

Cancels & replaces the same document:  
distributed 30-May-1997

**ECO-LABELLING: ACTUAL EFFECTS OF SELECTED PROGRAMMES**

**ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT**

**Paris**

**53794**

Document complet disponible sur OLIS dans son format d'origine  
Complete document available on OLIS in its original format

This report was prepared as part of the work programme of the OECD Joint Session of Trade and Environment Experts. It is derestricted under the responsibility of the Secretary-General of the OECD.

This paper is also available in French.

**Copyright OECD, 1997**

**Application for permission to reproduce or translate all or part of this material should be made to:**

**Head of Publications Service, OECD, 2 rue André-Pascal, 75775 Paris Cedex 16, France**

## TABLE OF CONTENTS

PREFACE .....	4
EXECUTIVE SUMMARY .....	5
I. INTRODUCTION .....	9
II. DESCRIPTION OF ECO-LABELLING SCHEMES .....	12
EU ECO-LABEL AWARD SCHEME .....	12
SWEDISH ENVIRONMENTAL CHOICE .....	17
NORDIC SWAN.....	19
CANADIAN ENVIRONMENTAL CHOICE PROGRAMME .....	22
BLUE ANGEL.....	25
GREEN SEAL .....	27
JAPANESE ECO MARK.....	29
NF ENVIRONNEMENT .....	31
III. GENERAL REMARKS ON TRANSPARENCY AND CONSULTATION PROCESSES: .....	33
IV. IMPLEMENTATION OF ECO-LABELLING SCHEMES -- THEIR ACTUAL EFFECTS .....	37
EU ECO-LABEL AWARD SCHEME .....	39
SWEDISH ENVIRONMENTAL CHOICE .....	43
NORDIC SWAN.....	45
CANADIAN ENVIRONMENTAL CHOICE PROGRAMME.....	49
BLUE ANGEL.....	52
GREEN SEAL .....	60
JAPANESE ECO-MARK .....	62
NF ENVIRONNEMENT .....	65
V. GENERAL REMARKS ON THE ACTUAL EFFECTS OF THE SCHEMES.....	67
ANNEX: LIST OF PRODUCT CATEGORIES .....	71

## **PREFACE**

This paper is the final report of an examination of the actual market, trade and environmental effects of eco-labelling programmes carried out by the OECD Joint Session of Trade and Environment Experts.

The study is based on information collected from various sources and interviews with representatives from eco-labelling programmes, government and interest groups (e.g. industry, consumer, environment and trade groups) in Sweden, USA, Belgium, Germany, Canada, Japan and France.

## EXECUTIVE SUMMARY

The purpose of this paper is to examine the actual market, trade and environmental effects of a selection of eco-labelling programmes operating in OECD countries: the EU Eco-label Award Scheme, the Nordic Swan, the Swedish Environmental Choice Programme, the Canadian Environmental Choice Programme, the Blue Angel, the Green Seal, the Japanese Eco-Mark and the French NF Environnement.

### *Transparency and Consultation*

Examination of the various schemes reveals that a similar procedure is used for the development of the different eco-labels. The transparency and consultation processes follow the same general pattern with certain variations. Eco-labelling programmes all have mechanisms for transparency, ranging from publication of information to active dissemination to interested parties, to simply establishing inquiry points; and they have similar consultation processes. Once product groups have been selected by the decision-making body, representatives of various interest groups generally participate in the expert group responsible for the development of the eco-label criteria. The draft criteria are then available for public review before the final criteria are adopted by the decision-making body. Lack of consideration given to comments provided on the draft criteria has been a source of criticism. Furthermore, decision-making on the final eco-label criteria is generally not open to outside participation. While no examples of overt discrimination have been found in the course of this study, for practical reasons, access to information and participation in criteria development will be more difficult for foreign producers without a domestic presence. The need for an international notification system centralising information on all eco-labelling programmes has been suggested, by those running eco-labelling programmes, as a way to minimise these problems.

### *Market Impacts*

The market impact of eco-labels may be examined from two perspectives. From the schemes' perspective, the market impact of eco-labelled products is an indication of success. From the trade perspective, the bigger the market impact, the bigger the potential trade impact. However, in practice, data concerning the market impact of eco-labelled products is very difficult to obtain. It is often confidential commercial information in the hands of industry. Some scattered anecdotal evidence shows that sales have increased when an eco-label has been obtained, but there is no statistical data in general to show the market power an eco-label may confer on a product. Producers however continue to apply for and pay for eco-labels, indicating they have some market value. Also, it is difficult to separate out the market impact of the eco-label from other factors which influence a products' market share.

Eco-labelling programmes have been more successful in countries or regions which benefit from a higher level of consumer awareness of environmentally preferable products and therefore a consumer demand for eco-labelled products (e.g. Sweden). Environmental NGOs, consumer groups and the media have contributed to increasing consumer awareness of environmentally preferable products through consumer awareness-building campaigns of various kinds (e.g. the Swedish Society for Nature Conservation in Sweden, consumer organisations and the specialised press in Germany). In certain cases, eco-labels have had a significant impact on the market for specific product categories (e.g. detergents in Sweden).

Eco-label criteria are generally set so that only a small percentage of products in a product category (5 to 30 per cent) can obtain the eco-label. In practice, eco-labelled products which are successful often cover more than 30 per cent of the market share in a product category. Eco-labels then no longer selectively identify a sub-set of products which are environmentally preferable to other products in the same product category, but tend to become a *de facto* voluntary standard. If the product is highly traded, and if the eco-label contains production and process-related criteria, the eco-label may constitute a barrier to competing in the market place as regards foreign products which do not conform to the eco-label criteria.

Overall, eco-labelling has only been moderately successful with the individual consumer. However, eco-labels may have an important market impact when retailers specify they want to stock products with eco-labels (e.g. ICA retailers in Sweden) or when they become a tool in identifying environmentally preferable products for government procurement (e.g. Canadian Environmental Choice Programme, Japanese Eco-Mark) and institutional purchasing (e.g. Green Seal Environmental Partners, Canadian Environmental Choice Programme).

The fear of losing market share to eco-labelled competing products rather than the drive to increase market share has often motivated producers to obtain an eco-label for their products. Eco-labels are also considered by manufacturers as a valuable tool to communicate the environmental qualities and quality image of their product and their company. Research has shown that improvements in environmental performance of a product only became a significant competitive factor once competitive levels of product performance, quality and value are attained.<sup>1</sup>

Most official government supported eco-labelling programmes have limited their coverage to products. However the Canadian Environmental Choice Programme, which is government-owned and directed but delivered through the private sector, has now begun developing eco-labels for services. Private eco-labelling programmes such as the Swedish Environmental Choice and the Green Seal have used product eco-labelling as one element of a broader environmental strategy aiming to educate consumers and guide them in their purchasing decisions, e.g. green shopping guides, and “shop and act green” campaigns.

---

<sup>1</sup> The Open University's Design Innovation Group, *The Commercial Impacts of Green Product Development*, 1996.

## *Trade Effects*

Information gathered during the course of this study, recognising data limitations, did not reveal hard evidence of changes in trade flows arising from the selected eco-labelling programmes. However, fears and concerns have been voiced as to potential effects.

Eco-labelling schemes raise particular trade concerns when they include production-related criteria. Such criteria can discriminate against imports when they reflect exclusively the environmental conditions and preferences of the importing country, and the effects can be particularly acute for developing countries and countries heavily dependent on exports<sup>2</sup>.

In the absence of hard evidence regarding the trade effects of the selected eco-labelling schemes, it is useful to examine the eco-label criteria to determine whether circumstances potentially leading to trade concerns exist. For instance, the extent to which eco-labels include production related criteria and whether eco-labels were developed for products of export interest to developing countries.

Certain eco-labelling programmes, such as the Canadian Environmental Choice and the Japanese Eco-Mark have mostly developed eco-labels for products which reduce environmental damage during the use and disposal phase. These programmes encourage the use of recycled products to limit waste generation and limit consumption of non-renewable resources. Only a limited number of eco-labels include requirements exclusively related to the environmental effects which occur during the production phase (e.g. water effluents, air emissions). The Blue Angel does not develop eco-labels for products which are the source of environmental damage during the production phase.

As for product categories of specific interest to developing countries, the Canadian Environmental Choice Programme (ECP), the Green Seal and the Eco-Mark have developed an eco-label for textiles. The ECP and the Green Seal eco-labels for cotton reusable utility bags do not include any production related requirements; rather criteria address exclusively the use and consumption phase of the product. The eco-label for textiles developed by Eco-Mark encourages textile products made of recycled fibre. The Blue Angel is examining the possibility of developing eco-labels for rattan and jute products in co-operation with developing countries. No eco-labels for products of particular export interest to developing countries had been developed by the Blue Angel previously.

Eco-labelling programmes such as the EU Eco-label Award Scheme, the Nordic Swan, the Swedish Environmental Choice Programme and NF Environnement generally include production-related requirements in their eco-label criteria.

The eco-label for T-shirts and bed linen and the eco-labels for paper products developed by the EU have been the largest source of trade concerns because they include criteria related to the production stage of products which are largely imported into the EU. The importance of the EU market and the economic stakes involved explain the level of concern with respect to these eco-labels. Under these circumstances a high level of transparency and adequate consultation mechanisms would need to be ensured.

---

<sup>2</sup> *Report on Trade and Environment to the OECD Council at Ministerial Level*, Paris 1995, OCDE/GD(95)63.

The eco-labels developed by the Nordic Swan and the Swedish Environmental Choice include requirements which address the whole life-cycle of the product. Eco-labels have been developed by these schemes for various types of detergents, cleaning agents and paper products which have had a heavy market impact and include production related criteria. Producers, both domestic and foreign, have modified their processes and production methods to meet the eco-label criteria and maintain their products on the market.

Eco-labels for textiles were developed in both of these schemes. The eco-label developed for the Nordic Swan includes production related criteria which favour ecological cotton growing. Two of the three licensees are foreign producers.

The NF Environnement has only been awarded for two product categories. Products of particular export interest to developing countries have not thus far been considered for the French label.

It is of interest to note that few eco-labels in the selected schemes have been developed for products of specific export interest to developing countries.

The percentage of foreign licensees varies between 0 and 20 per cent across the schemes studied. This however provides no indication of the percentage of foreign products which are eco-labelled because foreign products are often eco-labelled by the importer or distributor - a national company- through which the product is sold.

Mutual recognition and equivalency have been recognised as useful concepts which may help to minimise the potential trade effects of eco-labelling programmes. In this context, it should be noted that attempts at equivalency and mutual recognition have been initiated by the Canadian Environmental Choice Programme and the US Green Seal.

### ***Environmental Effectiveness***

The environmental benefit sought through eco-labelling will be achieved when a balance is reached between the number of eco-labelled products and the stringency of the criteria. Although data relating to the environmental benefit achieved through eco-labelling is lacking, a few estimates of the environmental effectiveness of eco-labelling programmes have been made in terms of pollution avoidance. Generally however, due to the difficulty of isolating and measuring the environmental benefits of eco-labelled products as distinct from benefits achieved via other environmental measures, environmental effectiveness has instead been evaluated indirectly on the basis of consumer awareness and consumer demand for eco-labelled products, and changes in producer behaviour. Public awareness and attitudes to eco-labelled products vary significantly depending on the country. In some instances, the development of eco-labels has had an impact on the behaviour of manufacturers, strongly encouraging them to modify their products in order to qualify for an eco-label so as to maintain their products in retail chains, for example. Surveys have indicated that eco-labels are better known to women than men and to younger people than older people.



## I. INTRODUCTION

Considerable work has been conducted in various international fora, including the OECD Joint Session of Trade and Environment Experts on the *potential* trade implications of eco-labelling programmes. Life-cycle approaches have been recognised as valuable tools for governments, industry and consumers in understanding the complex environmental effects of products from “cradle to grave”, and in reducing environmental burdens caused by products during their life cycle<sup>3</sup>. The relatively recent trend for eco-labelling programmes to be based on more extensive life-cycle criteria, specifically production related criteria, is a source of trade concern with respect to eco-labelling schemes. The possible trade effects of eco-labelling programmes have been identified and solutions are now being examined in various fora to minimise these potential trade implications. A number of steps to avoid unnecessary trade impacts on foreign exporters were in fact recommended in the 1995 Report on Trade and Environment to the OECD Council at Ministerial Level.

The main purpose of this study is to examine the *real* effects of eco-labelling programmes based on a selection of eco-labelling programmes operating in OECD countries. It is to provide a factual analysis, examining the *actual* market, trade and environmental effects of the selected eco-labelling schemes, including their effects on the export of products from developing countries.

The main objectives of the study are the following:

- Identify and describe a selection of eco-labelling schemes operating in OECD countries;
- Examine these schemes with a view to studying transparency and consultation processes;
- Analyse the current and short term impacts of these eco-labelling schemes including:
  - i) the market impact of eco-labelled products;
  - ii) the impact of eco-labelling programmes on trade, particularly for imports from developing countries;
- Evaluate the environmental effectiveness of eco-labelling schemes and give an indication of public awareness and attitudes within OECD countries, including the degree to which eco-labelling affects purchasing decisions by consumers and evidence of any particular demand for eco-labelled products.

Environmental labelling has become a popular tool to promote environmentally preferable consumption and production patterns. Different types of environmental labels exist which operate in different ways and whose effects may be quite different. A certain amount of confusion and misunderstanding over the effects of eco-labelling schemes may be due to the different types of environmental labels which are referred to as eco-labels.

The present study will look at one specific type of environmental label, multi-issue voluntary labels commonly referred to as eco-labels (Type 1 environmental labels as defined by the International Organisation for Standardisation). In general, these schemes are designed to apply to a small proportion of

---

<sup>3</sup> *Report on Trade and Environment to the OECD Council at Ministerial Level*, Paris 1995, OCDE/GD(95)63, par. 67.

products in a product category which are determined to have lessened adverse environmental impacts. Within a product group, eco-labels are meant to distinguish between products, to identify ones which are deemed environmentally preferable to others. The label is meant to indicate the overall environmental quality of a product, in order to encourage consumers to purchase it. Eco-labelling programmes are often government-supported, third party certification programmes. They are voluntary since manufacturers have the choice of whether or not to apply for the eco-label.

Although the scope of this study has been limited to eco-labelling programmes, it should be mentioned that increasing attention is being given to other types of environmental labels, such as Type II and Type III environmental labels as they have been defined by ISO. Type II environmental labels are informative self-declaration environmental claims made by manufacturers, importers, distributors or retailers. Type III environmental labelling is quantified product information labelling based upon independent verification using pre-set indices. Due to their nature, the effects of these other types of environmental labels may be very different from the effects of eco-labelling schemes. Other environmental labels also exist which fall outside the definitions of Type I to Type III environmental labels e.g. private industry-based environmental labels for textiles. These labels, often referred to in the literature as eco-labels, may be the source of some trade effects and may have been confused with eco-labels as defined in this paper. The impact of these labels needs to be further investigated.

The eco-labelling programmes selected for this study are the following: the German Blue Angel, the Nordic Swan, the Swedish Environmental Choice, the EU Eco-Label Award Scheme, the Canadian Environmental Choice Program, the Green Seal operated in the USA, the Japanese Eco-Mark and the French NF Environnement. Aside from practical considerations, most of these schemes were chosen because they are some of the oldest schemes. It was also considered interesting to include two private schemes such as the Swedish Environmental Choice and the Green Seal in the analysis. Although very few products have been awarded the EU eco-label, it is an interesting scheme to analyse because it has been the source of some concern from non-EU producers.

A description of these eco-labelling schemes is provided in the first part of the study.<sup>4</sup> Most of these schemes are relatively recent and/or are still evolving. Their structure and procedures are being modified on a trial and error basis. The description provided below reflects their present structure and operating procedures. Particular attention is directed towards their transparency and consultation processes. Transparency and consultation have been recognised as essential to ensure the credibility of eco-labelling schemes, and they have been advocated as minimum requirements to avoid unnecessary trade effects.

