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ECOLABELLING: ITS IMPLICATIONS FOR CHINA

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I. Introduction

Labels have been used for at least a century as means to inform consumers of special features of certain products or to warn consumers of possible impacts of particular products.¹ Since the late 1980s or so, the increased public awareness of environmental impacts of products has prompted the rise of a new body of labelling, often called ecolabelling or environmental labelling, to provide the necessary information for environmentally conscious consumers on products that have less environmental impact. On the other hand, ecolabelling encourages manufacturing industries to be actively involved in environmental protection and pollution control by designing and developing environmentally friendly products.

Special features of this kind of labelling include ecolabelling is based on voluntary application, and it is a third party certification labelling. An ecolabelling program usually identifies products that have less environmental impact than other similar products, sets up non-binding environmental requirements for these products, and awards a special label to producers who meet these standards. Ecolabelling has increasingly been seen as an important market instrument used to complement mandatory laws and regulations for environmental protection.

The world's first ecolabelling was initiated by Germany in 1978. Canada, Japan, and the United States established ecolabelling schemes in the late 1980s. Many more were launched in the early 1990s. Ecolabelling programs have also been introduced to some developing countries including China. By now, ecolabelling is being implemented in more than thirty countries around the world. Some of them are government supported programs, and others are privately run schemes. The European Union and the Nordic Council have established intergovernmental ecolabelling schemes. In addition, there are also some international ecolabelling programs specialized in certain products, such as the Forest Stewardship Council (FSC) forest product ecolabelling program and the Codex Alimentarius organic food labelling.

The growing use of ecolabels and the increasing ecolabelling programs have caused confusion among consumers and producers both domestically and internationally. The International Organization for Standardization is now developing a standards for ecolabelling. It aims to draw up a series of internationally agreed guiding principles to guide national programs to implement ecolabelling.

The proliferation of ecolabelling programs have also raised a number of trade concerns. Countries, especially developing countries, feel that ecolabels could be used as a disguised form of trade barriers and thus affect their exports. Major concerns related to potential trade barriers include: ecolabelling schemes are lack of transparency, in particular do not provide opportunities for foreign producers to be aware of existing and

¹ Kristin Dawkins, Ecolabelling: Consumers' Right-to-know or Restrictive Business Practice? IATP, September 25, 1995.

emerging ecolabelling programs; ecolabels are being increasingly developed in sectors of export interest to the developing countries; criteria based on life-cycle analysis don't 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; and developing countries may lose international competitiveness due to high cost associated with compliance with ecolabelling criteria.²

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 Environmental Programmes (UNEP), the Organization for Economic Cooperation and Development (OECD), and a newly formed Global Ecolabelling Network.

UNCTAD studies show that ecolabelling, in general, has not caused significant trade effects. However, it has created some difficulties for some sectors of products, in particular paper and pulp, footwear, and textiles from developing countries, and more serious problems are feared. Over the long-run, when ecolabelling programs increase their product coverage to include more and more products of export importance to developing countries, the impact of ecolabelling could potentially become more significant.³

Discussions in the above mentioned international fora conclude that ecolabelling is a valid environmental policy instrument and it should be developed and implemented in a manner consistent with fundamental WTO disciplines of non-discrimination and national treatment. A number of possible solutions to promote the compatibility of trade and environmental interests have been proposed. These include: increasing transparency, establishing mutual recognition between ecolabelling schemes and equivalencies between eco-criteria, dealing properly with PPM-related criteria and compliance with local environmental regulations, establishing international principles (such as ISO ecolabelling principles) and dealing with special need of developing countries and technical assistance. It was the general view supported by many delegates at a recent WTO Trade and Environment Committee meeting that voluntary ecolabelling programs should respect basic WTO TBT principles of national treatment, avoidance of unnecessary obstacles to trade, and promotion of the use of international standards.⁴

China is a developing countries and a big emerging market in the world. In order to have a better understanding of issues of ecolabelling for China, it is worthwhile having a close analysis on how ecolabelling is implemented in China, whether China has been affected

² UNCTAD Secretariat, International Cooperation on Eco-Labeling and Eco-Certification Programmes and Market Opportunities for Environmentally Friendly Products, TD/B/WG.6/2, 6 October 1994; UNCTAD Secretariat, Trade, Environment and Development Aspects of Establishing and Operating Eco-labelling Programmes, TD/B/WG.6/5, 28 March 1995.

³ Id.

⁴ World Trade Organization, WTO Trade and Environment Committee Discusses Proposals on Trade Measures in Multilateral Environmental Agreements and on Eco-labelling, Press/TE/008, 29 April 1996.

by foreign ecolabelling programs, how China could benefit from developing its own ecolabelling program, and what are challenges and opportunities ahead for China.

