

ICTSD Project on Environmental Goods and Services



# Defining Environmental Goods and Services: A Case Study of Mexico



By **Enrique Lendo**

Consultants in Environmental Strategy and Negotiations (COESNA)

A study commissioned by the Commission for Environmental Cooperation



International Centre for Trade  
and Sustainable Development

Issue Paper No. 1

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Executive Summary

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ICTSD and the CEC welcome feedback and comments on this document.  
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Founded in 1996, the **International Centre for Trade and Sustainable Development (ICTSD)** is an independent non-profit and non-governmental organisation based in Geneva. By empowering stakeholders in trade policy through information, networking, dialogue, well-targeted research and capacity building, the Centre aims to influence the international trade system such that it advances the goal of sustainable development.

The **Commission for Environmental Cooperation (CEC)** was established under the North American Agreement on Environmental Cooperation (NAAEC) to address environmental issues from a continental perspective, with a particular focus on those arising in the context of liberalised trade.

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## FOREWORD

Environmental goods and services (EGS) as a subset of goods and services were singled out for attention in the negotiating mandate adopted at the Fourth Ministerial Conference of the World Trade Organization (WTO) in November 2001. Increasing access to and use of EGS can contribute to improving environmental quality and pollution abatement in both developed and developing countries. Trade in these sectors can also be a powerful tool for economic development by generating economic growth and employment and enabling the transfer of valuable skills, technology and know-how embedded in such goods and services. Furthermore, trade in EGS can facilitate the achievement of sustainable development goals laid out in global mandates such as the Johannesburg Plan of Implementation, the UN Millennium Development Goals and various multilateral environmental agreements. On the other hand, the negative impacts of liberalisation on vulnerable industries in developing countries, in particular fledgling small and medium-sized enterprises, and sections of populations without the purchasing power to access privately-delivered EGS, such as sanitation, has often been cited. This has also led to calls among some stakeholders that liberalisation should be gradual or carefully qualified and in certain cases that countries should be able to stop or roll back liberalisation that may have these negative impacts.

Developing countries have been slow in articulating their positions in the WTO Committee on Trade and Environment (CTE) in light of prevailing uncertainty regarding the sustainable development impacts of EGS liberalisation for their own countries. To add to the confusion, the type of goods and services deemed 'environmental' is a definitional debate that, at the time of writing, still awaits resolution at the WTO. Members have been trying other approaches such as proposing specific lists of goods or even identifying goods and services that are inputs into specific environmental projects. A number of goods and services proposed are based on lists developed by the Organization of Economic Co-operation and Development (OECD) and the Asia Pacific Economic Co-operation Mechanism (APEC) which heavily focused on capital, technology and knowledge-intensive goods exported primarily by developed countries. Others go beyond this categorisation to include environmentally preferable goods and services that many developing countries have a comparative advantage in producing.

As a contribution to the debate, this study - a joint output of the International Centre for Trade and Sustainable Development (ICTSD) and the Commission for Environmental Cooperation (CEC) - provides an initial assessment of the sustainable development impacts of EGS liberalisation in Mexico under different scenarios. Starting from a framework of Mexico's sustainable development goals, as embodied in its national legislation, the study looks at EGS from both a 'traditional' and 'broad' definitional perspective and attempts a comparative qualitative analysis of the sustainable development impacts of these definitions, namely, in the economic, social and environmental spheres. Having established a free-trade area with its neighbour and the largest economy in the world, the United States, as well as the EU and Japan, Mexico is well-suited to provide lessons on the sustainable development impact of EGS liberalisation to the rest of the developing world, particularly similarly placed middle-income developing countries.

The study is the first of a series of forthcoming issue papers which will address a range of cross-cutting, country-specific and regional issues of relevance to the current EGS negotiations, commissioned in the context of ICTSD's Environmental Goods and Services Project. This project aims to enhance developing countries' capacity to understand trade and sustainable development issue linkages with respect to EGS and reflect regional perspectives and priorities in regional and multilateral trade negotiations. This study is also one of many published by the CEC since 1996 under the trade in environmentally preferable goods and services project. This project aims at greening trade in North America by removing barriers and promoting through policy recommendations and cooperation among stakeholders across the three NAFTA countries, the best use of market-based approaches to support environmental protection and the conservation and sustainable use of biodiversity.

We hope you will find this pleasant and informative reading and an effective contribution to the debate.



**Ricardo Meléndez-Ortiz**  
Executive Director, ICTSD



**Chantal Line Carpentier**  
Head of Program, Environment, Economy and Trade CEC

## SUMMARY

Commitments undertaken in diverse international fora support the liberalisation and market expansion of the environmental goods and services (EGS) sector as a strategy worth exploring to support the pursuit of sustainable development. Among these commitments, the mandate in Paragraph 31(iii) of the Doha Ministerial Declaration of the World Trade Organisation (WTO) calls for negotiations to reduce or, as appropriate, eliminate tariff and non-tariff barriers for trade in EGS. However, implementing such a strategy poses major challenges. Moreover, despite some attempts undertaken in recent years, the international community has yet to reach a consensus on suitable approaches to defining and classifying the EGS market.

This study considers that a suitable approach for facing these challenges is to assess the sustainable development impacts of the liberalisation of the EGS sector under different classifications. In this context, the study assesses the potential impacts of EGS trade liberalisation against Mexico's own sustainable development goals and strategies. The analysis presented addresses the sustainable development patterns experienced by Mexico over the last three decades; the current debate regarding the liberalisation of the EGS sector and its implications for Mexico; the market structure and trade flows of the Mexican EGS market; the potential of some environmentally preferable products (EPPs) of export interest to the country; and options for Mexico's possible strategies on EGS negotiations in the WTO.

To assess the sustainable development impact, the study proposes and implements a methodology to carry out a preliminary impact assessment (PIA) under two definition/classification approaches based on Mexico's own goals and strategies. The PIA comprises two steps. First, a *causal chain analysis* is undertaken to provide the context for the potential impact analysis by showing the logical cause-and-effect interplay among various variables that lead to different sustainable development outcomes. Second, a *potential impact analysis* is performed to estimate the number of Mexican sustainable development goals and strategies that are impacted by liberalisation under both "traditional" and "broad" EGS definitions and the likely direction of such

impacts. The "traditional" definition, based on the OECD/APEC classification, focuses primarily on *environmental quality support goods and services* (EQSGS) (i.e. goods or services used to address specific environmental problems). A "broader" definition would include *environmentally preferable products* (EPPs) (i.e. goods or services where the environmental benefits are derived in the course of their production, use and disposal).

Based on this analysis, the study concludes that Mexico could obtain potential sustainable development benefits from EGS liberalisation, both under the OECD/APEC classification schemes and under a broader definition of these goods and services. Under the "traditional" definition, a reduction in tariffs would increase exports of countries with a comparative advantage in the production of environmental quality support goods and the provision of high-skill support services (mainly developed countries) and increase imports for countries without such a comparative advantage (mainly developing countries). The net benefit for Mexico under this definition would centre on the environmental dimension of sustainable development. A broadly defined list of EGS, on the other hand, would permit the inclusion of goods and services of export interest to developing countries. Thus, in addition to the typical environmental (and potential social) gains from the traditionally defined list, the broadly defined approach could enhance benefits to the economic and social dimensions of sustainable development.

As detailed in the study, Mexico could have a comparative advantage in the production or provision of EPPs. Relevant sectors with export potential in Mexico include primary sector activities in the areas of agriculture (in particular sustainable coffee), fisheries and forestry, which are mainly promoted by non-governmental and international organisations. More recently, governmental and international initiatives have also fostered the introduction of sustainable processes in the provision of some services, such as eco-tourism. Such products and services usually rely on labelling and certification schemes that, in most cases, go beyond environmental quality to address social development, equity, fairness, community development and benefit sharing.

While the study illustrates that the overall sustainable development gains of a broader EGS seem quite clear, there are, however, challenges associated with turning such impact potential into actual gains. In this regard, the study sets out some enhancing and flanking measures to support liberalisation efforts.

Finally, the study puts forward some considerations for Mexico's approach in the EGS negotiations in the WTO. As the study shows, developing countries, including Mexico, have a comparative advantage in EPPs under a "broad" definition of environmental good. Thus, among the options open to Mexico would be to propose a list at the WTO that takes account of these goods. However, most of these EPPs would likely be based on process and production method (PPM) criteria. This is an element, which many, if not most, Members, in particular developing countries, wish to avoid; they fear that PPM-based distinctions could be misused for "green protectionism" and could open the door for other PPM-based criteria, such as labour standards, to be brought into the WTO. Other relevant issues to consider in the environmental goods negotiations include the evolving technology of certain EPPs; issues related to eco-labelling; dual use of environmental goods; and an assessment of relevant tariff and non-tariff barriers in both developed and developing country markets.

The study reveals that environmental services of export interest to developing countries are presently limited, despite increasing opportunities for South-South trade. Mexico may have a trade interest in a number of environmental quality support services listed in the traditional OECD definition, such as remediation and industrial services, consulting and engineering, and water treatment work services, due to the presence and concentration of firms already well established in this sector. Moreover, from an export perspective, sustainable tourism would be high on the list of negotiating priorities for Mexico at the WTO. However, relevant classification issues remain to be resolved at the WTO and Members, including Mexico, have yet formally to bring this sector onto the EGS agenda.

The study illustrates that Mexico also could keep in mind certain cross-cutting issues while defining a negotiating strategy, including adopting a co-ordinated strategy for EGS in various WTO bodies, addressing non-tariff barriers to trade, especially those relevant to Mexican EGS exports, and adopting trade policies that facilitate the creation of domestic EGS capacities, particularly for Mexican small and medium-sized enterprises.





## 1. INTRODUCTION

At the beginning of the new millennium, the concept of environmental goods and services (EGS) has been addressed directly and indirectly in diverse international fora, notably the Millennium Declaration, the Monterrey Consensus, the World Trade Organisation (WTO) Doha Ministerial Declaration, and the World Summit on Sustainable Development (WSSD) Plan of Implementation. These commitments support the liberalisation and market expansion of the EGS sector as a strategy worth exploring to support the pursuit of sustainable development.

However, implementing such a strategy poses major challenges. Sustainable development is a complex concept. Different definitions and interpretations have been proposed over the last two decades – both by the international community and by nation states. Governments have been implementing the principles of sustainable development at different paces according to their particular needs and circumstances. Moreover, despite some attempts undertaken in recent years, the international community has yet to reach a consensus on suitable approaches to defining and classifying the EGS market.

A suitable approach for facing these challenges is to assess the sustainable development impacts of the liberalisation of the EGS sector under different definition/classification approaches. A sound assessment should take into consideration the country-specific economic, social and environmental dimensions of development, as well as different time scenarios and the geographical scope of the impacts.