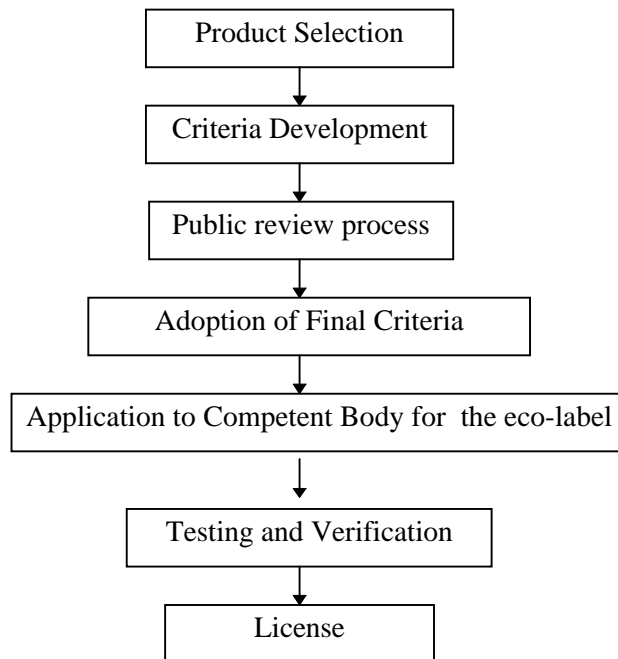
The transparency of the programmes is examined to determine the information mechanisms or notification procedures available and the information provided during the various stages of development of eco-labels. The consultation process in each scheme is examined to determine the opportunities available for interested parties, including foreign producers, to provide input and participate throughout the development process of eco-labels, from the product selection until the adoption of the final criteria. Any

---

<sup>4</sup> The terminology used in this study has been standardised and the following terms are defined as follows: *eco-label criteria*: set of qualitative and/or quantitative technical requirements that the product or service shall meet to be awarded an eco-label; *product category*: group of products, of a class or kind, which have an equivalent use; *licensee*: applicant to which an eco-label has been awarded for a product; *applicant*: legal entity applying for an environmental label for a product or range of products and which undertakes to comply with ecological and product function criteria and the certification and costs involved in the application and awarding of the label.

official public review mechanism, allowing interested parties to provide comments during the development of the eco-label, is examined, as is the consideration given to comments on the final criteria.

To illustrate the process, a simplified chart identifies the main steps which characterise the general procedure for the development of eco-labels:



The second part of the study (Sections IV and V) addresses the actual effects of eco-labelling schemes.

## II. DESCRIPTION OF ECO-LABELLING SCHEMES

### EU ECO-LABEL AWARD SCHEME

A Community Eco-Label Award Scheme was established on 23 March 1992, by the adoption of Council Regulation (EEC) No 880/92<sup>5</sup>. On 10 December 1996, the European Commission proposed a major revision of Council Regulation 880/92 which would include the following changes among others: the introduction of a graduated label; the establishment of an independent European Eco-label Organisation to develop eco-label criteria; increased complementarity between the EU scheme and the national schemes; a ceiling for the annual fee to be charged for the use of the label and a reduced fee for SMEs and applicants from developing countries; and formalisation of the consultation process. The proposed revision has been presented to the Council and the European Parliament, the Economic and Social Committee and the Committee of the Regions will also be consulted. Deliberations on the proposed revision will be held throughout 1997<sup>6</sup>. Until the revision is formally adopted by the Council, the programme will continue to operate on the basis of its current structure and operating procedures as described hereafter.

#### *Administrative Structure*

The procedure being relatively complex, guidance documents were developed by the European Commission in 1994 to assist in the establishment of product groups and ecological criteria.<sup>7</sup>

A number of bodies are involved at various stages in the development of ecological criteria for product groups, namely:

- the European Commission;
- Competent Bodies designated in Member States for the administration of the eco-label award scheme;
- the Committee of Competent Bodies comprised of two representatives of each Competent Body;
- the Consultation Forum which represents five interest groups at the European level: industry, environment, consumers, commerce and trade unions. The first four are each represented by three members, one head of delegation and three substitute members. The trade unions have one representative and one substitute;
- the Regulatory Committee which consists of the representatives of the Member States;
- the Council of Ministers.

---

<sup>5</sup> The scheme does not cover food, drinks and pharmaceuticals.

<sup>6</sup> European Commission, *Newsletter on the EU Eco-Label*, Issue N° 16, January 1997.

<sup>7</sup> *Procedural Guidelines for the Establishment of Product Groups and Ecological Criteria*, EC Eco-Label Newsletter, N° 6, June 1994; *A Framework of Policy Principles for the Establishment of Product Groups and Ecological Criteria*, Draft 2, May 1994; *Guidelines for the Application of Life-Cycle Assessment in the EU Eco-labelling Programme*, Final Report of the First Phase, September 1994.

DGXI of the European Commission runs the scheme in consultation with other Commission services. Competent Bodies of each Member State and members of the Consultation Forum are consulted throughout the process.

Ad Hoc Working Groups, which assist in the development of criteria, are composed of interested Commission services, two representatives from Competent Bodies in each Member State, two representatives from each interest group nominated by the Consultation Forum and two representatives of the Consultation Forum.

As of 27 September 1996 a total of 24 products had been awarded the EU eco-label. Seven labels had been awarded to Hoover Limited for washing machines, but have since expired as new revised criteria were set in August of 1996. Four eco-labels were awarded for kitchen towels, four for toilet paper and nine for indoor paints and varnishes. As of 16 December 1996, eco-label criteria had been published for a total of 12 product categories: washing machines (revised criteria published in August 1996), dishwashers, soil improvers, toilet paper, paper kitchen rolls, laundry detergents, single-ended light bulbs, paints and varnishes, bed-linen and T-shirts, double ended light bulbs, copying paper and refrigerators.

### ***Product Selection***

A list of priority product groups for consideration is established by the Commission upon consultation with the competent bodies. According to information from the Consultation Forum, a matrix of selection criteria developed by the Consultation Forum for the choice of new product categories was taken into consideration in deciding on the seven new product groups. Some of the criteria suggested by the Consultation Forum for deciding which products are priorities for developing eco-labelling criteria are: visibility of the product, frequent use consumer products, relevant share of every day consumption, consumer choice, competition, perceived environmental relevance, availability at retail outlets, acceptance by producers.<sup>8</sup> The Policy Principles say that international aspects are also to be taken into account when identifying product groups for criteria development but the practical effect is unclear.<sup>9</sup>

### ***Criteria Development***

The procedure for the development of criteria for new product categories was recently slightly modified. Initially, once new product categories had been identified, a Lead Competent Body was responsible for developing proposals for eco-labelling criteria, e.g. UK Eco-labelling Board for washing machines and dishwashers. In July 1995, DGXI opened calls for tenders for developing eco-label criteria for seven new product groups. As a result, separate study contracts were awarded for consultants to carry out a life-cycle assessment for each of the following product groups: batteries consumer goods, floor cleaning products, sanitary cleaning products, detergents for dishwashers, shampoos, rubbish bags and converted paper products. These studies are to be completed within a fourteen month period.

The various phases for the development of the criteria are the following<sup>10</sup>:

---

<sup>8</sup> *Report of the Consultation Forum for the European Eco-label on the List of priority products for possible preliminary considerations under the EU Eco-Label Award Scheme*, Brussels, 10 February 1995.

<sup>9</sup> Section II of the Policy Principles.

<sup>10</sup> Procedural Guidelines.

The first phase aims to establish the feasibility of developing an eco-label for a specific product category, based on considerations such as the nature of the market, the perceived environmental issues, the advantages of the product group being labelled and the identification of problem areas.<sup>11</sup>

Based on the results of the feasibility study, DGXI determines whether to proceed with the establishment of an eco-label for a product category, following a meeting with the Committee of the Competent Bodies, the Consultation Forum and the relevant Commission Services.

If the decision is made to proceed, a market study (phase two) will provide further information on the nature of the market, including the market share held by manufacturers and main brand names both at the European and national level and also for imports into the EU.<sup>12</sup>

During Phase Three and Four, the Inventory and Environmental Impact Evaluation, the draft ecological criteria are developed based on a life-cycle analysis.

During Phase Five, based on the results of the LCA study, the draft criteria are drawn up by the Commission. In this phase, a number of elements are determined including the most important environmental impacts, the applicable criteria, the standard to be set for each criterion, the necessary test methods and the certification procedures.

During Phase Six, the draft proposal is presented by DGXI to the Consultation Forum for a formal Opinion. Following a six week period, the Opinion of the Forum will be transmitted to all Competent Bodies and relevant Commission Services. After internal consultations within the Commission, a final draft decision is presented to the Regulatory Committee. The Regulatory Committee votes on the draft decision. If the vote is affirmative, the Commission establishes the decision and it is published in the Official Journal. If the Regulatory Committee majority is not in favour of the decision put forward, the Commission may decide to present the draft decision to the Council.

At the end of each phase, meetings of the Ad Hoc Working Group are held to discuss progress and provide input into the process.

The policy principles provide that eco-labelled products should “indicatively and initially” represent no more than 30 per cent and no less than 5 per cent of the market share, unless the rapid introduction of clean technologies justifies a lower percentage.<sup>13</sup>

---

<sup>11</sup> Official Journal of the European Communities No C 203/20, Open procedure.

<sup>12</sup> *Id.*

<sup>13</sup> Policy Principles, Section of Characteristics of Eco-labelling Criteria, art.4.

### ***Duration of Criteria Validity***

Criteria for each product group remain valid for three years.

### ***Application -- Licences***

Manufacturers or importers may apply for the award of an eco-label only to the Competent Body or Bodies of a Member State in which the product is manufactured or first marketed or imported. On the basis of documents to be submitted by the applicant, the competent body will assess compliance with the criteria and decide whether or not to award the label. The Commission and other competent bodies are to be informed when a label is awarded.<sup>14</sup>

It is stated in the "Policy Principles" that the EU eco-label applies to imported products without discrimination. The conditions and criteria for application are exactly the same as those applied to European Union producers.

An application fee of ECU 500 and a royalty of 0.15 per cent on the turnover of the eco-labelled product, or a minimum of \$US660, is applied.

### ***Transparency -- Consultation***

#### **A. *Transparency***

Commission Decisions on product groups and ecological criteria, the list of products for which an eco-label has been awarded, the names of licensees, and the names and addresses of the competent bodies are published in the Official Journal of the European Communities.

A quarterly Newsletter is also published by the Commission which provides an update of the work in progress for each product group. Over 10 000 copies are printed and posted to subscribers in over 50 countries. Contact points for the Competent Bodies and members of the Consultation Forum are also listed.<sup>15</sup> Foreign producers may be informed through their trade representatives in Brussels.

#### **B. *Consultation***

Interest groups are consulted both through the Ad Hoc Working Group meetings and the Consultation Forum.

##### **i) Ad Hoc Working Group Meetings**

The Consultation Forum is invited to nominate experts from environment, consumer, industry and commerce to participate in the Ad Hoc Working Group meetings during the development of criteria for each product group. Ad Hoc Working Groups generally meet four to five times during the development of criteria for a product category, particularly at the end of phases two, three, four and five. The same experts are meant to follow the development of criteria for one specific product group through

---

<sup>14</sup> Council Regulation (EEC) N° 880/92, article 10.

<sup>15</sup> WTO/CTE, *Eco-Labeling Programmes*, G/TBT/W/23, 19 March 1996, p.10.

the Ad Hoc Working Group meetings organised to assist in the development of criteria. Foreign producers may be nominated as experts by Euro-Commerce<sup>16</sup>.

Initially, the Ad Hoc Working Group met in the lead country where national interest groups could have more influence. For the seven new product groups however, the Ad Hoc Working Group meetings take place in Brussels. This is intended to provide a better representation of interest groups at the European level. Reimbursement is provided for environment and consumer groups but not for industry and commerce. According to a Euro-Commerce representative, this has made it difficult for Euro-Commerce to find experts to attend meetings.

#### ii) Consultation Forum

Once a draft proposal for criteria has been established by the Commission (end of phase five), the Consultation Forum is given a six week period to elaborate a formal opinion on the proposal. The Consultation Forum holds a meeting with members of the five interest groups, experts nominated by the groups and the consultant in charge of developing the criteria for the product group under discussion. The meeting is chaired by the President of the Consultation Forum. Following a presentation by the consultant, experts from the interest groups are also given the opportunity to provide their input.

Following these presentations, the draft proposal for criteria will be discussed. After experts and the consultant have left the meeting room, a synthesis of opinions expressed is distilled and diverging conclusions are noted. After the draft opinion has been reviewed by the members of the Forum following a strict procedure, the Opinion is finalised. The final Opinion of the Forum is reached through consensus, however diverging opinions expressed by minority groups will be highlighted in the Opinion. The Formal Opinion is sent to the Commission and to the Competent Bodies.

Although the Consultation process is quite elaborate, members of the Consultation Forum have expressed concern that their opinions were not duly taken into account by the Commission and the Regulatory Committee. The Forum has also argued that it is consulted too late in the process.<sup>17</sup>

In practice, interest groups are generally not represented by the same persons in the Ad Hoc Working Groups and in the Consultation Forum. In the Ad Hoc Working Groups, experts are invited to provide input to the discussion relevant to their area of expertise (e.g. in meetings for discussions on criteria for detergent, the industry will likely be represented by the professional organisation of soaps and detergents). However, in the Consultation Forum, based on the information provided by experts, members of the Forum (e.g. UNICE for industry) need to reach a consensus on the criteria proposed.

It is the responsibility of the Consultation Forum to ensure that “adequate consideration” is given to the point of view of non EU producers, through Euro-commerce, the representative of commerce/ importers/ distributors. Procedural guidelines also provide that “third country producers have access through the Consultation Forum to the same information available to European Union producers and be able to submit their point of view”.<sup>18</sup>

---

<sup>16</sup> Euro-Commerce is the official representative of Commerce interests in the Consultation Forum. Euro-Commerce is an association which represents wholesalers, importers and retailers at the European level. It is also through Euro-Commerce that foreign producers are involved in the consultation process.

<sup>17</sup> Consultation Forum for the European Eco-Label, Report - *The EU Eco-label Scheme: Overview and Analysis to Date*, 31 January 1996.

<sup>18</sup> Procedural guidelines, Section V on Procedural requirements, section on consultation, art. V.8



An information meeting organised by the Consultation Forum was held in June 1994 on *Aspects and Implications for Third Countries* of the EU Eco-label Award Scheme in response to criticisms from non EU Members.

## **SWEDISH ENVIRONMENTAL CHOICE**

The Swedish Society for Nature Conservation (SSNC), founded in 1909, is the largest environmental NGO in Sweden with over 200 000 members. The establishment of the Swedish Environmental Choice also known as the Good Green Buy or the Falcon was one of the outcomes of a popular trend towards green consumerism which started with the Shop and Act Green Project initiated by SSNC to increase environmental awareness in consumption patterns. Initially, the Good Green Buy was conceived to pave the way for the Nordic Swan.

The Good Green Buy was established in 1990 by the Swedish Society for Nature Conservation and three Swedish retailers (ICA, KF and Dagab) who control 75 per cent of the grocery business in Sweden.

In order to increase consumer awareness of eco-labelled products, campaigning through various activities of the SSNC has been a major strategy (e.g. promoting shops with the biggest percentage of labelled products).

As of April 1996, criteria had been established for 27 product groups and approximately 695 products have been awarded the eco-label. Products groups for which criteria have been developed include: different types of detergents (e.g. laundry, dishwashing), stain removers, all-purpose cleaners, diapers, different types of paper (e.g. toilet tissue, paper towels, office paper, coffee filters), and textiles.

### ***Administrative Structure***

Since 1992, a Board composed of an equal number of representatives of the SSNC and three Swedish retailing companies has managed the programme. SSNC has three votes and the retailers each have one. The chairperson appointed by the SSNC has deciding power in case of disagreement. The Board chooses the product categories for which criteria should be developed and decides when to revise the criteria.

The Society for Nature Conservation is responsible for developing the criteria. The final decision on the criteria is taken by the SSNC's Secretary General.

The retailers provide 3/4 of the financing for the scheme and the SSNC the other 1/4.

### ***Product Selection***

The Board will decide for which products groups criteria should be developed. Not all products are considered suitable for eco-labelling. Goods which are not considered necessary are not selected for eco-labelling, e.g. fabric softeners.

### ***Criteria Development***

As a first step a preliminary study is conducted to identify the main environmental problem caused by the product chosen. An evaluation of the market situation for that product is undertaken by an external consultant for SSNC. Within a period of six months, based on the latest scientific findings, interviews with manufacturers and retailers, a preliminary draft will be drawn up. This draft is widely circulated for comments to industry, science, universities and trade representatives.

The draft proposal, containing lists ranking the environmental impacts of the product, is reviewed by the Society's panel of experts and debated. On the basis of the proposal and the outcome of discussions, agreement is reached on criteria for the product category. The final criteria are ratified by the Society's head of conservation and the environment. The Board then decides when the criteria should take effect.

Once most products in the same group are covered by the eco-label, the Board will decide that the criteria must be revised. Once the criteria are reformulated, producers are given 6 months to comply with the new criteria. For example, the criteria for detergents has been revised four times since 1990. While the initial criteria usually address one particular environmental impact, the scope of the criteria will broaden at each revision to address a greater variety of environmental impacts of a product during its life cycle (e.g. for detergents the criteria initially concentrated on chlorine bleaching).

The criteria are established so that approximately 10 to 15 per cent of the existing market should qualify for the label.

