

REPORT OF THE WORKING GROUP ON TRADE AND ENVIRONMENT OF CCICED

Executive Summary

The Working Group on Trade and Environment is the newest of the Council's groups. It was created in 1995 and has formally met only twice, the last meeting being held in Wuyishan, Fujian Province in May 1996.

Recognizing the importance of trade and the environment to a country whose exports are growing as rapidly as those of China and recognizing that China will soon rejoin the WTO, the Working Group has initiated four projects:

- 1) An examination of the potential sources of green protectionism, in particular the effects of ecolabelling, voluntary environmental standards and consumer boycotts;
- 2) Accelerating green food development in China;
- 3) Possibilities for joint implementation;
- 4) Examining the relationship between pollution havens and ozone-depleting substances (ODS).

The first two of these projects have now been completed and the Working Group is pleased to submit its recommendations to the Council for its consideration:

1. Ecolabelling

1. Strengthen China's ecolabelling program

It is important to increase public awareness of the ecolabelling program and to ensure participation of interested parties. China has made efforts to disseminate information on environmental labeling by means of television, broadcasting, newspaper as well as press conference. However, the environmental label is still not widely known. As a result, the contribution of ecolabels to the sales of some ecolabeled products is not significant. In the process of ecolabelling assessment and certification, more representatives from various relevant organizations should be invited, such as manufacturers, retailers, consumers, governmental officials, and academic researchers. Foreign importers should also be given opportunities to participate in the process.

Efforts should be made to increase the number of environmentally friendly products, and to increase their market visibility.

2. Develop Criteria for Mutual Recognition

China should actively participate in international discussions on ecolabelling and promote the idea of the mutual recognition by countries of other countries' ecolabels. Ecolabelling criteria and specifications will differ between developed countries and

developing countries. In order to avoid the creation of trade barriers, efforts should be made to explore the establishment of mutual recognition through international negotiation and cooperation. This will require the strengthening of China's bilateral as well as multilateral cooperation with other ecolabelling programs.

In implementing its ecolabelling program, China should take into consideration internationally accepted principles, such as ISO ecolabelling standards. Consideration should also be given to following the WTO Technical Barriers to Trade (TBT) rules in order to avoid trade barriers.

The development of the ISO ecolabelling standards is not as far advanced as the first two ISO 14000 standards. It is important for China to actively participate in and provide input to the standards-setting process. Meanwhile, China should also participate in other international cooperation activities.

3. Explore opportunities for China's export of ecolabeled products

As the development of ISO 14000 environmental standards is moving forward rapidly, ecolabelling is likely to be linked to the ISO environmental management system, China's enterprises, in particular those of export-oriented enterprises, should be well aware of this situation, prepare for the implementation of environmental management system standards, and to obtain ISO14000 certification as soon as possible. Steps should be taken to ensure that information about these developments is available to enterprises in China.

At the same time, China should also actively disseminate information about its program to the potential importers of Chinese goods.

2. China's Greenfood Development

1. China should further promote the development of eco-agriculture and greenfood. Eco-agriculture, which is in reality a combination of China's traditional agriculture with modern farming, is the only way for sustained growth.

2. China's greenfood labeling is divided into two categories: the Double A Grade and the Single A Grade. China should develop its greenfood in two phases in order to gradually link its greenfood to international market standards:

Step I: Strictly regulate the standards of Single A Grade greenfood products by 2000 with every item scientifically and quantitatively specified higher than general food products. Based on this, vigorously develop the Single A Grade for greenfood in conjunction with the transformation of the country's agricultural structure to halt the deterioration of the environment. In many regions in China, particularly the mountainous and remote areas, chemical fertilizers and other agricultural chemicals are basically not used at all in farming. Therefore, many organic food products, (though not regarded as organic food), are already available in these regions. Therefore, it is possible to develop not only Single A Grade greenfood, but also Double A Grade food during this phase.

Step II: By 2010, the development of Single A Grade greenfood will become mature, along with the completion of agricultural structural readjustment and the spread of ecological agriculture in China. By then, the Double A Grade greenfood should also be developed and marketed worldwide.

3. The Ministry of Agriculture needs to build the development of ecological agriculture into the transformation of the structure of agriculture. NEPA may, based on the national overall planning for environment protection, regulate standards, carry out quality control and examination and deliver licenses. The cooperation between the two with respective duties, which also acts as mutual supervision, will contribute greatly to a healthy development of China's greenfood.

