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EXPORT PROMOTION AND ENVIRONMENTAL TECHNOLOGIES

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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This study of government activities for the promotion of exports of environmental technologies is based on a survey of OECD Member countries. It was prepared with the assistance of consultant David Blair, Canada. The study was sponsored by the OECD Environment Directorate as part of its work programmes on trade and environment and technology and environment. It is derestricted under the responsibility of the Secretary-General of the OECD.

This report is also available in French.

TABLE OF CONTENTS

SUMMARY

This report, which is based on a survey of OECD Member countries, is intended to clarify the relationship between government export promotion activities and the export of environmental technologies. Government export promotion activities consist of: 1) **officially-supported export credits**, or financing used to promote or facilitate export sales; and 2) **general export promotion activities**, such as business awareness programmes, advisory services, market information and trade fairs and missions. In this report, environmental technologies include both: 1) pollution control or end-of-pipe technologies; and 2) pollution prevention or clean technologies. In general, the overall level of export credits given by OECD countries is declining, while export promotion activities are increasing in level and scope; attention to the environmental dimension of export credit and export promotion programmes is a relatively recent phenomenon.

Governments are increasingly interested in promoting the export of environmental technologies because of the trade benefits to be derived by OECD countries and the environmental benefits to be reaped by non-OECD countries. OECD environmental technologies can signficantly improve ecological conditions in developing countries, contributing to their economic development and to addressing global environmental problems. Most technologies (including environmental technologies) are transferred to developing countries through the trading system rather than through official development assistance or foreign direct investment.

Government support for **export credits** has been the most common form of export promotion in OECD countries. Most OECD export credit agencies do not keep data on the amount of support given specifically to environmental technologies. However, some OECD governments are now starting to conduct environmental reviews and assessments of their export credit programmes to determine the amount of funding devoted to environmental technologies as well as the environmental content or impact of the goods and projects which are being funded. A few governments are targeting a percentage of export credits for transferring environmental technologies to developing countries.

Governments also support exports through a variety of **general export promotion activities** which are being increasingly used to encourage the export of environmental technologies and services. Examples are given here of how governments are organising awareness programmes, advisory services, market information sources and trade fairs to alert exporters and importers to trade opportunities in environmental technologies. For the most part, environmental reviews and assessments have not been conducted of general export promotion activities. Currently, the majority of environmental technologies supported through export promotion activities are for pollution control or end-of-pipe technologies rather than for pollution prevention or clean technologies.

The report concludes with the discussion of a number of **policy options** to be considered by governments to integrate further environmental considerations into their export credit and promotion programmes, including: 1) improving data and information on environmental technologies benefiting from export promotion, 2) targeting export promotion activities to assist producers of environmental technologies, 3) promoting more exports of clean technologies as opposed to pollution control technologies, 4) conducting reviews and assessments of the environmental implications of both export credits and export promotion activities, 5) harmonising these review and assessment methodologies, and 6) ensuring consistency in development assistance and export promotion policies regarding environmental technology transfer.

INTRODUCTION

Export promotion is an area of trade policy that has long been used by governments to enhance the export of goods and services. The need to step up the transfer of environmental technologies throughout the world is gaining growing recognition, and an examination of the role that export promotion can play in contributing to this technology transfer seems more desirable than ever. For the purposes of this study, the term *environmental technologies* includes six broad groupings:

1. end-of-pipe (or add-on);
2. disposal;
3. external recycling;
4. clean-up;
5. process modification; and
6. feedstock amendment.

Most of the output of the environment industry is concentrated in the first four categories, which are often referred to collectively as the ***pollution control*** sector. The last two categories are the so-called ***clean technologies***, which prevent pollution and/or reduce raw material consumption and other forms of industrial input through alternative production techniques. Over the long-term, it is believed that clean technologies (including technologies for promoting energy efficiency) will come to occupy an increasingly important place in the market for environmental products and services.

Data about environmental technologies are limited, partly due to the diversified nature of these technologies. The collection of data is particularly problematic in the case of clean technologies, which are usually an integral part of the overall production process of various industries. Isolating the purely environmental component of these processes for statistical purposes is a difficult task. Hence, many governments in the OECD area do not distinguish between clean technologies and pollution control technologies, and simply refer to them collectively as *environmental technologies*.

A study conducted by the OECD in 1992 developed market estimates for the environment industry, which includes end-of-pipe pollution control equipment and related services as well as general environmental services related to the installation of clean technologies (OECD, 1992b). Although these estimates exclude clean technologies themselves, they do give an indication of the dimension of the international market for environmental technologies. According to this study, the estimated size of the world market for environmental goods and services was $200 billion in 1990, and this market is forecast to grow annually (in real terms) at a rate of 5.5 per cent to the year 2000. OECD countries are the main producers of environmental equipment and services, accounting for an estimated 90 per cent of the value of world output. Trade data on environmental technology are limited, although according to OECD estimates, international trade in environmental products (which includes income from technology licensing) is believed to be over $24 billion.

Since many non-OECD countries are moving into the same industrial sectors that OECD countries have long been involved in, many of the environmental problems in developing countries are similar to those that OECD countries themselves have faced. Some of the fastest growing industrial sectors in non-OECD countries include pulp and paper manufacturing, steel-making, metal smelting, the chemicals

industry, consumer electronics, automobile manufacturing, textiles and footwear. A wide range of environmental technologies have been developed by OECD countries to deal with the growing environmental problems associated with these industrial activities. Some of these technologies have the potential for significantly improving environmental conditions in non-OECD countries, thereby reducing the costs associated with environmental degradation which can retard economic development in these countries and contribute to global ecological problems. Examples of technologies which may bring both environmental and economic benefits to non-OECD countries include:

-- cleaner burning and more fuel-efficient motor vehicles;
-- chlorine minimisation in pulp and paper production;
-- cleaner coal combustion technology;
-- energy-efficient iron and steel smelting and refining;
-- water-based textile dyes;
-- low- and no-chrome leather tanning technologies;
-- CFC replacements;
-- membrane cell technology for the chloralkali industry; and
-- ion exchange technology for the metal plating industry.

There are basically three methods by which technology can be transferred from OECD countries to non-OECD countries:

First, technology transfer can occur within the context of **official development assistance** (or foreign aid), either through *grants* (i.e. outright gifts, with no repayment expected) or *loans* which are extended on preferential terms (e.g. longer repayment periods and lower interest rates than can be obtained in financial markets).

Secondly, technology can be transferred through **foreign direct investment** (FDI), in which a foreign investor will arrange the financing of technology acquisition, either on its own, in a consortium with other foreign investors, or in a joint venture with locally-based firms.