### ***Application -- License***

Once the final criteria have been adopted, applications can be submitted for the eco-label. Applicants must declare the composition of their products to the Society and products which meet the criteria will obtain shelf marking in retail outlets at no cost. However, the producer has to pay a fee for his product to be eco-labelled and a license agreement will be signed between SSNC and the applicant. The fee is 5000 SEK for the first product and 1500 SEK for each additional product. This fee is paid only once unless the product is disqualified and a new application is submitted.

The products are not tested, a license is granted on the basis of the information and guarantees provided by the applicant, including results from laboratory testing if necessary. If the information furnished is found to be unreliable, the applicant will be subjected to heavy fines.

### ***Transparency -- Consultation***

New criteria are published via press-releases, the SSNC newsletter and letters to producers and traders. One major difference with official schemes is that producers, domestic or foreign, are not involved in the criteria development. Their input is limited to comments they may provide on the draft criteria during the public review process. The draft criteria are all translated into English and some into German.

### **NORDIC SWAN**

In 1989, the Nordic Council of Ministers for Consumer Affairs introduced an eco-labelling programme for products, common to Sweden, Norway, Finland and Iceland. The logo for the programme displays a white swan flying against a green background. It is the first multi-national eco-labelling scheme.

One essential objective of the Nordic Swan was the harmonisation of eco-labelling programmes in the Nordic countries, in order to avoid confusion in the marketplace resulting from a proliferation of eco-labelling schemes.

An evaluation of the Nordic eco-labelling system was ordered by the Nordic Council of Ministers in 1994-95 and carried out by a group of research scientists at the International Institute for Industrial Environmental Economics at Lund University. As a follow-up to the evaluation, revised Guidelines were adopted by the Nordic Council of Ministers in January 1996, and an Environmental Strategy was adopted in February 1996 by the Nordic Eco-labelling Board, primarily aimed at preserving and reinforcing the credibility of the system among consumers, purchasers and producers. Procedures for criteria development, for licensing and inspection are also to be adopted by early 1997<sup>19</sup>.

### ***Administrative Structure***

National Boards in Norway, Sweden, Iceland and Finland administer the programme. National Boards are comprised of consumer representatives, environmental agencies, NGOs, trade, industry and research institutes and associations of importers.

The Nordic Co-ordinating Body, comprised of the Director and President of the Board from each country, makes final decisions on the selection of product categories and on the final eco-label criteria.

As of November 1996, a total of 215 licenses were awarded for 45 different product groups. More than 1 000 products are now labelled with the Nordic Swan. Criteria have been approved for the following product categories among others: all purpose cleaners, car care products, detergents for textiles, fine paper for copying and printing, processed fine paper products, paper envelopes, rechargeable batteries, copying machines and toner cartridges. The Nordic Swan covers a broader range of products than the Swedish Environmental Choice which mainly focusses on various types of paper products, detergents and cleaning agents.

---

<sup>19</sup> Nordic Council of Ministers, *Nordic Eco-labelling - Scheme and Evaluation*, p. 13-15.

### ***Product Selection***

National agencies handle proposals for new product groups which are then submitted to the Nordic Co-ordinating Body. Once the Nordic Co-ordinating Body has approved a new product category, a lead country is chosen to develop the criteria for the new product group.

The choice of product categories by the national board is based on various considerations: the environmental impact associated with the products, potential for environmental improvements and potential for succeeding in the market. The selection is based on a market analysis which assesses: what products are available in the market, the quantities in which they are manufactured on the Nordic market, quantities imported, the need for consumer guidance, producer structure and competition.

The Environmental Strategy, adopted in February 1996, suggests that the Nordic Swan could also cover services, particularly those associated with products for which eco-label criteria have already been drawn up.

### ***Criteria Development***

A Nordic expert group created by the national board and formally appointed by the Nordic Co-ordinating Body is responsible for the development of the criteria. It includes representatives of all interested parties, such as representatives from industry, importers, governmental authorities, research institutes, and environmental NGOs.

The expert group considers the environmental impact of a product throughout its entire life-cycle, from cradle to grave. Criteria are then established to address the most important environmental impacts of the product group.

The proposals are sent out for comments and public review by interested parties, “for practical reasons normally to interested parties in the Nordic countries only”<sup>20</sup>. Based on the comments, a final draft proposal adopted by the National Board is sent to the Nordic Co-ordinating Body for approval.

The Environmental Strategy document contains principles on which the development of the criteria should be based: criteria must be based on a life cycle assessment; criteria must be aimed at factors which have a bearing on environmental impacts; environmental priorities of Nordic countries’ are to be addressed on a priority basis; performance and quality of product must be equivalent to similar products on the market; criteria must be stringent; transparent and consistent.

---

<sup>20</sup> WTO/CTE, *Eco-labelling Programmes*, G/TBT/W/23, WT/CTE/W/23, p. 13.

### ***Application -- Licences***

A fixed application fee (US\$ 2 000) and an annual fee of 0.4 per cent of the estimated annual turnover in the country are to be paid by the applicant<sup>21</sup>. A ceiling is fixed for each country which is 250 000 Norwegian crown in Norway, 350 000 SEK in Sweden and 300 000 FIM in Finland. Additional testing and verification costs are also to be paid by the applicant.

For a product to be labelled, it must be of equivalent quality and cause less environmental harm and hygienic hazards than the alternative products. Foreign products may be awarded the eco-label if they comply with the criteria. They often obtain the eco-label following a request from the Nordic importer.

### ***Compliance Verification***

Verification is not undertaken systematically but may be undertaken if suspicions arise with respect to a licensed product on the market.

### ***Transparency -- Consultation***

Inquiry points in each national body provide information upon request, such as the list of product groups, the list of licensees, the list of ongoing criteria and proposals for criteria once they have been sent out for public review. Criteria are rapidly translated into English. Interest groups participate in the development of the criteria through the expert groups and the public review process.

Despite these provisions for consultation, criticisms have been expressed with respect to the transparency of the scheme. The outcome of suggestions and proposals are not reported and it is not clear whether they are actually taken into account. Some have also pointed to a lack of information flow between the national bodies, the Nordic Co-ordinating Body and the public<sup>22</sup>.

The Guidelines for Nordic Eco-labelling<sup>23</sup> make a series of recommendations to ensure the transparency of the scheme:

- Criteria development activities should be available to all interested parties;
- Information concerning criteria established, the composition of expert groups and the state of progress of current work shall be open to the public;
- The widest possible circle of interested parties should be heard in connection with all draft criteria;
- Responses from such reviews shall be open to the public;

---

<sup>21</sup> WTO/CTE, *Eco-labelling Programmes*, G/TBT/W/23, WT/CTE/W/23, p.15.

<sup>22</sup> Backman M., Lindqvist T., Thidell A., The International Institute for Industrial Environmental Economics at Lund University, *Issues Concerning Some Key Problems in Environmental Labelling - Abstract*, p.5

<sup>23</sup> The Decision of January 24, 1996 of the Nordic Council of Ministers Concerning the Objectives and Principles for Nordic *Eco-labelling*, Section 3.8 entitled "Openness".

- Minutes and protocols of the Nordic Eco-labelling Board should be open to the public.

## **CANADIAN ENVIRONMENTAL CHOICE PROGRAMME**

The Canadian eco-labelling programme was founded in 1988 by Environment Canada. The Environmental Choice Programme is still evolving and the administrative structure of the programme has been substantially modified since its inception. The description below reflects its present administrative structure.

The official mark of the programme is the EcoLogo, three doves intertwined symbolising the co-operation between government, business and consumers.

As of February 1997, final guidelines (i.e. eco-label criteria) were in place for 50 product categories<sup>24</sup>. Guidelines developed to date have been mostly directed towards office and schools (e.g. paper products, office furniture), car care (e.g. lubricating oil), construction and home materials (e.g. surface coatings, floor covering, insulation), cleaning and maintenance, and recreational boating. Approximately 1600 products had been awarded the EcoLogo as of February 1997.

### ***Administrative Structure***

The Environmental Choice Programme (ECP) is a government programme delivered, since 1995, by a private company, Terra Choice Environmental Services Inc., under a license agreement with Environment Canada.

Review committees composed of representatives from business, academia, environmental organisations, consumers, trade unions, and federal, provincial and/or municipal levels of government participate in the development of the guidelines.

The ECP Interdepartmental Committee formed of representatives from Environment Canada and other federal departments provides ongoing policy advice and serves as an information forum.

The ECP has participated and sponsored many marketing activities to increase widespread knowledge of its programme. These have included participation in trade shows and speaking engagements across Canada and the USA, direct mail campaigns, information services, joint promotional activities with licensees, advertising and the launch of a procurement Newsletter "The Ecobuyer".

---

<sup>24</sup> Environment Canada, *Final Guidelines*, June 1, 1996.

### ***Product Selection***

A new “Demand Side Management Approach” is now used to choose product categories for eco-labels, whereby industry expresses interest in the development of a guideline for a product category. Industry interest is generally identified through the Panel Review Certification Process.<sup>25</sup>

This process was developed to certify products for which product guidelines do not exist. Products recognised as environmentally preferable to their alternative on the market may obtain the EcoLogo certification following evaluation by the Panel. If more than three companies wish to obtain certification for a product in the same product category, ECP may decide to develop a technical guideline for the product category. Criteria development will then be initiated in response to demand.

### ***Criteria Development***

Once a product category has been selected, a technical briefing note is prepared by Terra Choice which includes the following: a life cycle review, a profile of the industry, an assessment of potential economic aspects, assessment of the market status of the product category.

On the basis of this technical briefing note, Terra Choice drafts the initial guideline. The draft guideline highlights the environmental benefit of certain product characteristics and establishes the award criteria. Product-specific technical review committees, formed of government, NGOs, academic experts and key industry sector representatives, are set up by Terra Choice to assist in the development of the guidelines. They review and comment on the proposed guideline aiming to ensure that all relevant technical issues are addressed; that the life-cycle review is scientifically based; and that the criteria are economically feasible.

Once the draft guideline is developed, a four to eight week public review period is announced in the Government of Canada’s official publication for announcements, the Canada Gazette. Interested groups and individuals are also directly notified. The opportunity is given for manufacturers, consumers and any member of the general public to suggest improvements to the criteria in writing. The draft guideline is then revised by Terra Choice and the Review Committee, taking into account the comments received. The final guidelines reviewed by the interdepartmental representatives are announced in the Canada Gazette.

The objective is for approximately 20 per cent of products in a product category to meet the criteria.

### ***Duration of Criteria Validity***

Guidelines or eco-label criteria are generally reviewed every three years to ensure their continued relevance and stringency. They may then be reconfirmed, revised or revoked. The criteria may however be revised at any time, if significant technical or market developments occur. For instance, if large portions of the marketplace are able to meet the criteria, the guideline may be reviewed. Revisions are announced periodically in the Canada Gazette. All licensees affected by the revision of the guideline and other interested parties are notified of the content of the revision (and are also involved in the revision

---

<sup>25</sup> Terra Choice Environmental Services, *Environmental Choice Program - Certification Overview*, November 1995

process through direct input and expert review). Licensed companies will receive specific instructions in order to proceed with necessary adjustments to remain in compliance with the new guideline<sup>26</sup>.

### ***Application -- Licenses***

Applications are submitted to Terra Choice. Once Terra Choice is satisfied of compliance with the criteria through testing and verification, a license agreement will be signed between the applicant and Terra Choice. The annual licence fee, based on the gross annual sales of the certified product or service, is of maximum \$CAN10 000 per agreement. For a company with several license agreements, the maximum fee is of \$CAN20 000. The minimum license fee is \$350 per license<sup>27</sup>. Testing and verification fees are charged by Terra Choice or by an associated external auditor for the auditing of pertinent documents. The EcoLogo can then be used on packaging and for promotional and marketing activities. The annual license fee may be reduced by 20 per cent if a company demonstrates product marketing initiatives incorporating the EcoLogo. Licensed companies can also participate in the ECP's marketing, media and advertising campaigns.

In order to obtain the EcoLogo, products must meet established industry standards for safety and performance and must stand up to any products in their category<sup>28</sup>.

The same procedures and requirements for obtaining the eco-label apply to foreign producers without discrimination.

### ***Compliance Verification***

Terra Choice monitors, investigates and attempts to alleviate misuses or abuses of the EcoLogo. When Terra Choice can not achieve a remedy, Environment Canada is notified for follow-up action. Environment Canada, as owner of the EcoLogo official mark, has the authority to demand and control proper use. Licensed companies must submit annual attestations, and Terra Choice officials may also conduct inspections or product testing, to confirm continued compliance. In cases of persistent non-compliance, the license agreement is terminated.

### ***Transparency -- Consultation***

The current and proposed work programme of the ECP, including newly developed or revised guidelines, is announced through the Canada Gazette and publications targeted to potential licensee groups. This information is also forwarded to interested parties on request. Manufacturers interested in the Canadian market can request information on product categories and final guidelines through Canadian embassies and consulates. A mailing list, including embassies and foreign entities, has been established and is regularly updated to provide notification and/or copies of guidelines.

Two newsletters were created by Terra Choice: Choice Words designed for the licensees and general audiences and the EcoBuyer designed for the professional procurement audience.

Comments and input can be made at any point during and after the development of the guidelines. This also applies when guidelines are being revised. Interest groups are represented in the

---

<sup>26</sup> Certification Overview, Canadian Environmental Choice, September 1996, p. 2.

<sup>27</sup> Certification Overview, Attachment 1: Annual License fees, September 1996, p.6.

<sup>28</sup> Environment Canada leaflet, EcoLogo products and services.



technical review committees which participate in the development of the guidelines. A 40 to 60 day public review process also permits input.

## **BLUE ANGEL**

The Blue Angel eco-labelling programme was created in 1977 by the German federal ministry and the state level ministries in charge of environmental affairs. The Federal Republic of Germany was the first country to implement a national eco-labelling programme for consumer products and served as a model for other countries' efforts.<sup>29</sup>

As of December 1996, 920 manufacturers or importers had been awarded the Blue Angel for a total of 4 100 products in 76 different product categories<sup>30</sup>. The following are examples of product categories for which criteria have been developed: returnable bottles, low pollutant coatings, recycled paper, zinc-air batteries, sound-proofed glass collection bins for noise-sensitive areas; products made from recycled plastics, wall paper and ingrain wall covering made from recycled paper, low emission gas burners, reusable ribbon cassettes and refillable toner cartridges, computers, copiers, printers and hydraulic fluids (see Annex for complete list).

### *Administrative Structure*

The Blue Angel is administered by three bodies: the Jury Umweltzeichen; the German Institute for Quality Assurance and Labelling (RAL); and the Federal Environmental Agency (Umweltbundesamt).

The Jury is the decision-making body, formed of representatives from industry, the scientific, business and environment communities, consumer organisations, trade unions, and the Churches. They are appointed by the Federal Minister for the Environment, Nature Conservation and Nuclear Safety (BMU) for a period of three years. Federal States, the BMU, the Federal Environment Agency and RAL also take part in discussions of the Jury.

The Federal Environmental Agency is the environmental scientific body. The RAL, a non-profit standards organisation founded in 1925, is the administrative body.

---

<sup>29</sup> *Environmental Labelling in OECD Countries*, Paris 1991, p. 43.

<sup>30</sup> Data obtained from Harald Neitzel of the Federal Environmental Agency.

### ***Product Selection***

In theory, anyone may submit proposals to the Federal Environmental Agency. However, in reality all proposals originate from manufacturers<sup>31</sup>. New proposals are reviewed by the Agency and results of preliminary testing and evaluation are submitted to the Jury who will decide which proposals deserve further investigation.

It is interesting to note that, generally, product categories for which the environmental damage is related to the final product, and not to its production stage, will be chosen for eco-labelling. Legislative and administrative measures are meant to address the reduction and avoidance of environmental damage which occurs at the production stage. It is considered that difficulties in defining and verifying environmentally sound production standards are thereby avoided.<sup>32</sup>

### ***Criteria Development***

A preliminary draft of the criteria is developed by the Federal Environmental Agency. An expert hearing is then organised and chaired by the RAL to discuss the draft criteria and all other matters relevant to the labelling of the specific product category. During the expert hearing, representatives of various interest groups (environment, industry, consumers) stakeholders and independent experts are given the opportunity to provide their input into the process. The Federal Environmental Agency will revise the draft and present it to the Jury for the decision-making process.

Based on the results of the expert hearings, the Jury decides on the criteria for the product groups by majority vote. Decisions are regularly published in a press bulletin of the Federal Ministry for Environment, Nature Conservation and Nuclear Safety.

Life-Cycle Analysis is used to identify the most important environmental impacts in a products' life-cycle and criteria are developed to address these. Criteria which directly address the production stage of a product have rarely been defined.<sup>33</sup> However, criteria which address the use of substances included in the production stage and which are possible to identify in the final product (e.g. hazardous substances, chlorine free bleaching) have been developed.