Two of the Working Group's Projects have not been completed, but the Working Group is pleased to present some preliminary considerations to the Council:

3. Project proposals for Activities Implemented Jointly

As mentioned above, this research is still in its infancy. Because of the complexity of the issue, we expect that AIJ will remain in the work program of the Working Group for at least the next three years. Immediate further research will concentrate on the following areas:

1) Research on the development of a scheme to promote AIJ projects in China. This will involve an examination of the role of the Framework Convention and other international mechanisms;

2) The organization of a series of workshops in China on the possibilities of AIJ for China;

3) The identification of possible AIJ projects in China and the partnerships and mechanism needed to implement them.

4. Preliminary consideration for the Control of Ozone Depleting Substances in Foreign Direct Investments (FDI)

1) Efforts should be made to make Chinese enterprises and people in charge of approving FDI aware of the importance of the protection of the ozone layer, especially of the contents of the Montreal Protocol and China's regulations and policies.

2) The Ministry of Foreign Trade and Economic Cooperation (MOFTEC), should fully participate in the international negotiation and domestic policy making in this field. An effective coordinating mechanism should be set up between NEPA and MOFTEC in this regard.

3) The Chinese Program (CP) needs to be further amended and considerations should be given to the role of FDI and its complexity. Extra funding should be provided from the international community to assist foreign funded Enterprises (FFE), in the phase-out the production and consumption of ODS.

4) FDI in ODS production and consumption should be strictly forbidden, and FDI in using interim substances such as HCFC-22 should be strictly limited. A detailed product category list should be published so that the examining and approving authorities for FDI and domestic enterprises could know the overall national policies in this field so as to implement them.

5) The transfer of ODS production and consumption from the coastal region to inland China should also be prohibited.

A nation-wide survey of FDI in this regard should be conducted so as to know the actual situation and adopt suitable policies and measures.

6) Transnational Companies (TNCs), in China, especially those set up many branches in different parts of China should be initially asked to take actions to phase-out ODS production and consumption. Their parent companies should provide them with advanced technology and financial support.

Future Program of the Working Group

The projects on ecolabelling and greenfood in China have been completed. The one exception to this is the work which the group is doing on ISO 14000. Although not strictly an ecolabel, the ISO process is seeking to develop international standards for environmental management and auditing at the level of the firm.

The International Organization for Standardization (ISO) is an international non-governmental organization which brings together national standard setting organizations. It has been given special status under the new WTO agreement on TBT. Beginning with the Earth Summit in 1992, ISO has been working to develop agreed standards for environmental management, environmental auditing, ecolabelling, life cycle management and environmental performance standards. The first two are likely to be adopted this year with the remainder following later.

Recognizing that ISO 14000 has great potential for China's environmental management and for its trade, the Working Group has agreed to sponsor (with NEPA and the UNEP Industry and Environment Office) a major national seminar on China and ISO 14000, to be held in Beijing in November 1996.

The Working Group will be sponsoring the participation of a number of foreign experts and preparing three papers for the symposium.

The project on the production and use of ozone depleting substances will continue but is expected to be finished in 1997. The project on AIJ is expected to continue for the next several years.

The Working Group has decided to schedule its meetings so that the meeting in early summer will produce recommendations for the Council. Its second meeting of the year will concentrate on the continuing work program. The second meeting of the Working Group will be held in Beijing, immediately before the 1996 meeting of the full Council.

This meeting will develop and approve the coming year's work program, which will be reported verbally to the Council.

Working Group Report

I. BACKGROUND

Environment is a relatively recent arrival at the trade negotiating table. The subject arose during the preparations for the United Nations Conference on the Human Environment, and the GATT went so far as to establish a Committee on Trade and Environment in 1972. But the Committee did not meet for almost 20 years and the trade/environment link was a minor issue at Stockholm.

It was not until the 1980's that the environment began to play a major role in the trading system, as some governments sought to use trade measures to influence the environmental policies of others. Perhaps the most notable examples have arisen from the application of U.S. domestic legislation (especially as it applies to marine mammals) to the harvesting practices of other countries. Perhaps the best known of these, the "tuna-dolphin" dispute has been the subject of two GATT dispute resolution panel decisions.

Austria sought to influence the forest management policies of tropical countries by employing trade measures against imports of timber from countries whose practices it deemed unsustainable and the European Parliament has recently acted against imports of furs from animals caught in leg hold traps. This action is similar to the Community's 1972 ban on imports of seal pelts in 1972.

