in Bangkok from 25 to 27 May 2005. It reviewed the impact of the new ERs on the exporting industry and preliminary results of successful adjustment approaches, in particular the one implemented by Thailand. The workshop recommended that further CTF activities focus on (i) the adjustment problems of SMEs in phasing out the use of heavy metals and hazardous substances in EEE;⁴ and (ii) the appropriate policy framework, initiatives and scope for subregional cooperative approaches for the sound collection and management of domestically generated EEE waste.

21. As regards horticultural exports, the sector-level activities of the CTF aim at analysing proactive adjustment approaches to new private sector supply chain requirements that have been introduced in response to regulation on more stringent maximum residue levels (MRLs) for pesticides, product traceability, and hazard analysis and critical control points (HACCP) in key export markets. Some of the new voluntary supply chain requirements are multidimensional – that is, they combine aspects of food safety, product quality, and environmental, social and animal welfare issues. There is concern among developing country producers and exporters that new stringent requirements on HACCP, MRLs and traceability may jeopardize market access. Institutional weaknesses and compliance costs might undermine competitiveness and the new requirements may reinforce concentration among producers and exporters and marginalize smallholders.⁵

22. CTF activities focus on EurepGAP, a harmonized standard that may gradually overcome multi-tier standards that are a major market entry hurdle and a significant cost factor, in particular for producers from developing countries. CTF activities review the question of how national circumstances (regulatory, agronomic and social) and developmental priorities in developing countries can be reflected in EurepGAP-benchmarked national codes on good agricultural practice (GAP). Activities encourage stakeholder dialogue at national and subregional levels on national GAPs and pool the expertise of other relevant institutions, in particular FAO, UN ESCAP, GTZ and FoodPlus.⁶ Benchmarking national GAP codes are of strategic importance in facilitating the harmonization of private sector standards. They assure developing country suppliers of predictability, transparency and consistency in further development and application of the governing “rules of the game” and they encourage the setting up of local certification bodies that can reduce certification costs.

23. Ten CTF country case studies were prepared (for Ghana, Kenya and Uganda in Africa; for Argentina, Brazil and Costa Rica in Central and South America; and for Malaysia,

⁴ In Thailand SMEs account for about three quarters of all registered companies in the electrical and electronic sector.

⁵ Studies on Kenya's experience, for instance, point to a concentration of production and exports in large farms owned or leased by major exporting companies and high compliance costs for a medium-sized farm that undermine profitability.

⁶ The secretariat of EurepGAP.

the Philippines, Thailand and Viet Nam in South-East Asia), and were discussed at two subregional stakeholder workshops – for South-East Asia (Manila, 28–29 November 2005) and Central and South America (Rio de Janeiro, 8–10 December 2005). A subregional workshop for Africa is planned for early March 2006.

C. Facilitating market access for organic agricultural products

24. Organic agriculture (OA) offers a range of economic, environmental and social benefits for developing countries. The world market for certified OA products is growing rapidly – it grew by over 12 per cent in 2003 – offering promising export and development opportunities for developing countries, such as:

- Easier compliance with government and private sector food safety regulations and standards, for example maximum residue limits of agro-chemicals and traceability;
- Higher prices for their certified products, usually at least 30 per cent more than for conventional agricultural products;
- Increased output for OA smallholding farmers;
- Higher net revenues for OA farmers than for conventional farmers;
- Improving livelihoods, including those of female farmers;
- Environmental benefits (less pollution, improved soil fertility, less soil erosion, enhanced biodiversity, no risk of genetic drift from genetically modified organisms, mitigated climate change and reduced energy consumption);
- Preserving *in situ* local farmer varieties and traditional agricultural knowledge, both of which are being lost at alarming rates worldwide, with serious consequences for current and future food security;
- Improved local nutrition, cleaner drinking water and reduced number of agricultural occupational injuries;
- Community revitalization and reduced rural–urban migration.

25. OA production is expanding in developing countries around the world. In nearly all these countries, the sector has developed with little government involvement. Actual and potential developing country OA producers need support to face a number of production- and export-related challenges. These include lack of information (on OA techniques, markets, etc.), expensive certification systems, cumbersome import requirements in major markets and underdeveloped domestic OA markets. Developing country Governments should consider actively supporting the development of this sector by conducting a dialogue with organic stakeholders in their countries, ascertaining the major constraints they face, assessing current policies and programmes to determine their impact on the sector, and formulating OA action plans.