Section II presents the ecolabelling program in China and how it works. It summarizes the special features of this program.

Section III discusses the implications of ecolabelling for China, including its impacts on China's trade as well as challenges and opportunities ecolabelling may create.

At the end to the paper, we propose some recommendations in the hope that they will be useful for China to implement its own ecolabelling program.

Attached to the paper are two appendices: An Overview of Ecolabelling, and A Compendium of Global Ecolabelling Programs.

II. Ecolabelling Program in China

1. *The development of ecolabelling program in China*

China is a developing country with its environmental problems quite serious. The implementation of an ecolabelling program in China, on one hand, may encourage enterprises to actively prevent and control pollution through influencing consumer's purchasing behavior. On the other hand, it may increase the competitiveness of China's products in the international market.

The work on the establishment of a ecolabelling program in China started in 1993, when the National Environmental Protection Agency (NEPA) issued a *Circular Concerning the Establishment of the National Environmental Labelling Program*. The logo, chosen through a public design contest, means "joint effort of the nation to protect the environment on which human beings rely."

There were several factors that prompted the establishment of China's ecolabelling system. First, to develop environmentally friendly products and to establish a sound system for product environmental quality standards had been given a high priority by the Chinese government after the UN Conference on Environment and Development. Second, some China's exports, such as refrigerators and wall paper, had been affected by foreign environmental standards including ecolabelling in the international market. Third, some provinces such as Guangdong, Jilin, Zhejiang, and several manufacturers and enterprises such as Guangdong Wanbao Refrigerator Factory had designed, or started to design their own environmental programs or logos. Such a circumstance called for a uniform national program.⁵

China Certification Committee for Environmental Labelling Products (CCEL) was established in May 1994, which marked the official launch of China's environmental labelling. CCEL, authorized by China State Bureau of Technology Supervision (CSBTS), is the third party certification agency representing the Government to deal with environmental labelling certification as well as to administer and supervise the environmental labelling program in China. It consists of 24 members, of which 16 are governmental officials. The chairman is the Administrator of NEPA. It defines the policy, principles and rules of the program, select product categories and approves certifications. It also decides the fees for certification, reports to NEPA and CSBTS, and cooperates with other related national and international organizations.

⁵ National Environmental Protection Agency, Notes Concerning the Selection of Product Categories and the Development of Criteria for China's First Batch Ecolabelled Products, NEPA 1994.

A small Secretariat, seated in NEPA, is in charge of day-to-day operation of the program and handles applications for certification, and issues licenses.

To date, a series working rules have been adopted including *the Rules of China Certification Committee for Environmental Labelling Products (Trial Implementation)*, *the Management Rules on Certification of Environmental Labelling Products (Trail Implementation)*, and *the Management Rules on the Use of Environmental Labelling Certificates and the Environmental Label (Trial Implementation)*. Specifications/criteria for nine product categories have also been issued.

In April 1995, CCEL first awarded the environmental label for 18 products in six product categories to 11 manufacturers. The second batch of product categories for the environmental label were approved in April 1996. Up to June 1996, 43 products of 23 manufacturers has been awarded the label.

2. Procedures to select product categories, to establish criteria and to certify

China's environmental labelling program, like all other ecolabelling schemes, has a set of procedures for the selection of product categories, the establishment of criteria and the certification.

Procedure to select product categories Any interested parties, whether organizations or individuals, can propose a new product category for ecolabeling by submitting a proposal form for the proposed category.

The Secretariat will study the proposed category and submit a report to CCEL to suggest whether to accept or to reject the proposal. CCEL makes the decision on the proposed product group, and submit to NEPA and CSBTS for approval.⁶

The selection of product categories currently covered by the program is based on the following considerations:

- products that have significant environmental impact and need to reduce their environmental impact;
- products that are closely related to people's daily life, thus the application of ecolabeling will have direct effect of reducing environmental impact;
- products that contribute to global environmental protection, such as products that reduce the production and consumption of CFC;
- Products that stimulate the development of new technology and new products, such as low-toxic, low-emission, and energy-saving products;
- products that are covered by other national ecolabeling schemes.⁷

⁶ Article 6, 7, and 8, the Management Rules on Certification of Environmental Labelling Products (Trial Implementation).

⁷ Id.

Procedure to develop criteria When a product category is approved, the Secretariat of CCEL entrusts a competent standard setting organization with the task of developing the criteria for the product category. After the draft is ready, the Secretariat consults relevant experts and manufacturers, and make changes in accordance with their comments. The draft is then submitted to NEPA which approves and releases the final specifications/criteria.