The surge of environmental interest in the years leading up to the Earth Summit made consumers much more aware of the environmental impact of goods which they purchase. And they have sought to express this awareness both through the ballot box and the marketplace. Voluntary boycotts on imports of tropical timber, backed up by changes in local building codes, have existed for a number of years in much of Europe. And the threat of further boycotts has provided a major inducement to some exporters to the European market to alter their own forest management practices.

A number of countries have enacted tough packaging and recycled paper legislation. And more than 25 countries now have some form of ecolabelling system in place. Although the evidence suggests that these systems have been primarily designed with the environment in mind, and not principally to protect local industry, nevertheless, they do have implications for market access.

International action to deal with global environmental problems can also have trade impacts. Simultaneously with the seven year negotiations on the Uruguay Round, governments concluded multilateral agreements on ozone depletion, climate change, biodiversity and the transport of hazardous wastes. All of these conventions have trade implications. CITES and the Montreal Protocol contain explicit trade provisions. The Basel Convention deals specifically with trade in hazardous wastes.

And the Conventions on Climate Change and Biodiversity may well evolve into regimes with profound impacts on the trading system.

The Environment in the Trading System

The environment has begun to find its way into trade agreements. The European Union has long exercised substantial powers in the environmental field. It has become a signatory to the Multilateral Environmental Agreements (MEAs) and is one of the most active agencies in the areas of ecolabelling and regulations for recycled paper content. But the EU is much more than a regional trade agreement with its impetus toward greater political and monetary union.

It was therefore the debate over The North American Free Trade Agreement (NAFTA) in the United States which brought the formal incorporation of the environment into trade agreements to the fore. NAFTA is the first regional trading scheme to incorporate a formal environmental agreement into its structure.

Although the trade/environment issue played at best a minor role in the Uruguay Round, the final Marrakesh Agreement contains several references to sustainable development and the environment. And the WTO has established an active Committee on Trade and the Environment with an ambitious mandate for the first WTO Ministerial meeting in Singapore at the end of 1996.

Some Impacts of the Trading System on the Environment

Rather than concentrate entirely on the "traditional" agenda- the effects of environmental policy on trade, the 1987 report of the World Commission on Environment and Development also pointed out the dangers to the environment of many of the current trading arrangements. The Brundtland report pointed out that pressures on developing countries to earn foreign exchange (often under World Bank and IMF Structural Adjustment agreements) were forcing undue reliance on increasing commodity exports. By overexploiting the natural infrastructure, these exports were helping to undermine the ecological capital of many developing countries.

The Commission went on to state that "...such processes have been at work in ranching for beef, fishing in both coastal and deep sea waters, forestry, and the growing of some cash crops. Moreover, the prices of commodity exports do not fully reflect the environment costs to the resource base. In a sense, then, poor developing countries are being caused to subsidize the wealthier importers of their products."

WCED pointed out that developing countries are also paying the environmental price of Northern development in other ways. MacNeill, Winsemius and Yakushiji introduce the concept of shadow ecology thus: "Today, however, the major urban/industrial centers of the world are locked into complex international networks for trade in goods and services of all kinds, including primary and processed energy, food, materials and other resources...This ecological capital, which may be found thousands of miles from the regions in which it is used, forms the shadow ecology of an economy." 1

There are also undeniable positive relationships between trade liberalization and the environment. UNDP and other bodies have repeatedly pointed to the loss of hundreds of billions of dollars in potential revenues to developing countries which results from tariff and non tariff barriers in the North. Agricultural subsidies, quotas on such critical exports as textiles and a host of other non tariff barriers exist in almost all Northern markets.

If these barriers are removed, developing countries would have increased revenues to devote to the achievement of more sustainable patterns of development. In fact, trade liberalization and the revenues that can result from it, are necessary, if not sufficient, conditions for sustainable development.

China has a real stake in these issues. Its exports are growing faster than those of virtually any other country. It will soon rejoin the WTO system. And it is an active participant in all of the Multilateral Environmental Agreements.

Environmental issues will remain an important component of the trading system and could present constraints to China's foreign trade as well as provide opportunities in certain "niche" markets. It was for these reasons that the Working Group on Trade and Environment was formed. The Working Group was formally established at an organizing meeting in January 1995. This meeting approved a list of priority research topics for the Working Group's first full meeting.