Thirdly, firms (and sometimes governments) in non-OECD countries can acquire technology on **purely commercial terms** from firms in OECD countries which do not have any direct investment, joint venture or consortium relationship with the importing firm. For the purposes of this paper, such a transfer is simply termed *trade*. Foreign trade in environmental technologies includes foreign sales or purchases of less-polluting products, cleaner production machinery and equipment, and a range of services. Among these services are training programmes, construction, engineering and management consulting, and the purchase of know-how. A significant part of this trade involves the licensing of technologies by one firm from an unrelated firm in another country.

Data show that the vast majority of technology (and presumably of environmental technologies) is transferred from OECD to developing countries through regular commercial channels or trade among unrelated firms. According to the limited data available, some 77 per cent of technology transfer to the developing countries takes the form of foreign trade. In 1988, $144 billion was spent by developing countries for the direct import of technological goods and services as well as payments for licensing fees and royalties. The flow of technology to developing countries via official development assistance was valued at about $13 billion. Approximately $29 billion worth of technology was transferred through foreign direct investment in the form of intra-firm trade. It should be noted that these figures are averaged over all non-OECD countries and, for *certain countries*, foreign aid represents the largest percentage of technology transfer.

There are two principal ways in which governments can directly influence the flow of environmental technologies in international trade. In the first instance, they may erect barriers to technology trade through such traditional methods as tariffs and quantitative import restrictions, or through a variety of trade-related policies and practices such as local content requirements in the purchase of foreign goods and services, foreign exchange restrictions, or insufficient patent protection. However, according to a previous OECD study, these trade-related policies and practices do not appear to be a significant barrier to the transfer of clean technologies (OECD 1992c).

Secondly, governments can positively influence trade in environmental technologies through an area of trade policy known as export promotion. Export promotion has been defined as *"those public policy measures which actually or potentially enhance exporting activity at the company, industry, or national level*" (Seringhaus and Rosson). Although many forces determine the international flow of goods and services, export promotion is one of the principal opportunities that governments have to influence the volume and types of goods and services exported from their areas of jurisdiction.

The objective of this report is to clarify the relationship between government export promotion activities and the export of environmental technologies. Two main questions are addressed in this study:

-- ***Do OECD member governments have in place any programmes specifically designed to promote the export of environmental technologies?***

-- ***Do OECD governments, when promoting the export of goods and services in general, have any procedures for assessing the environmental implications of these exports?***

This study confines itself to *government* export promotion activities and does not examine the efforts of private sector entities to promote exports. Secondly, only the policies and programmes of *central* governments are discussed and not the export promotion activities of the various sub-national and regional governments of OECD countries. Thirdly, this study does not examine export promotion in all of the OECD member countries and should not be treated as a comprehensive catalogue of OECD policies on exports of environmental technologies. Rather, it is the intention of this study to provide a general sense of how and to what extent exports of environmental technologies are dealt with in the OECD area as a whole based on examples. Fourthly, this study encompasses all types of industrial environmental technology, both pollution control *and* clean technologies, although a distinction between these two types of environmental technologies will be made wherever possible. Technologies and government programmes for the agricultural and military sectors are not examined here. Finally, it should be noted that because of the changeable nature of export promotion programmes, the various government practices and programmes referred to in this report may have been modified or terminated, and new programmes which are not mentioned here may have been initiated.

OFFICIALLY-SUPPORTED EXPORT CREDITS

Government support for export credits is the most common form of export promotion in OECD countries and is the export promotion activity which involves the greatest commitment of government funds. Virtually every government in OECD Member countries provides some form of export credits in order to promote or facilitate export sales. In most OECD countries, export credits are handled by a different agency than more general export promotion activities. Export credits are described by the OECD as follows:

> *Broadly defined, an export credit arises whenever a foreign buyer of exported goods or services is allowed to defer payment. Export credits are generally divided into short*

term (usually below two years), medium term (usually two to five years) and long term (usually over five years). They may take the form of "supplier credits", extended by the exporter, or of "buyer credits", where the exporter's bank or other financial institution lends to the buyer (or his bank). Export credit agencies may give official support to both types of credit (OECD 1990).

This support may take the form of ***financing support***, which includes the extending of direct credits, refinancing and interest rate subsidies. Another form of official support is ***pure cover***, where governments provide insurance and guarantees to domestic suppliers and lending institutions for political and/or commercial risk (that is, the risk of non-payment due to political unrest, government-imposed restrictions, or bankruptcy of the buyer). In addition, a special form of official support to export credits is the ***mixed credit***, in which governments combine export credits with development assistance funding. A related practice is the offering of ***tied aid financing***, which arises when any development assistance loans or grants are tied to the purchase of goods or services from the donor country (OECD 1992a). As the practice of tied aid is primarily under the aegis of aid agencies, it is not discussed in this study of export promotion policies.

In 1991, the contract value of officially-supported long-term export credits was SDR 11.4 billion and the credit value was SDR 8.3 billion. The level of export credits supported by governments declined steadily during the 1980s after peaking at a contract value of nearly SDR 25 billion in 1982. The subsidisation of export credits has also declined significantly, after peaking at an estimated US$7 billion in 1981 (Blair 1993). Export credits are generally given to support the export of large-scale capital goods and services, including such items as passenger aircraft, power generating plants, steel plants, pulp and paper mills, mining machinery, ground satellite communications stations, cement plants, oil refineries and chemical plants.

The export credit agencies in OECD countries do not for the most part keep data on how much support is given to environmental technologies, and it is particularly difficult to say with certainty what proportion of government support given to export credits goes to clean technologies as opposed to end-of-pipe technologies. However, since most of the exports receiving this kind of support involve industrial production processes, export credit is the form of export promotion most likely to benefit clean technologies. On the basis of the information that is available, however, most of the environmental technology supported by government export credit programmes appears to be pollution control technology, rather than clean technology. Among the pollution control technologies supported by export credits are:

-- slag and ash disposal;
-- water clarification;
-- oil spillage control equipment;
-- fume scrubbers;
-- noise shielding;
-- reforestation over refill of open-cut mines; and
-- wastewater/sewage treatment facilities.

Examples of the kinds of clean technologies which have been supported through government export credit financing programmes or which could benefit from such support include:

-- renewable energy projects incorporating geothermal, solar, wind, cogeneration and biomass technologies;
-- fluidised-bed combustion technology;
-- oxygen delignification technology for the pulp and paper industry;
-- direct reduction technology in the iron and steel industry;
-- technologies to capture methane gas in oil production;

-- combined cycle power plants; and
-- plants to manufacture energy-efficient, non-CFC refrigeration equipment.