Criteria considerations Criteria product categories currently covered by the program were based on the following four considerations:

1. The labeled products must meet applicable State's standards of quality, safety and hygiene;
2. The emphasis should be placed on the significance of environmental impact that a particular product will create (For example, the criteria for refrigerators focus on the consumption of CFC which is the major problem for cooling appliances,);
3. The consideration should be given to criteria established by other national ecolabelling schemes for the similar product, as well to the actual situation of China; and
4. Criteria should be easy for average consumers to understand.⁸

The rationale which China's ecolabelling is based on is mainly a single-factor or a few factors approach. For example, criteria for toilet paper, low CFCs refrigerator, unleaded gasoline, water-based paint, and mercury-free battery are based on this approach. However, criteria for silk are based on the life-cycle of the production.

Procedure to certify to the label There are several steps for a manufacturer to be certified to the label:

1. An applicant may apply to a local competent environmental protection agency in their jurisdiction for ecolabelling certification. The agency receiving an application undertakes the preliminary review of the product, and submits the application to CCEL with its opinion;
2. An inspection team is formed by CCEL to conduct a site inspection. The inspection team inspects the product and its production process according to an inspection checklist, and then reports to the Secretariat;
3. After the site inspection, samples of the product will be tested by a designated laboratory;
4. The Secretariat reviews the application, inspection and testing reports and submits its review opinion to CCEL;
5. CCEL then convenes a plenary meeting or distributes the application among members for veto in order to make the final decision for the award; and
6. NEPA and CSBTS then approve and announce the award.⁹

⁸ Id.

⁹ Article 11 to 16, the Management Rules on Certification of Environmental Labelling Products (Trial Implementation).

If certified, the applicant has to sign a three-year contract with the CCEL Secretariat, and obtain an ecolabelling certificate. The applicant has also to pay an application fee, testing fees, an approval fee as well as an annual fee for the use of the label.

Ongoing monitoring During the contract period, the licensee is subject to regular inspection by the local competent environmental agency. The interval of inspection should be once or twice a year. The responsible agency has to report to CCEL on the compliance of the labeled product.

3. Characteristics of China's ecolabelling program

The objectives of China's environmental labelling program are similar to those of other countries. It is mainly designed to reduce domestic environmental stress of products by using market forces as a means to supplement mandatory environmental laws. It tries to target products that have significant environmental impact, that are closely related to people's daily life, that cause global environmental problems (such as CFC related products), so that ecolabelling will have the direct effect of reducing environmental impact and contribute to global environmental protection. It also aims to increase public awareness of the environmental impact of products. To promote the trade of China's environmentally friendly products is also one of the program's objectives. One of the considerations for the selection of product categories is to include products that are currently covered by other national ecolabelling schemes.

The structure of China's ecolabelling program is very similar to most other countries' programs, and meets most of the Type I third party certification ecolabelling guiding principles proposed by ISO 14024.

Third party seal of approval

China's environmental labelling program is a third party certification program according to the ISO classification. It is a program initiated and sponsored by the government. The Certification Committee for Environmental Labelling Products, which oversees the program, is the nation's thirteenth certification committee accredited by the China State Bureau of Technical Supervision, the State's standardization organization.

Voluntary application

Application for the label is voluntary in nature. Manufacturers may choose to use the label, or to compete in the marketplace without labelling. In practice, most products that bear the label are products that have certain environmental features, either new products or new technology.

Multi-party consultation process

Like other ecolabelling schemes, China's system also consists of a multi-party consultation process. Not only representatives from NEPA, environmental science, economics, research institutions and quality standards organization, but also

representatives from associations of consumer, environmental protection and environmental industry, are present at the ecolabelling committee. They participate in defining the program policy, principles and rules of the program, proposing product categories, approving certifications, deciding the fees for the use of the label. Most importantly, related experts and manufacturers are consulted during the criteria-setting process .

Selection of products

Product categories are selected by the program. Any interested party can propose a new product category to be covered by the program. The Secretariat deliberates the proposed product category based a set of principles. In addition, the percentage of the product group in the marketplace and the stability of the production are also considered. Decisions are made by the Committee subject to approval of NEPA and CSBTS.

Establishment of environmental criteria

China's environmental labelling criteria are in principle based on a single factor or a few factors of the product, very similar to that of the Japanese program. In developing its environmental criteria, China's program takes into consideration the criteria established by other national ecolabelling programs. For example, the Canadian Environmental Choice Program's criteria were considered in formulating the criteria for water-based paints; and the German Blue Angel's criteria were referred to in developing the criteria for toilet paper.

However, the criteria for pure silk products are more complete than others. They are based on a product life-cycle approach, covering several stages of the production, including specifications for raw material production, requirements for the manufacturing process, requirements for final products and even for packaging. Nevertheless, the life-cycle assessment has not been used regularly for establishing criteria.