26. In line with this approach, a CBTF project entitled “Promoting Production and Trading Opportunities for Organic Agricultural Products in East Africa” was launched in October 2005. Activities include studies on key issues such as OA and food security, and how Governments can best support their OA sectors; national and regional multi-stakeholder dialogues and workshops; national integrated assessments of OA; identification of elements of national OA action plans; and exploration of the development of an East African organic standard. UNCTAD has also supported policy dialogues and case studies to examine opportunities for expanding the production and export of OA products in Central America and Spanish-speaking Caribbean countries.

27. Exported OA products must be certified as having been produced in accordance with the OA standards in the import market. This includes government regulations as well as more stringent private standards often tied to the labels that consumers in those markets recognize. Unfortunately, many of these standards are not particularly well suited to the ecological and social conditions in developing countries. Moreover, there are currently some 200 similar but not identical public and private standards. In an extreme case, producers may have to produce to different standards in order to sell in two stores in the same street. This complex and confusing situation discourages many potential OA exporters and is acting as a brake on the growth of OA trade.

28. In response to this problem, UNCTAD partnered with FAO and the International Federation of Organic Agriculture Movements (IFOAM) to create the International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF) in 2002. Aimed at removing technical barriers to OA trade and enhancing developing country access to OA markets, the ITF provides a platform for multi-stakeholder dialogue among Governments, certification bodies, private sector operators, accreditors and international organizations. After five meetings in 2002–2005, the ITF completed its review of the current situation and agreed upon a long-term strategic goal, whereby international OA trade would be based upon (a) acceptance of local production standards equivalent to a single international standard; (b) a common guideline for certification; and (c) a common international procedure for assessment of the competence of certification bodies.⁷

IV. THE PROTECTION, PRESERVATION AND SUSTAINABLE USE OF TRADITIONAL KNOWLEDGE

29. Traditional knowledge (TK) has been receiving increased attention on the international agenda owing to the recognition of TK's vital importance in the lives of the majority of the world's population and in the conservation of biodiversity; concerns about the rapid loss of TK; concerns about unauthorized and inappropriate patenting and use of TK, with little or no sharing of resulting benefits with the original holders of TK; and interest in harnessing the potential of TK for local sustainable development. A holistic approach is needed, comprising simultaneous actions at national and international levels. At the national level, multi-stakeholder consultations are needed to raise awareness, identify underlying needs and concerns of different societal sectors, including indigenous groups, identify national priority objectives and develop a TK action plan.

30. UNCTAD XI stated that "full attention and support should be given to the protection, preservation and promotion of traditional knowledge, innovation and practices and biological resources of developing countries". For each of these TK-related objectives, ("the three P's") UNCTAD's work has identified menus of possible actions that could be taken to meet these objectives. To preserve TK, some actions can support the *ex situ* preservation of TK (e.g. TK registries) and more importantly, the *in-situ* preservation of TK as a dynamic, constantly evolving body of knowledge in living diverse communities. National actions aimed at the latter include media transmissions in local languages, including TK in formal education, the training of youth, preservation of the natural environment upon

⁷ For more information, see S. Twarog, Organic Agriculture: A Trade and Sustainable Development Opportunity for Developing Countries, UNCTAD Trade and Environment Review 2005.

which TK-holding communities are dependent, securing land rights and enhancing livelihoods.

31. TK protection aims to prevent the unauthorized or inappropriate use of TK by third parties. This includes unauthorized commercial use and applications for intellectual property rights (IPRs) that are based on TK but made without the prior informed consent (PIC) of the TK holders and without benefit sharing. Possible national level actions include disclosure of the source or origin of genetic resources and related TK in IPR applications, recognition of TK-holding communities' ownership of their TK, recognition of customary law and use of conventional IP instruments.

32. TK plays a key role in development, as TK is the main resource of the poor. To promote TK for development, sharing experiences among communities helps keep this body of knowledge growing. Supporting the development of local and indigenous community-run ventures could include capacity building in entrepreneurial skills, access to finance and markets, and facilitating partnerships with larger enterprises. Value addition by and benefit sharing with TK holders are important considerations. The international community can support developing country efforts through technical cooperation and facilitating market entry for TK-based products, such as non-wood forest products, ethnic foods, traditional medicinal products and handicrafts.