OECD export credit agencies do not generally have special programmes or funds targeted at environmental technologies, nor do they normally give preferential treatment to any particular product, company, industry or industrial sector. Instead, these agencies respond to specific requests for financing from domestic exporters; it is the exporter who decides which projects to pursue and applies (and pays) for export credit cover. The main criteria used by governments for approving applications for export credits are the financial standing of the project or contract, and the ability of the buyer to repay the debt. The decision is thus based on the risk in the buying country (and increasingly the concentration of risk assumed by export credit agencies). Part of the risk assessment may encompass consideration of potential environmental problems that might threaten the viability of a project. But, for most export credit agencies, this is not a regular discipline and may only be done for those projects which receive a developmental assessment in relation to mixed credits (i.e. involving an aid input).

An exception to this general pattern is the Export-Import Bank of the United States, which has been mandated by the Export Enhancement Act of 1992 to encourage "*the use of its programs to support the export of goods and services that have beneficial effects on the environment or mitigate potential adverse environmental effects."* Eximbank has initiated a new database system which will capture environmental technology information for each transaction authorised, and has appointed an officer to advise it on ways to use Eximbank programmes to support exports of environmental technologies. At present, Eximbank estimates that roughly 5 per cent of the Bank's credit and guarantee financing is directed to environmental technologies.

Eximbank also participates in two inter-agency programmes aimed at enhancing exports of environmental technology. It co-operates with other government agencies in the Committee on Renewable Energy, Commerce and Trade (CORECT), set up in 1984 to coordinate federal activities to promote exports of renewable energy technologies. Since 1979, Eximbank has supported over 40 renewable energy projects representing $1.5 billion in exports of US goods and services to developing countries. Eximbank is also one of the main government agencies involved in the US-Asia Environmental Partnership (US-AEP), which is intended to provide "one-stop shopping" for US government assistance on environmental goods and services including export financing and risk insurance.

Also in the United States, the US Overseas Private Investment Corporation (OPIC) provides medium- to long-term financing and insurance for US business ventures in developing countries. Although OPIC provides support for US private investment abroad, its activity stimulates US exports as well. OPIC has set up a privately owned and managed Environment Investment Fund, intended to identify, invest in, and support new or expanding business enterprises in developing countries and in Eastern Europe, which contribute to sustainable natural resource development and practice sound environmental management (Delphos 1990). The priority areas targeted by the Fund are sustainable agriculture, forestry management, ecotourism, and pollution prevention. However, OPIC has not yet succeeded in raising the private sector financing required to make the Fund operational.

Australia's export credit agency, the Export Finance and Insurance Corporation (EFIC), estimates that the cost component allocated to environmental technologies in projects supported by direct financing and guarantees from 1985 to 1992 was approximately 8 per cent. The Australian government also estimates that more than 10 per cent of its mixed credit funding offered through the Development Import Finance Facility (DIFF) will be used in the 1992-93 financial year to support projects with the explicit objective of transferring environmental technologies (both pollution control and pollution prevention) to developing countries.

GENERAL EXPORT PROMOTION ACTIVITIES

Public sector promotion of exports is a widespread practice among the Member countries of the OECD and generally refers to export support activities which do not involve direct financing or funding for specific exports. The general goal of export promotion programmes is to encourage and assist domestic firms to sell their products abroad (GAO 1992b). Export promotion programmes can play a useful role in increasing the exports of goods and services in particular sectors where a country is competitive. However, these programmes alone will not normally produce substantial changes in the export performance of industrial sectors, since that performance is largely determined by the underlying competitiveness of the domestic industry and by the macroeconomic policies of the country concerned and its trading partners (GAO 1992a).

Various studies (GAO 1992a, Hibbert 1990) have identified those conditions under which export promotion services tend to be most helpful:

- -- when domestic firms lack awareness of foreign opportunities because markets have failed to give the right information to producers who would otherwise export;
- -- when domestic firms view exporting as excessively time-consuming, costly and risky;
- -- when domestic firms (particularly smaller companies) are aware of export opportunities and are motivated to export but lack sufficient resources (eg. time, money) to pursue these opportunities; and
- -- when domestic businesses need representational assistance from their government in establishing contacts abroad.

Consequently, export promotion programmes can attempt to motivate managers to export by making them aware of the opportunities and advantages of exporting, making available information that can assist their export efforts, and providing firms with some of the resources necessary to pursue export opportunities. Export promotion can include a variety of activities and the governments of most OECD countries engage in at least some of these.

An evaluation of the degree to which exports of environmental technologies benefit from the various export promotion activities described below is not simple or straightforward. Most OECD government export promotion agencies do not keep data on environmental technologies in any systematic way. Many governments make a variety of export promotion services available to any businesses that care to make use of them, and do not keep track of the types of products that these services benefit most. In the case of some activities, such as the publication of information or government advertising to encourage companies to export, there is no way of knowing which exports have benefited from these services.

Thus, it is difficult to make any reliable generalisations about such things as the share of export promotion activities directed to environmental technologies, particularly the share of such activities directed towards clean technologies as opposed to pollution control technologies. Until more complete data become available, the best that can be offered at this stage is a description of those export promotion activities or programmes that have been specifically targeted at environmental technologies. It should be recalled, moreover, that not every OECD government plays a major direct role in export promotion, and many of them do not target any particular products through special programmes or activities. The following is a list of the main types of export promotion activities and, where such information is available, examples of how these activities have supported the export of environmental technologies from OECD Member countries.

TYPES OF EXPORT PROMOTION ACTIVITIES

Export Motivation and Awareness Programmes

Many governments attempt to make domestic companies aware of the benefits of exporting, inform them of general business opportunities abroad, and encourage firms to export. These tasks may be performed through:

-- advertising in the domestic business press;
-- holding or sponsoring seminars and symposia to discuss new markets, to explain how to become an exporter, etc.; and
-- giving awards and prizes for outstanding performance in exporting.

For example, the Canadian government has organised a series of seminars on business opportunities in the US environmental marketplace in order to inform Canadian firms about what is necessary to succeed in that market. The French Ministry of Industry and Foreign Trade has organised a colloquium dealing with market opportunities in the area of engineering and environmental technologies. In the United States, the government has informally supported the work of the Environmental Technology Export Council (ETEC) and the Environmental Business Council (EBC), business associations intended to enhance the awareness of US environmental technology suppliers of potential export markets.

Business Counselling and Advisory Services

Governments may also provide more specific counselling to businesses on such matters as how and where to market their goods and services, what modifications to make to products in order to increase their appeal to foreign customers, and how to package products for export. Companies may be screened for their export readiness (i.e. to make sure that they are internationally competitive) before being provided these services. Government advice may also be given on long-range plans for export expansion, the setting of market priorities, and how best to use the available government resources in support of their export efforts.