### ***Transparency -- Consultation***

As mentioned above, decisions on the final criteria are published in a press bulletin of the Federal Ministry for Environment, Nature Conservation and Nuclear Safety.

Interested parties, including foreign producers, may take part in the development of the criteria by participating in the expert hearing. However, in practice this has rarely been the case. The composition of the Jury indicates that the position of various interest groups, excluding foreign producers, is also likely to be taken into consideration in the decision making process.

---

<sup>31</sup> *The Environmental Label Introduces Itself*, January 1995, Edition, p.9.

<sup>32</sup> Neitzel, Harald, *Comparison of Working Methods and Procedures Between the German Environmental Labelling Scheme and the European Scheme*, presentation at the UTEC Berlin, 27 February 1996.

<sup>33</sup> Neitzel, Harald, *The Development of the Blue Angel Scheme in Germany*, March 1995 paper.

### ***Application -- License***

Applications may be submitted to the RAL as soon as the criteria for a new product category have been adopted. The RAL certifies the product following the examination of the applications in collaboration with the FEA and the Federal State. In general, a binding declaration from the manufacturer demonstrating compliance with the criteria including additional information, such as the composition of the product, will be sufficient. The fulfilment of emission standards (air and noise) or biodegradability standards will be checked by independent test reports. Minimum fitness for use and safety requirements should also be respected. When the applicant is deemed to successfully meet the award criteria, a contract is signed between the producer or importer and RAL. The manufacturer undertakes to meet the criteria for the entire duration of the contract.

Compliance with the criteria is monitored through the mechanisms of free market competition. The FEA and RAL follow up all incoming information from competitors, consumer associations and individual consumers on possible abuse.<sup>34</sup> The eco-label will be withdrawn if the terms of the contract are not respected.

A fee of DM 300 is charged for the application. An annual contribution is then payable to the RAL (in the range of 350 DM to 3980 DM) based on the estimated annual turnover of the labelled product. Every licensee must also contribute to the advertising fund.

The Blue Angel eco-label is awarded to foreign manufacturers without discrimination.

### ***Duration of Criteria Validity***

An eco-label may be awarded for a maximum of 4 years. The Environmental Label Jury revises criteria regularly to determine if it they can be improved and if further environmental aspects can be included. When the criteria for a product category are revised, producers need to apply for the label once again.

## **GREEN SEAL**

### ***Administrative Structure***

The US Green Seal is a national non-profit organisation established in 1990. The Board of Directors is composed of business people, public figures, leaders of major national environmental, consumer and other public interest organisations.

An Environmental Standards Board formed of experts such as academic scientists approves the final criteria.

The product testing and factory inspections are generally conducted by Underwriters Laboratories Inc., a respected non-profit organisation founded in 1898, well known in standard setting for product safety.

---

<sup>34</sup> *The Environmental Label Introduces Itself*, January 1995, Edition, p. 10.

The main purpose of the Green Seal is to identify and promote products which cause less harm to the environment than similar products. Its aim is to help consumers, both individuals and institutions, identify environmentally preferable products. Green Seal's Environmental Partners' Programme assists institutions to incorporate green policies into their purchasing decisions and thereby increase the purchase of environmentally preferable products. Environmental partners include retailers, government agencies, non-profit groups, associations, educational institutions, foundations and others. Environmental partners are granted the use of a Green Seal Partners Mark on their annual reports, letterhead and store signage.

Green Seal is building consumer awareness through public education campaigns using television, trade publication and environmental press.

### ***Product Selection***

On the basis of proposals made by industry and the public, Green Seal selects product categories for the programme. A number of factors are considered in selecting product categories such as the significance of environmental impact, the opportunity for its reduction, public interest, manufacturer interest and promotional opportunity.

### ***Criteria Development***

Criteria development for each product is based on an Environmental Impact Evaluation. This evaluation identifies the most important environmental impacts of a product's life-cycle. Criteria (which Green Seal refers to as standards) are set for the most important points in extraction, manufacturing, distribution, use and disposal stages of the product's life cycle.

The standards developed generally aim to address the following objectives depending on the product: "reduce air and water pollution; cut the waste of energy and natural resources; slow ozone depletion and the risk of global warming; prevent toxic contamination; protect fish and wildlife and their habitat."<sup>35</sup>

The criteria are developed with the help of an advisory group of stakeholders formed of parties interested in the product category. The draft criteria are then sent for comments to relevant parties, such as government, trade associations, manufacturers, environmental and consumer groups and any other interested party upon request. A forty to sixty day period is set for comments. The revised final standard is then sent for approval to the Environmental Standards Committee of Green Seal's Board of Directors along with responses to all comments.

---

<sup>35</sup> Green Seal brochure, p.8.

### ***Application -- License***

In order to obtain the eco-label a product must meet safety and performance standards and regulatory requirements. Underwriters Laboratory will conduct tests and inspections to verify that the product meets the standard for the eco-label. The use of the logo will then be awarded for the product and its advertising. Testing fees and an annual monitoring fee are at the charge of the future licensee.

Foreign producers may obtain the label if they comply with their national law and the criteria set for the granting of the eco-label.

As of September 1996, standards for 19 different product categories had been developed and over 300 products had been awarded the Green Seal. 17 different companies were licensed and product categories for which standards have been developed include: papers and newsprint, re-refined engine oil products, compact fluorescent lamps, paints, reusable bags, water-efficient fixtures.

### ***Verification of Compliance***

Certified products are monitored annually to verify continued compliance.<sup>36</sup>

### ***Duration of Criteria Validity***

The standard is meant to identify environmental leadership and therefore a maximum of 15 to 20 per cent of products in the same product category should be able to comply with the criteria. The criteria are revised every three years.

### ***Transparency -- Consultation***

All interested parties are given the opportunity to participate in the standard setting process, including foreign producers. It is also interesting to note that all comments regarding the draft standard are responded to once the final standard is approved.

## **JAPANESE ECO MARK**

### ***Administrative Structure***

The Japan Environment Association (JEA) administers the Eco Mark Programme; JEA Eco Mark Secretariat administers general affairs. JEA administers the EcoMark Programme with the help of two advisory bodies: the Eco Mark Promotion Committee and the Eco Mark Expert Committee.

The Eco Mark Promotion Committee is formed of specialists in environmental conservation, specialists from administrative agencies, consumer groups and relevant enterprises. This Committee selects product categories, approves the criteria for the Eco-Mark eco-labels and “discusses important policies related to the Eco Mark Programme”.

---

<sup>36</sup> Green Seal Annual Report, 1993-1994, p.4.

The Eco Mark Expert Committee is formed of experts in environmental impact assessment. It is responsible for preliminary surveys and approving Eco Mark products.

As of June 1996, 2 023 products were awarded the Eco-Mark in 69 product groups.

### ***Product Selection***

On the basis of the procedures laid out in the “Guidelines for Suggestion of New Eco Mark Product Categories”, suggestions for new product categories can be presented by anyone. A survey or hearing is then carried out by the Secretariat following which the products categories will be selected by the Eco Mark Promotion Committee.

Newly selected product categories are announced in the Eco Mark Newsletter and elsewhere.

### ***Criteria Development***

A working group, set up by the Secretariat, formed of experts and interested parties establishes a draft of the eco-labelling criteria on the basis of the analysis of environmental impacts throughout the product’s life cycle. The product’s life cycle (resource extraction, manufacture, distribution, use and consumption, disposal and recycling) is considered on the basis of a chart which takes into account a selection of environmental impacts (the consumption of resources, emissions of green house gases, emission of ozone layer depleting substances, destruction of eco-systems, the exhaust of air pollutants, the emission of water contaminants, emission/disposal of wastes, use/emission of toxic substances and other environmental impacts).

The draft criteria will then be publicised in Eco Mark News and elsewhere for 60 days in order to receive comments and suggestions. The draft criteria are then presented to the Promotion Committee for its approval. If the draft has been approved by the Promotion Committee, the Secretariat will announce the final criteria on Eco Mark News.

The objective of the programme is to cover a small percentage of products within a product category. If labelled products cover a large portion of the market for one product category, then the criteria for the product group will be revised to increase the stringency of the criteria or the product category will be abolished.

### ***Transparency -- Consultation***

The draft criteria are available for comments and suggestions for 60 days through Eco Mark News and electronic communication in EIC-Net. The newsletter also contains information on the recent progress of the programme, new product categories and their criteria, revision of the criteria, the final criteria adopted and other information relevant to the programme. The Eco Mark Newsletter is only available in Japanese. Background information on the Eco-Mark, procedures and criteria are available in English.

### *Application -- License*

Once the application has been approved, a license contract will be concluded between the applicant and JEA for the use of the Eco Mark. The license fee is relative to the retail price of the awarded products, paid to JEA. The testing and verification expenses conducted by an independent laboratory are borne by the applicant. The contract, effective for two years, is renewable. JEA has trademark rights on the Eco Mark.

### *Verification of Compliance*

No verification or investigation system exists as such to ensure the proper use of the Eco-Mark. However, information regarding the misuse of the Eco-Mark is provided by consumers, manufacturers and governmental organisations. If the Eco Mark is improperly used, JEA shall terminate the license contract or take other necessary legal procedures.

### *Duration of Criteria Validity*

The criteria are reconsidered every 3 to 5 years. It is then decided whether it is necessary to revise the criteria or abolish the eco-label for a product category on the basis of considerations such as market trends and technological innovation.

## **NF ENVIRONNEMENT**

Work started on the creation of an eco-labelling scheme in 1989 and the eco-labelling programme was officially in place in 1991. Industry was initially strongly against eco-labels. Pharmaceutical products, services, the automobile sector and foodstuffs are not covered by the programme.

### *Administrative Structure*

A number of bodies are involved in the NF Environment eco-labelling programme, including the following:

- The NF Environment label Committee (hereafter the Committee), created in 1991 and composed of 18 members: 4 industry representatives, 2 distributors, 3 environmental associations, 3 consumer associations, representatives from public authorities (Ministries in charge of Industry, Environment and Consumer Affairs), the ADEME (French Agency for the Environment), the AFNOR and the chairman of the Scientific Council<sup>37</sup>;
- The Ministry for the Environment and the ADEME (Energy Management and Environment Agency), the Environmental Agency in charge of executing the policies developed by the Environment Ministry;
- AFNOR (the French standards organisation).

---

<sup>37</sup> The Scientific Council is a network of environment experts appointed by the Director General of AFNOR.

AFNOR manages the NF Environnement eco-labelling programme under the direction of the Committee<sup>38</sup>. A “Groupe de travail restreint” or limited working group, formed of a representative from each interest group (industry, retailers, environment and consumer NGOs), ADEME and AFNOR is responsible for the elaboration of the draft criteria.

In December 1996, eco-labels had been developed for: paints and varnishes; dustbin bags; glues for floor coatings; mechanical washing aids and vacuum cleaners. Licenses have been awarded for paints and varnishes and dustbin bags. Over 200 products have been awarded the NF Environnement.

### ***Product Selection***

New product groups for eco-labelling are generally proposed by industry representatives or environmental authorities (ADEME or Ministry of Environment). The proposals are collected by AFNOR and the Committee will then select new product categories. In reality, for a product to be selected at least one company must support the project.

### ***Criteria Development***

Following a hard fight between environmentalists and the industry, it was agreed that the whole life cycle of the product should be considered in the establishment of the criteria for the eco-labels.

The method used for the development of the criteria has been modified over time. The method presently being applied is called the “simplified approach”. Once product groups have been selected, a preliminary feasibility study will be undertaken by the ADEME in collaboration with interested industry representatives. Once this study has been validated by the Committee, work will start on the development of the draft criteria (referred to by AFNOR as technical rules).

A limited working group, convened by the ADEME, including a representative from each interest group (industry, retailers, environment and consumer NGOs) and AFNOR is responsible for the development of the draft criteria. Upon request, experts from the concerned professional sector may also participate.

The draft criteria are distributed to all interested parties and particularly industry representatives for their comments. Comments will then be considered before the draft criteria is adopted by majority vote of the Committee. AFNOR will then submit the draft technical rule for approval by the General Director of AFNOR. The adopted criteria are finally published in the Official Journal.

Products bearing the NF Environnement must be as fit for use as other similar products on the market.

### ***Transparency -- Consultation***

Once the preliminary feasibility study is completed by ADEME and has been validated by the Committee, industry representatives are informed of the development of a new eco-label. Draft criteria are then elaborated by the limited working group and validated by the Committee. The draft criteria is then

---

<sup>38</sup> Specific attributions and responsibilities of the Committee are outlined in the following document: AFNOR, *General Rules governing the NF Environment Label*, p. 9.



notified to industry representatives, consumer and environment associations and various government ministries for their comments.

In order to be involved in the process, foreign producers must enquire about developments underway and express interest in participating in the process. They may then have the possibility of getting involved in the criteria development or at least of being notified of the draft criteria in order to provide their comments. Foreign producers were involved in the process for the development of eco-labels for garbage bags and for vacuum cleaners.

### ***Duration of Criteria Validity***

Criteria are to be revised systematically every 3 years<sup>39</sup>, following which the eco-label may be extended, modified or cancelled. They should apply to 5-30 per cent of products in a category.

### ***Verification of Compliance***

Periodic spot checks guarantee compliance with the eco-label criteria. In the event that a licensee is found not to respect the General Rules governing the NF Environment Label or the eco-label requirements, appropriate sanctions will be applied, which may include the suspension or the withdrawal of the right to use the eco-label<sup>40</sup>.

### ***Application -- License***

Applications for the NF-Environnement must be sent to the General Director of AFNOR. An auditor appointed by AFNOR visits the production site and inspection of the products is carried out based on samples of the product. The eco-label will be attributed once audit and test reports have established compliance with the eco-label criteria.

User right admission fees comprise an initial contribution of 15 000 FF per product category; administrative fees of 7 385 FF for the first product and 3 730 for the following instruction. Site visit fees of 6 740 FF and compliance test fees are also payable by the applicant. An annual fee of 0.1 per cent of turnover of the labelled product is also payable for the right to use the NF-Environment Mark.

## **III. GENERAL REMARKS ON TRANSPARENCY AND CONSULTATION PROCESSES:**

As illustrated in the above descriptions, the level of transparency varies from one scheme to another. Most of the selected programmes publish information, through newsletters, official publications or newspapers on the status of developments. Varying by scheme, the information published includes new products selected for eco-labelling, the draft eco-label criteria and the final eco-label criteria, the list of licensees and more. Schemes which do not make information available through publications, have set up inquiry points (e.g. Nordic Swan).

From the description of schemes provided above, it appears that eco-labelling schemes generally follow the same type of consultation process. Once product groups have been selected by the decision-

---

<sup>39</sup> AFNOR, *General Rules governing the NF Environment Label*, p.6

<sup>40</sup> General Rules, p. 12.

making body, the development of criteria for the award of the eco-label is undertaken. Expert groups formed of representatives of various interest groups are generally involved in this process. The draft eco-label criteria are then sent out for public review.

Although, in theory, nothing prevents foreign producers from participating in the expert working group responsible for the development of the draft criteria, in practice, foreign producers rarely participate. Even though, in principle, information is made available to interested parties, it often does not reach foreign producers.

Large foreign producers or multinational companies are generally represented in the importing country. They will hence have access to information and the possibility of expressing their interest in participating more closely in the development of eco-labels. Access becomes more difficult for foreign producers, particularly SMEs, which are not represented in the importing country. Even though foreign embassies and consulates are in some cases (e.g. EU, ECP) provided with information regarding eco-labels, this information does not directly reach the producer of products concerned by the eco-labels developed. It is generally considered the responsibility of the foreign producer to find out about the market requirements of the country to which it intends to export its products.

Under these circumstances, it has been suggested by those running eco-labelling programmes that an international centralised system of information should be set up to act as an intermediary between eco-labelling programmes and foreign producers. This system would provide easily accessible information to producers across countries regarding the developments underway.

The critical point remains the consideration given to comments and proposals in the final decision-making process. Criticisms relate to the lack of consideration given to comments, the opaque decision-making process and the lack of feed-back. Decision-making is generally not an open process. Interest groups are not part of this process unless the decision-making body itself is comprised of representatives from various interest groups. In any case, foreign interests are not represented.

In practice, foreign producers and more particularly developing country producers have rarely been involved in the development of criteria because:

- i) when eco-labels are created for product groups which are produced in foreign countries, and more particularly developing countries, the importer or distributor is often the one applying for the eco-label not the foreign producer directly;
- ii) the products may be manufactured in foreign countries by large multinationals which are represented in the importing country; their local representative could then participate in the development of the criteria;
- iii) few eco-labels have been developed, to date, for products which are manufactured largely in developing countries.