33. At the international level, much of the attention has been focused on TK protection. Many feel that there is a lack of balance in the current IPR system. One type of IP – that usually owned by entities in developed countries – is well protected. That category of IP in which developing countries have comparative advantage, namely TK, is generally considered free for all takers. To redress this imbalance, a number of actions have been proposed by developing countries and others. One is to make TK clearly in the public domain more accessible to patent examiners around the world, so as to prevent IPRs on this TK from being inappropriately granted to third parties. Another proposal is to require disclosure of origin/source of genetic resources and associated TK in relevant patent applications. These two measures could go a long way in preventing "bad patents". However, to prevent unauthorized or misappropriate commercial use (without IPRs) would require a farther-reaching positive system of protection. This may involve an international *sui generis* system that recognizes national systems related to TK protection, PIC and access and benefit-sharing (ABS). CBD negotiations on an international treaty on ABS have begun. Much will depend on how those negotiations proceed and what weight the results will carry.⁸

V. THE KYOTO PROTOCOL AND THE CONVENTION ON BIOLOGICAL DIVERSITY

A. Global environmental issues

34. There are important trade and investment opportunities for developing countries within the Kyoto Protocol and the Convention on Biological Diversity (CBD). The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) marks the first step in an international move to limit emissions of greenhouse gases. The Protocol

⁸ On options for implementing disclosure of origin requirements in IP applications, see UNCTAD/DITC/TED/2005/14, prepared at the request of CBD-COP7.

has set legally binding reduction targets for countries listed in its Annex B (industrial countries). To meet their emissions commitments, Annex B countries have considerable flexibility in their choice of domestic policies, including carbon/energy taxes, subsidies, energy efficiency standards and government procurement policies. Article 2.3 states that this must be done in such a way as to minimize adverse effects on international trade. The Protocol also introduced three international flexibility mechanisms, namely international emissions trading, joint implementation, and the clean development mechanism (CDM) that can also be used for meeting reduction targets. The CDM in particular opens up new avenues to finance the reduction of greenhouse gas emissions in developing countries.

35. The CBD and the UNFCCC are the two most universally ratified and economically relevant multilateral environmental agreements. They received special attention at the 2005 World Summit. They both have particular relevance to developing and developed countries as they directly link sustainable use of scarce resources and technological and energy development options with the possibility of using economic incentives and market mechanisms, including trade promotion and greater market access, in their implementation. UNCTAD has, through economic policy analysis, technical assistance and consensus building, played an active role in the identification of trade and investment opportunities arising in the implementation of these two conventions. It has established partnerships with other institutions such as ITC, WIPO, the CBD, FCCC, CITES and Ramsar secretariats, WTO, ICTSD, IEA, FAO, and UNF to maximize programme impacts and tangible results.

36. The need to reconcile the goals of environmental sustainability, including biodiversity loss, with developmental needs and the need of millions of poor people for natural resources has been stressed in the Millennium Development Goals (MDGs) and by the WSSD. The UN Commission on Sustainable Development (CSD) also stresses the urgent need “to provide incentive measures at national, regional and international levels to stimulate the conservation and sustainable use of biological diversity and improve the functioning of their markets by enhancing developing countries' capabilities to compete in emerging markets for biological resources”. The *Millennium Ecosystem Assessment*, launched in mid-2005 as a partnership among several international organizations, highlighted the importance of biodiversity for human well-being, the loss of biodiversity due to human activity, and hence the need to promote conservation and sustainable use of biological diversity. As a concrete attempt to reconcile development needs and sustainable use of biodiversity products and services, there has been considerable interest in exploring opportunities for enhanced trade in products with environmental and developmental benefits. Developing-country producers must overcome a number of obstacles if they are to take full advantage of these new markets. UNCTAD's BioTrade Initiative seeks to assist developing countries in this effort.