In this context, the current study assesses the potential impacts of EGS trade liberalisation against Mexico's own sustainable development goals and strategies. The analysis presented addresses the sustainable development patterns experienced by Mexico over the last three decades; the current debate regarding the liberalisation of the EGS sector and its implications for Mexico; the market structure and trade flows of the Mexican EGS market; as well as the potential of some environmentally preferable products (EPPs)<sup>1</sup> of export interest to the country. The study proposes and implements a methodology to carry out a sustainable impact assessment under two definition/classification approaches. Based on this analysis, the study also explores options for Mexico's possible strategies on EGS negotiations in the WTO.

## 2. SUSTAINABLE DEVELOPMENT PATTERNS IN MEXICO

The 1990s marked a turning point for the Mexican economy, which was fostered by regulatory reform, trade liberalisation and institutional strengthening. In 1992, Mexico signed a Free Trade Agreement with Canada and the United States to create the largest market in the world. Since then, international trade has become one of the main drivers of the Mexican economy. The country has also invested significant resources to enhance its institutional and regulatory frameworks for the development of a diverse range of industries, including the EGS industry. By enhancing the business environment, investment has thrived and the structure of the economy has been transformed. In this regard, a natural resource-oriented economy, highly dependent on oil exports, has yielded to a booming manufacturing industry.

Mexico's integration into the global economy through trade and investment agreements has fostered productivity and competitiveness in export industries, leading to unprecedented share gains in international markets. However, such improvements in structures, strategies and production processes have not been widely shared among all industry sectors. The economic growth strategy in general has excluded small entrepreneurs, and isolated low-income populations and indigenous people. Today, Mexico is the 12<sup>th</sup> largest economy in the world (World Bank, 2005). Nevertheless, social and environmental problems pose major challenges for the full implementation of sustainable development goals.

Poverty, inequality, inadequate education rates, insufficient access to basic services, such as water, sanitation and electricity, as well as health-related problems are among the major challenges within the social dimension of sustainable development. According to economic theory, the liberalisation process that Mexico engaged in during the second half of the 1980s should have increased the mobility of production factors, changing income disparity trends between regions, states and income groups. However, this has not taken place at the pace required due to institutional, economic and capacity constraints, including inequalities in infrastructure, the supply of public goods and inefficient market development. In addition, the southern states lack sound trade facilitation policies necessary for expanding their export

production (including in environmentally preferable products) (Hernandez, et. al., 2003).

Today, the United Nations Development Programme (UNDP) ranks the country 52<sup>nd</sup> in the *Human Development Index* (UNDP, 2005). This is explained by poverty and income inequality factors. Poverty is widespread. Some indicators show that over half of the population lives in impoverished conditions, with one-third in extreme poverty (INEGI, 2002a). One-tenth lacks access to basic water services (*Presidencia de República - PND*, 2001). Moreover, ten percent of the poorest Mexican families capture only 1.6 percent of the national income, while ten percent of the wealthiest families capture 35 percent (Hernandez, et. al., 2003).

Attempts to integrate environmental concerns into the public policy making process in Mexico date back to the 1980s with the establishment of the first regulatory and institutional schemes. However, it was not until the mid-1990s that the Mexican government started designing and implementing comprehensive public policy strategies to foster sustainable development. Indeed, the 1995-2000 National Development Plan (Plan Nacional de Desarrollo (PND)) incorporated – for the first time in Mexican history – the principle of sustainable development. Since then, a considerable network of complementary laws, regulations, standards and institutions for environmental protection and natural resource management has been established. Despite all the gains in terms of regulatory and institution building, Mexico faces major challenges for the control and reversal of pollution patterns and unsustainable use of natural resources. These challenges include high deforestation rates, declining water tables, loss of marshlands, swamps and biodiversity, as well as escalating pollution in urban areas.

The 2001-2006 PND once again placed the principle of sustainable development at the centre of public policy making. National ministries and governmental bodies were encouraged to set their own sustainable development goals and indicators. In this regard, the PND and its sectoral environmental programme (i.e., the National Environment and Natural Resources Programme 2001-2006) present a suitable reference framework for the assessment of sustainable

development impacts of the liberalisation of the EGS sector in Mexico. These documents include Mexico's goals and strategies in the areas of economic policy, social development and environmental protection. Tables 1 and 2 in the Annex present the economic and social policy goals and strategies embraced by the 2001-2006 PND. Table 3 presents the environmental strategic

programmes/campaigns and goals contained in the Mexican National Environmental and Natural Resources Programme 2001-2006 (Programa Nacional de Medio Ambiente y Recursos Naturales (PNMARN)), which sets the environmental policy framework in Mexico at the federal level based on the PND.

### 3. ENVIRONMENTAL GOODS AND SERVICES IN THE INTERNATIONAL CONTEXT

The potentially positive sustainable development impacts from the liberalisation and market expansion of EGS, including traditionally defined Environmentally Quality Support Goods and Services (EQSGS) and EPPs, have been addressed in diverse international fora – including a mandate set by the WTO Doha Ministerial Declaration, which calls for the reduction or, as appropriate, elimination of tariff and non-tariff barriers for trade in EGS. Yet, despite all the work undertaken in this field in recent years, the international community has yet to reach a consensus on a proper definition and classification to support the implementation of the Doha mandate. The Doha Declaration does not define or propose a classification for the EGS sector. Post-Doha negotiations have relied both on documents submitted by WTO Members and on work developed in other fora, notably the Organisation for Economic Co-operation and Development (OECD) and the Asia Pacific Economic Co-operation (APEC) Mechanism.

The international debate around the adoption of EGS definitions and classifications for trade purposes tends to converge on the idea that the OECD/APEC proposals will not present a “one size fits all” solution. One argument central to this idea is that most of the EGS included in these lists are support goods and services, either for pollution control or for natural resource management, as opposed to products and services derived from sustainable activities. Another argument is that most of the EGS from the OECD/APEC lists rely on technological solutions to environmental problems, and present a comparative advantage to developed countries in the international trade context. Moreover, the regulatory and institutional frameworks may not be solid enough in developing countries to engage in a trade liberalisation process under the OECD/APEC lists.

Within this context, Mexico faces major challenges in defining its position towards the most suitable definition/classification approach for EGS in light of its sustainable development goals. While Mexico is the 12<sup>th</sup> largest economy in the world, a member of both the OECD and APEC and its standards for environmental protection compare and, in some cases, exceed those of some developed countries, its development shortcomings, capacity constraints and export potential still resemble the situation of many developing countries. Thus, Mexico could obtain potential sustainable development benefits from EGS liberalisation, both under the OECD/APEC schemes and under a broader definition of these goods and services.

A way forward in terms of definition and classification is to build upon the OECD classification by adding goods and services of trade interest to Mexico, then assessing the sustainable development implications of such an approach. A way of adapting the OECD classification in order to incorporate a broader definition of goods and services is to divide goods and services in the three major groups (namely, Group A: Pollution Management, Group B: Cleaner Technologies and Products and Group C: Resource Management) into two categories: *environmental quality support goods and services* (EQSGS) (i.e., goods or services used to address specific environmental problems), and *environmentally preferable products* (EPPs). Some countries, including Mexico, could have comparative advantages in the production or provision of EPPs. The consideration of EPPs will imply in most cases the use of labelling and/or certification schemes for identification, confidence and reliability purposes.

#### 4. TRENDS IN THE MEXICAN MARKET FOR ENVIRONMENTAL QUALITY SUPPORT GOODS AND SERVICES

The traditional Mexican market for environmental quality support goods and services (EQSGS) is small but dynamic. It is expected to grow in the next few years as a result of regulatory reforms currently being undertaken in many areas, including in the water, waste management and energy sectors. In March 2003, the OECD in collaboration with the North American Commission for Environmental Cooperation (CEC) completed what is probably the most comprehensive analysis of the market for environmental goods and services in Mexico (OECD-CEC, 2003d).<sup>2</sup>

Like in many other countries, the traditional Mexican EQSGS market is highly concentrated in the group of goods and services for pollution management (see Table 4.5 of the detailed study). The cleaner technologies group is the smallest in the Mexican EQSGS market. This market segment presents a complication, as the identification of these products and services often requires certification. Schemes available in Mexico for efficient/cleaner technology processes and products certify companies (or, more precisely, facilities), as opposed to processes or products (except in the case of energy-efficient products). Some examples of such schemes are included in Annex III of the detailed study.<sup>3</sup>

The second largest segment is the one oriented to *resource management*. It may be noted that the Resource Management category has a relatively lower number of economic units and, to a certain extent, a lower number of average-occupied personnel, as compared with the Pollution Management category – although the contribution in terms of the gross production, total inputs and added value is greater (see Tables 4.6 and 4.7 in the detailed study). Table 4.7 of the detailed study also reveals that about 99 percent of the environmental goods firms in Mexico are small scale.

It is possible, however, that official statistics underestimate the *Resource Management* Group due, in large part, to the difficulty of identifying firms that supply outputs from this sector, such as ecotourism services or products from sustainable agriculture, fisheries and forestry and, to a lesser extent, the difficulty of identifying those firms that supply inputs (e.g. equipment) into these activities. In order to

improve the understanding and potential of these sectors, it will be imperative for national statistics systematically to record the main characteristics and evolution of these sectors.

The OECD-CEC study found three key drivers for the EQSGS market in Mexico: a) the state of the environment and the development of environmental policy; b) increasing competitiveness trends in global markets; and c) increasing social pressure for environmental quality in Mexico. On the supply side, the study identified an increasing penetration of companies in the market, especially in the pollution management group. For the period 1993-1998, the Mexican EQSGS market showed growth rates between two and six percent in items such as the number of firms, gross production, added value, total inputs and labour.

In the international context, the private sector has responded to the global sustainable development agenda, launched at the United Nations Earth Summit in 1992, with the creation of different organisations to promote voluntary schemes for environmental protection and the sustainable use of natural resources. Different policy instruments – such as internationally recognised agreements, standards, audits and environmental management systems, as well as certification and labelling methodologies for products and processes – have facilitated the adoption of schemes for environmental protection. Moreover, a number of bodies have promoted the adoption of voluntary policy tools for environmental protection, including internationally recognised standards, environmental management systems (EMS), cleaner/more efficient technologies and processes and environmental certification schemes among Mexican companies for the last decade. According to a study by Wisner and Epstein, the North American Free Trade Agreement (NAFTA), in addition to creating additional exporting opportunities, also created a “pull” effect on Mexican industry to be more responsive to environmental management issues. The study found that firms exporting to the US and Canada were significantly more responsive in their environmental management actions than were firms that did not export, given more or less the same level of regulatory influence (Wisner & Epstein, 2003).

While the lowering of tariff and non-tariff barriers has undoubtedly had an impact on the competitive strength of the domestic economy, much of the economy remains comparatively closed because of over-regulation and high transport and communication costs. The failure of productivity to pick up in a sustained fashion ten years after Mexico's entry into NAFTA suggests deep-seated problems of adaptation and lack of competitiveness – except for the narrowly-based manufacturing export sector – problems that are only slowly being resolved (OECD, 2003a).