Most governments that engage in this type of activity have targeted specific foreign markets or regions that are considered to have the most market potential. In some countries, there is movement towards the targeting of certain domestic products and product groups for export. In addition, governments may in some cases conduct feasibility analyses of specific projects, products or services requested by foreign buyers, and then review the technical and financial capability of domestic suppliers before advising suppliers on fulfilling these requests.

An example is Japan's International Centre for Environmental Technology Transfer (ICETT), established in February 1991 under the jurisdiction of the Ministry of International Trade and Industry (MITI) to encourage the transfer of environmental technologies to developing countries and Eastern Europe. One of the activities engaged in by ICETT was the sponsoring of a symposium for business focusing on effective means for transferring environmental technologies to developing countries.

The United States-Asia Environmental Partnership programme (US-AEP) initiated in 1992 is designed to promote the application of US environmental expertise, goods and services to solve serious environmental problems in Asia. Among the planned activities of the US-AEP is helping US firms with specifications and standards to permit them to remodel US products and technology so they are appropriate to the Asian context. Some of the environmental technologies expected to benefit from this Partnership

programme are in the areas of water purification and wastewater treatment, solid and toxic waste management, forestry conservation, clean and efficient power plants, recycling, and pollution prevention.

Training and Education

Representatives of exporting firms may be provided with courses on foreign trade, international marketing or foreign language training. These courses are usually conducted at universities, community colleges, or other specialised educational facilities, and participating firms receive government funding to cover the costs incurred. Training may also be extended to foreign businessmen and government officials which may increase their familiarity with (and ultimately their demand for) goods and services available in the exporting country.

The Canadian government has initiated an Environmental Technology Transfer Opportunities Fund (ETTOF), which will support firm-specific management training in non-OECD countries. In addition, a Canadian Office of Training in the Environment (COTE) has been established to assist representatives from developing countries to learn through training about Canadian management, processes and technologies with applications to environmental issues. The Office, which is sponsored by three government departments, initiates training projects that match needs in developing countries with Canadian expertise available in research institutes, colleges and the Canadian environmental industry. Canadian industry representatives are sent to developing countries to explain their technologies to interested firms, and then representatives of those developing country firms are invited to Canada to learn about the Canadian technologies in greater detail.

Among the activities of Japan's International Centre for Environmental Technology Transfer (ICETT) is a programme of training for officials, company executives, managers, engineers and workers from developing countries focusing on identifying the environmental dimension of technologies, particularly Japanese technology exports.

Through the EPA's Environmental Training Institute, the US government participates in a joint venture with the environment industry to provide problem-specific environmental training to executives, regulators and policy-makers in developing countries. One of the main components of the United States-Asia Environmental Partnership programme (US-AEP) covers environmental fellowships, exchange and training. This would include training for Asian business and government executives through the Environmental Training Institute, the US Forest Service International Seminar on Forest Administration and Management, and USAID-DOE's Energy Industry Training Programs.

Market Information

One of the most common export promotion activities engaged in by governments is the provision of information on export markets. This information may be provided through government publications (special publications or periodicals), video presentations, libraries, computerised data banks, and trade inquiries services (usually by telephone). Information may be organised by country or regions (market profiles), by product or product groups, and by product or product groups within specific countries or regions. This information may be provided directly by the government of the exporting country, or in some cases the government may help finance the efforts of companies to obtain this information on their own.

Some of the general information provided through these services includes:

-- world trade statistics;
-- exporting techniques;

-- emerging market opportunities worldwide;
-- the location and details of trade fairs and exhibitions; and
-- information about the various government export promotion services that are available, as well as lists of export associations, chambers of commerce, industrial associations, etc. in the exporting country.

Information about specific country markets may comprise:

-- general country information (level of economic development, economic conditions, trends in trade, market structure, etc.);
-- government departments and agencies, chambers of commerce and industry associations, etc.;
-- import regulations;
-- national standards and technical specifications;
-- legal system (re: contracts, etc.);
-- transport, postal and other aspects of infrastructure;
-- business practices, national customs;
-- financial standing of foreign companies;
-- important points of contact;
-- leads on specific commercial opportunities, invitations to bid, calls for tender.

For example, the Canadian government's Department of External Affairs and International Trade commissions studies about the situation in the environmental marketplace in individual countries in Latin America, Asia and Europe. Canadian government studies on the United States market have highlighted certain pollution control technologies, including hazardous and toxic waste management, municipal solid waste, air pollution control, and water and wastewater treatment. In the Korean market, the market opportunities identified have also been largely in the area of pollution control, although LNG and LPG heating systems and motors, and airplane and carwash equipment with water recovery systems have also been pointed out. In the case of the European market, Canadian exporters have been advised to focus on opportunities in industrial waste water technologies, recycling, and environmentally friendly packaging technologies. Canada also advertises upcoming environmental trade fairs in a periodical publication entitled *CanadExport*.

The French government has conducted and commissioned environmental technology market surveys and collected information on the environmental companies that operate in France in order to define expansionary strategies, including through exports. Through its export strategy for engineering services, the French government promotes a number of environmental engineering services (particularly urban and industrial waste management and waste water treatment and filtration). Japan's International Centre for Environmental Technology Transfer (ICETT) conducts country studies in order to identify environmental problems in developing countries and Eastern Europe and to evaluate the possibility of applying Japanese environmental technologies to these problems.

The United States International Trade Administration (ITA) has provided US companies with information about export opportunities for environmental products and services in newsletters. Some examples of the export opportunities identified in the European market are catalytic converters, air pollution sensors and analysers, recycling equipment, heavy metal collecting equipment, waste prevention technology for specific materials, water filtration equipment, ozonation equipment, consulting services for energy, environmental impact assessments, and technical environmental services to advise on eco-labeling and eco-auditing. The ITA has also underlined to US companies the outstanding opportunities in the servicing and retrofitting of existing manufacturing facilities, as European firms move towards preventive solutions and decrease their emphasis on end-of-pipe solutions. The US-AEP programme will include improved information services covering business opportunities and trade leads, market trends and regulatory/enforcement policies in Asian countries.

Publicity

Governments may publish directories and periodicals containing descriptions of new products from domestic producers available for export, which are then distributed to business and government officials in foreign countries. In addition, financial support may be provided for companies to carry out advertising campaigns. For example, the US International Trade Administration advertises US environmental products in a periodical publication entitled "Commercial News U.S.A.". The Japan External Trade Organisation (JETRO) lists Japanese environmental technologies in two publications, "New Technology in Japan" and "Manufacturing Technology Guide Series". The Canadian government has published a specialised directory entitled, "Canada...A World Leader in Environmental Products and Services", and the Belgian Foreign Trade Office has published a similar directory entitled "Environmental Protection: The Contribution Made by Belgian Companies".