**Simplified illustration of the consultation processes in selected eco-labelling schemes**

	<b>Product Selection</b>	<b>Criteria Development</b>	<b>Public Review Process</b>	<b>Final Draft Criteria</b>	<b>Decision - Making</b>	<b>Certification</b>
<b>EU Eco-Label Award Scheme</b>	European Commission	(Phase 1 to Phase 5) Consultant & Ad hoc Working Group	Consultation Forum	European Commission	Regulatory Committee or Council	Competent body of a Member State
<b>Nordic Swan</b>	Nordic Co-ordinating Body	Inter-Nordic Expert Group in Lead country	draft criteria sent to interested parties	National Board of Lead country	Nordic Co-ordinating Body	National Eco-labelling Organisation
<b>Swedish Environment Choice</b>	Board	Swedish Society for Nature Conservation	draft circulated to interested parties	Swedish Society for Nature Conservation	SSNC's head of conservation and environment	SSNC
<b>Canadian Environmental Choice Programme</b>	Environmental Choice Programme	Terra Choice & Technical Review Committees	public review process (4-8 weeks) announced and notified to interested parties	Terra Choice & Review Committee	Inter-departmental Advisory Committee	Terra Choice

	<b>Product Selection</b>	<b>Criteria Development</b>	<b>Public Review Process</b>	<b>Final Draft Criteria</b>	<b>Decision - Making</b>	<b>Certification</b>
<b>Blue Angel</b>	Jury	Federal Environmental Agency	Expert hearing organised by RAL	Federal Environmental Agency	Jury	RAL
<b>Green Seal</b>	Green Seal	Green Seal & advisory group of stakeholders	draft criteria sent out for comments to interested parties (40-60 days)	Green Seal	Environmental Standard's Committee of Green Seal's Board of Directors	Green Seal (following testing by the Underwriters Laboratories Inc)
<b>Japanese Eco-Mark</b>	Eco-Mark Promotion Committee	Working Group	draft criteria publicised on Eco-Mark News for 30 days for comments	Eco-Mark Promotion Committee	Promotion Committee	Japan Environment Association
<b>NF Environnement</b>	NF Environment label Committee	Limited Working Group	Notification to relevant professionals	NF Environment label Committee	General Director of AFNOR	AFNOR

#### IV. IMPLEMENTATION OF ECO-LABELLING SCHEMES -- THEIR ACTUAL EFFECTS

The effectiveness of an environmental label and consequently its actual effects ultimately depend on the extent to which consumers perceive, recognize and act on the information it conveys. The precondition for this is environmental awareness on the part of the consumer. Environmental awareness can be defined as the knowledge and understanding of the ecological consequences (e.g. pollution, waste...) of individual consumer behaviour (purchase, consumption, use and disposal of products) and the willingness of consumers to adopt attitudes and behaviour that are geared towards solving environmental problems<sup>41</sup>. As illustrated by the following, for eco-labelling programmes to have an impact, public awareness and market response are prerequisites.

Issues for examination in this part will cover: market impact, trade effects and environmental effectiveness.

##### *Impact on the Market*

Market impact is interesting from two perspectives. From the schemes' perspective, it concerns the visibility and to some extent the success of the eco-labelling programme. From a trade perspective, the bigger the market impact, the bigger the potential trade effect. At one extreme, if an eco-label is so powerful that consumers will only buy labelled products, then any disadvantage facing foreign producers in the whole eco-labelling process, will be extremely significant. At the other extreme, if an eco-label makes no impact on consumer decisions, then no matter how big any bias in the scheme may be, there will be no trade effect.

An over-riding problem in analysing the market and trade impacts is the fact that the vast majority of data on the experience of individual eco-labelled products is considered by producers as confidential commercial information, and is hence unavailable. However, some specific examples have been found and are included below.

Market penetration statistics are not intrinsically indicative of the success of eco-labelling programmes. As described in the first part, the criteria are generally set so that only a small percentage of products in a product category (5-30 per cent) can obtain the eco-label. Once a substantial share of the market is occupied by eco-labelled products, the criteria are revised to be more stringent and to once again create an incentive for producers to improve the environmental aspects of their products.

Nevertheless, eco-labels are market instruments and therefore one indication of their success is the market power conferred on the producer which has been awarded an eco-label, i.e. whether the product can be sold at a higher price, whether its market share will increase or whether a new market will be created for a new product. In order to measure this, available data will be presented on the market share of eco-labelled products. Information has been gathered to illustrate the market impact of eco-labels for specific brands or companies.

This section also contains anecdotal information on the impact of eco-labelling programmes in certain countries and more specifically the impact of eco-labels in certain product categories. Factors which make some schemes more successful than others are identified (e.g. media involvement, awareness building campaigns, institutional procurement) and factors which may contribute to the success or failure

---

<sup>41</sup> Umweltzeichen und Verbraucherverhalten, p.5

of eco-labels for specific product categories are also examined (industry interest, consumer demand, visibility of the product in retail outlets). Evidence on the growing demand for certified products in corporate and government procurement is also considered.

### ***Trade Effects***

The 1995 Report on Trade and Environment endorsed by OECD Ministers recognised that well-designed schemes play a valuable role in informing consumers about the environmental consequences of their purchasing decisions. However, it was also stated that:

*Eco-labelling schemes can raise particular trade concerns when they include production-related criteria which can discriminate against imports when they reflect exclusively the environmental conditions and preferences of the importing country. This may be particularly acute for developing countries and countries heavily depending on exports.*<sup>42</sup>

In this context, examples of cases where eco-labelling schemes have been held by producers to create barriers to trade will first be examined. In the absence of evidence of specific trade effects, the following points will be considered to determine whether circumstances potentially leading to trade concerns exist:

- The number of eco-labels developed for product groups of particular export interest to developing countries;
- Whether the eco-label criteria developed are based on criteria related to the production, use or disposal phase of the product, since trade concerns have emerged largely because eco-label criteria are increasingly based on life-cycle analysis and more specifically production related criteria;
- The proportion of eco-labelled products manufactured or produced in foreign countries and in particular developing countries;
- The proportion of foreign licensees which have obtained an eco-label for their products.

### ***Environmental Effectiveness***

This Report also aims to gather the evidence on the environmental effectiveness of eco-labelling programmes. For eco-labelling programmes to be environmentally effective, the eco-label must be a guarantee of reduced environmental impact. This will be ensured only if the criteria on which basis the eco-label is attributed is accurate and appropriate for domestic and foreign products alike.

Most eco-labelling programmes are relatively recent and their environmental effectiveness has not been evaluated. Also, the environmental benefit of eco-labelled products is difficult to differentiate from the environmental benefit achieved through other environmental measures. It is difficult to determine whether the eco-label was really the source of the environmental improvement of a product or whether manufacturers would in any case have developed a product which is environmentally preferable. The marketing of green products through eco-labelling may nonetheless be worthwhile. It has been

---

<sup>42</sup> Report on Trade and Environment to the OECD Council at Ministerial Level, OCDE/GD(95)63, p. 27, par. 69.

demonstrated that, in order to succeed in the market, green products also need to be competitive on the market in terms of performance, quality and economic value<sup>43</sup>.

One way of calculating environmental effects is in terms of avoidance of pollution with respect to a certain product (e.g. phosphates for detergents). Some evaluations of this type have been conducted which give an indication of the environmental benefit achieved through eco-labelling of particular products.

In the absence of data on the environmental benefit achieved through eco-labelling, the environmental effectiveness of eco-labelling will be evaluated indirectly on the basis of the following points: consumer awareness, changes in consumer behaviour and changes in the behaviour of manufacturers.<sup>44</sup>

## **EU ECO-LABEL AWARD SCHEME**

Although the EU Eco-label award scheme has a very small number of eco-labelled products on the market so far, it is nevertheless the most controversial eco-labelling programme. In this context, it is interesting to note that the EU scheme is the first eco-labelling programme to cover such a large market. This may explain at least in part the high level of concern directed towards this scheme at this early stage, even though it is too early to determine the actual impacts of the scheme. Indeed the size of the market covered has certainly contributed to fears regarding the potential trade impacts of the scheme. The EU scheme is also one of the first eco-labelling programmes to take into account the whole life cycle of the product and to develop criteria which address the environmental effects of a product from cradle to grave.

As the EU scheme is still in its early stages, it is very difficult to find any relevant data on the impact of the scheme either on the market, on trade or on the environment. The following will therefore attempt to draw a picture of the present situation of this programme noting the various concerns expressed.

### ***Market Impact***

The EU scheme got off to a slow start but seems to have gained momentum recently. Indeed, several criteria were adopted over the past year and a number of eco-labels were awarded to manufacturers.

From its inception in 1992 until end-1995, the EU eco-label had only been attributed to two UK manufacturers: Hoover for washing machines and Fort Sterling for kitchen towels and toilet paper. In 1996, the number of licensees has doubled. The EU eco-label was awarded to a French manufacturer, Dalle Hygiène, for kitchen towels and toilet paper sold in a large French retail chain Monoprix. Also, nine licenses were awarded for indoor paints and varnishes. Four of these licenses were awarded to Swedish manufacturers, three to UK manufacturers, one to a Danish manufacturer and another to a Portuguese producer.

The three Swedish companies were awarded a label for water-based wall and ceiling paints. Alcro-Beckers, one of the Swedish companies awarded a license for 13 paints claims that these labelled

---

<sup>43</sup> The Open University's Design Innovation Group, *The Commercial Impacts of Green Product Development*, 1996.

<sup>44</sup> Approach adopted in *Determinants of Effectiveness for Environmental Certification and Labelling Programs*, EPA, 1994.

products account for more than 50 per cent of the Swedish market. The firm apparently applied for the EU eco-label because the Nordic Swan has not developed an eco-label for paints. So far, no eco-labels have been awarded for copying paper or T-shirts and bed linen. However, at least one UK company is apparently interested in applying but is waiting to see how other eco-labelled products will do on the market<sup>45</sup>.

According to the 29 May 1996 edition of the International Environment Reporter<sup>46</sup>: “Commission officials claim that Hoover Manufacturing Company, which applied for and received the label for washing machines, has seen its sales in Germany soar.”

Local authority associations in England and Wales have decided to encourage their members to buy eco-labelled products. Green purchasing policies being considered as one of the major influences local authorities can have on the environment; guidelines are being drafted by local authorities to encourage 470 local authorities to buy eco-labelled products<sup>47</sup>.

### ***Trade Effects***

Particular concerns have been raised with the development of eco-labels for paper products and textiles.

The eco-label criteria for paper products has been severely criticized mainly by the governments of the US, Canada and Brazil supporting respectively the American Forest and Paper Association (AF&PA), the Canadian Pulp and Paper Association (CPPA) and the Brazilian Association of Pulp Exporters (ABECEL). Concerns have also been expressed by Argentina, Japan, the British paper industry and the Confederation of European Paper Industries (CEPI).

The eco-label criteria for toilet paper and kitchen rolls were published in December 1994. These criteria address renewable resources (mainly wood); the consumption of non-renewable resources (coal, oil, gas) for the production of electricity; emissions of carbon dioxide (CO<sub>2</sub>) and sulphur dioxide (SO<sub>2</sub>) into the air; organics to water; chlorinated organics (AOX) to water as a result of bleaching; and the volume of waste. It is also required that sustainable forest management practices are applied in regions from which the virgin pulp originates. The criteria, which address the production phase of pulp and paper, are meant to encourage reduced use of non-renewable resources, to reduce the release of pollutants to air and water, and to reduce waste through recycling of previously used paper<sup>48</sup>.

The criteria for copying paper were published in August 1996. Based on a life cycle analysis, they again cover water pollution, sulphur emissions and energy use during the production of pulp and paper and also require the application of sustainable forest management practices.

Some of the main criticisms of the EU eco-label for paper products are the following:

- lack of transparency: foreign producers are shut out of the process for drawing up the criteria; third party business input at every stage of the decision making process is not provided for; they are allowed to make presentations but do not participate in discussions; there is scope to submit comments but no dialogue.

---

<sup>45</sup> ENDS Report 256, May 1996.

<sup>46</sup> International Environment Reporter, May 29, 1996, p.434

<sup>47</sup> International Environment Reporter, October 2, 1996, p. 891.

<sup>48</sup> European Commission, *Commission Information on Eco-labelling*, Issue No 8, December 1994.



- discrimination: the criteria have been accused of favouring Nordic countries<sup>49</sup>; more specifically, Canadians and Brazilians consider that the criteria, by emphasising recycled content, discriminate against their paper which has a high virgin paper content.
- eco-label criteria reflect domestic environmental conditions and preferences;
- failure to take into account equivalent but different national methods for identifying and measuring environmental impacts.

In the context of the revision of the scheme, several suggestions have been made to improve the transparency of the scheme: access for non EU producers to information on the same terms and conditions as it is provided to producers from the European Union; and meetings at each stage of the decision-making process for third party business interests.

The Commission on the other hand points to the elaborate consultation process and the high transparency of the programme, as described in the first section of this paper.

The eco-label developed for textiles has also been the source of criticism by the American Textile Manufacturers' Institute (ATMI) and more particularly by certain developing countries which fear that eco-labelling will impede their ability to export their textile products to the EU, especially because the criteria take into account the production process. ATMI questions the science behind the criteria.

In the process of developing the EU eco-label for T-shirts and bed linen, the life-cycle assessment revealed that the main environmental impacts resulted from the use of pesticides in the growing of cotton, harmful processes during the production of polyester and the use of harmful substances during the processing, making up and finishing of bed linen and T-shirts. The main environmental parameters, therefore, relate to pesticide residues in the cotton yarn, volatile organic compounds (VOC) emissions and use of antimony in polyester production, use of detergents, bleaching agents, dyes and pigments during wet processing, and VOCs and formaldehyde in the final printing and finishing of bed linen and T-shirts. Parameters also relate to waste water treatment and discharges to water during production.

A study completed by UNCTAD in 1995 indicates that:

*A large part of the consumption of textiles and clothing in the European Union is supplied by imports. As much as around 80 per cent of the value of EU imports of T-shirts and bed linen (excluding intra-EU trade) originates in developing countries. Consequently, many of the environmental effects meant to be addressed by the PPM related criteria being developed under the European Union eco-labelling programme take place outside the European Union, principally in developing countries.*<sup>50</sup>

---

<sup>49</sup> The eco-label for paper products has encountered opposition from the British paper industry which considers that the eco-labelling criteria for paper and pulp favour Nordic manufacturers -- House of Commons, Session 1995-96, Environment Committee, Fourth Report, World Trade and Environment, Volume 1, London, p. lix

<sup>50</sup> UNCTAD, *Trade, Environment and Development Aspects of Establishing and Operating Eco-Labelling Programmes*, TD/B/WG.6/5, p. 17, par. 53

A study on the impacts of the EU eco-labelling scheme on Brazilian exports, based on interviews conducted with leading companies in the Brazilian clothing sector, revealed that they were all making adjustments to comply with environmental requirements of European importers and four out of five already had information regarding the EU eco-label for textiles. They already complied with a number of the draft criteria for T-shirts and bed linen. The severest difficulty was found with respect to the use of pesticides in cotton-growing, waste water parameters during the manufacturing process, and noise. The use of pesticides in cotton grown in Brazil is low, however imports of cotton are increasing and it is difficult for textile producers to certify that the cotton they import was not manufactured with the use of pesticides<sup>51</sup>. This difficulty may also be encountered by EU producers.

The trade effects of eco-labels for copying paper or T-shirts and bed linen are uncertain. The criteria have only recently been published and no eco-labels have been awarded to date. Other eco-labels developed by the EU have not been the subject of such concern and it is still too early to establish any trade effects.

The life cycle assessments conducted for washing machines, single ended light bulbs, laundry detergents, soil improvers and dishwashers indicated that the main environmental impact occurred during the use of these products. The criteria developed therefore mainly address the utilisation phase of these products.

The criteria for washing machines cover energy use, water and detergent loss during the use of the machine. Both the criteria for single-ended light bulbs and for double ended light bulbs focus on energy efficiency in the generation of electricity, mercury content and recycled content for the packaging. The use of compact fluorescent lamps which are more energy efficient are favoured<sup>52</sup>. The criteria for laundry detergents relate to emissions to water and more specifically to the total content of chemicals, phosphates, insoluble and soluble organics, and non-biodegradable organics. The criteria included for packaging encourage reuse and recycling through limitations on the use of virgin material<sup>53</sup>. Criteria for dishwashers focus on energy and water consumption. The criteria for soil improvers encourage the use of "treated" or recycled waste as soil improvers with the aim of reducing soil and ground water pollution.

For paints and varnishes, the life-cycle assessment revealed that the main environmental impacts resulted from the production of titanium dioxide for the white pigments and the emissions (into air and water) during the utilisation of paints. The environmental criteria more specifically set parameters on the maximum white pigment content in the paint, emissions and waste for titanium dioxide production, the maximum VOC content in the paint and the maximum volatile aromatic hydrocarbon content in the paint. Certain substances are not allowed to be used in the pigments and certain other dangerous substances are excluded from the paint formula<sup>54</sup>. Other ecological criteria address the environmental effects occurring during the utilisation phase.