As for the share of trade in EQSGS in Mexico's overall trade, it is still difficult to obtain exact figures, given that national statistics do not consider this a category of its own. Difficulties in measuring trade arise from the lack of an agreed definition of environmental goods, incomplete trade data, limitations in the Harmonised System (HS) nomenclature for the classification of environmental goods and the fact that many environmental goods have multiple end-uses, only one of which may be environmental (UNCTAD, 2003a).

Despite statistical challenges, some international organisations have carried out comprehensive analyses of trade flows and market size for the EQSGS sector. For instance, the United Nations Conference on Trade and Development (UNCTAD) has estimated the size of the global traditional EQSGS industry at US\$550 billion; of

which 50-75 percent is associated with environmental services (this figure represents the sum of domestic sales and exports). According to UNCTAD, in 2000 Mexico ranked second – just below China – among developing country exporters of traditional environmental goods under the OECD and APEC classifications. Its total exports amounted to almost US\$10 billion (see Chart 1). However, Mexico's trade deficit under the APEC and OECD classifications was US\$5.4 billion and US\$5.2 billion, respectively, in the same year, amounting to US\$6.1 billion under the combined (and overlapping) APEC and OECD lists (UNCTAD, 2003a).

The potential for trade as a vehicle for technology transfer is also important. A recent study by Richardson (2004) entitled *Assessing Technology Transfer and NAFTA* states that direct commercial transactions related to international technology transfers to Mexico were valued at US\$454 million in 1999, up from US\$347 million in 1996 (WTO, 2002b). The study adds that “these transfers are likely related to the strong presence of foreign affiliates in Mexico, which appear to acquire technology actively from their countries of origin. Foreign innovation also reaches Mexico embodied in new plants and equipment, which in recent years have arrived in significant volumes through trade and foreign direct investment”.

## 5. TRENDS IN THE MEXICAN MARKET FOR SELECTED ENVIRONMENTALLY PREFERABLE PRODUCTS

The market for EPPs in Mexico includes primary sector activities mainly promoted by non-governmental and international organisations. More recently, governmental and international initiatives have also fostered the introduction of sustainable processes in the provision of some services with export potential. Such products and services usually rely on labelling and certification schemes that, in most cases, go beyond

environmental quality to address social development, equity, community development and benefit sharing, among others. The main sectors involved are sustainable tourism, agriculture, forestry and fisheries. All of these hold important export potential, as well as potentially significant sustainable development benefits in their production and provision.

### 5.1 Tourism

Tourism is the third largest industry and source of foreign exchange in the country after oil and manufacturing. Revenues from international consumers accounted for US\$8.2 billion in 2000 – roughly half of Mexico's current account. The Mexican tourism sector has also been one of the most progressive supporters of sustainable development. In 2001, the Ministry of Tourism (SECTUR) in collaboration with the Ministry of

the Environment and Natural Resources (SEMARNAT) completed the sustainable development strategy for this sector. The strategy proposes, among other instruments, a sustainable tourism certification programme based on the findings from a survey, which showed that 69 percent of respondents were willing to pay a price premium for sustainable tourism services.

### 5.2 Agriculture

Mexico has the 15th largest organic agriculture production area in the world, accounting for 103,000 hectares. After a decade of expansion, organic production continues to be driven primarily by foreign demand and the possibility of obtaining a price premium for Mexican organic products in more developed countries. Mexican production in organics accounted for US\$140 million in 2001, with a growth rate of 42 percent in production area over five years. More than 33,000 producers are involved in this activity. There are 262 zones in 28 states dedicated to organic agricultural production. However, 87 percent of this production takes place in the states of Chiapas, Oaxaca, Michoacán, Chihuahua and Guerrero, which at the same time show high poverty and inequality rates, as well as high biological and ethnic diversity.

Sustainable coffee accounts for the largest share among sustainable agricultural products. Mexico is the fifth largest producer of coffee in the world and a leader in organic coffee production. Its total exports account for 340,000 tons a year, representing a significant share of Mexico's total agricultural exports. Moreover, it is estimated that more than three million people in Mexico depend on coffee production. The majority of Mexican organic agricultural products depend on voluntary labelling and certification schemes to penetrate international markets. While most of these schemes are designed in other countries (mainly the United States and Western European countries), a few Mexican-designed schemes have gained acceptance in recent years.



### 5.3 Forestry

The share of the forestry sector in the GDP was 1.3 percent in 1996 and 1.1 percent in 2001. However, Mexican international trade in forest products has experienced a significant increase since the 1990s due to the adoption of several international trade agreements. In terms of sustainable forest management, Mexico has some experience in ecosystems restoration and reforestation. However, of the 21.6 million hectares with market potential, only 8.6 million are under some form of sustainable management. For this reason, Mexico's National Forest

Programme 2001-2006 considers a strategy for sustainable forest management, forest plantations and restoration, including the promotion and facilitation of certification schemes. Sustainable forestry certification schemes have been fairly successful in increasing the number of communities involved and the total certified area under sustainable management. Today, there are over 30 communities certified (including *ejidos* and indigenous groups), covering more than 600,000 hectares in different regions of Mexico.

### 5.4 Fisheries

Mexican fisheries exports accounted for US\$594 million in 2002. From this total, tuna exports amounted to 22,500 tons, with a value of US\$56 million. Tuna is also the second most important commercial fish species captured in Mexico - after sardines in volume terms and after shrimp in value terms. Yellow fin tuna accounts for 75-90 percent of total tuna species captured. However, the Mexican tuna industry has been faced with market access challenges. The *Tuna-Dolphin* dispute panel between the United States and Mexico in the General Agreement on Tariffs and Trade (GATT) in the early 1990's set a benchmark for trade and environment analysis on the multilateral agenda, as well as established the foundations of the Mexican position towards environmental labelling and certification schemes in the context of international trade. This position is based on support for multilateral, transparent and participatory initiatives and is

reflected in support for schemes, for instance, under the Agreement on the International Dolphin Conservation Programme (AIDCP). Thus, since the *Tuna-Dolphin* case, Mexico has become more oriented towards trade, environment and sustainable development. With regard to the tuna industry, there are currently two sustainable management initiatives in place. They include *sustainability bans* targeted at tuna species in areas regulated by the Inter-American Tropical Tuna Commission (IATTC), as well as the AIDCP, to which Mexico is a Party. In June 2001, AIDCP members adopted a certification/labelling scheme called *AIDCP Dolphin Safe*. The Mexican government has embraced this scheme as the only instrument supported by a far-reaching multilateral agreement that includes a transparent follow-up mechanism and active member participation.

### 5.5 North American Trade in EQSGS and EPPs

A detailed assessment of the North American environmental market was recently performed by Environment Business International (EBI) for the Commission for Environmental Cooperation (CEC, 2004c). Using its own methodology, EBI estimated that most Mexican trade in EQSGS and EPPs takes place within the NAFTA region, where the environmental market stood at US\$232 billion in 2001 or 41 percent of

the global market. Environmental trade between Canada and Mexico totalled US\$32 million in 2001 (US\$18.9 million in Canadian exports to Mexico and US\$12.8 million in Mexican exports to Canada). Mexico-US environmental trade totalled US\$1 billion in the same year (US\$116 million in Mexican exports to the US, and US\$920 million in US exports to Mexico). Overall environmental trade within the NAFTA region was

US\$4.1 billion in 2001, with the equipment segments accounting for two-thirds of the total. Within the equipment segment, water, chemical, air pollution control and waste management equipment were the largest segments.

Despite the fact that Mexico is a net importer of EQSGS within the NAFTA region in absolute terms, trade in some resource segments (including sustainable agriculture, tourism and, to a lesser extent, sustainable forestry) show export potential (see Tables 5.1 and 5.2 in the detailed study). In terms of trade with other regions, there is export potential for Mexican-produced equipment and resources in Latin American markets. As for the rest of the world, exports reached two digits

only (as a percentage of the total Mexican exports to the rest of the world) in the sustainable agriculture and eco-tourism segments.

The study by Richardson (2004) points out that Mexico is globally competitive in equipment to monitor air quality and atmospheric emissions and in services to optimise

energy use in industrial processes. Mexico is also a significant supplier to the global market of energy-efficient consumer goods, including florescent lamps and multi-layered insulating glass windows (UNCTAD, 2003b). The study adds that progress can be made in lowering non-tariff barriers related to such products, especially those relating to certification requirements.

## 6. ASSESSING THE SUSTAINABLE DEVELOPMENT IMPACTS OF EGS TRADE LIBERALISATION IN MEXICO

The sustainable development impacts from trade liberalisation constitute one of the main concerns of the international community in the new millennium. In the last decades, national governments, research institutions and non-governmental and international organisations have designed methodologies to assess different economic, welfare, and environmental variables that might be related to trade liberalisation. For the purpose of this study, suitably adapted versions of two such methodologies – the first developed by Kirkpatrick, Lee and Morrissey (Kirkpatrick, et. al., 1999) and the second by Bisset, Flint, Kirkpatrick, Mitlin and Westlake (Bisset, et. al., 2003) – have been applied in order to assess the sustainable development impacts of EGS trade liberalisation based on different definitions (for a detailed explanation of these methodologies refer to Annex VI in the detailed study).

Based on a combination of these methodologies, Chapter 6 of the detailed study presents an assessment of the qualitative sustainability impact assessment (SIA) of the liberalisation of trade in EGS in Mexico. The SIA is qualitative as it is not based on actual or revealed data or econometric modelling results, but rather on a hypothetical process logically linking liberalisation in environmental goods and services under alternative definitions of EGS and a number of national sustainable development goals and strategies impacted under each definition. A quantitative analysis would need to be

based on an *ex-ante*, or, more likely, an *ex-post* assessment and analysis of quantitative data and indicators subsequent to liberalisation. In addition, most quantitative methodologies in this area are still being developed and they are not robust enough to generate consensus for their use – neither by the international trade community nor by national environmental authorities in most developing countries. This is the reason why the analysis in the present study is also only a preliminary one.

This study differs from the above methodologies in two ways. First, it seeks to assess the general sustainable development impacts from comparable EGS definition / classification approaches, as opposed to specific EGS categories under a single definition/classification. Second, the study addresses the sustainable development impacts for the specific case of Mexico in light of its sustainable development goals and strategies, as opposed to broader goals, either defined by international instruments or the literature. The impacts – based on Mexico’s own sustainable development goals and strategies – are assessed against two comparable definition/classification approaches of environmental goods and services (i.e. OECD traditional definition / classification versus a broad definition / classification, which includes environmentally preferable products of export interest to Mexico).