Trade Fairs and Exhibitions

Government assistance in this area may include:

-- sponsoring or organising trade fairs and exhibitions at home;
-- advising companies about foreign and domestic fairs;
-- advising companies on how to set up exhibits, etc.;
-- setting up national exhibits at domestic and foreign fairs, in which a selection of domestic products are displayed;
-- financial support to help domestic businesses cover such costs as travel abroad to fairs, entry fees, space rental, design and construction of display booths, etc.;
-- assistance in setting up commercial promotions in foreign department stores.

Canada's Department of External Affairs and International Trade (EAITC) has helped Canadian firms to participate in overseas environmental trade fairs by renting space at the fairs and then in turn renting them out to Canadian companies at a reduced rate. EAITC has also given support to an environmental trade fair organised in Canada, the International Conference and Trade Fair on Business and the Environment (GLOBE '90 and '92). The Swedish Trade Council has promoted environmental technologies through support to trade fairs. The US International Trade Administration has promoted US environmental technologies by running ecological trade fairs in the United States, and by exhibiting environmental products in USA pavilions at commercial exhibitions overseas.

Trade Missions

Many governments play a role in facilitating both inward and outward trade missions. This role includes inviting and welcoming influential foreign representatives from business and government, as well as foreign journalists, so they can examine domestic industries and products. Governments may also invite domestic firms to participate in collective trade missions travelling abroad, or sponsor individual visits to overseas markets by the representatives of a particular firm. Included in this category are international symposia supported by government agencies, which bring together domestic and foreign business representatives for the purposes of encouraging international trade and investment.

The Canadian government has organised an environmental trade mission to Europe, and the Swedish Trade Council promotes environmental technologies through inward and outward trade missions. The Japan External Trade Organisation (JETRO) has helped sponsor international symposia and seminars on environmentally sound manufacturing technologies, where Japanese and foreign business representatives,

government officials and researchers were brought together. In these symposia, Japanese technological products and services have been highlighted. In the United States, environmental technologies have been promoted through trade missions sponsored by the International Trade Administration (ITA), the Committee on Renewable Energy, Commerce and Trade (CORECT), the Environmental Technology Export Council (ETEC), and the United States-Asia Environmental Partnership (US-AEP).

Government Commercial Offices Abroad

Another common practice is for governments to post commercial officers abroad. These officials, who hold such titles as trade commissioners, trade attaches, and so on, are responsible for carrying out a number of the activities listed above (e.g. information gathering and dissemination), although they may also perform a number of other tasks:

- -- locating sales agents and distributors in foreign countries;
- -- counselling visiting business representatives from the home country;
- -- making contacts with government officials and members of the business community in the country where they are posted;
- -- setting up meetings between business representatives visiting from the home country and local government officials and business people.

Examples of services that post commercial officers abroad are Canada's Trade Commissioner Service, France's Postes d'Expansion Economiques, and the United States Foreign Commercial Service. Data is generally not available on the extent to which the activities of these offices support environmental technology exports, although most governments report that exports of these goods and services have benefited from this kind of activity. Under recent legislation, the US Secretary of Commerce is authorised to designate a Foreign Commercial Service officer to serve as the Environmental Export Assistance Officer in any country that offers promising markets for such exports. This officer would assist US exporters by identifying potential customers and market opportunities in those countries, by obtaining necessary business services, by providing information on environmental standards and regulations in those countries, and by making available information on all United States government programmes that could assist US exporters in any particular foreign market. In addition, under the US-AEP, new US environmental business centres are to be set up in several Asian cities to establish a presence for US environmental firms.

Contract Assistance

Certain governments help domestic firms by providing project bidding assistance where a company is competing for work on projects overseas. The government may participate directly in negotiations, or give advice on how to conduct negotiations. In some instances, a government may become a party to contracts itself, by purchasing goods and services from domestic suppliers and selling them directly to customers abroad. In other cases, governments may help bring domestic companies into a consortium for export marketing purposes. An example of this form of export promotion is the assistance provided by the Canadian Commercial Corporation (CCC) and by Canada's Programme for Export Market Development (PEMD), although data is unavailable on the extent to which this assistance benefits the export of environmental technologies.

Support to Private Sector Export Promotion

Rather than undertaking all export promotion activities themselves, several governments give financial and other support to private sector export promotion organisations, such as chambers of commerce,

export associations, and industry associations. Governments may also make funds available to individual firms to finance pre-export activities, such as market research and feasibility studies.

Examples of countries that offer support to the export promotion activities of domestic and/or overseas chambers of commerce are France, Germany, Italy, Sweden, and the United Kingdom. The French government provides support to the Federation of Small and Medium-Sized Industries, which assists medium-sized industries in establishing foreign subsidiaries, with the expectation that this will increase exports. The German government provides funds for some projects of the German Industry Council for Exhibitions and Trade Fairs (AUMA). The Netherlands government gives financial support to the Nederlands Centrum voor Handelbevorderung (NCH), which is a council devoted to trade promotion.

The French government's Agence Nationale pour la Valorisation de la Recherche (ANVAR) provides interest-free loans for firms to conduct overseas market research. In addition, the Agence pour la Cooperation Technique, Industrielle et Economique (ACTIM) provides support to consulting firms in the form of feasibility studies for specific consulting projects.

Information on the extent to which this form of government support benefits the export of environmental technologies is unavailable. However, one example of a programme targeted specifically at environmental technology is the Canadian government's Environmental Technology Transfer Opportunities Fund (ETTOF), which supports venture-specific feasibility studies undertaken by or on behalf of Canadian firms.

Support for Participation in Project Planning

Another activity in which governments can engage is to identify major projects in developing countries which offer large export potential and then to provide funding for companies to carry out feasibility studies, consultancies and other planning services related to the projects. By encouraging private sector involvement in project planning, the expectation is that domestic firms will be well-positioned for follow-on or additional contracts when these projects are completed and implemented.

The United States Trade and Development Agency (USTDA) makes funds of this kind available for the hiring of US consultants to assess the technical and financial feasibility of projects, many of which are environment-related, particularly in the areas of energy efficiency and renewable energy. For example, one grant from USTDA to the Electricity Generating Authority of Thailand (EGAT) for a power plant study undertaken by an American engineering consultant resulted in a follow-on engineering services contract for the American company, as well as the procurement of two gas turbine combined-cycle power plants from an American supplier (Delphos 1990).

COMPARING EXPORT PROMOTION ACTIVITIES

There are certain areas of similarity among export promotion policies and programmes mounted by OECD governments. The main benefactors of government export promotion programmes are typically small and medium-sized enterprises. Also, for most countries, a fairly broad range of products and services receives government export promotion support.