B. Biological diversity and development

37. Biodiversity is the source of many products and services utilized by society. Millions of rural people depend on biodiversity for food, medicines, income, ecosystem services and cultural and spiritual needs. Currently, biodiversity provides essential inputs for diverse industries such as agriculture, cosmetics, pharmaceuticals, pulp and paper, and waste treatment. It is being lost at accelerating rates, because of widespread overexploitation of biological resources, introduction of alien species and transformation of habitats. Biodiversity loss often destabilizes and reduces the productivity of ecosystems, weakening their ability to

generate products and services, as well as their capacity to deal with natural disasters and human-caused stress, such as environmental pollution and degradation and climate change.

38. The sustainable use of biodiversity is thus fundamental for long-term sustainable development. Developing countries, which are often endowed with rich biodiversity, face the greater challenge of combining poverty alleviation and economic growth with sustainable use and conservation of biodiversity. They need to find ways for the long-term financing of biodiversity conservation, which is currently financed mostly through external funding.

39. Trade of products and services derived from biodiversity could be partly the solution to this problem, in particular if trade policies support goods and services produced in a sustainable way. Biotrade refers to the collection, production, transformation, and commercialization of goods and services derived from native biodiversity on the basis of criteria of environmental, social and economic sustainability. Biotrade stimulates trade and investment in biological resources to further sustainable development in line with the three objectives of the CBD, namely conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising from the utilization of genetic resources. Research shows that market interest and demand for biodiversity products and services are growing, thus giving countries rich in biodiversity a comparative advantage (see box 1). However, developing countries often lack the capacity to turn this into a competitive advantage, and consequently, traded volumes of sustainably obtained biodiversity goods and services remain relatively low.

Box 1. Some figures relevant to biotrade

- **Essential oils and carrier oils:** The total value of production in 1995 was \$1 billion. Essential oils are used in the flavour, cosmetic and pharmaceutical industries. In 1999, the United States, the European Union and Japan imported oils worth \$717 million. In 2003, the value of imports of essential oils by the original 15 EU member States alone amounted to euro 490 million.
 - **Gums, latex and resins:** The world market is estimated to be worth \$2.5 billion. These materials are used in the food, cosmetic and chemical industries (mainly in paint production). In 1999, the United States, the European Union and Japan imported materials worth \$829 million.
 - **Colours and dyes:** These are used in the food, cosmetic, textile and manufacturing industries. In 1999, the value of imports by the United States, the European Union and Japan exceeded \$217 million. In the United States, imports and exports of ingredients and intermediate products (essential oils, natural dyes, glues and fibres) were worth nearly \$3 billion in 2003.
 - **Spices and herbs:** In 1999, the United States, the European Union and Japan imported spices and herbs worth more than \$1.2 billion.
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- ***Medicinal plants and their derivatives (phytopharmaceuticals):*** The world market is estimated to be worth \$40 billion. In 1999, the United States, the European Union and Japan imported medicinal plants and their derivatives worth more than \$450 million. By 2000, the value of medicinal plant sales worldwide had reached euro 18.5 billion globally. In 2004, Europe marketed approximately 2,000 species of medicinal and aromatic plants.
 - ***Flowers and tropical foliage:*** The value of the world flower market increased from \$1.25 billion in 1982 to \$3.7 billion in 1999.

Source: UNCTAD compilation

40. Trade as a positive incentive measure for biodiversity conservation is increasingly recognized at national and international levels and efforts are underway to promote trade that takes into account ecological and social issues. Efforts are directed towards (a) creating an enabling policy environment at the national, regional and international levels that promotes sustainable trade in biodiversity products and services; (b) increasing the supply capacity of developing countries for goods and services derived from biodiversity, requiring increased levels of productivity, strengthening technical skills, improving technology, augmenting access to finance, and promoting alliances among actors; and (c) improving market access and forging market creation for biodiversity goods and services, including enhancing the understanding of these markets, facilitating commercial contacts between exporters and importers, improving market access and raising awareness among consumers.

C. UNCTAD's BioTrade Initiative

41. UNCTAD's BioTrade Initiative supports sustainable development through trade and investment in biological resources in line with the three objectives of the CBD. It gives concrete expression to the concept of sustainable use of biodiversity and reconciling biodiversity conservation with the development aspirations of local communities in biodiversity-rich areas in developing countries. It derives its mandate from UNCTAD X and UNCTAD XI and the CBD, and is consistent with the principle of sustainable development in the CSD, the MDGs (especially Goals 1 and 7⁹) and the WSSD.