### 6.1 Adapting the OECD Classification of EGS

In order to adapt the OECD classification in a way that EGS of export interest to Mexico (mainly EPPs) can be added to the list, the definitions of some categories needs to be modified. Box 1 below includes proposals to modify the OECD definitions and categories that are necessary to facilitate the incorporation of goods and services of significant sustainable development interest to Mexico. While Groups A and B remain unchanged, given the fact that they do not present significant export potential for Mexican EPPs, the definitions of some categories included in Group C (Resource Management) need to be modified.

This implies that the OECD categories primarily comprising *inputs* into activities, such as sustainable agriculture and tourism, will need to be supplemented by *outputs* deriving from such activities. Thus, for example, the “sustainable agriculture and fisheries” category under the OECD definition includes any activity that produces equipment, technology or specific materials, designs, constructs or installs, manages or provides other services for systems, which reduce the environmental impact of agriculture and fisheries activities and biotechnology applied to agriculture and fisheries activities. Products under a broader definition could include, for example, organic fruit or fish caught through sustainable practices. The potential goods and

services to be incorporated under these new and modified categories, as well as the conditions and criteria for their incorporation, are presented in Annex I of the detailed study.

**Box 1: Amendment Proposals to the original OECD/EUROSTAT Classification to facilitate the incorporation of EGS broadly defined (amendment proposals are underlined)**

**A. POLLUTION MANAGEMENT GROUP**

*Environmental equipment and specific materials*  
*Environmental services*

**B. CLEANER TECHNOLOGIES AND PRODUCTS GROUP**

**C. RESOURCE MANAGEMENT GROUP**

*Indoor air pollution control*  
*Potable water treatment and distribution*  
*Water supply and sustainable water management*  
*Recycled material*  
*Renewable energy*

*Heat/energy saving and management*

*Sustainable agriculture and fisheries*

This category includes any activity that produces equipment, technology or specific materials, designs, constructs or installs, manages or provides other services for systems, which reduce the environmental impact of agriculture and fisheries activities. It includes biotechnology applied to agriculture and fisheries activities. In addition, this category embraces products derived from sustainable agriculture and livestock management and the fisheries industry, including ecological farming<sup>4</sup> and conservation agriculture.<sup>5</sup>

*Sustainable forestry*

This category includes any activity that produces equipment, technology, or specific materials, designs, constructs or installs, manages or provides other services for programmes and projects for reforestation and forest management on a long term sustainable basis. It also includes wood species extracted using sustainable management practices from virgin or forested and reforested plantations for marketing purposes as wood by-products or raw materials.

*Sustainable biodiversity and landscape*

This category includes all biological materials (excluding wood products) extracted in a sustainable manner from natural ecosystems for human use, including individual members of species, resins (rubber, latex, chicle), ornamental plants, wildlife (products and live animals), and raw materials like bamboo, natural fibres, rattan and bromeliads.<sup>6</sup> It also includes the provision of services for the conservation and sustainable management of biological diversity and landscape and the management and surveillance of parks and natural protected areas.

*Natural risk management*

*Sustainable tourism and eco-tourism*

This category includes any activity that designs, constructs, installs, manages or provides other services for tourism that involves the protection and management of natural and cultural heritage, or education about the natural environment, and that do not damage or degrade the natural environment. It also includes the provision of different tourism infrastructure and services following environmental and sustainable development criteria.

*Other*

As will be shown below, the qualitative analysis reveals that under a broad definition/classification approach for EGS, the potential for positive impacts on the economic and social dimensions of sustainable development increases substantially. This, in a sense, summarizes the key finding of the present study. Data from field studies suggest that the expansion of these markets will bring significant sustainable development benefits, since in

most cases they are labour intensive and their production/provision processes take place in low-income areas, including indigenous communities. Moreover, data on trade flows indicate that Mexico is already a net exporter in those sectors. Hence, trade liberalisation at the multilateral level has the potential to increase its market penetration into other markets.

## 6.2 Preliminary Impact Assessment

As noted above, a comprehensive sustainability impact analysis for each of the EGS included in the traditional and broad definition/classification approaches goes beyond the scope of the current study. However, for purposes of policy guidance, it is possible to undertake a Preliminary Impact Assessment based on Mexico's own goals and strategies. Such a preliminary assessment comprises two steps:

- I. A *causal chain analysis* that provides the context or setting for the potential impact analysis by showing the logical cause-and-effect interplay

among various variables that lead to different sustainable development outcomes.

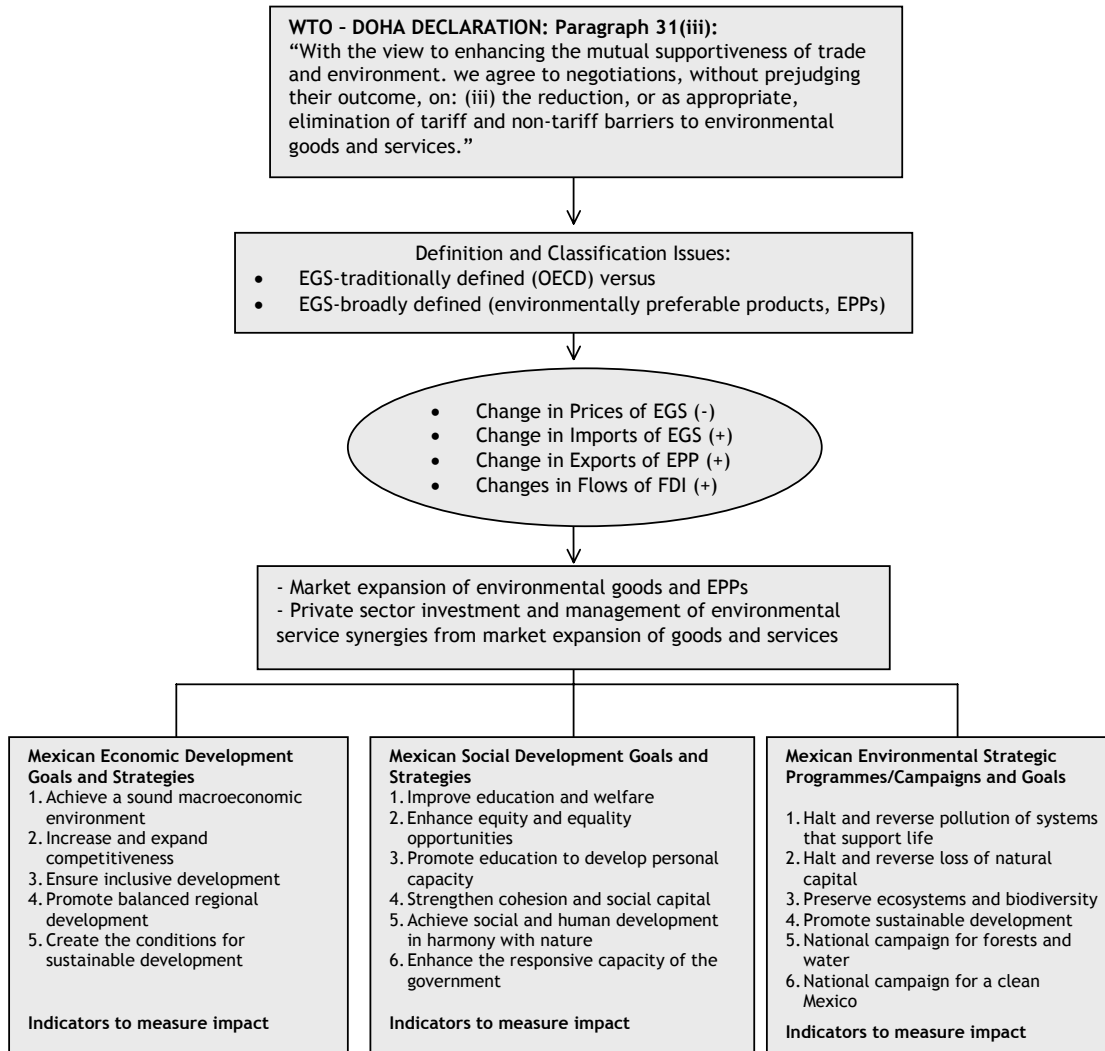
- II. A *potential impact analysis* that estimates the number of Mexican sustainable development goals and strategies that are impacted by liberalisation under both “traditional” and “broad” EGS definitions and the likely direction of such impacts.

### 6.2.1 Causal Chain Analysis

Diagram 1 below includes the main components of a causal chain analysis for Mexico (for a detailed explanation of the various trade measures and scenarios, refer to the section on “Screening and Scoping” in Chapter 6 of the detailed study). The *trade policy change* under consideration is Paragraph 31(iii) of the Doha Ministerial Declaration, which instructs WTO Members to reduce tariff and non-tariff trade barriers to EGS. The *direct goal* of that mandate is to enhance the mutual supportiveness of trade and environment

and the likely *indirect goal* is to reaffirm the WTO's commitment to sustainable development, pursuant to the preamble of the Doha Declaration. By lowering prices of environmental goods and services through the reduction/elimination of tariff and non-tariff barriers, WTO Members seek both to enhance environmental quality in their countries and to create new business opportunities (market expansion in the EGS sector). The analysis was applied under two potential EGS definitions, i.e. traditional and broad.

**Diagram 1: Causal Chain Analysis Applied Under Two Comparable EGS Definitions**



Under the traditional (OECD) definition/classification of EGS, a reduction in tariffs will increase exports of countries with a comparative advantage in the production of environmental quality support goods and the provision of high-skill support services (mainly developed countries) and increase imports for countries without such a comparative advantage (mainly developing countries). In this regard, gains for developing countries will be associated with the reduction of compliance costs with environmental regulations and other environmental quality initiatives.

Opportunities to realize economies of scale and the effects of increased competition on efficiency can be expected to lead to welfare gains. Advanced know-how and environmental technologies will become more readily available, since trade in services and capital goods are an effective channel for transferring technology. Government institutions at the federal, state and local levels in charge of environmental policy will likely have a wider range of options (and prices) of goods and services to choose from in order to meet their policy goals with potential efficiency gains in their budgets. Likewise, private companies and individuals will be faced with more options and lower prices in

order to comply with environmental regulations. Private participation in the provision of certain services will be needed and reinforced by the liberalisation process. Of course, this price differential rests on the assumption that EGS are liberalised first.

In sum, the net benefit for developing countries from the EGS liberalisation under the traditional definition will centre on the environmental dimension of sustainable development. A broadly defined list of EGS, on the other hand, will permit the inclusion of goods and services of export interest to developing countries. For instance, some developing countries have a comparative advantage in the production and provision of goods and services derived from sustainable agriculture and fisheries, sustainable forest management, biodiversity and sustainable tourism activities. In addition to the typical environmental and potential social gains from the traditionally defined list, the broadly defined approach that considers EPPs should enhance benefits to the economic and social dimensions of sustainable development. Markets for EPPs should expand with direct, positive impacts on equity, regional development, poverty and employment, among other variables.