There are also a number of respects in which government export promotion programmes in the OECD area vary considerably from country to country, such as in the number of services provided, in how much public spending is devoted to export promotion, and in the strategic approaches adopted. In some countries (Austria, Germany) the government's role is limited to one or a very few of the activities listed

above, and most export promotion is conducted by private sector organisations. In other countries (United States, Canada, Japan), many different types of export promotion activities receive government support. There is also a wide range in the level of government spending on export promotion. One study estimated that in 1987 total government spending on these services by OECD countries ranged from $0.35 per $1000 to $6 per $1000 of total exports (Cornell University 1989).

In many countries, governments tend to help firms that have already demonstrated success at exporting, while in other countries attention is focused on companies with little or no export experience. Governments also differ in the degree to which their various export promotion activities are co-ordinated and focused. Some governments strategically apply their export promotion programmes to fit the needs of specific firms, once their competitive strengths and weaknesses in the international market have been identified. Assistance may be phased over a specific period of foreign market development, and there is usually close co-ordination and management between the company and the government agency (Hibbert 1990). In other countries there is little co-ordination of export promotion activities according to a strategic plan, although efforts are being made to modify this situation in some cases. Whether they have a formal strategic plan or not, a number of countries to varying degrees target specific geographic regions and industry sectors for export promotion assistance (GAO 1992b).

A recent example of movement towards a more focused, co-ordinated approach is found in the United States, where the Export Enhancement Act of 1992 directed all appropriate departments and agencies of the US government to encourage and support exports of environmental technologies, goods and services. This legislation requires that the President establish an Environmental Trade Promotion Working Group as a subcommittee of the interagency Trade Promotion Coordination Committee, with the purpose of developing a strategy for expanding US exports of environmental technologies. The Working Group is expected to coordinate the environmental trade promotion programmes of several government agencies, including feasibility studies, technical assistance, training programmes, business information services, and export financing.

The Canadian government has also recently begun to move towards a more concentrated approach to the promotion of environmental technology exports. A working group on the international transfer of environmental products and services has been established, bringing together over a dozen government agencies and departments. The working group is intended to help co-ordinate the efforts of various parts of the government in the area of environmental technology transfer. Four priority areas identified by the group are air pollution, water and effluent, solid waste, and hazardous waste, with secondary priority given to monitoring, recycling and oil spills and site reclamation.

In the United Kingdom, a Joint Environmental Markets Unit (JEMU) has recently been created, staffed jointly by officials of the Department of Trade and Industry and the Department of Environment. This new unit is intended to focus on international markets for environmental goods and services and to ensure that the importance of these commercial opportunities is reflected in the development of government policies and initiatives.

ENVIRONMENTAL REVIEWS AND ASSESSMENTS

An area of government policy that has potentially significant implications for the transfer of environmental technologies is the review or assessment of the environmental impact of export promotion activities, especially support for export credits. One objective of environmental assessment and review measures is to identify any potential negative environmental impact of government activities so that steps can be taken to minimise these negative effects. Governments have become increasingly conscious of the fact that, while many of their policies and practices are devoted to the protection of the environment, certain

other government activities may inadvertently be working against that goal. Environmental review and assessment procedures might help reduce such inconsistencies. To this end, OECD Ministers in June 1993 endorsed a procedural guideline on the desirability of conducting environmental reviews of trade policies and agreements (OECD 1993).

For many reasons, there is hesitancy in applying such environmental review and assessment procedures to export credit activities. Applying environmental review and assessment measures to export credits may excessively complicate the efforts of exporters and government officials to expand exports and international trade. The additional steps that these environmental review and assessment procedures require may discourage firms from exporting or delay their entry into the international market, resulting in lost sales. The introduction of these measures may harm the competitiveness of a country's exports, because government support may be reserved for more costly goods and services which may not be able to compete effectively with lower-cost goods and services from other countries.

In addition, most OECD export credit agencies are now unable to put in place these measures because of a lack of expertise in environmental assessment and the absence of appropriate assessment methodologies. In some cases, export control mechanisms may be more appropriate than review procedures for preventing government support of exports of environmentally-harmful goods and technologies. For example, the Montreal Protocol on Substances that Deplete the Ozone Layer requires parties to discourage the export to non-parties of "*technology for producing and utilising controlled substances*" and to refrain from providing new subsidies, aid, credits, guarantees or insurance programmes for the export to non-parties of "*products, equipment, plants or technology that would facilitate the production of controlled substances.*" Many OECD export credit agencies have had practical difficulty complying with these provisions of the Montreal Protocol because of the lack of expertise and procedures and their inability to identify the products and technologies in question. Specific products might be controlled more effectively through export licensing rather than through general reviews of export credit activities.

Proponents contend that environmental reviews and assessments are necessary to ensure that government domestic and trade policies are consistent in their approach to the environment. For instance, some governments require environmental reviews of domestic policies in order to protect their country's environment; failure to apply the same reviews to trade policies could be counterproductive, particularly if government support is given to exports that later result in the import of pollution from neighbouring countries or cause harm to the global commons. Another inconsistency arises when a government requires environmental reviews or assessments of development assistance (as most OECD countries do), but provides support for exports that cause environmental degradation. Environmental reviews and assessments of export credits could help prevent the export of polluting or environmentally-harmful technologies or at least ensure that governments do not give support to such exports.

Proponents also argue that environmental reviews and assessments may contribute to the development and competitiveness of the domestic environment industry by encouraging exporters to incorporate more environmental technologies in the goods and services they are trying to market abroad. A growing domestic environment industry could foster further technological advancements and improve rather than hinder the competitiveness of a country's exports. In summary, governments might wish to explore further the costs and benefits of conducting environmental reviews and assessments of export credit activities.

OFFICIALLY-SUPPORTED EXPORT CREDITS

There has been some movement in the OECD countries towards environmental review and assessment by export credit agencies. These agencies are generally involved in fewer, larger-scale projects

which are therefore relatively easier to review, assess or monitor for environmental effects than are the smaller, more numerous goods and services that tend to benefit from other forms of export promotion. Nevertheless, the adoption of these measures by export credit agencies is a relatively recent phenomenon in those OECD countries that have adopted them. In many cases, environmental review procedures are still in the process of being developed. The following generalisations can be made:

Motivation: To date, most environmental reviews of export credits have been part of the overall risk assessment process for evaluating the likelihood of repayment. In the view of export credit agencies, any project that causes excessive degradation of the environment might not be technically or economically viable because the trend towards stricter environmental regulation may eventually result in expensive clean-up or facility closure. There is also the risk of environmental accidents and liabilities.