Relationship with regulations

Article 10 of *the Rules on Certification of Environmental Labelling Products* requires that manufacturers wishing to be licensed for the environmental label must comply with applicable regulations. To be more specific, the manufacturers must be legally registered with the competent business and commercial administrative agency; hold product quality certification which verifies that the product has met all required quality standards; meet with both national and local pollution emission standards; not have been fined or punished by the competent environmental protection agency within one year of the date of application.

Use of the label

Manufacturers wishing to use the label have to apply for the certification. Site inspection and testing of the product will be required. There are fees of application, site inspection and testing. If certified, the applicant has to sign a three-year contract with the Secretariat, and pay an annual license fee for the use of the label, calculated according to an indicative matrix which takes into account of sales of the product, the nature of the product and the

size of the manufacturers. This may imply that a small manufacturer could pay less than a big one.

Ongoing monitoring

During the contract period, the licensee is subject to regular inspection by the local competent environmental agency. Inspection should be carried out at least once or twice a year. The responsible agency reports to the Committee on the compliance of the labeled product.

It should be noted that a public review process exists in most ecolabelling schemes, and it is the process highly recommended by the ISO draft guiding principles. Public review is also the process required by the WTO TBT rules. In China's ecolabelling procedure, there is no formal public review requirement. However, interested parties are presented at the Committee. Experts and manufacturers are also consulted in developing product environmental criteria.

It should be also noted that more and more ecolabelling programs in other countries are using the life-cycle analysis (LCA) approach in establishing product environmental criteria. Criteria based on parameters from life cycle analysis are also recommended by ISO 14024. In order to link its ecolabelling program with other national programs, China should probably consider using LCA in its criteria formulation. Since a life-cycle analysis of a product is very expensive and time-consuming, it may be a good idea to first conduct an environmental impact assessment of a product based on information available in order to determine the most important environmental aspects during a product life cycle.

4. China's ecolabelling in practice

To date criteria for 12 product categories had been issued. Up to June 1996, 43 products of 23 manufacturers had been awarded the environmental logo.

These first 12 ecolabelled products currently covered by China's program are closely related to people's daily life. The designers of the program hope that these products will guide average consumers in their purchasing and therefore promote their involvement in environmental protection activities, and that public awareness of environmentally friendly products will be raised through the program. It has been reported that the sales of two water-based paints and two non-phosphate detergents bearing the environmental label have comparatively increased within a very short time.

One obstacle that producers of ecolabelled products encounter is that the awareness of the environmental label does not appear to be very high. The label is not very well known among domestic consumers. Efforts have been made to disseminate information on the environmental labelling through television, broadcasting, newspaper as well as press conference. However, this is not enough. The ecolabelling committee is now working on how to more effectively disseminate information on ecolabelled products.

Another problem with the ecolabelled products is that they are on average more expensive than unlabelled products. For example, a CFC-free refrigerator sells for 100-300 yuan RMB more than a general one, which is a big sum to an average consumer.

Although China's ecolabelling program is mainly domestic-oriented, to promote its trade, or to avoid trade barrier to China's exports, is also one of its objectives. So far, China's program has not influenced China's imports or exports, because it is a relatively new program. It is rarely known to other countries. For example, Xiamen Silk Import and Export Corporation brought its silk products bearing China's environmental label to Germany, Japan, the United States and Italy for exhibition. None of these countries gave credence to its ecolabelled products. This shows that information about China's ecolabelling should be widely disseminated and China's ecolabelling program needs extensive cooperation with other national programs.

III. Implications of Ecolabelling for China

1. The impact of ecolabelling on China's Trade

Despite the fact that the primary goal of ecolabelling programs is to protect the environment, they at times discriminate against foreign producers in ways they are operated. Although ecolabelling so far has not caused significant trade effects in general, it has created some difficulties for some exports from developing countries, in particular paper and pulp, footwear, and textiles due to the differences in standards.¹⁰

China is a big emerging market in the world. Its average economic growth over last five years has exceeded 10%. The trend of growth is likely to continue. Export has been an important means to create the nation's wealth, to earn foreign currency, and to finance the import of advanced technology. The country's foreign trade has steadily expanded. In 1995, the total volume of exports and imports reached US\$ 280.9 billion, up 18.6% over the previous year. Of which the value of exports was US\$148.8 billion, up 22.9%, and the value of imports was US\$132.1 billion, an increase of 14.2%.¹¹

As ecolabelling programs in many countries have developed rapidly, China's exports have in a few occasions been affected. For example, ecolabelling criteria established for refrigerators and other cooling systems in some European countries have made China's exported refrigerators less competitive in these markets. In order to get easy access to the European market, manufacturers have to obtain a European ecolabel. Wall paper produced by Maoxiang Wall Paper Ltd. in Tonghua, Jilin Province was not allowed to be exported to one European country due to a problem related to an environmental label.¹²

For the purpose of this study, investigation has been made into China's textile industry with the focus on silk. The textile industry is chosen as the subject of the study for the following reasons:

1) Textile is one of the key industries in China's economy. It remained the country's largest export sector from 1978 to 1994, which made up almost 1/3 of the nation's total exports. In 1995, the value of exports from textiles and clothing was US\$38 billion, ranking as the second biggest export sector of the country after mechanical and electrical exports. The four biggest markets for China's textiles and garments are Hong Kong/Macao, Japan, North America, and the European Union countries.