## 6.2.2 Potential Impact Analysis

The Potential Impact Analysis estimates the likely direction of impacts for each category of EGS under the traditional and the broad definition/classification approaches in relation to each sustainable development goal and strategy (economic, social and environmental) considered in the Mexican National Development Plan 2001-2006 (Plan Nacional de Desarrollo (PND)) and its respective National Environment and Natural Resources Programme 2001-2006 (Programa Nacional de Medio Ambiente y Recursos Naturales (PNMARN)).<sup>7</sup> (See Tables 1-3 in the Annex to this document).

The economic dimension of sustainable development includes five goals and 36 strategies; the social dimension embraces six goals and 40 strategies; and the environmental dimension has six strategic programmes/campaigns and 21 goals. The percentage figures presented in Tables 6.2 to 6.5 of the detailed study (and Table 4 in the Annex) are derived by dividing the potential number of goals and strategies, which

might be impacted by the policy change (tariff reduction/elimination of EGS and EPPs) into the total number of goals and strategies included in Tables 1 to 3 in the Annex to this document for the three dimensions of sustainable development.

For instance, a liberalisation/tariff reduction of category 1 (air pollution control) of Group A (Pollution Management) has the potential to impact positively on three of the PND economic development goals (60 percent of the total), three of the PND social development goals (50 percent of the total) and two of the PNMARN environmental strategic programmes (33 percent of the total). Then, the total number of goals/strategic programmes with a potential positive impact is added up and divided by the total number of economic, social and environmental goals/strategic programmes considered in the PND and PNMARN, obtaining the potential sustainable development impact (41 percent of the total). This exercise is undertaken for

each of the categories included in the three groups of the OECD list in relation to all the goals and strategies of the PND and PNMARN, and the positive percentage results are presented in Tables 6.2 and 6.3 of the detailed study (see Annex VI in the detailed study for the goals and strategies which might be impacted for each case). Once the definition/classification approach is broadened, the exercise is undertaken again only for the Resource Management Group, since this is the only group where definition changes have been proposed. The results from this latter exercise are presented in Table 6.4 of the detailed study.

Then, the weighted average of positive potential impacts is calculated for each of the dimensions of sustainable development (also presented in Tables 6.2 to 6.4 of the detailed study). The impact potential (IP) index is derived by adding the weighted average of likely positive impacts from the trade policy change in relation to the total goals and strategies of the PND and PNMARN for each of the dimensions of sustainable development. The sum of potential impacts from these dimensions equals the sustainable development impact potential (SDIP).

$$\text{SDIP} = \text{EIP} + \text{SIP} + \text{EVIP}$$

Where,

$$\text{IP} = \text{Impact Potential}$$

$$\text{SD} = \text{Sustainable Development}$$

$$\text{E} = \text{Economic}$$

$$\text{S} = \text{Social}$$

$$\text{EV} = \text{Environmental}$$

Finally, the net gain from the definition/classification approach change is calculated by subtracting the weighted averages of potential impacts for each dimension of sustainable development under the traditional definition from the same figures under the broad definition (Table 6.5 of the detailed study and Table 4 of the Annex). This exercise is undertaken both for the total list of EGS (weighted average of Groups A, B and C) and again in detail for Group C (Resource Management) – which is the category with maximum

scope for including goods and services of export interest to Mexico (particularly EPPs) – in order to assess the

potential gains from changing the definitional approach in this particular group.

Liberalisation, under the traditional definition of EGS that includes only environmental support goods and services (EQSGS), still produces sustainable development benefits in the form of positive impacts on Mexico's sustainable development goals and strategies, as Table 4 in the Annex shows. Liberalisation of Group B (Cleaner Technologies and Products) in EQSGS has a slightly larger overall sustainable development impact (67 percent) on Mexico's sustainable development goals followed by Group C (Resource Management) with 63 percent and Group A (Pollution Management) with 58.5 percent (see Table 6.3 of the detailed study). For sustainable development goals, impacts seem to vary widely with regard to economic, social and environmental components within each group. Thus, the average economic, social and environmental impacts, respectively, for Group A are 57, 53.7 and 61.6 percent, for Group B: 60, 50 and 83 percent and Group C: 71, 56 and 67 percent. Thus, it is only in Group A and particularly Group B that the average environmental impact is greater relative to economic and social impacts. On average, however, the impact on the environmental dimension is the highest in Group B, while economic benefits are highest with regard to Group C. The impact on the social dimension is relatively lower in all three groups, but does better within Group C than under Group A or Group B.

With regard to Mexico's sustainable development strategies, liberalisation has a greater overall sustainable impact within Group B (22 percent) followed by Groups A (14 percent) and C (13 percent). The average economic, social and environmental impacts for Group A are 8, 12 and 30 percent, for Group B: 12.5, 16.5 and 43 percent and for Group C: 12, 11 and 35 percent respectively (see Table 6.4 of the detailed study). Thus, in terms of Mexico's strategies, the environment fares better than the social and economic dimensions in all three categories, but particularly in Group B. In Group C, it is interesting to note that only 11 percent of social strategies are impacted by EQSGS liberalisation, as compared to 16.5 percent of the strategies for Group B. Thus, for Group C, it can be said that EQSGS liberalisation impacts a greater percentage of social goals as compared to social strategies.

The Potential Impact Analysis shows that, by broadening the OECD approach to include EPPs of trade interest to



Mexico, the impact potential on the country's sustainable development strategies and goals increases 23 and three percent respectively. This is most evident in Group C, where the impact potential increases by 10 percent for sustainable development goals and 87 percent for sustainable development strategies. Overall, the impact of broadening the EGS definition is greatest with regard to the social goals (11 percent) and social strategies (30 percent). Interestingly, in the economic dimension the impact was high in terms of strategies (28 percent) but non-existent (zero) with regard to the goals. The environmental impacts amounted to 13 percent in terms of strategies and two percent in terms of goals. Thus, with regard to Mexico's sustainable development *goals*, broadening the EGS definitions has the most impact on the social followed by the environmental dimension, but none on the economic

dimension. On the other hand, with regard to sustainable development *strategies*, a broader definition has the greatest impact again on the social dimension followed by the economic and, lastly, the environmental dimension.

Within the specific category of the Resource Management Group, this trend is magnified with the impact on social *goals* being greatest (32 percent) followed by environmental (five percent) and economic (one percent) *goals*. The wide gap between the impacts on social *goals*, on the one hand, and the economic and environmental *goals*, on the other, is thus quite significant. The divergence is less marked in terms of *strategies*, which have the greatest impact on the social (107 percent) and economic (77 percent) strategies, followed by environmental (41 percent).

### 6.3 Enhancing and Flanking Measures

While the overall sustainable development gains of a broader EGS seem quite clear, there are, however, challenges associated with turning such impact potential into actual gains. In this regard, enhancing and flanking measures will play a major role. Some of these measures could include:

- The use of flexible and integrated instruments for environmental protection;
- The strengthening of regulatory capacity, both for environmental enforcement and for addressing private sector participation;
- The adjustment of EGS lists/liberalisation commitments to match national sustainable development goals;
- The adoption of WTO-compatible limitations and safeguards in the liberalisation commitments, particularly in environmental services;
- The sequencing of the liberalisation process to address sustainable development considerations;
- The use of complementary measures to foster foreign direct investment (FDI);
- The design of policy instruments to address the impacts on labour from liberalisation of the EGS sector and specific social impacts of waste management services;
- The application of multilaterally agreed labelling and certification schemes to facilitate the consideration of EPPs in the liberalisation process;
- The elaboration of comprehensive (beyond the environmental mandate) negotiating strategies to overcome barriers associated with a truly sustainable development driven liberalisation process.

## 6.4 Consideration of Tariff and Non-tariff Barriers

Some important Mexican environmentally preferable products and services, including in the agriculture, forestry and fisheries sectors, continue to face a range of tariff and non-tariff barriers (NTBs) to trade in the country's most important export markets – notably Canada, the United States, the European Union (EU) and the European Free Trade Area (EFTA) countries (see Annex VII of the detailed study for an illustration of such barriers). Mexico has signed free trade agreements (FTAs) with these countries and also negotiated one with Japan. Tariffs are particularly significant for agricultural products as compared to forestry and fisheries products. The current average tariff structures for Mexican agricultural, fisheries and forestry goods entering the EU and some EFTA countries are difficult to calculate due to a complex tariff reduction schedule included in their liberalisation lists. While European countries, including the EU, have generally higher tariff levels on agricultural products as compared to the US and Canada, the EU tariff level is slightly lower on fisheries products.

NTBs pose an even greater challenge, comprising, *inter alia*, various kinds of sanitary and phytosanitary standards, technical regulations, and mandatory and voluntary labelling schemes for environmental goods. In the case of services, such as eco-tourism, for which the

tourism sector as a whole has been taken up for illustrative purposes, NTBs include requirements to obtain authorization, licenses or permits in order to market or supply a service; establishment of full commercial presence (in specific territories); legal requirements for the constitution of a company; limitations on the number of concessions to operate; licenses to operate; definitions of personnel, agents and operators permitted to enter; and limits on the time length or number of entrants per visit. In the EU, certain member states have put in place their own individual restrictions, which further complicate the situation.

Annex VII of the detailed study illustrates some of the key tariff and non-tariff barriers prevailing in countries with which Mexico has signed FTAs. While it is difficult to present exhaustive data on tariff and non-tariff barriers in the various other non-FTA trading partners that include big developing countries, such as China and India, they will certainly be more restrictive relative to FTA partners, particularly in terms of tariff levels. These markets could potentially be attractive for Mexico to consider with regard to EGS exports. Lowering barriers in non-FTA trading partners could then be one of the most important gains that Mexico might consider achieving through the WTO negotiations.

## 7. WAYS FORWARD FOR AN EGS NEGOTIATING STRATEGY AT THE WTO

Given the potential sustainable development impacts of a broad definition of EGS for Mexico, what are the implications for Mexico's negotiating strategy for the EGS negotiations in the WTO? Since the launch of the Doha Round, negotiators have been grappling with the mandate contained in paragraph 31(iii) of the Doha Ministerial Declaration that aims at "the reduction, or as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services".

Negotiations on environmental goods have been taking place in the Special Session of the Committee on Trade and Environment (CTE), which is responsible for identifying what constitutes environmental goods, as well as the Negotiating Group on Non-Agricultural Market Access (NAMA), which is looking at the actual modalities. Negotiations on environmental services are under the auspices of the Special Session of the Council for Trade in Services (CTS).

### 7.1 Environmental Goods

While the OECD and APEC definitions of environmental goods have been used as a starting point for the negotiations on environmental goods, the lack of a clear definition of environmental goods has prompted WTO Members also to consider a "list" approach, whereby Members would propose specific items they would like to see included in a list of environmental goods.