Mixed Credits: Most of the countries surveyed noted that whenever mixed credits (i.e. export credits mixed with development assistance) were involved, the development assistance agencies participating in the mixed credit package insisted on more rigorous assessment procedures, even in countries that did not conduct environmental reviews or assessments for unmixed export credits. A number of OECD countries are applying OECD recommendations calling for early and continuous environmental assessment in co-operative development projects in their mixed credit projects (OECD 1989).

Procedures: Environmental review procedures for export credits vary from country-to-country, first of all in their degree of rigour. Some countries have loose and undemanding assessment requirements, while others have adopted more detailed procedures through which proposals for export credit support are scrutinised. There are also differences among OECD countries with respect to requirements for the monitoring of projects after assistance has been granted. Some countries provide for extensive follow-up of projects, while others have no such provisions. None of the agencies surveyed required exporters to include any particular types of environmental technologies in their projects in order to receive assistance.

The following is a brief description of the state of current environmental review and assessment procedures for export credit programmes in each of the countries that provided information on this subject:

In ***Austria***, the project evaluation department of the Oesterreichische Kontrollbank Aktiengesellschaft (OKB) makes a rough assessment of the potential environmental impact of projects for which export financing and guarantees have been requested. In general, there is an effort to ensure that the goods and services exported at a minimum meet Western European environmental standards. In the case of projects benefiting from mixed credits, a more thorough environmental analysis of the project must be carried out in which the environmental consequences of the exported goods and services are evaluated.

In ***Australia***, there are two procedures for assessing the environmental impact of any project supported by the Export Finance and Insurance Corporation (EFIC). If the project receives funding from EFIC alone, it is expected that the exporter's contract with an overseas buyer should reflect the obligations contained in the Australian Securities Institute "Due Diligence" manual. The environmental provisions in this manual require the following:

-- *Where applicable, make enquiries of national, state and local environmental regulatory agencies concerning compliance by the company and its facilities.*

-- *Determine whether it is necessary to consult with environmental legal counsel concerning the application of laws and regulations to the company.*

-- *Evaluate the impact on operational costs and efficiencies of: a) non-compliance with applicable regulations; b) ensuring compliance; c) the use of by-products and recyclable materials in the production process; and d) recycling by-products and other materials for sale to third parties.*

EFIC's Manager of Project Administration has the task of monitoring exporter performance, including monitoring exporter's compliance with environmental and safety stipulations, in order to obviate any potential contract disputes with the overseas buyer. Contracts between Australian exporters and overseas buyers are scrutinised prior to the execution of any credit agreements to ensure the inclusion of appropriate environmental technologies, and to establish the appropriateness, scope and governing standards or regulations for the actual facilities. During the implementation of projects involving the supply of EFIC-supported goods and services, technical monitoring is included to ensure the effectiveness of the environmental facilities upon completion. In the case of mixed credits, the agency responsible for the grant element of the package, the Australian International Development Assistance Bureau (AIDAB), requires that project proposals be subject to assessment and review procedures as set out in AIDAB's "Environment Assessment for International Development Co-operation" guidelines, in addition to the requirements contained in the "Due Diligence" manual.

In ***Canada***, the Canadian Environmental Assessment Act requires that federal departments and agencies conduct environmental assessments of all proposed projects for which they have decision-making authority. In the area of export credits, the Export Development Corporation (EDC) may require that applications for support include an environmental impact study in cases where the potential hazard is deemed to be significant, and applications may be turned down on the grounds that potential environmental hazards are serious enough to jeopardise the success of the proposed project (for example, if a proposed pulp and paper mill were forced to close down for environmental reasons).

As a minimum requirement, EDC insists on compliance with the environmental standards of the recipient country. EDC might suggest to the applicant that measures be taken to remedy potential environmental hazards in a project, but does not normally make any recommendations regarding particular environmental technologies. At the present time, EDC's general assessment guidelines only include a fairly broad question about whether environmental issues have been addressed by the applicant, and the environmental impact study produced by the applicant is not required to follow any specified format. However, EDC is in the process of developing guidelines for each industrial sector containing a comprehensive checklist of specific environmental issues which all applicants will be expected to address.

In ***France***, export credit support will not normally be given if serious environmental problems are foreseen which would threaten the viability of the project. Projects benefiting from mixed credits must pass through the qualitative environmental assessments that are required for all development assistance project proposals.

In ***Germany***, the environmental impacts of projects receiving government-supported export credits are generally examined by the German embassy in the country where the project will be located, which reports back to the committee deciding on whether to grant guarantees. On projects valued at over DM 20 million, companies are asked to submit a memorandum outlining the expected environmental impact, although the government does not make recommendations about environmental technologies that should be included in the project. The government does, however, refuse to promote any projects which would be counter to international treaty obligations, such as the Montreal Protocol. When mixed credits are concerned, the environmental impacts are studied within the general project feasibility study done by Kreditanstalt fur Wiederaufbau on behalf of the Ministry for Economic Cooperation.

In ***Japan***, the Global Environment Office of the Export-Import Bank of Japan (Eximbank) has produced a set of manuals covering general environmental issues (air pollution, water pollution, and industrial waste) as well as fourteen sectoral manuals setting out non-quantitative environmental standards for such industrial sectors as smelters and power plants. Loan officers are expected to check all project proposals against these manuals, and there is a minimum requirement that projects meet the environmental standards of the recipient country. However, Eximbank does not recommend that any particular environmental technology be included in a project for which an application for financing has been made. All loan agreements include a clause stating that Eximbank can send a mission to the recipient country at any time to check on the environmental performance of the project after the loan has been approved.

In the ***Netherlands***, there is no procedure for assessing the impact of export support activities, except in the case of mixed credits. In this case, the Ministry of Foreign Affairs assesses the environmental impacts of the proposed project in accordance with the government's procedures for development assistance projects.

In ***Sweden***, when official support for export credits is granted, no preference is given to export of environmental products or technologies. However the Swedish Export Credits Guarantee Board would not issue guarantees for projects that would have a negative environmental impact. When mixed credits are concerned, the environmental impacts are thoroughly studied.

In the ***United Kingdom***, the Export Credits Guarantee Department (ECGD) does not assess environmental implications of a project and has no scientific or technical expertise to carry out such an assessment. Where mixed credits are concerned, the UK's Overseas Development Administration will carry out an initial environmental screening under its Manual of Environmental Appraisal to ensure that the environmental aspects of the project are appropriately assessed.

In the ***United States***, the Export-Import Bank (Eximbank) is required by statute to apply the Bank's Environmental Procedures to any project for which long-term support of $10 million or more is requested, and which may have significant environmental effects upon the global commons or any country not participating in the project, or which may produce an emission, effluent or product that is prohibited or strictly regulated by US environmental law. If the Bank's Engineering Division determines that the proposed project may have significant environmental effects, it must prepare a Concise Environmental Review. Eximbank's Board of Directors is responsible for taking into account the environmental effects of a transaction, as well as for specifying the terms and conditions upon which financing will be made available, although the Bank does not normally recommend or require that any specific type of technology be included in the project. The Board has recently been given the authority to withhold financing from a project for environmental reasons. However, the environmental procedures may be modified when necessary to meet bid deadlines, competitive pressures, or for other reasons.