Members met for the first time in September 1995 in Beijing. At the meeting, the Group discussed China's Agenda 21 and international trade, the trends of green protectionism in OECD countries, environmental technology transfer, green food development, pollution havens in China, China's ecolabelling scheme, and the internalization of environmental costs. It was decided that the Group's work program would concentrate on:

- 1) the potential sources of "green protectionism", in particular the effects of eco-labeling, voluntary environmental standards and consumer boycotts;
- 2) green food development in China;
- 3) the relationship between pollution havens and ozone-depleting substances;
- 4) possibilities for joint implementation; and
- 5) the role of foreign investment in "green industries" in China.

The Working Group has concentrated on the first four topics. Its second meeting in Wuyishan City in May 1996 reviewed the preliminary reports on these four projects and discussed some new ideas for future research.

The following are the reports of the four research projects that the Working Group has undertaken.

II ECOLABELLING AND CHINA

1. Background

Ecolabelling is designed to contribute to reducing the environmental impacts associated with products through identifying those products which have lower environmental burdens and awarding labels to manufacturers who produce these products. Ecolabelling also aims to provide consumers with information on environmentally friendly products to guide them in making their purchasing decisions.

Germany first introduced the "Blue Angel" ecolabelling scheme in 1978. In the 1980s, Countries such as Canada and Japan also established ecolabelling programs. Many more were established in the early 1990s. By now, more than 25 countries, including some developing countries, are implementing ecolabelling programs.

Regional ecolabelling schemes also exist. Both the European Union the Nordic countries have agreed programs.

Although ecolabelling is based upon voluntary action, the growing use of ecolabels has raised a number of concerns. Developing countries feel that ecolabels could be used as disguised forms of trade barriers to their exports.

There are a number of major concerns related to potential trade barriers. Ecolabelling schemes do not provide opportunities for foreign producers to participate in the design of the criteria for the labels. Ecolabels are being increasingly developed in sectors of export interest to the developing countries. Criteria based on life-cycle analysis do not reflect different environmental and developmental conditions and thus are not as effective in terms of environmental protection in the exporting country as in the importing countries. Developing countries may lose international competitiveness because of the high costs associated with compliance with ecolabelling criteria.

These issues have attracted international attention and are being discussed in a number of fora, including the World Trade Organization (WTO), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Environment Program (UNEP) and the Organization for Economic Cooperation and Development (OECD). The International Organization for Standardization is now attempting to develop an internationally agreed standard for national ecolabelling schemes.

2. Ecolabelling in China

China is a developing country, as well as a country with a high stake in terms of the environment. Environmental protection is a long-term and arduous task. The implementation of ecolabelling in China, on one hand, may encourage enterprises to actively prevent and control pollution through consumers' purchasing preference. On the other hand, it may increase the competitiveness of China's products in the

international market, and safeguard China's environmental and economic interests in accordance with international trade practices.

The China Certification Committee for Environmental Labeling Products (CCEL) was established in May 1994. It is the sole legal entity representing the State to select product categories, handle certification, manage and supervise the environmental labeling program. The establishment of the CCEL provides organizational guarantees for environmental labeling certification in China. Technical specifications for twelve product categories have also been issued.

In April 1995, CCEL awarded the environmental label for 18 products in six product categories to 11 manufacturers. In April 1996, the second batch of products, including 17 products of 10 manufacturers, were awarded the label.

3. Impact of Ecolabelling

There is no evidence that foreign ecolabelling programs have yet had a significant impact on Chinese exports, nor that the Chinese program has influenced imports. No importers have obtained a Chinese ecolabel. Nevertheless, foreign experience shows a potential for impacts of ecolabelling on Chinese exports and the contribution ecolabelling can make to domestic environmental management. A strong Chinese program and active participation in international consultations on ecolabelling are the most important responses to the challenge of ecolabelling.

4. Recommendations

a. Strengthen China's ecolabelling program

It is important to increase public awareness of the ecolabelling program and to ensure participation of interested parties. China has made efforts to disseminate information on environmental labeling by means of television, broadcasting, newspaper as well as press conference. However, the environmental label is still not widely known. As a result, the contribution of ecolabels to the increase of the sales of some ecolabeled products is not significant. In the process of ecolabelling assessment and certification, more representatives from various relevant organizations should be invited, such as manufacturers, retailers, consumers, governmental officials, and academic researchers. Foreign importers should also be given opportunities to participate in the process.