Several WTO Members, including Brazil, Canada, Chinese-Taipei, the EC, India, Japan, Korea, New Zealand, Qatar, Switzerland and the US have proposed concrete lists of goods.<sup>8</sup> Many developing countries, however, have yet to submit lists. Much of the hesitation stems from the fact that most environmental goods of export interest to developing countries - as also shown in this study - would likely be based on process and production method (PPM) criteria. This is an element, which many, if not most, Members, in particular developing countries, wish to avoid; they fear that PPM-based distinctions could be misused for "green protectionism" and could open the door for other PPM-based criteria, such as labour standards, to be brought into the WTO.

Developing countries have repeatedly called for development concerns to be incorporated into the negotiations, specifically with respect to the "list" approach, and have questioned the adequacy of the OECD and APEC list.

New Zealand and Switzerland have proposed an alternative approach focusing on those EPPs that are identified by "end-use or disposal characteristics".<sup>9</sup> This issue will also be important in the Mexican context, particularly as the study identifies sustainable

agriculture as one of the key sectors where potential sustainable development gains could be made.

Brazil has called for consideration of developing country interests through the prism of special and differential treatment (S&D) and, in particular, through improved market access for products with low environmental impacts, which are derived from or incorporate cleaner technologies.<sup>10</sup> In addition, Brazil proposes to adopt the approach of the UNCTAD on EPPs as a basis for the negotiations.<sup>11</sup> The lists of Brazil and UNCTAD include EPPs of interest to Mexico (as noted in the study), such as natural fibres and colourants and other non-timber forest products.

The EC list includes products with high environmental performance and/or low environmental impact, as well as eco-labelled products.<sup>12</sup> While not explicitly recognising EPPs as a category for negotiations, the US list includes several EPPs from the UNCTAD list.<sup>13</sup>

India has pointed out the special problems of small and medium-sized enterprises (SMEs) and the adverse effect on SMEs in developing countries of unrestricted concessional duty imports of environmental goods and services. Instead of a "list-based" approach, India has proposed an "environmental-project" approach, whereby a project, which meets criteria agreed by the Special Session of the CTE to ensure transparency, would be considered by a Designated National Authority (DNA).<sup>14</sup> If approved, the goods and services included in a project would qualify for specified concessions for the

duration of the project. India considers that its approach would ensure that approved EGS were used for environmental purposes, whereas under the “list” approach products receiving tariff concessions could instead be used for a 'dual' non-environmental purpose.

India points out that the “environmental-project” approach would enable the transfer of environmentally sound technologies as mandated by *Agenda 21* and facilitate compliance with technical and sanitary requirements, which would in turn improve the export potential of developing countries. This approach would also facilitate compliance with MEAs. Given the prevalence of NTBs faced by Mexican EPPs, such as technical and sanitary requirements in their export markets (as illustrated in the study), Mexico has an interest in considering this approach in determining its negotiating strategy. Given the relevance of SMEs in the Mexican EGS sector (as illustrated in the study), in determining its position, Mexico will need to assess the extent to which the “environmental-project” approach would benefit SMEs.

Cuba has raised issues of importance to Mexico, such as the actual benefits of the negotiations given the complexities involved in “dual-use” goods, when a product, such as lead pipes, may be used for both environmental and non-environmental purposes, and the issue of NTBs relating to certification and labelling.<sup>15</sup>

Other challenging issues that Mexico would need to consider when developing its EGS negotiating strategy are raised by Japan’s proposed list of goods with regard to giving trade preferences to energy-efficient products, which is a category subject to continuously evolving technology.<sup>16</sup> For example, what would happen to a tariff preference granted to energy-efficient washing machines when a superior version is produced? Tariff preferences once granted (and possibly bound) may be difficult to roll back. Similarly Qatar’s list, which proposes natural gas and gas-based technologies for the environmental goods negotiations, raises the issue of relativism.<sup>17</sup> For example, natural gas may claim a trade preference for environmental benefits – say, in relation to coal – but not, for example, in relation to solar technologies or hydrogen fuel. Natural gas also raises the question of whether commodities, *per se*, could qualify as environmental goods owing to their inherent environmentally friendly properties.

Since environmental goods are an evolving category, New Zealand also has proposed that any list established be a “living” list that would reflect the emergence of new types of environmental goods and technologies.<sup>18</sup>

Some WTO Members, such as Chile,<sup>19</sup> have advocated against any preferential liberalisation of EGS, including EPPs, arguing, for instance, that liberalisation should extend to *all* products of export interest to developing countries. Any additional reduction should be “compensated” by concessions in other areas. In this sense, an export benefit for many EPPs may depend on a “preferential” market access margin maintained vis-à-vis their “non-environmental” counterparts, as ultimately the objective of the WTO is to liberalise tariff and non-tariff barriers on all goods and services. Here the nature of barriers facing EPPs and their non-EPP counterparts both in FTAs as well as in the WTO context could be useful for Mexico to assess.

The issue of tariff classification is also an important one. Separate tariff headings may need to be created in order to grant tariff preferences to environmental goods if they have a less environmentally preferable “like” counterpart, such as hybrid-technology cars versus gasoline-powered cars.

On the issue of modalities for WTO negotiations on environmental goods, the US proposal advocates a “core” list (on which consensus exists) for faster liberalisation and a “complementary” list, for which individual countries could nominate products enjoying a wide degree of support. China has taken a more “import-defensive” approach, proposing a “common” list, including environmental goods of export interest to both developed and developing countries, and a “development” list of goods derived from the common list, eligible for special and differential treatment in the form of lower levels of reduction commitments for developing countries.

Developing countries, including (as the study shows) Mexico, have a comparative advantage in non-traditional environmental goods, particularly those based on sustainable agriculture, forestry and fisheries that would fall under a “broader” definition of environmental goods. Among the options open to Mexico would be to propose a list at the WTO that takes account of these goods. However, as with most other developing countries, the PPM issue, as well as the issue of relevant tariffs and NTBs (including standards and

labelling) for these products in export markets, needs to be tackled, particularly where Mexico does not have access under an FTA.

Apart from substantive questions, some WTO Members have also raised the question of an appropriate negotiating forum for agricultural environmental goods. Annex B of the General Council Decision of 1 August 2004 encourages the Negotiating Group on NAMA to work closely with the CTE Special Session with a view to addressing the issue of “non-agricultural environmental goods” covered in Paragraph 31(iii) of the Doha Ministerial Declaration. This does not appear to clarify if

and where agriculture-based environmental goods would be addressed. If WTO Members decide to negotiate sustainable agriculture within the Negotiating Group on Agriculture it is likely that these would then not be guided by Paragraph 16 of the Doha mandate and would instead become intertwined with the broader, more complex agricultural negotiations, raising the likelihood of trade-offs within the agricultural negotiations themselves.

## 7.2 Environmental Services

Negotiations on services in the WTO precede the start of the Doha Round with discussions focusing on negotiating formats and procedures. The Doha Round set deadlines for submitting requests (June 2002) and offers (March 2003), which were not met by most Members, as well as for concluding the negotiations in 2005. The General Council Decision of 1 August 2004 adopted the recommendations set out by the Special Session of the CTS (contained in Annex C of the General Council Decision) and called for revised offers to be tabled by May 2005. Annex C of the 1 August 2004 General Council Decision also states, among other things, that “Members shall strive to ensure a high quality of offers, particularly in sectors and modes of supply of export interest to developing countries, with special attention to be given to least-developed countries”.

Most developing countries have received requests to undertake specific commitments in all environmental services, principally from developed countries. Among them, the EU proposal on including “water for human use” as an environmental service has raised some concerns regarding control of water as a resource, as well as issues related to equitable access to clean water among the poorer sections of the population. At the same time, developing countries have followed a cautious approach, having made relatively few commitments in infrastructural environmental services to date, particularly with regard to water management.

This is also reflective of the diverse approaches to update the existing classification of environmental services (based on the WTO Services Sectoral Classification list (W/120) derived from the UN Provisional Central Product Classification (CPC)) being proposed by WTO Members. The W/120 list aims at preserving the mutually exclusive character of services and seeks to avoid an overlap between services in various sectors. From a legal perspective, a WTO Member can choose to adopt this classification model or the CPC, or schedule commitments for a specific activity under a particular sector in whatever manner it deems fit.<sup>20</sup>

WTO Members agree that the W/120 classification needs to be updated or adapted to the needs of the market. One of the suggestions has been a “core” and “cluster” approach proposed by the EU with regard to environmental services. This proposal seeks to take account of the evolving, dynamic and inter-related nature of environmental services industries. According to the EU, “core” services are those which can undisputedly be classified as “purely” environmental and where the services are classified according to the environmental media (i.e. air, water, solid and hazardous waste, noise, etc.). Thus, the mutually exclusive character of the W/120 list is preserved. In addition, subsequent EU submissions in 2000 also propose a “cluster” approach, whereby conceptual services, such as design, engineering, research and development (R&D) and consulting services that have an

environmental “end-use” would be subject to a special “cluster” or “checklist”.<sup>21</sup> This cluster or checklist approach would be used as an *aide-memoire* during the other sectoral negotiations.

While this approach could enable Members to classify as a single category all services with an “environmental end-use”, it may create confusion through an overlap of services sub-categories under various headings and result in a non-coherent listing of sectoral commitments. Some countries fear that unless commitments are carefully tailored, adopting such an approach could result in unintended commitments being made as any request for liberalisation under environmental services would implicitly include any service that has an environmental “end-use”, such as engineering, construction or R&D.

Under the concept of the “cluster” approach as proposed by the EU, Mexico could keep in mind the broadened OECD definition of environmental services that includes “sustainable tourism”. However, this does not imply it will need to make this commitment under “environmental services”. Instead, Mexico could specify “sustainable tourism” as a sub-sector of tourism and make liberalisation commitments only in this sub-sector.

A careful and precise definition of sustainable tourism will be desirable when making or seeking liberalisation commitments. In the event of a WTO dispute, a panel or the Appellate Body will be compelled to interpret the commitment in accordance with the exact terms of what Mexico has entered in its definition of sustainable tourism. A clear definition thus avoids the risks of a generally-worded entry, which proved to be the pitfall for the US, for instance, in the *US - Gambling* dispute.<sup>22</sup>

An alternative concept is the one of “regulatory” clustering that has been proposed by certain Central American and Caribbean countries.<sup>23</sup> These countries propose that services sharing the same characteristics be grouped under a single cluster for the purpose of developing regulatory disciplines or principles applicable to the particular sector being subject to liberalisation. For example, they propose the need to create a set of disciplines that could apply to “tourism-characteristic” services that are considered as part of a “tourism” cluster, such as foreign exchange services and hotel and restaurant services. This approach would allow for market access, but also for setting

environmental regulatory principles in eco-tourism activities.