To date, eco-labels awarded have all been to European companies.

---

<sup>51</sup> Fundação Centro de Estudos de Comercio Exterior, *Eco-labelling schemes in the European Union and their impacts on Brazilian Exports*, presented at the UNCTAD Workshop on Eco-labelling and International Trade, Geneva, June 1994, p.10.

<sup>52</sup> Newsletter, Issue No 12, December 1995.

<sup>53</sup> Newsletter, Issue No 10, August 1995.

<sup>54</sup> Newsletter, Issue No 13, March 1996.

### *Environmental Effectiveness*

No attempts have been made to evaluate the environmental effectiveness of the EU scheme. The consumer awareness and consumer demand for products eco-labelled with the EU flower would seem limited due to the very low visibility of products labelled with the Flower on the European market so far.

### **SWEDISH ENVIRONMENTAL CHOICE<sup>55</sup>**

The Swedish Society for Nature Conservation (SSNC), the largest environmental non-governmental organisation in Sweden, formed in 1909, has a long history of environmental protection and has developed considerable influence and credibility in Sweden.

The Shop and Act Green Campaign initiated in 1989 by the SSNC, including the publication of a Green Shopping Book, was welcomed by Swedish consumers and was the first response to a growing need and demand for information regarding the identification and purchase of environmentally preferable consumer goods. The Shop and Act Green Project also encouraged manufacturers to develop more environmentally friendly products. The strong demand for environmental information created an incentive for SSNC and three large retail chains in Sweden to develop a commercially independent, unbiased, environmental label: the Swedish Environmental Choice or Falcon. Since the creation of the Swedish Environmental Choice, SSNC has been supporting the eco-label through active campaigning on green consumption.

### *Market Impact*

In Sweden, eco-labels (both the Nordic Swan and the Swedish Environmental Choice) have had an important market presence for some high-turnover consumer goods sold in large retail chains.

The pre-existing demand for environmentally preferable products has greatly contributed to the success of eco-labels. Also, the association of SSNC with large retailers has assured them a certain influence. Retailers are intermediaries between consumers and manufacturers. As one of the most important transmission mechanisms between production and consumer demand, they have important influence in the decisions to produce environmentally preferable products.

26 out of the 27 product categories covered by the Falcon are various types of detergents, cleaning agents and paper products. An eco-label was also developed for textiles but it has only been awarded for 6 products which cover a small market segment. SSNC has also elaborated criteria for newspaper print, personal transport and electricity independently of retailers.

An illustrative anecdote is the rise in popularity of eco-labels for detergents. In the beginning, large detergent manufacturers were not interested in eco-labelling their products. In order to sell products bearing the Falcon, retailers started to purchase detergents from lesser known brands of washing powder. These detergents then started winning market share from the big brands. As a further incentive, SSNC decided to promote the best products and identify the worst. One of their strategies was to lead a boycott

---

<sup>55</sup> The SSNC is presently carrying out two studies on the effects of the Swedish Environmental Choice. One of these studies is meant to evaluate the environmental benefit of the eco-labelling programme. These studies should be completed in 1997.

against the Unilever washing detergent (Via - Omo). In response to this pressure, the big manufacturers were forced to develop new formulations for their products to meet the eco-label criteria and carry the eco-label<sup>56</sup>. Consequently, when the criteria were published in 1990, the market share for eco-labelled product was negligible and in 1993 it was close to 50 per cent.

The growing awareness of the environmental impact of pulp and paper production which eventually led to changes in consumption and production patterns is also interesting. SSNC started trying to influence the production of paper and pulp in the mid seventies. Over a long period of time, they supported sustainable forestry management and criticised the negative environmental effects of pulp and paper production without any positive response to their arguments from the industry. Awareness of the negative impacts of pulp and paper production started to rise in the late 1980s and eventually became an important political issue. The SSNC also published a booklet on paper and the environment in 1987 which contained bleaching criteria for paper. The organisation of Swedish municipalities then recommended that their members buy their paper from a particular mill in Sweden which respected the criteria set out by the SSNC. Following a growing demand from small and large consumers for environmentally preferable pulp and paper production, paper mills were forced to change their production processes. Within two years time it became impossible to sell anything but unbleached or environmentally bleached paper on the market<sup>57</sup>. Once again the eco-label was a response to an existing demand for environmentally preferable products and therefore had a large impact on the market.

### ***Trade Effects***

One particularity of the Falcon is that producers whether domestic or foreign are not included in the initial development of the criteria. They may however provide their comments on the draft criteria. Once the draft criteria have been developed and comments have been provided by interested parties, the final decision on criteria is taken by the SSNC. The transparency of the programme could in these circumstances be criticised by manufacturers, domestic as well as foreign, who wished to participate in the criteria development. Also the fact that various interest groups do not take part in the final decision-making could be criticised. Although the transparency of the scheme could be questioned, the exclusion of both domestic and foreign industry could in fact reduce the tendency for bias in the criteria toward domestic industry.

It is mentioned in the first part of the paper, providing a description of the programme, that the criteria are established so that 10 to 15 per cent of the existing market for a product group should qualify for the label. However, eco-labelled products generally cover between 30 to 70 per cent of the market for each product category. The criteria are revised when most products within a group are eco-labelled. The revised criteria should then allow for a small portion of products in the product group to obtain the eco-label based on the new revised criteria.

The only product of significant interest for developing countries for which a label has been developed is the eco-label for textiles. It has only been awarded for 6 products which cover a small market share.

Licensees are essentially domestic companies, companies from Nordic countries and multinational companies such as Procter and Gamble, Johnson Wax, Unilever and Ultramar which are represented in Sweden.

---

<sup>56</sup> SSNC, *Re-mark-able eco-labelling and the Swedish Society for Nature Conservation*, 1993, p.5

<sup>57</sup> Eiderström Eva, *The Merits of Eco-Labelling*, 1993.

Multinational companies which sell the same type of products in Sweden and other countries have accused the Falcon and the Nordic Swan of creating negative trade effects for their products in the form of increased costs in terms of market segmentation. Indeed for certain products such as detergents, the fact that the European formula needs to be changed for the Swedish market has induced a loss in economy of scale. One large detergent manufacturer has alleged an increase in costs of 15 per cent.

### ***Environmental Effectiveness***

One environmental consequence of the demand for unbleached or environmentally bleached paper fibre is that the discharges of chlorinated organic compounds were estimated to have been reduced from 175 000 metric tonnes to less than 10 000 tonnes in 1993. The criteria for paper products have now been broadened to include the reduction in sulphur emissions, in optical whiteners and in the emissions of COD<sup>58</sup>.

## **NORDIC SWAN**

### ***Market Impact***

In recent guidelines adopted by the Nordic Eco-labelling Board<sup>59</sup>, it is recognised that: “The market share held by eco-labelled products has a considerable bearing on the overall environmental gain. Accordingly, in the future efforts must be concentrated on the marketing and promotion of the eco-labelling scheme to maximize the availability of eco-labelled products through the retail trade (and)...the need to develop a common Nordic marketing strategy should be considered, with a view to increasing the overall impact of the eco-labelling scheme.”

As demonstrated under the section addressing the effects of the Swedish Environmental Choice, eco-labelling has had an important market impact in Sweden, particularly for products such as detergents, paper products and cleaning products which are sold in retail chains.

As previously mentioned, retailers have played a major role in promoting eco-labels in Sweden.

ICA, one of the three largest retail chains in Sweden, decided in 1987 “to launch a programme to make environmental issues a part of their ongoing business and strategy of work”. The environmental policy and business plan developed aim to mitigate the environmental impact caused by the goods themselves, from production to consumption, and their distribution and handling. The environmental policy encompasses product range, consumer information, storage, packaging and transportation. The implementation of this policy with respect to the product range has namely given priority to eco-labelled products. Striving for a range of products as benign as possible, they influence their suppliers to develop products with as little adverse environmental impact as possible, throughout the product’s entire life cycle.<sup>60</sup>

---

<sup>58</sup> Eiderström, Eva, *The Merits of Eco-labelling*, 1993.

<sup>59</sup> Nordic Eco-labelling, *Environmental Strategy*, Adopted by the Nordic Eco-labelling Board on 2 February 1996, p. 2

<sup>60</sup> ICA Handlarnas AB Environmental Report, p. 6.

A programme started in 1994 in Sweden and implemented nationally by regional environmental officers awards diplomas to stores which propose to their customers a broad range of green products. In order to receive an environmental diploma, a store must fulfil certain requirements. The main criterion is that a certain proportion of items within each product group should be eco-labelled with the Good Environmental Choice, the Nordic Swan or KRAV (ecologically grown). For example, at least 85 per cent of all dishwashing liquids and 90 per cent of all laundry detergents should be eco-labelled, and the store should carry a broad selection of KRAV-labelled products. The objective is to have 500 stores with environmental diplomas by 1997. At the end of 1995, the number was 259. In terms of volume, they comprise approximately 20 per cent of the ICA stores' total turnover.<sup>61</sup>

The table below illustrates the progress of eco-labelled products in ICA stores, from 1994 to 1995<sup>62</sup>:

<b>Product Group</b>	<b>No. of eco-labelled items In 1994</b>	<b>No. of eco-labelled items in 1995</b>	<b>Share of sales in 1995</b>
Laundry detergents	16	26	83%
Dishwashing liquids and dishwasher detergents	9	16	74%
Cleaning agents	15	18	53%
Shampoo and soap	5	16	5%

Both the Good Environmental Choice and the Nordic Swan have developed eco-labels for laundry detergents, dishwashing detergents and cleaning agents.

The number of products labelled with the Good Environmental Choice and the Nordic Swan increased by 30 per cent during 1995. "Sales of eco-labelled products continued to increase and in certain product groups sales of these product as a percentage of all sales in this group have reached 80-90 per cent."<sup>63</sup>

The above clearly demonstrates the influence of retailers with respect to eco-labelling. Under these circumstances, manufacturers have been strongly encouraged to label their products. The motivation was clearly not to increase market share but rather to maintain it and above all to keep their products on the shelves of retail chains.

The Swan has also had a visible impact on the market for photocopying machines. This is one example of a product which was already available on the market before it was labelled. Following a promotion and advertising campaign in 1995 for the newly labelled product, the market share of Scribona Office Machines AB rose by 20 per cent.<sup>64</sup>

Companies have also chosen to obtain the Nordic Swan for product advertising. The credibility of the Swan as both a quality and environmental label has served to enhance or at least maintain the overall quality image of products. It is therefore in some cases not a question of market share but rather a

<sup>61</sup> Id, p. 13.

<sup>62</sup> The table was copied from the ICA Handlarnas AB Environmental Report 1995, p.8.

<sup>63</sup> ICA Annual Report, p. 13.

<sup>64</sup> Nordic Swan Brochure.

question of image. For example, MIELE washing machines are top of the line products which are substantially more expensive than competing products on the market in Sweden. The MIELE washing machine is the only one to bear the Nordic Swan on the Swedish market. Obtaining the label for their product was considered as an additional guarantee for the consumer of the superiority of their product.

The Swan is also considered by manufacturers<sup>65</sup> as an easy way to communicate the environmental quality of product to consumers. It is considered to be a simplified and credible way (as opposed to self certified claims) to provide environmental information.

### *Trade Effects*

As of November 1996, out of a total of 215 licensees, 75 were foreign or multinational companies.

A large number of labels for different kinds of cleaning agents and detergents were awarded to large multinationals, including Procter and Gamble, Unilever, Colgate-Palmolive, Lever AB, Sv Johnsons Wax AB, SC Johnson Professional.

Some eco-labels have only been attributed to foreign companies: the Swan for washing machines has only been awarded to the MIELE washing machine (German product); the Swan for boat motors to Honda Power Equipment (Japanese company); the Swan for copying machines has only been attributed to three different Toshiba models; the eco-label for personal computers was only attributed to Siemens Nixdorf AB.

For the textile eco-label, 2 out of 3 licensees awarded the Swan are foreign producers. This eco-label takes into account the production stage and has not been successful so far since only three licensees have been awarded this eco-label, including a Texan and a Greek producer. The eco-label criteria encourages ecological farming. The eco-label does not seem to discriminate between foreign and national producers but rather in favour of ecological farmers (or cotton growers). Some of the criteria are too difficult for a majority of textile manufacturers to respect. For example, one of the requirements is to provide the fibre producer's name, annual production, production site and the chemical products used. This information is impossible to obtain for most textile manufacturers who buy their cotton in bulk from large suppliers (e.g. in Rotterdam). It is impossible for them to know where the cotton exactly comes from and even less who was the manufacturer.

A majority of licenses for the eco-labelling of paper products have been attributed to Scandinavian producers, the largest pulp and paper producers in Europe being located in Scandinavian countries. Of the 75 licenses awarded in Sweden for various paper products, 20 have been awarded to Scandinavian companies located outside Sweden and 6 to foreign companies.

With a considerable number of foreign licensees and only one product category of particular interest to developing countries, the Nordic Swan has not been a source of trade concerns. The transparency of the scheme has not been criticised, but rather the requirements imposed by retailers for eco-labelled products have been resented by some manufacturers. Decisions of retailers on the characteristics of products they wish to stock are commercial decisions that, while they may have a market or trade impact, are not trade barriers in a strict sense.

---

<sup>65</sup> Personal communications with representatives of various companies with products bearing the Nordic Swan such as : Byggelit (building boards); Forbo (floor covering).

The eco-label criteria developed address the whole life-cycle of the product. All eco-labels developed for various paper products include criteria addressing the environmental effects caused by pulp and paper production.

It is interesting to note that products for which an eco-label is sought must comply with all relevant provisions in the legislation/laws of the place/ country of production.

### ***Environmental Effectiveness***

As an indication of the environmental effectiveness of the Nordic Swan, a rough estimate was made by the Swedish Organisation<sup>66</sup> which indicated that the eco-labelling of fine paper had resulted in an 11 per cent reduction in sulphur emissions from Swedish pulp and paper mills, a 21 per cent reduction in COD emissions and a 50 per cent reduction in AOX emissions. However, these figures are only indicative.

A 1996 booklet published by the Nordic Council of Ministers containing results of an evaluation of the Nordic Swan<sup>67</sup> gives some indications of the environmental benefit achieved by the Nordic Swan to date.

It states that the eco-labelling of detergents has seen a complete end to the use of optical whiteners, certain surfactants and chelates. It is also stated that the industry has confirmed that eco-labelling of these groups has played a major role in product development. Also, Swan-labelled oil-fired boilers reduce CO emissions by 78 per cent, NO<sub>x</sub> emissions by 58 per cent and C<sub>x</sub>H<sub>y</sub> emissions by 64 per cent compared with standard boilers, but since fewer than one per cent of all oil-fired boilers are Swan-labelled, the environmental effect is not significant.

The fact that paper and detergents have long had a symbolic status in the debate, as was demonstrated under the section addressing the market impact of the Swedish Environmental Choice, may explain the good results for paper and detergents.

With respect to consumer awareness of the Nordic Swan, the evaluation states that, based on a survey made in 1996, the Nordic Swan is known to 72 per cent of consumers in Norway, over 80 per cent in Sweden and 80 per cent in Finland.

A survey carried out by Eureka Research and the Roper Organisation in 1995<sup>68</sup> gives an indication of the Swedes' attitudes and behaviour with respect to consumption patterns and lifestyles in relation to the environment. One section of the survey was devoted to environmental labels and other symbols and was carried out on the basis of 500 face-to-face interviews in five different towns (Stockholm, Göteborg, Helsingborg, Karlstad and Umeå). The respondents were 50 per cent men and 50 per cent women, in the 16-74 age group.

According to the results of this survey, the Nordic Swan is recognised by virtually everybody (95 per cent). The Bra Miljöval is not as well known (48 per cent). However, it appears from successive surveys that knowledge of this environmental label has increased significantly over the past two years. In general, women know the symbols and trademarks better than the men and younger people better

---

<sup>66</sup> Figures from a SIS Memorandum, 13 March 1995 included in the *Nordic Eco-labelling, Scheme and Evaluation*

<sup>67</sup> Nordic Council of Ministers, *Nordic Eco-labelling - Scheme and Evaluation*, 1996, p.8-9.

<sup>68</sup> Eureka Research AB, Konsumenten Och Miljön - Resultat från en undersökning av svenska konsumenters miljömedvetenhet, Rapport 1995/96:13.



than older people. The proportion of people who associate the Swan and the Swedish Environmental Choice with less environmental pollution, environmental protection, something environment-friendly are 92 per cent for the Swan and 81 per cent for the Falcon. The proportion who consider that the symbols are very or fairly reliable are 68 per cent for the Swan and 69 per cent for the Falcon.