Efforts should be made to increase the number of environmentally friendly products, and to increase their market visibility.

b) Develop Criteria for Mutual Recognition

China should actively participate in international discussions on ecolabelling and promote the idea of the mutual recognition by countries of other countries' ecolabels. Ecolabelling criteria and specifications will differ between developed countries and developing countries. In order to avoid the creation of trade barriers, efforts should be made to explore the establishment of mutual recognition through international

negotiation and cooperation. This will require the strengthening of China's bilateral as well as multilateral cooperation with other ecolabelling programs.

In implementing its ecolabelling program, China should take into consideration internationally accepted principles, such as ISO ecolabelling standards. Consideration should also be given to following the WTO Technical Barriers to Trade rules in order to avoid trade barriers.

The development of the ISO ecolabelling standards (ISO140XX) is so far advanced. It is important for China to actively participate in and provide input to the standards-setting process. Meanwhile, China should also participate in other international cooperation activities.

c) Explore opportunities for China's export of ecolabeled products

As the development of ISO 14000 environmental standards is moving forward rapidly, ecolabelling is likely to be linked to the ISO environmental management system, China's enterprises, in particular those of export-oriented enterprises, should be well aware of this situation, prepare for the implementation of environmental management system standards, and to obtain ISO14000 certification as soon as possible. Steps should be taken to ensure that information about these developments is available to enterprises in China.

At the same time, China should also actively disseminate information about its program to the potential importers of Chinese goods. Efforts should also be made to help Chinese enterprises to obtain foreign ecolabels.

III CHINA'S GREENFOOD DEVELOPMENT AND ENVIRONMENTAL PROTECTION

1. Background

Agriculture depends heavily on resources and the ecological environment. If polluted, the rural environment will not support the increased agricultural production which China needs to fulfill the rising expectations of its population. The rural environment in China is increasingly characterized by:

Deteriorating agricultural environment.

Deteriorating ecological environment.

Resource shortages and deteriorating product quality.

Increasing pressure of population growth.

These problems also adversely affect the export of China's farm produce. Here the major problems are:

food exports are restrained by high pesticide residues;

severe impact of environmental pollution on some local food products.

food exports affected by contamination in food processing industries

2. The Development of Greenfood in China

It is clear that China can no longer afford rapid economic growth at the expense of its environment and natural resources. Instead, the nation's economic and social development must be based on the sustainable use of the environment and resources, through production techniques which guarantee the sustained growth of its agriculture and food industries.

In the early 1980s, the State Council called for the establishment of eco-agriculture in China. The development of greenfood aims to push forward the establishment of this eco-agriculture. There are two goals for developing greenfood in China: to protect the nation's environment and to enhance people's health.

The development of China's greenfood dates back to 1990. Following the establishment of China's National Greenfood Development Center in 1992, 29 authorized administrative organizations have been set up at the provincial and municipal levels, along with local agencies for greenfood growth monitoring and assessment. Nine regional food quality control stations have also been established. This forms a comprehensive network in China to deal with greenfood production and quality control as well as technical supervision.

The full membership of China National Greenfood Development Center in the International Federation of Organic Agricultural Movement (IFOAM) in 1993 marked an important international step for China's greenfood program.

By the end of 1995, 568 types of greenfood products had been developed in China, with the combined output of greenfoods at 0.6% of the gross national foods and with a total area of 0.4% the nation's overall arable land.

3. The System of Chinese Greenfood Standards and Existing Problems

In China, greenfood normally refers to foods free from pollution, that are nutritious and high-grade, and are permitted by specialized institutions to carry a designated label. China's greenfood labeling is divided into two categories: the Double A Grade and the Single A Grade. Both of these grades must be produced in an environment that is in line with certain criteria and in accordance with specific operation procedures, and both must pass tests of processing and packaging quality controls before being certified by special agencies. No use of harmful synthetics is allowed in the production of Double A Grade certified products, while such substances can be applied in restricted ranges and limited quantities in Single A Grade production.

China's greenfood standards represent a new set of principles and regulations different in many respects from other food standards currently in effect across the country. They are, however, still not completely in line with standards in developed

countries. The gap between them and those of organic foods internationally available (including standards and procedures for production and processing), is even greater. The most fundamental difference is that greenfood production in China allows the use of chemical pesticide and fertilizer of low toxicity. Foreign standards for organic agriculture concentrate on the use of organic manure, bio-pesticide and physical means of controlling pests. Though this is exactly what has been prescribed for Double A Grade greenfood in China, no foods have yet been produced which fully meet this requirement.