Thus far, sectors such as sustainable tourism have not yet been formally proposed as part of an environmental services classification. Scheduling eco-tourism under environmental services would mean that Mexico should be prepared to favourably consider requests from Members to schedule other environment-related activities, such as R&D or consultancy under environmental services. At the very least, it may weaken Mexico’s leverage in resisting such requests. Furthermore, it may set a precedent for implicit acceptance of a “cluster” approach in other sectors. It may be worth considering whether such systemic implications are to an extent unavoidable. It is also important to bear in mind that the classification under the “cluster” approach does not necessarily match the manner by which many services providers act commercially (which in many cases do not differentiate in the provision of services by “end-uses”).

Inputs into sustainable tourism could possibly be classified under other services, such as construction and engineering, but, here again, Mexico might need to consider carefully tailoring its commitments if it does not wish to liberalise these sectors as a whole on a most favoured nation (MFN) basis.

Domestic regulations, such as those laying down criteria for educational and technical qualifications, can affect the quality of market access granted. For example, regulations relating to educational qualifications can impair the movement of natural persons as service providers, although, technically, the market may have been fully opened under the General Agreement on Trade in Services (GATS). Moreover, government procurement, an important channel of demand for environmental goods and services, particularly in municipal projects, such as sewage systems and water supply purification, does not yet have rules and disciplines under the GATS. Rules and disciplines on both domestic regulation and government procurement have yet to be clarified as part of the GATS negotiations, as well as in the WTO Working Party on Domestic Regulation. This introduces an element of uncertainty into the negotiations. Developing countries have expressed the need for a clearer understanding of liberalisation and its various implications, particularly for “regulatory policy space” before making formal binding commitments. The nature of sustainable

development problems, such as access to clean water and sanitation, have been referred to in the study; any GATS approach to “regulatory policy space” at the WTO could seek to ensure equitable and broad-based access to these essential services for the Mexican population. Such an approach could also be informed by the experience arising from Mexico’s participation in Regional Trade Agreements.

Moreover, environmental services of export interest to developing countries are presently limited, despite increasing opportunities for South-South trade. Most of these opportunities may lie in the realm of Mode 4 (movement of natural persons), where immigration restrictions constitute a major barrier. On Mode 2 (consumption abroad), sustainable tourism, as the study

has shown, could bring about sustainable development benefits, but WTO Members, including Mexico, have yet formally to bring it onto the EGS agenda.

Furthermore, the GATS mandates timely completion of the negotiations on disciplines related to domestic regulation, emergency safeguards, government procurement and subsidies. These have yet to be completed and have an important bearing on the actual value of market access concessions that Mexico and other developing countries could obtain during the course of the GATS negotiations.

### 7.3 Cross-cutting Issues

In addition to issues specific to the environmental goods and environmental services negotiations, Mexico could keep in mind certain cross-cutting issues while defining a strategy for the EGS negotiations. These could include adopting a co-ordinated strategy for EGS at various WTO negotiating bodies, addressing the issue of non-tariff barriers, especially those relevant to Mexican EGS exports – and specifically those prevailing in non-FTA trading partners – and adopting trade policies that facilitate the creation of domestic EGS capacities, particularly for Mexican small and medium-sized enterprises. These could help Mexico realize some meaningful sustainable development benefits from trade liberalisation in EGS.

In addition, better access to environmental goods and services may lead to access to cleaner water, air and improved energy efficiency. This might help facilitate the realisation of the objectives contained in other sustainable development mandates: the UN Millennium Development Goals and Johannesburg mandates, and important Multilateral Environmental Agreements, such as the Kyoto Protocol. Even if not directly discussed in the WTO negotiations, policy makers and trade negotiators could keep these mandates in mind during the course of the negotiations - even more so if trade liberalisation in these goods and services can assist in the realisation of the goals contained in these mandates.

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## ANNEX: TABLES

**Table 1: Economic Development Goals and Strategies within the PND 2001-2006**

GOALS	STRATEGIES <sup>24</sup>
(1) Achieve a Sound Macroeconomic Environment	<ul style="list-style-type: none"> <li>▪ Co-ordinate fiscal and monetary policies.</li> <li>▪ Reinvent fiscal policy.</li> <li>▪ Promote efficient regulatory and supervision schemes in the financial system.</li> <li>▪ Foster a solid and efficient banking industry.</li> <li>▪ Strengthen non-banking financial services and insurance culture in Mexico.</li> <li>▪ Develop a social banking policy.</li> <li>▪ Reactivate the development banking industry.</li> <li>▪ Foster efficiency in the stock market.</li> <li>▪ Promote productivity in the public sector.</li> </ul>
(2) Increase and Expand Competitiveness	<ul style="list-style-type: none"> <li>▪ Promote sectoral development and competitiveness.</li> <li>▪ Develop good quality infrastructure and public services.</li> <li>▪ Foster a new labour culture and promote a reform of the labour framework.</li> <li>▪ Foster an advantageous integration of the country into the international environment and the new economy.</li> <li>▪ Promote the use and take advantage of information technology means.</li> <li>▪ Consolidate and foster institutional and regulatory frameworks to simplify the administrative burden faced by companies.</li> <li>▪ Increase foreign direct investment flows.</li> <li>▪ Strengthen the domestic market.</li> <li>▪ Implement a comprehensive corporate development policy.</li> </ul>
(3) Ensure Inclusive Development	<ul style="list-style-type: none"> <li>▪ Integrate micro-entrepreneurs and self-employed workers to the market.</li> <li>▪ Establish institutions to finance low-income entrepreneurs.</li> <li>▪ Promote rural development and improvement in the welfare of rural population through investment, integration to chains of production, capacity-building and technology transfer.</li> <li>▪ Foster the creation and development of productive projects with benefits to vulnerable groups in indigenous communities.</li> <li>▪ Expand basic information technology infrastructure in rural communities and low-income urban areas.</li> </ul>
(4) Promote Balanced Regional Development	<ul style="list-style-type: none"> <li>▪ Strengthen regional economies.</li> <li>▪ Support the elaboration of locally designed urban development plans.</li> <li>▪ Support the development of local, state and regional tourist industries.</li> <li>▪ Create sustainable development centres to discourage regional migration.</li> <li>▪ Co-operate with state and local authorities in the regional development planning processes.</li> <li>▪ Develop the Northern and Southern regions according to their economic potential and their particular natural and social characteristics.</li> </ul>
(5) Create the Conditions for Sustainable Development	<ul style="list-style-type: none"> <li>▪ Foster efficient use of natural resources, especially water and energy.</li> <li>▪ Promote comprehensive and decentralised environmental policies.</li> <li>▪ Strengthen research and technology innovation to support sustainable development through clean technologies and productive processes.</li> <li>▪ Foster environmental protection and sustainable use of natural resources through education, training, communication and social participation.</li> <li>▪ Improve the environmental performance of the federal government.</li> <li>▪ Continue the development and implementation of a national sustainable development strategy.</li> <li>▪ Advance in the strategy to mitigate green house gas emissions.</li> </ul>

Source: Presidencia de la República, *Plan Nacional de Desarrollo 2001-2006*, [www.presidencia.gob.mx](http://www.presidencia.gob.mx).

**Table 2: Social Development Goals and Strategies within the PND 2001-2006**

GOALS	STRATEGIES <sup>25</sup>
(1) Improve Education and Welfare	<ul style="list-style-type: none"> <li>▪ Provide quality education tailored to the needs of the Mexican population.</li> <li>▪ Foster long-term social development policy.</li> <li>▪ Design and implement programmes to reduce poverty, increase access to basic infrastructure<sup>26</sup> and provide development opportunities to low income population.</li> <li>▪ Improve health standards.</li> <li>▪ Contribute to the comprehensive development of families through the provision of social security services.</li> <li>▪ Promote and implement housing and urban development public policies as an engine to development by linking territorial development policies with housing and construction programmes.</li> <li>▪ Integrate rural populations to the economic development strategy by (among others) taking advantage of technology development and sustainable use of natural resources.</li> <li>▪ Direct scientific and technological activities to address the basic needs of the population (including nutrition, health, education, poverty alleviation and environmental quality).</li> </ul>
(2) Enhance Equity and Equality Opportunities	<ul style="list-style-type: none"> <li>▪ Promote equity of education.</li> <li>▪ Eliminate discrimination and violence towards women.</li> <li>▪ Protect and provide full development of children and teenagers.</li> <li>▪ Develop inclusive policies for the elderly.</li> <li>▪ Promote and strengthen the development of handicapped people.</li> <li>▪ Provide incentives for the participation of indigenous population in national development.</li> </ul>
(3) Promote Education to Develop Personal Capacities as well as Individual and Collective Initiatives	<ul style="list-style-type: none"> <li>▪ Enhance adult education.</li> <li>▪ Diversify and make education supply more flexible.</li> <li>▪ Strengthen scientific research and technological innovation to support human resource development.</li> <li>▪ Facilitate access to state of the art technology.</li> <li>▪ Support the creation of social enterprises with the participation of low-income population in rural and urban areas.</li> <li>▪ Foster the knowledge of culture and diversity throughout the Mexican population.</li> </ul>
(4) Strengthen Cohesion and Social Capital	<ul style="list-style-type: none"> <li>▪ Strengthen family culture.</li> <li>▪ Foster civic culture through education.</li> <li>▪ Stimulate the participation of civil society in the development of public policies.</li> <li>▪ Integrate vulnerable populations into the development strategy.</li> <li>▪ Foster co-ordination between the education and culture sectors and strengthen cultural infrastructure throughout the country.</li> <li>▪ Establish a national model to develop sport culture.</li> <li>▪ Promote the modernisation of union groups.</li> </ul>
(5) Achieve Social and Human Development in Harmony with Nature	<ul style="list-style-type: none"> <li>▪ Harmonise growth and territorial distribution with sustainable development.</li> <li>▪ Promote environmental culture in the decision making process.</li> <li>▪ Strengthen scientific and technological research to better understand sustainable development.</li> <li>▪ Create new ways of interconnection with the environment and foster sustainable production and consumption processes.</li> <li>▪ Stop and reverse water, air and soil pollution.</li> <li>▪ Stop and reverse erosion processes and increase reforestation.</li> </ul>
(6) Enhance the Responsive Capacity of the Government	<ul style="list-style-type: none"> <li>▪ Promote the design and implementation of education policy at the state and local levels by involving communities in education policy making and implementation.</li> <li>▪ Build trust and credibility in government actors and institutions.</li> <li>▪ Reduce school desertion by supporting low-income families through scholarships.</li> <li>▪ Promote insurance schemes to protect families against extraordinary health expenses.</li> <li>▪ Regularise rural property through assuring legal certainty in land rights.</li> <li>▪ Strengthen justice and reduce uncertainty in the rural sector.</li> <li>▪ Promote effective schemes to support unemployed people.</li> </ul>

Source: Presidencia de la República, *Plan Nacional de Desarrollo 2001-2006*, [www.presidencia.gob.mx](http://www.presidencia.gob.mx).