## **CANADIAN ENVIRONMENTAL CHOICE PROGRAMME**

### ***Market Impact***

The Canadian Environmental Choice Programme (ECP) has gone through important changes since its inception in 1989. Delivery of the programme has been privatised and it has evolved from a confrontational to a collaborative relationship with industry. Nineteen new guidelines (eco-label criteria) were released over the past year.

Also, the scope of the programme has been extended from consumer products to the inclusion of services and events. The certification of services and events is growing rapidly. 15 to 20 per cent of the guidelines are now for services and 2 to 5 per cent of licensees are service companies. Certification of services can include printing, cleaning, Photo-finishing and car washes. The expansion of the programme to include services could have a substantial impact. Indeed, having 20 to 30 per cent of car wash services licensed could mean thousand of licensees. The certification of events such as the Pan Am Games would include the certification of design facilities, the management of waste and water, also the materials and energy used.

Also, a strategy is presently being developed by Terra Choice to involve retailers in promoting the Eco-label and to incorporate the ECP in the development of public procurement policies.

So far, general government procurement policies have not included environmental considerations, however some government departments have independently been developing their own green purchasing policies, such as Environment Canada, Transport Canada and Public Works and Services. No standard operating procedures have been developed concerning the purchase of green products which has made it difficult both for suppliers and purchasers. The EcoLogo, in this context, is serving as a useful tool to help government officials to identify environmentally preferable products. However, the product categories covered by the ECP do not respond to all their needs.

It is stated in the 1994-1995 Annual Report that:

*A 1994 Environment Canada study of public sector procurement reported that federal, provincial and territorial governments are increasingly using the ECP, its guidelines and its certified products list to guide their procurement activities. The ECP has also been approached by numerous representatives of cities, municipalities, school boards and other public sector organizations to get information on certified products to assist them in the greening of their procurement activities. ECP staff regularly make presentations at conferences, are invited guests at procurement courses and provide information sessions to companies on the Program and its participants.*

Also, according to the ECP 1994-95 Annual Report, total public sector procurement in Canada, including provincial and municipal governments, Crown corporations and agencies, and institutions, is

more than \$75 billion per year. The ECP is a member of several procurement organisations (e.g. :ACCESS - Association of Canadian Cities for Environmentally Sound Strategies and GIPPER - Governments Incorporating Procurement Practices to Eliminate Refuse) which have mandates to promote green procurement practices.

An EcoLogo Products Catalogue has been produced. Known as the EcoBuyer Catalogue, this catalogue promotes EcoLogo products and services to senior buyers and material managers in municipal, provincial and federal government, the private sector and institutional markets plus specification writers, architects and designers across Canada and key buyers in the US. High levels of demand have emerged for the catalogue, which will be updated quarterly.

Information on the market impact of the ECP is largely anecdotal. The first few years of the ECP were not very successful but the programme has since greatly benefited from the new approaches developed following changes in its administrative structure.

Once again, the motivation for obtaining an EcoLogo is often associated with the fear of losing market share rather than the drive to increase market share. Improving or maintaining company image is also a key motivation.

The most successful product categories to date have been paints, fine paper and ethanol blended fuel. Their success could, at least in part, be due to the high level of consumer awareness with respect to the environmental issues related to these products. Also, the EcoLogo for paints has become a public purchasing requirement. Approximately 70 to 80 per cent of paint companies have lines of paint which are eco-labelled.

Approximately half of ECP licensees are SMEs which have chosen to eco-label their products to create a market niche for new products they are launching on the market. Certain companies will choose not to apply for the EcoLogo fearing that they will not be able to keep it when the criteria is revised.

Often, once one company has applied for the EcoLogo for a specific product, competitors will follow and also apply for the eco-label.

### ***Trade Effects***

The Environmental Choice Programme seems to have a high profile internationally. Companies in Costa Rica and Argentina have requested information on the ECP.

15 per cent of licensees are foreign licensees and most of these are US. License fees are the same for foreign and domestic licensees. Testing and certification of applicants by Terra Choice may be more expensive if plants are located overseas. Foreign and domestic companies and products are treated equally, providing requirements are met.

One product category covered by the ECP for which products are largely manufactured in developing countries is reusable utility bags. The Canadian distributors for these products have applied for the EcoLogo. The main environmental goal is to reduce the number of regular, lightweight bags used in Canada. Reusable utility bags are meant to help reduce the petroleum and forest resources needed to make utility bags and also to decrease the amount of plastic and paper packaging destined for municipal landfill sites. In order to qualify for the EcoLogo, reusable utility bags must be made of strong and durable material, either natural or synthetic and may be reinforced by rivets or other strengthening parts.

Reusable utility bags also need to comply with some performance criteria such as minimum capacity requirements to qualify for the EcoLogo.

The main purpose of the eco-label criteria on reusable utility bags is waste avoidance and the criteria is exclusively related to the use and disposal of the product. Under these circumstances, the EcoLogo should not constitute a trade barrier for products manufactured in developing countries, rather it could be seen as a market opportunity for utility bags made out of natural fibre.

A majority of the eco-label criteria developed aim to promote products which reduce environmental damage during the use and disposal phases of the products. For instance the reduction of toxic emissions during the use of certain products such as ethanol blended fuels, driveway sealants, adhesives, water borne surface coatings, the reduction of energy consumption for household appliances, energy-efficient lamps. Others will aim at the reduction of waste such as reusable cloth diapers, reusable utility bags.

Only a limited number of products, such as sanitary paper products, do take into account non-product related externalities such as energy consumption, chemical oxygen demand, effluent toxicity and waste generation during the production process. A number of eco-label criteria also aim to promote the consumption of recycled products to limit waste generation and the consumption of non renewable resources (e.g. gypsum wallboard), the use of recycled oils in automotive engine oil, the use of recycled rubber for various types of products (e.g. automotive products, building and construction materials, sporting goods), fine paper from recycled paper (50 per cent recycled paper requirement), newsprint from recycled paper, remanufactured printing cartridges.

Under these circumstances, trade effects arising from production related criteria remain a largely theoretical issue.

On the basis of a Memorandum signed in October 1995 between ITRI and Terra Choice, the Green Mark Program implementation body in ROC (Taiwan) - the Industrial Technology Research Institute (ITRI), and Terra Choice Environmental Services Inc. agreed to pursue a bilateral co-operation and collaboration agreement addressing the mutual recognition of eco-labelled products.

An informal agreement regarding harmonisation and mutual recognition has also been carried out with the Green Seal eco-labelling programme. This may include for instance, the mutual recognition of certification methods, the adoption by one programme of eco-label criteria developed by another (further details provided under Green Seal).

### ***Environmental Effectiveness***

According to John Polak, the President of Terra Choice, the environmental benefit of eco-labelling will only be measurable in about ten years time. Eco-labelling is too recent to evaluate its environmental effectiveness.

To achieve an environmental benefit there is a need to strike a balance between the stringency of the criteria and the number of licensees. The environmental benefit will accrue over the years with the increase in number of licensees and the increased stringency of the criteria. The key is to find the right balance. On the one hand, if the criteria are too stringent and the number of licensees is limited then no environmental benefit can be achieved. On the other hand, if the criteria are too weak and a large number of licensees bear the EcoLogo, the environmental benefit can not be achieved.

According to the 1994-95 Annual Report on the Environmental Choice Programme:

*Public opinion surveys on Canadians and the Environment in 1994 indicated that the Environmental Choice Programme has credibility and is well positioned to provide needed consumer information and that consumers are interested in environmental information on the products being purchased. Our aggressive marketing efforts in the latter part of this year have allowed us to achieve a 7 per cent increase in overall awareness levels (from 37 per cent in the fall of 1994 to 44 per cent in early 1995).*

The 1995-96 Report indicates that in 1996, the awareness of the EcoLogo and the Program stands at 49 per cent. This represents an increase of five points over the level of April 1995 and a 12 point increase over the level of October 1994. The 1995/1996 strategy has been to build on the awareness achieved to date, to increase the visibility of products carrying the EcoLogo and to stimulate awareness and demand in selected markets.

The Report also highlights that, according to a recent survey conducted on behalf of the ECP, by Insight Canada Research, over 69 per cent of Canadian public and private sector paper buyers are aware of the EcoLogo and the ECP.

## **BLUE ANGEL**

The main forces which have contributed to the success of the Blue Angel are the media and consumer organisations. The media, more specifically local media and the specialised press, have been very active in raising environmental awareness and have contributed to increasing awareness of the Blue Angel and the greening of consumption and production patterns more generally. Campaigns were also organised by consumer organisations to encourage consumers not to buy self certified labelled products. They have worked jointly to inform and advise consumers on environmentally preferable products and in this context, the Blue Angel has served as an educational tool and a catalyst in the discussion on environmentally preferable products. The Blue Angel is considered as a transparent, credible programme whereas self-declaratory claims have rather created confusion among consumers.<sup>69</sup>

### ***Market Impact***

A growing demand for information provided by eco-labels has been observed in professional purchasing and public procurement. Some product categories covered by the Blue Angel such as municipal service vehicles, copiers, low noise construction machines or biodegradable lubricants, target professional purchasers<sup>70</sup>. Studies undertaken in 1990 and 1991 have shown that the Blue Angel is more important for professional purchasers than for private consumers. Anticipated consumer behaviour or the implementation of environmental management systems through institutional procurement may be reasons for this<sup>71</sup>.

---

<sup>69</sup> Interview with Dr. Hannelore Friege, Verbraucher-Zentrale (consumer organisation). Dr. Friege is also a member of the Jury Umweltzeichen.

<sup>70</sup> Neitzel, Harald, *Comparison of Working Methods and Procedures between the German Environmental Labelling Scheme (Blue Angel) and the European Scheme*, presented at a workshop in Berlin, 27 February 1996, p.5

<sup>71</sup> Neitzel, Harald, *The Development of the Blue Angel ...*, p. 3

Public procurement also gave a strong impetus to the increasing success of the Blue Angel. In Länder and municipalities, public procurement guidelines recommend the use of the criteria developed for the award of eco-labels as a valuable tool to identify environmentally preferable products.

Concerning data on the actual market share of eco-labelled products, very little information is available. The following gives an indication of the market impact of eco-labelled products for certain specific product categories.

In March 1995, the market share of Blue Angel paints was above 60 per cent in the Do-It-Yourself-sector, but only 20 per cent in the handicraft sector. In 1981, the market share for low emission paints was 1 per cent. For recycled paper products, an increase in market share of eco-labelled products was observed as follows: in 1993, 64 per cent for sanitary paper products compared to 32 per cent in 1986; and respectively 24 per cent for administrative paper products compared to 13 per cent.

Some products have not fulfilled the expectations in terms of consumer demand, e.g. products made from waste plastics or soil improvers containing compost rather than peat.

An assessment of the Blue Angel's impact on the market share of emulsion coatings (low pollutant paints) was undertaken. According to the Verband de Lackindustrie and the Pigments and Coatings Research Institute<sup>72</sup>, most low solvent/solvent-free emulsion coatings used for painting and decorating and reported in official production statistics now bear the Blue Angel eco-label.

The effect of the Blue Angel was identified through a comparative analysis of production trends for emulsion varnishes and other low-solvent/solvent-free coatings and solvent containing coatings.

The share of low-solvent/solvent-free coatings as a proportion of total output in Germany increased from around 14 per cent in 1986 to over 22 per cent in 1993. The share of coatings containing solvents fell from 86 per cent to 77 per cent over the same period. The share of alkyd resin varnishes as a proportion of total production fell from 28 per cent in 1987 to 22 per cent in 1993. The share of emulsion varnishes, the more environment-friendly substitute products awarded the Blue Angel in 1988, rose over the same period from 2.7 per cent to almost 5 per cent. The share of emulsion varnishes as a proportion of total production rose much more sharply than that of all low-solvent/solvent-free varnishes. At the same time, the share of alkyd (synthetic) resin varnishes fell more sharply than that of all solvent-containing varnishes.

It is apparent from these production trends that low-solvent/solvent free coatings have gained market share and that the market share of emulsion varnishes, awarded the Blue Angel, increased by more than the average. It may be plausible to conclude that the Blue Angel was the key factor behind this increase in market share, especially as the market share of the directly substitutable product, alkyd resin varnish, fell by more than the average.

The average production value by weight of emulsion varnishes, the majority of which have been awarded the Blue Angel, rose by more than the average, almost doubling between 1987 and 1993.

---

<sup>72</sup> Karl Ludwig Brockman und Jens Hemmelskamp, *Umweltzeichen und Verbraucherverhalten - Wie „grün“ ist der Blaue Engel?*, Zentrum für Europäische Wirtschaftsforschung, Mannheim, 2 October 1995, p.7.

The success of the Blue Angel is apparent from manufacturers' demand for the eco-label. The number of products has risen rapidly as illustrated in the two charts which follow. In December 1996, over 4100 products from 76 product categories had been awarded the Blue Angel. Particularly positive developments have been recorded for heating equipment, paints and varnishes and paper products.

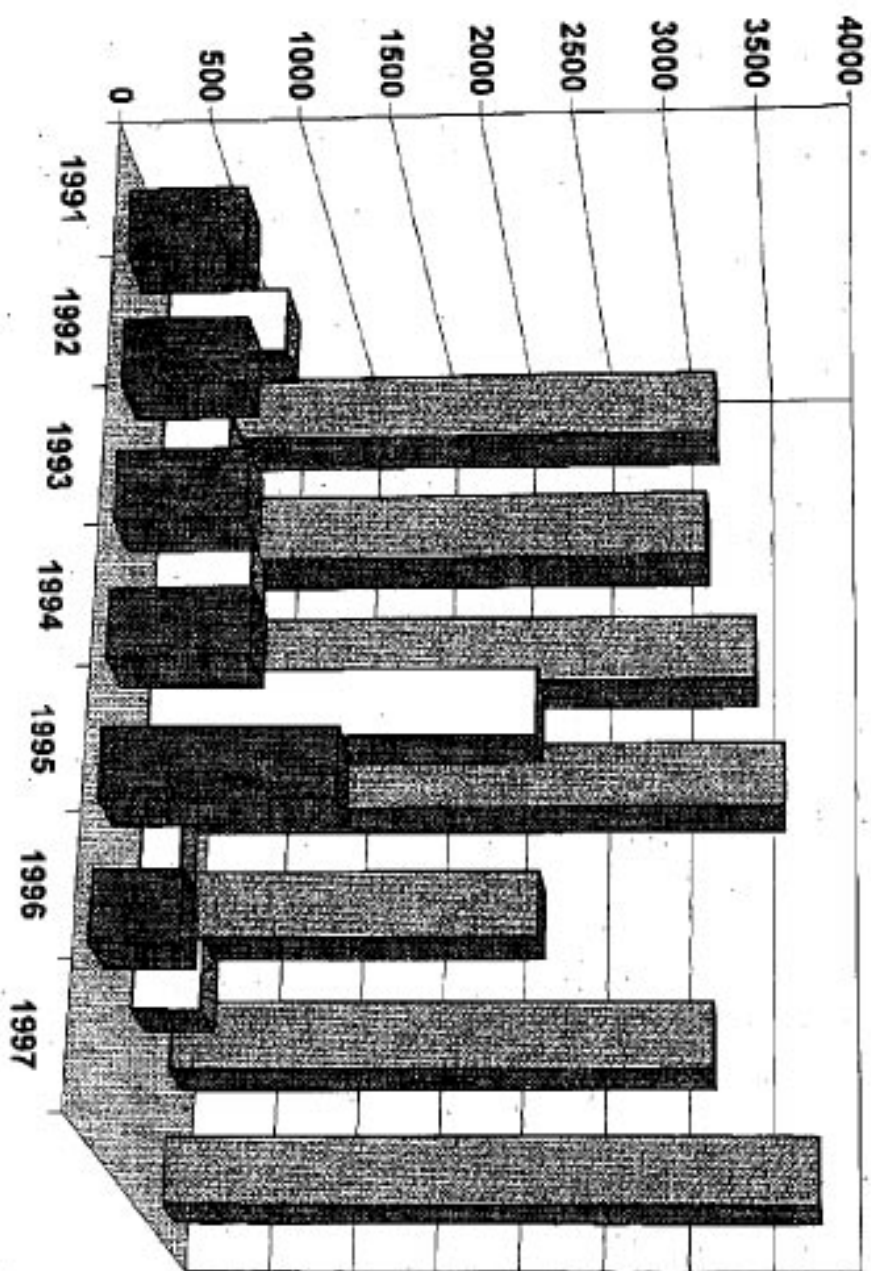
The two following charts <sup>73</sup> give certain indications with respect to the success of the eco-labelling programme. The number of cancellations indicated on the first chart, demonstrate an improvement in the environmental quality of a product. Indeed once a large proportion of products have obtained the eco-label, the environmental qualities of the product have been improved and the eco-label may be cancelled if the environmental benefit sought has been achieved. Also, if many applications are presented once the criteria for a product category has been revised this is an indication of success. When criteria are revised to increase their stringency, previous licensees need to apply for the eco-label once again and meet the new criteria. Therefore the number of new applications to obtain the revised eco-label is also a sign of improvement in the environmental quality of a product.