42. Since its creation in 1996, UNCTAD's BioTrade Initiative has formed partnerships with various national, regional and international organizations to establish programmes that enhance the capability of developing countries to produce and market value-added products and services derived from biodiversity for both domestic and international markets. In order to turn trade into a positive incentive measure for biodiversity conservation, the Initiative together with partners and beneficiary countries addresses the policy environment, supply capacity and market access. Over time, an increasing number of countries have benefited from assistance offered by the Initiative (see box 2).

43. A wide range of activities are carried out under UNCTAD's BioTrade Initiative. It participates in relevant intergovernmental processes and creates platforms for discussion in these processes. At the Conference of the Parties of Multilateral Environmental Agreements (MEAs), the Initiative provides parties with additional information on specific issues related

⁹ Respectively, eradicate extreme hunger and poverty, and ensure environmental sustainability.

to trade and biodiversity or shares its experiences at major UN and other international conferences. Together with partners, the Initiative conducts and collects case studies and develops tools for trade and investment in biodiversity products and services. These tools are designed for Governments, the private sector, NGOs, academia and local and indigenous communities, as well as for other international organizations. Technical assistance is often provided in cooperation with specialized partners, and may take different forms; it is normally targeted at Governments and national service providers.

44. Initiatives of the private sector and local and indigenous communities are important but often indirect beneficiaries of UNCTAD, as they are serviced either through national service providers or through specialized international agencies.¹⁰ For example, the Initiative worked with several international organizations in drafting a proposal on the revision of the European Union Novel Food Regulation (NFR) - Regulation (EC) No 258/1997 of the European Parliament and of the Council of 27 January 1997 concerning Novel Foods and Novel Food Ingredients.¹¹ The proposal includes introduction of simplified stipulations and procedures for importing exotic traditional foods into the EU that help developing countries alleviate rural poverty without compromising the objective of protecting the health of European consumers.¹² The Initiative collaborates with WIPO in evaluating the possibility of using distinctive signs such as appellation of origin or collective trademarks to promote trade in "biotrade" products. The Initiative conducts studies identifying the effects of the new EU legislation for chemicals – Registration, Evaluation, and Authorization of Chemicals (REACH) – on biotrade products such as essential oils.

Box 2. Examples of work done by the national biotrade programmes in beneficiary countries

POLICIES AND STANDARDS

- Supporting the design and implementation of policies and standards that facilitate the work of the national programme;
- Promoting administrative measures that favour the sustainable use of biodiversity;
- Developing political management at national, regional and international levels that facilitates the performance of the national programmes and its technical focal points.

SUPPORT FOR PRODUCTIVE CHAINS

- Selection of priority products or sectors and the subsequent support to the strengthening of their value chains through value chain analysis, assistance in the formulation of strategies and support for implementing such strategies;
- Supporting productive chains in the implementation of conservation practices and sustainable use.

¹⁰ The BioTrade Initiative joined with key partners such as ITC, CBI of Netherlands and SIPPO of Switzerland to address the promotion of local entrepreneurship in these new sectors.

¹¹ See The EU Novel Food Regulation: Impact on the Potential Export of Exotic Traditional Food to the European Union, UNCTAD/BTFP and CBI, November 2005.

¹² See also Missing the Market: How Exotic Foods are being Barred from the EU. UNCTAD/BTFP and others, November 2005.

ENTERPRISE DEVELOPMENT

- Consulting for communities, organizations and small and medium-sized businesses in the creation of bio-businesses, export plans and legal matters, among others;
- Consulting and supporting the development of implementation plans for quality management and good practices of conservation and sustainable use;
- Developing alliances that promote support services for the development of biotrade initiatives;
- Facilitating access to financing systems.

BIODIVERSITY CONSERVATION AND ITS SUSTAINABLE USE

- Supporting the design and implementation of management plans at a corporate or species level;
- Working with environmental authorities in the implementation of regulation and best practices.

MARKET

- Generating, analysing and disseminating information on the markets for biodiversity;
- Facilitating commercial interchange (commercial contracts, participation in fairs).

45. The Initiative will continue to address cross-cutting issues such as trade, investment and sustainable use. Special attention will be paid to increasing private sector cooperation on issues related to market access and market creation, to match-making between exporters and importers, to market studies, to trade-related legal issues relevant to the biotrade enterprises, and to the development of sustainable use protocols for selected value chains. Many of these activities were developed during 2005.