¹⁰ See Note 2.

¹¹ "Statistical Communiqué of the State Statistical Bureau of the People's Republic of China on the 1995 National Economic and Social Development (March 1, 1996), Beijing Review, April 1-7, 1996.

¹² National Environmental Protection Agency, Note Concerning the Selection of Products and the Development of the Criteria for China's First Seven Ecolabelled Products, NEPA 1994.

2) Textile is a sector that involves pollution problems, as a large number of potentially harmful chemicals are used for obtaining attractive and aesthetic appearance and for certain desirable characteristics and properties to textiles and clothing.

3) At present, there are several different existing ecolabelling schemes around the world that have established ecolabelling criteria for textiles. These include national programs such as the Japanese Eco Mark Program, the Korean program and the Sweden Good Environmental Choice program; private textile certification institutions' programs that have world-wide application (especially those in Germany including Oeko-Tex Standard 100, Texproof, and Eco-tex, etc.); and some requirements from textile fashion companies. Basically, there are two kinds of approach for textile labels and certification: labels for the final products, and certification of the manufacturers based on the life-cycle assessment of the whole production process. In addition, Germany in 1994 adopted a mandatory law restricting the use of Azo Dyes.

Interviews with China National Silk Import and Export Corporation and China Knitting Import and Export Corporations in Beijing were conducted, and investigation to Xiamen Silk Import and Export Corporation was made by the Information Institute of National Environmental Protection Agency.

The result of our investigation is that textile exporters in Beijing do not feel their exports are significantly affected.¹³ They consider that the effect of such programs on China's textile export from is very small and only temporary.¹⁴ On the contrary, Xiamen Silk Import and Export Corporation strongly fears that its export of silk products would potentially be affected by foreign environmental measures.

Xiamen Silk Import and Export Corporation (CXSIEC) is a corporation which deals specially with import and export of silk products. CXSIEC exports most of its products to the EU countries. Its overall trend of textile exports has declined gradually since 1992. The total value of its exports was US\$ 5.77 million in 1992, US\$ 4.76 million in 1993, US\$ 4.2 million in 1994, and US\$ 530,000 during January to April 1995. However, the study finds that the impact on CXSIEC's silk exports has mainly caused by the German law.

Germany adopted a new law in 1994 as an appendix to the Consumer Protection Act to ban textiles dyed with Azo Dyes which may release some specified amines that are harmful to human beings. The deadlines for latest import is March 31, 1996 and latest sales is September 30, 1996. As a result, CXXIEC has to have its samples tested by a

¹³ This is the answers we got from China Textile Import and Export Corporation and China Knitting Import and Export Corporation.

¹⁴ This is also confirmed by Zhou Jingyue in his paper *Environmental Issues and Silk Export from China* presented at the Workshop on Eco-labelling and Other Environmental Quality Requirements for Trade of Developing Countries in Textiles and Clothing organized by the International Trade Centre in Geneva in June 1995.

testing agent certified by Germany before the goods can be shipped, which is very expensive.

At present, there is no evidence to show that China's exports have been significantly affected by foreign ecolabelling in general. However, with the present development of ecolabelling, especially in European countries, some sectors including textiles and footwear in China could be potentially vulnerable to ecolabelling criteria established by these countries.

For example, the European Commission has just adopted the decision establishing ecological criteria for the award of the EU ecolabel to textiles (bed linen and T-shirt).¹⁵ After reviewing the main environmental impacts of textiles, the decision concludes that the main environmental impacts of these items are the use of pesticides in growing cotton, harmful process during the production of polyester, and the use of harmful substances during the processing and finishing of these products. Accordingly, the EU criteria for textiles contain requirements for limited use of pesticides in cotton growing, for restricted use of detergents and bleaching agents in wet processing, and for limited use of dyestuffs during, dyeing and finishing processes. The criteria also set waste water treatment requirements.

How the EU textile ecolabel will affect China's textile exports still remains unknown. The impact will probably not show until sometime late. However, China should remain vigilant over the potential impact that may cause by this or other ecolabelling programs.

On the other hand, as mentioned earlier, China's own program has so far not influenced China's trade. Since it is a rather new program, it is rarely known to other countries, No importers has obtained China's ecolabel.