**Table 3: Environmental Strategic Programmes, Campaigns and Goals in the PNMA 2001-2006**

STRATEGIC PROGRAMMES AND CAMPAIGNS	GOALS <sup>27</sup>
(1) Halt and Reverse Pollution of Systems that Support Life	<ul style="list-style-type: none"> <li>▪ Halt and reverse the pollution of water, air and soil to assure the conservation of these resources for future generations.</li> <li>▪ Ensure integrated management of water, air and land.</li> <li>▪ Ensure compliance with environmental laws, standards and regulations.</li> <li>▪ Reclaim rivers, lakes, basins and watersheds from polluting sources.</li> <li>▪ Ensure a culture of rainwater infiltration and storage.</li> <li>▪ Recuperate and reuse wastewater from agricultural use.</li> </ul>
(2) Halt and Reverse Loss of Natural Capital	<ul style="list-style-type: none"> <li>▪ Halt and reverse natural-resource degradation to preserve potential benefits for future generations.</li> <li>▪ Ensure approaches for natural resource use that incorporate processes for their conservation, protection and development.</li> <li>▪ Ensure co-responsible participation of social groups and individuals in the conservation and use of natural resources and the environment.</li> </ul>
(3) Preserve Ecosystems and Biodiversity	<ul style="list-style-type: none"> <li>▪ Integrate and consolidate instruments and means for biodiversity conservation.</li> <li>▪ Ensure co-responsible participation of all sectors in the conservation of biodiversity.</li> <li>▪ Ensure approaches for the use of natural resources and environmental services that guarantee the preservation of species, genetic biodiversity, and conservation of ecosystems and their inherent ecological processes.</li> </ul>
(4) Promote Sustainable Development	<ul style="list-style-type: none"> <li>▪ Incorporate environmental criteria into the decision making process on economic and social policies at all government levels and throughout all sectors.</li> <li>▪ Strengthen federalism and ensure integrated management of environmental issues with the participation of local stakeholders.</li> <li>▪ Ensure compliance with legal environmental instruments by involving society in their understanding and vigilance.</li> </ul>
(5) National Campaign for Forests and Water	<ul style="list-style-type: none"> <li>▪ Build a national alliance for the recovery of water bodies and forest lands throughout the country.</li> <li>▪ Make national economic and public policies, as well as market mechanisms, work towards natural resources rescue.</li> <li>▪ Promote a new environmental culture through out the population to achieve sustainable development.</li> </ul>
(6) National Campaign for a Clean Mexico	<ul style="list-style-type: none"> <li>▪ Decrease solid waste disposal.</li> <li>▪ Create business and market incentives for waste management to reduce stress on public budgets.</li> <li>▪ Create opportunities for private participation.</li> <li>▪ Reduce environmental problems and health risk associated with waste.</li> </ul>

Source: Mexican National Programme of Environment and Natural Resources (PNMA) 2001-2006, [www.semarnat.gob.mx](http://www.semarnat.gob.mx).

**Table 4: Gains in Sustainable Development Impact Potential (SDIP) from Adopting a Broader Definition of EGS Relative to the Traditional Definition**

Sustainable Development Goal and Strategies	EGS (TRADITIONALLY DEFINED) Impact Potential	EGS + EPP (BROADLY DEFINED) Impact Potential	EPP - EGS Deferential
TOTAL LIST OF EGS	%	%	%
Total Sustainable Development Goals (Economic + Social + Environmental)	62.94	65.03	3
Total Economic Goals	62.70	63.00	0
Total Social Goals	53.09	59.00	11
Total Environmental Goals	70.39	71.47	2
Total Sustainable Development Strategies (Economic + Social + Environmental)	16.55	20.43	23
Total Economic Strategies	10.79	13.80	28
Total Social Strategies	13.06	16.93	30
Total Environmental Strategies	35.79	40.50	13
<b>B. RESOURCE MANAGEMENT GROUP</b>			
Total Sustainable Development Goals (Economic + Social + Environmental)	63.33	69.60	10
Total Economic Goals	71.11	72.00	1
Total Social Goals	55.56	73.30	32
Total Environmental Goals	66.56	69.80	5
Total Sustainable Development Strategies (Economic + Social + Environmental)	13.44	25.1	87
Total Economic Strategies	11.78	20.8	77
Total Social Strategies	10.89	22.5	107
Total Environmental Strategies	34.78	48.9	41

Sources: Developed by the author with data from the OECD *Environmental Industry Manual*, 1999; Mexico's - National Development Plan 2001-2006; and Mexico's National Environment and Natural Resources Programme 2001-2006.

## ENDNOTES

<sup>1</sup> EPPs are goods or services where the environmental benefits are derived in the course of their production, use and disposal.

<sup>2</sup> This section is based on the OECD-CEC study, 2003d. Figures have been updated with the latest information available and the analysis of some issues illustrated with examples. A section on trade flows for EGS also has been added.

<sup>3</sup> For an elaboration of each scheme see CEC, 2004a.

<sup>4</sup> Holistic management systems are designed to enhance biodiversity, biological cycles and the biological activity of soil. This type of agricultural production is based on reduced use of inputs and the exclusion of chemical synthesis.

<sup>5</sup> Conservation agriculture enhances the efficient use of natural resources through an integrated use of land, water and biological resources combined with external inputs (FAO, 2002).

<sup>6</sup> According to the guidelines for assessing the management of non-timber forest products (NTFP) in natural forests developed by the Rain Forest Alliance in 1989, this category could be further classified into four groups:

*Exuded:* Resins, latex, rubber, colours and pigments for industrial and non-industrial use in the food, cosmetics and pharmaceutical industries.

*Vegetative structures:* Plant parts, such as stems, leaves and roots used in the pharmaceutical and food industries as raw materials for handicrafts and ornament, as well as construction materials.

*Reproductive parts:* Vegetal parts, such as nuts, fruits and seeds commonly used in the pharmaceutical, cosmetics, food and vegetal oil industries.

*Wildlife:* Includes live animals and products derived from direct extraction of wildlife (pets, feathers, collection articles, etc.).

<sup>7</sup> This is a common practice for the Mexican government planning process since the strategies and goals from each government body and programme at the federal level need to be related to the goals and strategies of the PND.

<sup>8</sup> A full list of Members' submissions is available at [www.trade-environment.org/page/theme/tewto/para31iii.htm](http://www.trade-environment.org/page/theme/tewto/para31iii.htm)

<sup>9</sup> TN/TE/W/49 and Suppl.1 and TN/TE/W/57.

<sup>10</sup> TN/TE/W/59.

<sup>11</sup> UNCTAD, 2003d.

<sup>12</sup> TN/TE/W/56.

<sup>13</sup> TN/TE/W/52.

<sup>14</sup> TN/TE/W/54 and TN/TE/W/51.

<sup>15</sup> TN/TE/W/55.

<sup>16</sup> TN/TE/W/17.

<sup>17</sup> TN/TE/W/27.

<sup>18</sup> TN/TE/W/49 and Suppl.1.

<sup>19</sup> TN/MA/W/17.

<sup>20</sup> The most commonly used classification system, reflected in MTN.GNS/W/120 (10 July 1991), is explicitly stated to be non-legally binding and purely voluntary. While there is a strong tendency among the WTO membership to encourage scheduling according to W/120, there is an equally strong advocacy by certain Members to revise the classification of certain sectors on the basis that W/120 no longer reflects business reality in these sectors. Among the sectors being examined by the membership, and being targeted by certain Members for revision, are environmental services and tourism services. Even if the new proposals are adopted and incorporated into W/120, or at least recognized as 'model' schedules, these would still not be legally binding or obligatory. Members will still be free to schedule commitments according to the classification system they deem best.

<sup>21</sup> S/CSS/W/3 and S/CSS/W/38.

<sup>22</sup> WT/DS285/R and WT/DS285/AB/R.

<sup>23</sup> S/CSS/W/9 and S/CSS/W/19.

<sup>24</sup> The components of each strategy can be consulted in the National Development Plan (PND 2001-2006), [www.presidencia.gob.mx](http://www.presidencia.gob.mx).

<sup>25</sup> The components of each strategy can be consulted in the National Development Plan 2001-2006, [www.presidencia.gob.mx](http://www.presidencia.gob.mx).

<sup>26</sup> A key component of this strategy is to expand basic services, including potable water, sewage, electricity and roads.

<sup>27</sup> The specific actions to reach these goals can be consulted at the Mexican National Environment and Natural Resources Programme (PNMARN) 2001-2006, [www.semarnat.gob.mx](http://www.semarnat.gob.mx).



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Issue Paper No. 1 by Marc Benitah, with David Vivas-Eugui, Alexander Werth and Mahesh Sugathan, 2005.

The ICTSD project on *Bridging Trade and Sustainable Development in Environmental Goods and Services* aims at enhancing developing countries' capacity to understand trade and sustainable development issue linkages with respect to environmental goods and services and reflect regional perspectives and priorities in regional and multilateral trade negotiations. The current phase of the project got underway in January 2005 and will continue until June 2006. Other project activities and resources include:

- Options for Liberalisation of Trade in Environmental Goods in the Doha Round. By Robert Howse and Petrus B. van Bork, November 2005.
- The Economics Of Trade In Environmental Services: The Implications For Developing Countries In The GATS. By Colin Kirkpatrick, forthcoming.
- Technology transfer Issues in environmental goods: Will the Doha Round of negotiations facilitate access? By Lynn Matelka, forthcoming.
- Latin American Consultation on Environmental Goods and Services, Diálogo regional sudamericano sobre bienes y servicios ambientales, Cartagena de Indias, Colombia, 1-2 June 2005.

For further information, visit [http://www.trade-environment.org/page/ictsd/projects/egs\\_desc.htm](http://www.trade-environment.org/page/ictsd/projects/egs_desc.htm).

One of the mandates of the CEC is to conduct an ongoing assessment of the environmental impacts of trade liberalisation in North America. This assessment work shows that liberalised trading rules under NAFTA do not in and of themselves lead to the increased use of environmentally preferable products. The CEC's project on *Trade in Environmental Goods and Services* (alternatively, *Greening Trade in North America*) seeks to understand what constrain this development. That work aims to break down barriers to environmentally preferable goods and services, including low consumer awareness of the environmental effects of purchasing habits, confusion about eco-labelling, difficulties in financing small companies in this field, lack of understanding about the best use of market-based approaches to support environmental protection and the conservation and sustainable use of biodiversity; and supporting cooperative efforts to increase these programs (e.g., renewable energy and energy efficiency, shade coffee, eco-palm fronds, grass-fed bison). It also aims to connect the growing numbers of suppliers and consumers of greener goods and services throughout North America.

A **complete listing of CEC publications on trade and environment** in general, and on environmental goods and services, is available at <http://www.cec.org/bibliographies>.