The US Overseas Private Investment Corporation (OPIC) has some of the most rigorous environmental review procedures of all the government agencies surveyed. All applicants for support are required to submit environmental impact assessments following the requirements of the World Bank sourcebook. Several applications are rejected each year on environmental grounds. OPIC does not recommend the incorporation of any specific technologies in proposed projects, but does require the adoption of whatever technology is necessary to meet World Bank environmental standards.

GENERAL EXPORT PROMOTION ACTIVITIES

Although environmental reviews and assessments of government policies have been gaining attention in many OECD countries, their application to general export promotion activities (other than

export credits) is relatively uncommon. All of the OECD countries surveyed reported that they had no such procedures in place for their general export promotion programmes. One reason for this is that it is not always clear which exports benefit from a government's export promotion efforts, particularly in the case of such activities as advertising campaigns to encourage firms to export, the dissemination of market information, or providing funding to private sector export promotion organisations.

Another possible reason is that export promotion programmes often include several different activities, which are carried out in numerous venues both at home and abroad, and which involve a multitude of goods and services. It is argued that carrying out an environmental assessment of every contact that governments have with private firms in the context of their general export promotion programmes would be impracticable, even if they could keep track of all such contacts.

The existence of environmental review and assessment procedures for export credit support, particularly in the case of mixed credits, has raised the question of whether and to what extent similar procedures should be applied to the general export promotion activities of OECD governments. Some argue that not only would such procedures reduce inconsistencies in the execution of government policies, but that environmental reviews and assessments could play a significant role in fostering the diffusion of environmental technologies worldwide. Moreover, given that a growing number of governments are adopting the view that *clean* technologies should be promoted wherever possible, review and assessment procedures could be an additional government policy instrument to encourage companies to incorporate clean technologies in their exports.

Despite the obvious difficulties in conducting environmental reviews and assessments of export promotion activities, it might be possible to devise such procedures for at least some of these activities. For example, governments could screen the list of goods and services produced by firms that apply for support or participation in counseling sessions, seminars, training, trade fairs, trade missions, and project planning, or for the inclusion of products in government publicity or directories. Some governments already screen applicants for some of these services to ensure that they are internationally competitive, and screening could be extended to ensure that the products of firms receiving support are also environmentally friendly.

Environmental review and assessment procedures would generate considerable data and could also permit governments to keep track of how many of these goods and services involve clean technologies as opposed to end-of-pipe pollution control technologies. With these data in hand, it might be possible for governments to introduce incentives into export promotion programmes to encourage firms to include environmental technologies, particularly clean technologies, in their exports.

CONCLUSIONS AND POLICY OPTIONS

Based on the information available, a number of policy alternatives concerning the environmental dimension of export promotion and export credit activities might be considered by OECD governments:

Improving Data and Information -- It would be useful for governments to keep better data wherever possible on the level of exports of environmental technologies and on the type of environmental technologies that benefit from export promotion programmes. This information would assist governments in identifying those technologies that are not currently receiving support and cases where export promotion activities might help technology producers get their products into the international marketplace. More complete data on the level of export promotion activities directed to environmental technologies may also reveal possible discrepancies between the priority governments

give to the goal of environmental technology transfer and the contribution of export promotion activities to the achievement of this objective. Governments might also investigate possible ways of improving their calculation of the value of clean technology exports receiving support.

Targeting Export Promotion Activities -- If improved information gathering does reveal that export promotion agencies are not, in the view of governments, doing enough to encourage exports of environmental technologies, then a number of possible options might be given consideration. One option would be for governments that are not currently doing so to design export promotion activities which target environmental technologies. In cases where governments already engage in some such targeted activities, the possibility of expanding into some of the other export promotion activities listed in this report could be explored. Such targeting may be more appropriate in the case of general export promotion rather than export credit support. Governments may also investigate ways in which their existing activities and programmes might be redesigned in order to better serve the specific needs of environmental technology exporters. Finally, governments could study the desirability of developing strategic promotion programmes for environmental technologies which co-ordinate the activities of all appropriate government agencies.

Promoting Clean Technology Exports -- Clean technologies have been identified as having the greatest prospects for market growth and are considered superior to pollution control technologies both in terms of their long-term environmental advantages and their effects on industrial productivity. Governments should carefully study the mix of environmental technologies benefiting from existing export promotion programmes and from any new programmes that target environmental technologies in order to ensure that, where possible, priority is given to cleaner production processes as opposed to pollution control technologies. For example, preference might be given to producers of clean technologies when there are only limited places available in trade fairs, on trade missions or in training programmes.

Conducting Reviews and Assessments -- Governments might consider conducting environmental reviews of their export credit and export promotion activities to determine whether they are promoting the export of goods and services that are beneficial or detrimental to the environment of foreign countries and/or to the global commons. General methodologies and procedures could be developed for screening goods and services that benefit from export credit and export promotion activities to ensure that they are environment-friendly, that they are not inappropriate or ecologically-harmful for the purchasing countries, and that they include clean technologies to the extent feasible. In general, governments might investigate the advantages and disadvantages of such environmental reviews for both increasing export competitiveness and achieving environmental objectives.

Harmonising Review Methodologies -- Even though governments may accept the view that environmental reviews and assessments of export credit and promotion activities are desirable, there is likely to be concern that adopting such measures may harm the competitiveness of their countries' exports. The effect of the environmental review and assessment of government export promotion on the international competitiveness of producers and their exports could be minimised if OECD Member countries worked to harmonise their assessment procedures. Areas for discussion in the OECD would include the range of activities to which such procedures should apply, the criteria and methodologies to be employed, and appropriate follow-up and monitoring activities.

Ensuring Aid and Trade Policy Consistency -- A study of the relationship between development assistance programmes and the transfer of environmental technologies could be extremely instructive for those involved in export promotion and export credit activities. This is particularly true for environmental review and assessment procedures, which are much more developed in foreign aid agencies. The experience of aid agencies in implementing these procedures, as well as the effectiveness of OECD efforts to harmonise environmental assessments of development assistance, would provide valuable information to trade policy officials. Better knowledge of the ways in which aid agencies actively encourage the inclusion of environmental technologies in development projects, and of the kinds of technologies being transferred through development assistance, may help governments to design export promotion activities that more effectively complement the efforts of their aid agencies to foster the transfer of environmental technologies.

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