2. Challenges of ecolabelling for China

Challenges that China is now facing are twofold: the need to further develop and implement its ecolabelling program, and the need to link its ecolabelling to the international development.

To further develop and implement China's ecolabelling program In order for ecolabelling to be an effective means for environmental protection and to increase the market share of ecolabelled products, there is a need to strengthen China's environmental labelling program.

First of all, China's ecolabelling program should be expanded to include more environmentally friendly products, and to increase the market visibility of the ecolabelled

¹⁵ The decision was adopted April 22, 1996 by the European Commission.

products in order to achieve its goal for environmental protection. As environmentally friendly products can come from all different sectors, efforts should be made to encourage various departments and sectors to play a full part in developing these products.

At the same time, the success of an ecolabelling program largely depends on the awareness of the public on ecolabelling and ecolabelled goods. The better the public understand the ecolabelling, the more likely that they will support it by using their purchasing power. China has made efforts to disseminate information on the environmental labelling by means of television, broadcasting, newspaper as well as press conference. Still, considerable portion of the public has little impression of the environmental label. Therefore, the dissemination of information about the ecolabelling program and ecolabelled products should be carried on more vigorously.

Second, efforts should be made to increase transparency of China's ecolabelling program, since a greater transparency can provide a good basis to address some of the trade concerns raised about ecolabelling schemes. In the process of selecting product categories, establishing environmental criteria, and award the label, more representatives from various relevant organizations should be invited, such as manufacturers, retailers, consumers, and academic researchers. Foreign importers should also be given opportunities to participate in the process.

Third, as the life-cycle assessment (LCA) approach has been used by most of the existing ecolabelling programs in the formulation of product environmental criteria, China should also consider to adopt this method as a regular tool in its standard-setting process. LCA is a process to assess all environmental aspects during the whole life cycle of a product including raw material inputs, manufacture, transportation, distribution, use and disposal. The most significant environmental impacts are then identified based on the initial assessment, and the level will be chosen as the criteria of the product. LCA is strongly recommended by the draft ISO 14024.

However, it should be noted that conducting a complete LCA is very expensive and time-consuming. Alternatives exist which allow a step by step approach to LCA.

Fourth, China's program may also adopt other feasible means in operating its ecolabelling program. These may include:

- To create mechanism for products that have environmental advantages but are not yet covered by the program. For example, the Canadian Environmental Program has recently started a new method of awarding the Ecologo - the panel review awarding process. This process allows a manufacturers to apply to the program for their niche environmental products for which criteria have not yet been established. The panel will review the products and decided whether to award the Ecologo to them. This is a very flexible way of recognizing new environmental products and technologies, while the whole process from the selection of product categories to the award of the logo takes quite some time.

- To offer self-declaration certification. Self-claim labels by manufacturer are becoming increasingly common in many countries. This is true in China too. In order to promote the exports of environmentally friendly products as part of its overall export promotion strategy, China should be able to establish its environmental claims credibly. For example, in Canada, the Guiding Principles for Environmental Labelling and Advertising are intended to guide manufacturers to make valid environmental claims. In the United States, Science Certification System offers several certification services, one of them is to certify self-declaration environmental claims. ISO/TC 207/SC 3/Working Group 2 is developing a set of standards for self-declaration (Type II) ecolabelling. This is in response to the huge number of environmental claims and the difficulties in verifying them.
- To create a multiple stage ecolabel. The Step Ladder Principle was suggested to apply in ecolabelling in order to provide a mechanism to allow multiple levels in the ecolabel.¹⁶ This multiple stage ecolabel can be described as several stars as used for hotels or restaurants. The French ecolabelling program is very likely the first program which could include such a multiple levels of achievement element in its very strict and objective system. It was suggested to use 100 points to assess the level of achievement of environmental performance by several stars:¹⁷

75 ≥ points 80	=	1 star
80 ≥ points 85	=	2 stars
85 ≥ points 90	=	3 stars
90 ≥ points 95	=	4 stars
95 ≥ points 100	=	5 stars

This system may allow small companies or those in developing countries easily to enter into the ecolabelling system, and encourages them to start up the ladder and gradually to increased performance.

The multiple stage ecolabelling is a proposal made for general ecolabelling schemes in the world. The Australian ecolabelling program for electrical products has practiced this tiered star initiative, and has been reported to be very successful. Therefore, this may also be in China's interest. For example, currently criteria for low-CFC refrigerators are set for 50% free of CFC. Some brands of refrigerators have exceeded this specification. The tiered star system can be introduced to award the higher standard refrigerators. This more dynamic system could also provide an incentive for manufacturers to improve their performance, and to allow consumers to make distinctions between different levels of performance.