4. Prospects for China's Greenfood Development

The rapid development of China's eco-agriculture provides a solid basis for greenfood development nationwide, and the expansion of the greenfood market will, in turn, contribute further to the development of China's eco-agriculture. The improvement of living standards provides a vast market for greenfood development and the change in the structure of world food trade provides an opportunity for China's greenfood development

5. Recommendations

a. China should further promote the development of eco-agriculture and greenfood. Eco-agriculture, which is in reality a combination of China's traditional agriculture with modern farming, is the only way for sustained growth.

b. China should develop its greenfood in two phases in order to gradually link its greenfood to international market standards:

Step I: Strictly regulate the standards of Single A Grade greenfood products by 2000 with every item scientifically and quantitatively specified higher than general food products. Based on this, vigorously develop the Single A Grade for greenfood in conjunction with the transformation of the country's agricultural structure to halt the deterioration of the environment. In many regions in China, particularly the mountainous and remote areas, chemical fertilizers and other agricultural chemicals are basically not used at all in farming. Therefore, many organic food products, (though not regarded as organic food), are already available in these regions. Therefore, it is possible to develop not only Single A Grade greenfood, but also Double A Grade food during this phase.

Step II: By 2010, the development of Single A Grade greenfood will become mature, along with the accomplishment of agricultural structural readjustment and the spread of ecological agriculture in China. By then, the Double A Grade greenfood should also be developed and marketed worldwide.

c. The Ministry of Agriculture needs to build the development of ecological agriculture into the transformation of the structure of agriculture. NEPA may, based on the national overall planning for environment protection, regulate standards, carry out quality control and examination and deliver licenses. The cooperation between the two with respective duties, which also acts as mutual supervision, will contribute greatly to a healthy development of China's greenfood.

IV. ENVIRONMENT TECHNOLOGY TRADE AND ACTIVITIES IMPLEMENTED JOINTLY

This research focuses on the study of environmental technology trade (ETT) and the potential for Activities Implemented Jointly (AIJ) as a means to promote technology transfer in this area. The work began only in April 1996. This project will continue to form an important part of the continuing work program of the Working Group. Preliminary work has concentrated on two areas:

I. Environmental technology trade and China's energy industry; and II. Promoting global environmental technology trade through AIJ.

In Part I, China's energy industry is taken as an example to analyze the difficulties and problems developing countries are facing in importing environmental technology. Some system and policy reforms and adjustments will be proposed to achieve effective environmental technology transfer. Part II analyzes AIJ under the Framework Convention on Climate Change, will discuss how to design AIJ projects so that they can be used as effective means to promote global ETT and to solve problems impeding environmental technology transfer from developed countries to developing countries.

1. Environmental Technology Trade and China's Energy Industry

China has acquired environmental technology and technical skills to some degree. However, large parts of the energy industry have found it difficult to absorb imported technology. Another major obstacle to environmental technology transfer is lack of funds. Chinese enterprises need low-cost, easy to apply and easy to digest environmental technology. Desulfurization equipment, for example, in developed countries may not be appropriate for China.

FGD units may well account for up to 10-30% of the total investment, and 30% of the operational costs. And these costs cannot be passed on to the consumer in China. Prices for coal and electricity are controlled by the government, and the increased costs of desulfurization cost cannot be added to electricity prices.

These high cost technologies from developed countries are also very complicated. They require special operating conditions and advanced training for the staff of power plants. These problems are particularly difficult for small-sized coal-burning power plants.

2. The Chinese Market for Environmental technology

The potential market for environmental technology is huge in China. Rapid and sustained economic development in China has resulted in major environmental problems. Because of the low-levels of domestic technology, it is critical that Chinese enterprises acquire foreign environmental technology in order to solve their environmental problems.

The Ministry of Electric Power is planning for the installation of desulfurization equipment in large-scale coal-burning power plants. During the Ninth Five-Year Plan, there will be 10 million KW generating units that need to install desulfurization equipment with a total investment of 7 billion Renminbi. Most of the technology and equipment will be imported. Such a huge market has attracted many foreign firms and countries.