46. A special aspect of the BioTrade Initiative is the BioTrade Facilitation Programme (BTFP). The latter's activities for 2006 include achieving concrete exports in the natural ingredients sector; elaboration and implementation of a marketing strategy; ensuring sustainable use of biological resources through companies' compliance in all value chains with the BioTrade principles and criteria, and putting in place sustainable management plans; strengthening of value chains participation; and dissemination of experiences such as the organization of a trade and biodiversity day and other side events during the eighth Conference of the Parties (COP 8) of the CBD in March 2006.

D. Climate change and development

47. Conventional fossil fuels such as petroleum and its derivatives, coal and natural gas are the primary sources of energy worldwide. Increasing greenhouse gas emissions stemming from ever-escalating dependence on fossil fuel combustion are the single most important source of greenhouse gas concentration in the atmosphere, causing human-induced climate change. Continued overdependence on fossil fuels has economic, social, climate and biodiversity impacts, especially for the most vulnerable developing countries. Greater awareness of climate change, and its linkages with options available for energy and transportation policies, the entry into force of the Kyoto Protocol and the emerging market

for carbon credits open up new opportunities for developing countries to move towards a sustainable energy future.

48. Bioenergy fuels derived from sustainable agricultural practices provide an opportunity for developing countries to utilize their own resources and attract the necessary foreign and domestic investment to achieve sustainable development goals. Greater biofuel production, domestic use and eventual trade bring multiple benefits. In the context of the current (and increasing) historically high oil prices, the economics are sound, as a greater share of biofuels in total primary energy supply can help reduce dependence on oil imports and promote nationally developed energy sources. From a developmental perspective, it fosters the agricultural production of well-known energy crops and promotes rural development thanks to the availability of accessible technologies to a large extent developed and tested in developing country regions. And, from an environmental standpoint, it offers an alternative lower carbon-intensive development path by offering a way to reduce greenhouse gas emissions while energy development goals are pursued, and by taking advantage of the financial incentive embodied in the Clean Development Mechanism (CDM). Lastly, paragraph 31(iii) of DMD encourages negotiations on “the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services”. Biofuels derived from sustainable agricultural practices have many attributes that might qualify them as environmental goods and may provide an opportunity for developing and middle-income countries to create substantial export markets.

49. The opportunity at hand is to provide action-oriented assessment tools that, together with domestic policy and innovative financial instruments, will enhance the role of bioenergy as part of a successful sustainable development strategy. The UNCTAD BioFuels Initiative will coordinate economic and trade policy analysis, capacity-building activities and consensus-building efforts towards the ultimate goals of making the case for increased production, domestic use and trade in biofuels, and reconciling climate change policies, energy and rural development needs and the opening up of new export markets for developing countries.

E. UNCTAD’s BioFuels Initiative

50. The production of biofuels – clean-burning, carbon-neutral fuels derived from sustainable agricultural practices – provides an opportunity for developing countries to utilize their own resources and attract the necessary foreign and domestic investment to achieve sustainable development goals. Promoting the wide use of biofuels would provide greater energy security, improved quality of life and economic development, opportunities for job creation and poverty alleviation, especially in the rural areas. UNCTAD’s BioFuels Initiative responds to this need. It was developed on the basis of recommendations of the Expert Meeting on Strengthening Participation of Developing Countries in Dynamic and New Sectors of World Trade (Geneva, 7–9 February 2005) and of the ninth session of the Commission on Trade in Goods and Services, and Commodities (Geneva, 14–18 March 2005).

51. UNCTAD’s BioFuels Initiative, with initial funding from the UN Foundation, was launched in June 2005. It promotes the use and production of biofuels as an emerging trade and investment opportunity for developing countries. It is designed to assess the trade competitiveness of developing countries in the growing worldwide use of and trade in

biofuels, as well as market access and market entry issues related to imports of biofuels in developing countries. The promotion of greater production, domestic use and eventual trade of biofuels help achieve trade liberalization, greater market access for developing country exports, energy diversification and climate change benefits. In this light, the Initiative also directly contributes to the MDGs. Since its launch, it has undertaken a number of country assessments in evaluating the real potential for greater use and production of, and trade in, biofuels. Initial surveys have been conducted in India, Thailand, Brazil and the Philippines. Preparations are underway for conducting assessments in the Dominican Republic, Kenya, Uganda and the United Republic of Tanzania.