¹⁶ It was suggested by Troy Davis, Executive Director of International Network for Environmental Management in Germany. See Troy Davis, International Trade Implications of Unified Environmental Standards, speech given at the Environment Forum of the Pacific Area Standards Congress, Bangkok, May 1994.

¹⁷ Id.

To link its program to international development With the increasing number of ecolabelling schemes worldwide, China's exports have in some cases been affected. In order to avoid possible negative trade effects from other existing ecolabelling programs, China should first actively participate in international standards setting process. At present, a major problem is that not many developing countries are participating in the ISO standards setting process, or if they do, they have small delegations and give little input. To make meaningful impact, China should share its experience in operating its program and provide input to the standard setting process. In addition, China should also participate in other international cooperation activities such as those organized by the new Global Ecolabelling Network. The Network was formed by national and multinational ecolabelling certification organizations in response to the need for mutual recognition of environmental labelling programs worldwide and the move towards harmonization of criteria for ecolabelling. The primary goal of the Network is to create a forum for ecolabelling organizations around the world to exchange information and views in establishing and implementing ecolabelling, and to achieve in a long-run harmonization of ecolabelling criteria. Recently, the Network has reduced the membership fee (from US\$ 5000 to US\$ 1500 per year) in order to allow more ecolabelling programs from developing countries to participate. China's environmental labelling program should explore the possibility to participate in the Network.

Second, mutual recognition and equivalency have been recognized as the most important elements for operating ecolabelling programs worldwide, and they may help to avoid or mitigate negative effects on trade while contributing to environmental objectives in a way of taking account of differences in environmental conditions and economic basis among nations. China should enhance multilateral and bilateral corporation with the international organizations and with other countries in order to establish mutual recognition.

Third, UNCTAD Ad Hoc Working Group on Trade, Environment and Development and the WTO Committee on Trade and Environment has recommended that all ecolabelling organizations give consideration to adhering to the WTO TBT rules, particularly, the Code of Good Conduct (annex 3 to TBT). It is also important for China to bring its ecolabelling in line with the TBT rules, ensuring that its scheme is non-discriminatory, offers equal competitive opportunities to imported products, ensures a greater transparency, and promotes internationally agreed principles.

Finally, China should actively disseminate information about its program to the potential importers of Chinese goods and probably even to consumer organizations in other countries.

3. New opportunities

Although ecolabelling may create potential trade barriers, it may create positive trade effects as well. China should take the advantage that ecolabelling may create to respond

to the increased green demand for environmentally responsible products in OECD countries, and to expand its environmentally friendly products.

Environmentally friendly products have been defined as product whose manufacture, use, and disposal place a reduced burden on the environment.¹⁸ Products that save energy, increase efficiency and utilize renewable energy sources, and products manufactured by firms that focus on eco-auditing and eco-management also fall into the environmentally friendly products category.

Currently, China's CFC-free refrigerators and pure silk products have most potential for exports.

CFC-free refrigerators and freezers have so far been included in several national ecolabelling programs, such as the Japanese Eco-Mark, the German Blue Angel, the Taiwanese Green Mark, the Canadian Environmental Choice Program, and the US Green Seal. Specifications established by these program require the labelled products to be 100% free of CFC. The specification set by China's program is 50% free of CFC. This is based on the best practical availability of technology in China. However, several Chinese manufacturers have produced 100% CFC-free refrigerators, such as the Haier Group, the Kelong Group and the Changling Group. In particular, the Haier Group's CFC-free and energy-saving refrigerator has been awarded the green certificate from the EU. During 1992 and 1995, the Haier Group exported 12 -20 percent of its total annual output, earning US 21 to 24 million per year. The Haier refrigerators have now been exported to Germany, Europe, the United States, Japan as well as other countries and regions.

Exports of pure silk products from China are also very promising. China is the largest silk producer and exporter in the world. Silk is a natural fibre, and traditional sericulture has no pollution to the environment. Although modern sericulture applies fertilizers and insecticides, and may cause some environmental problems, the application of chemicals is very limited. Several stages of silk production including dyeing, printing and garment making may cause environmental pollution, mainly in the form of polluted water. Additives used in finishing and sand-washing may also contain harmful chemicals. However, China's environmental labelling criteria for silk products are based on the "cradle to grave" approach, which set requirements for raw materials, production processes, and final products. They are basically in line with the requirements of other programs.

Last year, China's exports of machinery and electrical products ranked first among the country's exports, exceeding textile exports for the first time. The total value of exports of machinery and electrical products was US\$43.8 billion, representing a growth of 37.8% over 1994. Since more and more countries' ecolabelling program have established criteria for energy-saving electrical goods, attention should be paid to ecolabelling criteria established by other ecolabelling programs for electrical goods.