3. Promoting Global Environmental Technology Trade Through AIJ Programs

The Framework Convention on Climate Change (FCCC), signed by many countries at the Rio conference on environmental and Development in 1992, aims at mitigating global climate warming caused by greenhouse gases(GHGs) emissions. It recommended that developed countries move to stabilize their emissions of GHGs in the year 2000 at 1990 levels, and allowed these countries to implement control measures in cooperation with developing countries in order to achieve national targets based on cost effectiveness. The argument here being that it is often cheaper to reduce CO₂ emissions in developing countries than in the North.

Since then, joint implementation (JI) and its execution have been given some attention. The subject has been a very sensitive one among developing countries and environmentalists in the developed world. They have maintained that Northern countries should undertake efforts at home to improve their performance before they begin activities in the South.

At the same time, JI has developed rapidly and a number of projects have been undertaken under the name of JI, especially after the Conference of the Parties on Climate Change (COP 1) held in Berlin, March, 1995. COP 1 agreed to change JI to AIJ (Activities Implemented Jointly) in order to avoid the debate, and decided to start the AIJ pilot phase from 1995 to 2000. During this period, no countries will be able to claim credits against their CO₂ reduction targets as a result of reductions achieved through AIJ projects. Nevertheless, many countries have announced their AIJ initiatives and begun to seek partners. Right now, AIJ projects are mostly in the form of regional development.

Although the AIJ program is developing rapidly, there are many unsolved problems. Developed countries, and their energy producing firms are engaging in the pilot phase in the hope that they will eventually secure credits in order to meet their national targets under the FCCC. Developing countries, hope to obtain funds and technology by taking part in AIJ.

The establishment of an effective mechanism to facilitate the flow of funds and technology from developed countries to developing countries is the most crucial problem facing the advocates of AIJ.

4. Potential Elements Influencing Environmental Technology Transfer Under AIJ

The success of the AIJ program depends largely on whether it can become an effective channel to transfer funds and technology from developed countries to developing countries. Therefore, emphasis should be placed on the design of a mechanism for

funds and technology transfer in the pilot phase. Initial experience in AIJ has shown that there are many potential elements influencing environmental technology transfer. If these problems are not solved, environmental technology transfer through AIJ can be hardly realized.

5. Recommendations

As mentioned above, this research is still in its infancy. Because of the complexity of the issue, we expect that AIJ will remain in the work program of the Working Group for at least the next three years. Immediate further research will concentrate on the following areas:

- 1) Research on the development of a scheme to promote AIJ projects in China. This will involve an examination of the role of the Framework Convention and other international mechanisms;
- 2) The organization of a series of workshops in China on the possibilities of AIJ for China;
- 3) The identification of possible AIJ projects in China and the partnerships needed to implement them.

IV. POLLUTION HAVENS AND OZONE DEPLETING SUBSTANCES IN CHINA

1. Background

Although the Montreal Protocol is regarded as among the most successful multilateral environmental agreements, considerable challenges remain in addressing developing country issues. The 1994 Chairman's Report of the Scientific and Technical Committee of the Montreal Protocol (UNEP 1995) provides some preliminary evidence that developed countries have used foreign direct investment (FDI) as means to meet legal obligations related to the phase-out of ozone-depleting substances (ODS) by shifting production toward developing countries. An analysis by UNCTAD (UNCTAD Trade and Environment Committee, September 1995) confirms the possible establishment of pollution havens in developing countries, as a means to circumvent the spirit of the Protocol. One of the findings of the UNCTAD report (based on 18 country-case studies), is the need for more detailed and rigorous analysis of this issue.

This research aims to identify the current situation and the trends in foreign direct investment from OECD countries and newly industrialized countries (NICs) in China related to production and consumption of ODS. It will examine how much of the increased production of ODS by FDI is directed towards domestic consumption in China, and to what extent it is being used to finance exports to developed countries. It will assess the role of the Protocol and China's measures under it, such as controlling ODS production and policies towards FDI. It will also make policy recommendations to control the transfer of ODS production and consumption through FDI.

2. Current Status of Foreign Direct Investment to China related to Production and Consumption of ODS

The initial study reviews more than 40,000 foreign funded enterprises (FFE), and finds that 1490 of them are related to ODS production, and use, with a total foreign investment of US\$ 2.1 billion. FFEs in foams and solvent industries account for 85.9% of the total number of FFEs and 77.59% of the total FDI. Compared with those in 1987, the number of FFEs in foams and in solvent in 1992 increased by 14.42 times and 14.6 times, with the investment value growing by 34.14 times and 6.57 times respectively. FDI in refrigeration / AC has been kept at a high growth rate since 1992. Not many FFEs have made investments in aerosols and fire extinguishing industries. Some FFEs produce foaming agents, aerosol propellants, refrigerants, halon fire extinguishers and cleaning reagents.