52. Various activities have been implemented. The Initiative has actively sought partnerships with other relevant UN and non-UN partners such as the FAO, UNEP Risoe, the GEF Small Grants Programme, the World Bank and the G8 Global Bioenergy Partnership, as well as NGOs and think tanks such as Earth Council Geneva, CENBIO-São Paulo and the Tata Group in India. Fact-finding missions were conducted, initially in the Dominican Republic and East Africa, and national assessment reports were published for a few countries, including an estimation of biofuel market potential addressing relevant economic, environmental and national aspects, and national strategies, the role of key stakeholders, export possibilities, national supply and international demand.

53. UNCTAD convened a ministerial-level side event during the eleventh session of the Conference of the Parties to the Climate Change Convention (COP 11) and the first session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP) in Montreal in December 2005, at which early results were shared with a wide audience and the partners mentioned above. The event was webcast and can be viewed at www.unfccc.int. UNCTAD is organizing a policy dialogue to assess effectiveness in the implementation of national biofuel strategies, showcase early progress in individual national biofuels programmes, and initiate an international debate on biofuels and trade based on the expertise of members of the International Advisory Expert Group. It will also offer a networking event for current and future beneficiary countries, the donor community and the partners in the BioFuels Initiative.

54. UNCTAD plans to analyse recent developments in the field of biotechnology applied to the energy sector and identify the opportunities that it may offer in terms of strengthening capacities to address/solve energy problems, improving environmental protection, increasing manufacturing and export prospects, and fostering the development of rural communities. This work will also address a number of specific challenges that developing countries are likely to face in the sector.

F. Agro-biotechnology and international trade

55. The debate about agro-biotechnology is one of the most prominent and passionate debates that has been taking place during the last few years. This is the consequence of the diverging opinions that people and Governments have about the actual or potential risks and benefits of the products of agricultural biotechnology – namely, genetically modified organisms (GMOs) and the products thereof. For some, they would help address some of the serious problems that people, especially poor people in developing countries, face, such as starvation and malnutrition. For others, they could create serious and unpredictable health and environmental problems and have negative economic repercussions, particularly in

developing countries. The proliferation of domestic biosafety schemes and the related authorization, labelling, traceability and documentation obligations are likely to further complicate international trade in genetically modified agricultural products and indirectly affect trade in conventional agricultural products.

56. For developing countries agro-biotechnology is a particularly challenging phenomenon. They could be its main beneficiaries – if indeed agro-biotechnology keeps its promises – but they could also be the main losers if agro-biotechnology negatively affects biodiversity or if patented biotechnology disrupts traditional practices among farmers and makes access to seeds more difficult. At the international trade level, multilateral rules were agreed upon in the Cartagena Protocol on Biosafety. The interaction between this specific legal instrument and the WTO rules, and dispute settlement cases, adds some challenges to an already complex scenario. Within its mandate, UNCTAD has carried out analytical and capacity-building activities in respect of agro-biotechnology and international trade. For example, to provide its member countries, and especially developing countries, with more information and analysis on this emerging and complex sector, it published a study entitled *International Trade in GMOs and GM Products: National and Multilateral Legal Frameworks*(UNCTAD/ITCD/TAB/30).

VI. POSSIBLE ISSUES TO BE ADDRESSED BY THE COMMISSION

57. The Commission may wish to give its attention to issues raised in this note, namely:
- What should be the focus of UNCTAD's future work on EGS so that developing countries are appropriately assisted in meeting the objective of the negotiating mandate in the WTO?
 - How could UNCTAD best assist interested developing countries at national level in fostering policy dialogue and stakeholder debate on EGS trade liberalization?
 - How can the CTF best achieve its objectives?
 - What practical steps have developed countries taken or can they take to include developing country trade partners in consultations during the development of new environmental requirements?
 - What steps can be taken to strengthen OA production in developing countries and facilitate the access of products to developed country markets?
 - What measures can be taken to strengthen the contribution of biotrade and biofuels to reconciling biodiversity loss with developmental needs?
 - How can the BioTrade Initiative be strengthened in order to better address cross-cutting issues of trade, investment and sustainable use?

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