¹⁸ UNCTAD Secretariat, Eco-labelling and market opportunities for environmentally friendly products, TD/B/WG.6/2, October 1994.

Other products that fit the environmentally friendly products category and have potential for export are natural fibre, such as hemp, jute and bamboo products (Jute has now being used to make carpet in Canada, and the German Blue Angel is considering to include jute into its program). Other promising goods are organic farming goods, such as food and cotton. Many countries now have organic certification for these goods.

As the development of ISO 14000 environmental standards is moving forward rapidly, there is a tendency that ecolabelling will 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 ISO 14000 certification as soon as possible. Steps should be taken to ensure that information about these developments is available to Chinese enterprises.

IV. Summary of Conclusion and Recommendations

- ◆ Ecolabelling is primarily designed for providing accurate information to consumers on environmentally responsible products, encourage manufacturers to develop products that have less environmental impact, and ultimately for environmental protection. Nevertheless, it has potential to discriminate against foreign producers, in particular some sectors of products imported to OECD countries from developing countries, such as paper and pulp, footwear, textile and timber.
- ◆ A number of questions and concerns related to potential trade barriers have arisen. These include product coverage of ecolabelling and market access, transparency, cost and competitiveness, PPM related and other standards, and mechanisms of access to certification.
- ◆ Although the trade impact on developing countries does not appear to be significant at present, in the long-run, with the increasing demand for environmentally friendly products in OECD countries and with the increasing number of ecolabelling programs, developing countries are potentially vulnerable to trade effects of ecolabelling schemes worldwide.
- ◆ Several international fora have been worked on ecolabelling and some useful possible solutions have been proposed. These include: non-discrimination, transparency, acceptance of WTO TBT rules, and of international guiding principles. Mutual recognition and equivalency among ecolabelling schemes, and the caution in using PPM-related criteria are also useful approaches and should be further explored.
- ◆ In order to encourage the production of environmentally friendly products, to increase consumer awareness of green products, as well as to promote its international competitiveness, China established its own ecolabelling program.
- ◆ China's ecolabelling program has been successfully implemented over the past two years. Criteria for 12 product categories have been established, and more than thirty are currently under consideration. Up to June 1996, 43 products of 23 manufacturers had been awarded the logo.
- ◆ The textile industry has been analyzed in order to identify whether China's exports have been significantly affected by foreign ecolabels. The result shows that China's textile exports do not at present appear to be significantly affected by foreign ecolabelling programs in general. However, with the present development of ecolabelling, especially in European countries, some sectors including textiles and footwear in China could be potentially vulnerable to ecolabelling criteria.

- ◆ Challenges of ecolabelling for China include the need to strengthen its ecolabelling program, to link its program to the international development in order to reduce negative trade effects of foreign ecolabelling programs, and to take advantage of opportunities created by ecolabelling to expand China's exports.

Recommendations

1. Strengthen China's ecolabelling program

China's ecolabelling program should be expanded to include more environmentally friendly products, and to increase the market visibility of the ecolabelled products in order to achieve its goal for environmental protection.

It is important to increase public awareness of the ecolabelling program and to increase transparency. Efforts should be made to vigorously disseminate information on the program and ecolabelled products. In the process of selecting product categories, establishing product environmental criteria, and awarding the label, 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.

It is also important to integrate the development of ecolabelling with environmental management, and further promote the development of ecolabelled products. For example, watershed pollution control of Tai Lake (and other lakes suffering from eutrophication) needs to restrict the use of detergents containing phosphorous. To promote ecolabeled phosphorous-free detergents can contribute to pollution control of these water basins. The promotion of unleaded gasoline should also be gradually linked to control of the use of leaded gasoline. Basin.

In implementing its ecolabelling program, China should take into consideration internationally accepted principles, such as those are being developed by ISO. Consideration should also be given to adhere to the basic WTO TBT principles of non-discrimination and national treatment, avoidance of unnecessary obstacles to trade, ensuring great transparency and promotion of international standards.

China should also take into consideration good practices of existing ecolabelling programs in order to ensure the credibility of its program. These may include the use of environmental impact assessment of a product life cycle in its criteria-setting process, mechanisms for products not yet covered by the program and multiple stage ecolabel system.

2. Participate in international discussion and secure mutual recognition

The development of the ISO ecolabelling standards (ISO140XX) is so far advanced. It's 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.

Ecolabelling criteria and specifications may differ between developed countries and developing countries, due to the differences in economic basis. In order to avoid barriers that may create by ecolabelling to international trade, efforts should be made to explore the establishment of mutual recognition through international negotiation and cooperation. This may need to strengthen both bilateral and multilateral cooperation with other ecolabelling programs.

3. Explore opportunities for China's export

China should take the advantage that ecolabelling may create and to expand its exports of environmentally friendly 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.