The majority of FDI is concentrated in the coastal regions of China. Guangdong Province absorbs about one fourth of the total, and if the data of the three special economic zones are included, the percentage would be over one third. Shanghai, Shandong, Fujian, Beijing, Liaoning also share a high percentage of FDI. In the middle and western part of the country, FDI is relatively low. However, recent years have seen the flow of more and more FDI to inland China, especially to Hubei and Hunan Provinces.

Foreign investment comes mainly from 25 countries and regions, (12 are OECD countries, 8 are NICs and regions). Hong Kong accounted for 68.39% of FFE's and 58.39% of total investment. Japan, the United States, the Netherlands, Taiwan, South Korea, Singapore, Canada, and Italy also provided substantial investment. Many transnational corporations (TNCs) establish subsidiaries or branches in Hong Kong, which invest in China in the name of Hong Kong companies.

The average investment value of these FFEs is US\$ 1.41 million, with some of them over US\$ 50 million (some even reach US\$ 100 million), and many below US\$ 1 million (some even below US\$ 100,000). The investment value has been increasing in recent years. Some TNCs set up branches in different parts of China to produce various kinds of products which use ODS as raw materials. The majority of foreign investors prefer joint ventures to sole foreign enterprises, or even less contractual joint ventures.

3. Further Studies

This research project is continuing, and further studies will be undertaken to: further refine the existing product categories so as to determine the actual number and investment value of these FFEs; investigate some of these FFEs in order to know the actual situation of FDI related to production and consumption of ODS; provide practical recommendations on control of production and consumption of ODS through FDI, if the further study confirms the initial findings.

4. Preliminary recommendations

Efforts should be made to make Chinese enterprises and people in charge of approving FDI aware of the importance of the protection of the ozone layer, especially of the contents of the Montreal Protocol and China's regulations and policies.

MOFTEC should fully participate in the international negotiation and domestic policy making in this field. An effective coordinating mechanism should be set up between NEPA and MOFTEC in this regard.

The CP needs to be further amended and considerations should be given to the role of FDI and its complexity. Extra funding should be provided from the international community to assist FFEs in the phase-out of the production and consumption of ODS.

FDI in ODS production and consumption should be strictly forbidden, and FDI in using interim substances such as HCFC-22 should be strictly limited. A detailed product category list should be published so that the examining and approving authorities for FDI and domestic enterprises could know the overall national policies in this field so as to implement them.

The transfer of ODS production and consumption from the coastal region to inland China should also be prohibited.

A nation-wide survey of FDI in this regard should be conducted so as to know the actual situation and adopt suitable policies and measures.

TNCs in China, especially those set up many branches in different parts of China should be initially asked to take actions to phase-out ODS production and consumption. Their parent companies should provide them with advanced technology and financial support.

FUTURE PROGRAM OF THE WORKING GROUP

The projects on ecolabelling and greenfood in China have been completed. The one exception to this is the work which the group is doing on ISO 14000. Although not strictly an ecolabel, the ISO process is seeking to develop international standards for environmental management and auditing at the level of the firm.

The International Organization for Standardization (ISO) is an international non-governmental organization which brings together national standard setting organizations. It has been given special status under the new WTO agreement on Technical Barriers to Trade (TBT). Beginning with the Earth Summit in 1992, ISO has been working to develop agreed standards for environmental management, environmental auditing, ecolabelling, life cycle management and environmental performance standards. The first two are likely to be adopted this year with the remainder following later.

Recognizing that ISO 14000 has great potential for China's environmental management and for its trade, the Working Group has agreed to sponsor (with NEPA and the UNEP Industry and Environment Office) a major national seminar on China and ISO 14000, to be held in Beijing in November 1996.

The Working Group will be sponsoring the participation of a number of foreign experts and preparing three papers for the symposium.

The project on the production and use of ozone depleting substances will continue but is expected to be finished in 1997. The project on AIJ is expected to continue for the next several years.

The Working Group has decided to schedule its meetings so that the meeting in early summer will produce recommendations for the China Council. Its second meeting of the year will concentrate on the continuing work program. The second meeting of the Working Group will be held in Beijing, immediately before the 1996 meeting of the full Council.

This meeting will develop and approve the coming year's work program, which will be reported verbally to the Council.

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