The second chart shows the increasing number of eco-labelled products between 1979 - 1994. There is clearly a constant increase in products covered by the eco-label. The regular revision of the criteria explains the variations in the number of products eco-labelled from one year to another.

---

<sup>73</sup> The two charts were provided by the RAL, Umweltbundesamt.

## Number of Products labelled with the "Blue Angel"



- Number of new products in the course of a year
- Expired contracts at the end of a year because of further development of criteria
- ▣ Updated number of labelled products on 01.01. of a year

Source: RAL, Umweltbundesamt; dec. 1996

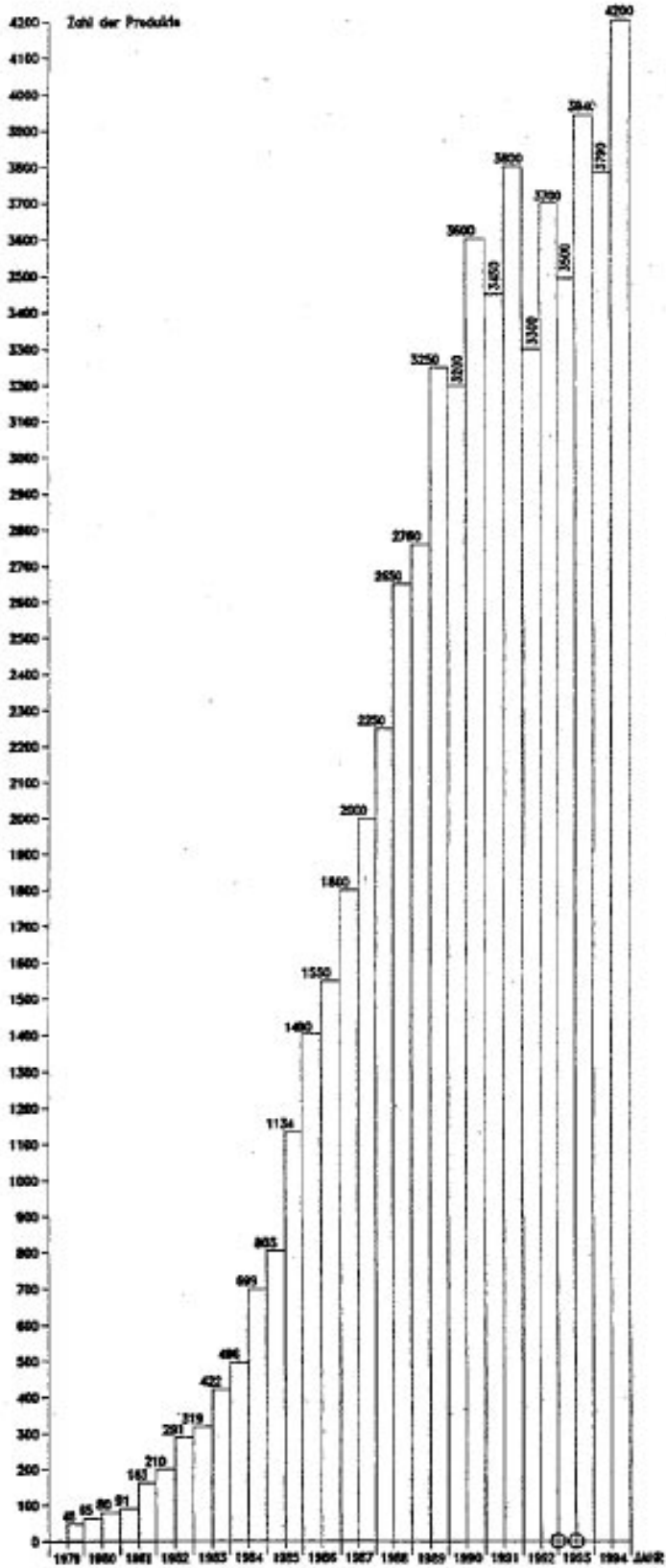


Abb. : Zahl der Umweltzeichenprodukte 1979 - 1994



It is important to note that the Blue Angel is considered as having influence which is not reflected through market impact. The following are some examples:

Soil improvers and soil adjuvants made from compost which have been awarded the Blue Angel still have a very small market share. However, substitute unlabelled products also would satisfy the label criteria. While it might be the case that the Blue Angel has had an impact akin to standard-setting, the market effects per se have not been discernible.

The eco-label for rapidly biodegradable hydraulic fluids has been extensively discussed in symposiums and workshops, therefore it is thought to have achieved important influence on the production behaviour of manufacturers. The label for sound-proofed glass collection bins for noise-sensitive areas has had an important effect in improving the sound attributes of these products even though the label for these products is not very visible on the market.

The Blue Angel has contributed to the establishment of environmental standards for office equipment such as copiers and computers. These new eco-labels have attracted attention from producers world-wide and also from other eco-labelling programmes. Also, reusable ribbon cassettes and refillable toner cartridges have had important effects, indeed without the Blue Angel the product would be very difficult to sell in Germany.

### ***Trade Effects***

The Blue Angel focusses on product related criteria. The reduction and avoidance of environmental damages which occur during the production stage of certain products are left to legislative and regulatory measures. Therefore, product categories which cause an unacceptable level of environmental damage during their production are not generally selected for eco-labelling. Methodological difficulties in defining and verifying environmentally sound production standards and potential negative trade effects or concerns are thereby avoided<sup>74</sup>.

Although the Blue Angel eco-label criteria for paper products does set minimum thresholds for wastepaper content, it does not however include requirements to minimise environmental externalities which occur during the production of paper. To address environmental effects which may be caused by the chlorine content in paper (e.g. to water) criteria have been developed to avoid chlorine bleaching processes.

Also, in order to obtain the eco-label, domestic products must comply with the legal requirements of competent states (Länder) related to the production stage of a product. Imported products are not submitted to these requirements.

---

<sup>74</sup> Neitzel, Harald, *Comparison of Working Methods and Procedures between the German Environmental Labelling Scheme (Blue Angel) and the European Scheme*, presented at a workshop in Berlin, 27 February 1996.

Of the 76 product categories covered by the Blue Angel, none are products of particular export interest to developing countries. However the FEA is now working on the development of an eco-label for products made of rattan (furniture) and jute in co-operation with developing countries. These eco-labels would give developing countries such as Bangladesh and India the opportunity to apply for an eco-label for their products destined for export<sup>75</sup>. In the context of the German development co-operation programme, FEA employees have contributed as consultants to the development of eco-labelling programmes in developing countries.

According to Harald Neitzel of the FEA, one third of the products which have obtained the Blue Angel are foreign products. However, since the eco-label is often awarded to the importer or distributor, only 17 per cent <sup>76</sup>of parties awarded the Blue Angel are foreign licensees.

Some complaints were expressed by Chile, Brazil, Canada and the USA over the recycled content criteria for paper products.

The following list illustrates the number of foreign companies with which contracts have been signed for the use of the Blue Angel:<sup>77</sup>

	Products	Contracts
Austria	66	14
Belgium	9	4
Denmark	60	9
France	96	25
Great Britain	63	14
Italy	61	23
Liechtenstein	8	3
Netherlands	75	19
Norway	2	1
Slovenia	5	2
Sweden	17	6
Switzerland	70	20
Spain	8	3
Czech Republic	1	1
USA	4	1
<b>TOTAL</b>	<b>545</b>	<b>145</b>

<sup>75</sup> Landmann Ute, FEA, *German Blue Angel Eco-labelling Scheme and Recent Developments in the German Regulations for Environmental Quality Aspects of Textiles and Clothing*. Text included in the the following publication: ITC, Trade Development Services, *Eco-labelling and other environmental quality requirements in textiles and clothing - Implications for developing countries*, Technical Paper, 1996, p. 73.

<sup>76</sup> As of October 1996.

<sup>77</sup> Federal Environmental Agency, Information Sheet on the "Environmental Label", Current Facts and Figures, Status: October 1996.

## *Environmental Effectiveness*

Environmental awareness has increased significantly in German households in recent years. However, sociological studies have shown that higher levels of environmental awareness do not necessarily translate into corresponding patterns of purchasing behaviour. A 1990 market survey showed that although over half of all German households consider themselves to be environmentally aware, environmental awareness translates into corresponding consumer behaviour in only a third of them. Numerous factors influence the relationship between environmental awareness and consumer behaviour such as the pleasure of consumption, effectiveness, identification to environment related features, cost, personal utility and availability<sup>78</sup>.

The view, held by some, that there is in general a considerable discrepancy between environmental awareness and environmentally-aware behaviour has been considered by some as overly simplistic. Eco-labelling advocates maintain that environmentally aware behaviour on the part of consumers can always be expected when they are offered reputable and reliable information. However, it must be possible for these recommendations to be acted on immediately, without any substantial extra cost or time. If not there is a sharp drop in consumers' willingness to take action.

A 1996 survey on environmental awareness in Germany published by the Federal Environment Ministry<sup>79</sup> provides a series of indications on environmental awareness of Germans to the Blue Angel:

51 per cent of respondents in the West and 30 per cent in the East said that they paid attention to products bearing the Blue Angel label when shopping. Overall, West German women showed the most regard for environmental protection considerations when shopping.

Regarding their willingness to pay higher prices on ecological grounds 37 per cent of respondents in the West said they were willing to pay higher prices for less environmentally harmful products, while 29 per cent said they were not, compared to 27 per cent and 40 per cent respectively in the East.

When asked how often they paid attention to labels on packaging giving indications about the environmental effects of products, 48 per cent of respondents in the West and 44 per cent in the East answered either "always" or "often". It can be concluded from this that less than half of all consumers pay much attention to environmental indications on packaging. The other half seem to be only moderately interested in such information or else ignore it entirely.

When consumers were asked how they recognised whether a product was environment-friendly, 50 per cent of respondents in the West and 33 per cent in the East cited the "Blue Angel". According to the study, since 1992 attentiveness to the Blue Angel as a label for environment-friendly products seems generally to have fallen in West and East alike. Overall, the results may be taken to indicate that consumers are slowly but surely becoming confused by the proliferation of eco-labelling systems.

---

<sup>78</sup> Karl Ludwig Brockman und Jens Hemmelskamp, *Umweltzeichen und Verbraucherverhalten - Wie „grün“ ist der Blaue Engel?*, Zentrum für Europäische Wirtschaftsforschung, Mannheim, 2 October 1995, p.5

<sup>79</sup> Eine Information des Bundesumweltministeriums, *Umweltbewusstsein in Deutschland - Ergebnisse einer repräsentativen Bevölkerungsumfrage 1996*, Berlin 1996.

51 per cent of respondents in the West and 30 per cent in the East said that they paid attention to Blue Angel products when shopping. There were clear differences between East and West as regards familiarity with the Blue Angel. 20 per cent of respondents in the West and 44 per cent in the East said that they were not familiar with the Blue Angel. Of those respondents familiar with the Blue Angel, 63 per cent in the West and 53 per cent in the East actually paid attention to Blue Angel products when shopping. Often, however, price also played a part, 35 per cent of respondents in the West and 17 per cent in the East said they were willing to pay more for Blue Angel products than for other products.

From a comparison of the 1996 and 1994 surveys, in both East and West there were almost no changes in the proportion of respondents paying attention to Blue Angel products. However, willingness to pay more for Blue Angel products declined significantly, from 59 per cent to 35 per cent in the West and from 24 per cent to 17 per cent in the East. A growing number of citizens seem to be reaching the limits of their willingness to pay.

With respect to changes in producer behaviour, it appears that the Blue Angel has accelerated the development of technology for different heaters and other equipment<sup>80</sup>. For instance, the criteria for oil burners have been revised five times since 1980.

In a study carried out by UNCTAD in 1995<sup>81</sup>, it is reported that a few years after the introduction of Blue Angel eco-labels for oil and gas heating appliances, emissions of sulphur dioxide, carbon monoxide, and nitrogen oxides were reduced by more than 30 per cent and that the energy efficiency of these appliances had improved significantly. Also, after the introduction of an eco-label, the market share of low-solvent paints and varnishes went up from 1 per cent to 50 per cent while the amount of solvents released into the environment were estimated to have been reduced by some 40 000 tons.

## **GREEN SEAL**

### ***Market Impact***

Information concerning the effect of the Green Seal on sales or market share is not available. Green Seal has sought this information from certified product manufacturers but was not able to obtain it as it is considered as proprietary marketing information. However, several manufacturers were willing to attest that the Green Seal has contributed to increasing their sales of household cleaning and paper products. The Green Seal Annual Report 1993-1994 contains the following quote from Scott Petrequin of Mohawk Paper Mills Inc.: *The Green Seal shows that the manufacturer has taken the extra step to go to a non-politicized third party group for certification of its environmentally sound products. And we're particularly pleased that the Green Seal on our products has boosted sales.*

The success of the Green Seal eco-labelling scheme has been rather limited so far, in part due to the reluctance of industry to engage in third party eco-labelling. Nevertheless, some well-known manufacturers such as General Electric, Sherwin-Williams, Carrier and others are part of the programme.

---

<sup>80</sup> Neitzel, Harald, *The Development of the Blue Angel Scheme in Germany*, Berlin, March 1995, p.8

<sup>81</sup> UNCTAD, *Trade, Environment and Development Aspects of Establishing and Operating Eco-labelling Programmes*, TD/B/WG.6/5, par.18.

In product groups for which eco-labels have been developed, a relatively equal number of products have been certified. However, the most successful product categories have been windows and doors and paints and coatings. These product categories account for the bulk of labelled products.

Procurement, namely through the Environmental Partners programme has been an important source of demand for Green Seal products. Under this programme, Green Seal helps organisations, such as businesses, universities and local governments to develop and adopt a green procurement policy. This policy will involve the purchase of Green Seal certified products and other environmentally preferable products. These products must however be cost-competitive and meet the Partners requirements for quality and performance. Some Environmental Partners even demand that their suppliers provide Green Seal certified products. Manufacturers may also be encouraged to have their products certified to benefit from the large market which Environmental Partners represent.

### *Trade effects*

As of September 1996, out of a total of 17 licensed companies, 4 of these are foreign licensees (3 Canadian and 1 Korean) which corresponds to approximately 24 per cent of licensed companies. These 4 foreign companies have obtained an eco-label for 26 products out of 318 products bearing the label. A Korean company, Oxy Company Ltd has obtained the Green Seal for Oxy-Clean Powdered Bleach.

These foreign manufacturers have had products labelled in household cleaners, paper/newsprint, water efficient fixtures and automotive products.

Some American companies have also obtained the Green Seal for products manufactured in foreign countries. A.V. Olsson Trading Co. has obtained a license for 3 products (Beyond Gourmet Unbleached Coffee Filters, Beyond Gourmet Unbleached Baking Cups, Beyond Gourmet Unbleached Parchment) which are manufactured in Canada and Sweden.

The Green Seal and the Canadian Environmental Choice Program have experimented, to some extent, with harmonisation and mutual recognition. For instance, several standards from the ECP have been adopted by Green Seal, such as eco-label criteria for newsprint and reusable utility bags. This process has helped Green Seal to develop eco-label criteria more quickly. Also, manufacturers who sell on the North-American market can more easily apply for both the Green Seal and the ECP if the eco-label criteria for both programmes are similar.

The mutual recognition of certification methods has also been trialled. Since the eco-label criteria of the Green Seal and the ECP were comparable, a programme was set up to recognise ECP certification for certain paper categories. Green Seal, in return, has provided the ECP with a number of eco-label criteria. Finally, Green Seal has also adopted some Canadian procedures for certification.

## *Environmental Effectiveness*

An evaluation of the credibility of the Green Seal was done at the inception of the program. A survey indicated that consumers would trust the independent Green Seal even more than a government label. The recognition level of the Green Seal has never been evaluated.

The Green Seal is considered as having had modest success so far. Green Seal has certified over 300 products which is reasonable for a young program but relatively small compared to the overall American market. The environmental benefit to date can therefore only be limited.

## **JAPANESE ECO-MARK**

### *Market Impact*

In Japan, a wide variety of environmentally preferable products are available. However, their sales have been negligible, with the exception of recycled copy paper. In spite of strong green consumer movements in many parts of Japan and environmental awareness among the younger generation, green purchasing is not yet reflected in consumer behaviour. This is in part due to a lack of information regarding greener products and the general perception among consumers that environmentally preferable products are more expensive.

In 1996, the Green Purchasing Network was launched to promote the purchasing of environmentally preferable products by governmental organisations, private enterprises and consumers. The Japanese government and certain local government have set up an action plan for the purchase and use of environmentally preferable products. The Eco Mark is one of the tools available to select these products<sup>82</sup>.

The Concrete and Detailed Actions for Implementing the Action Plan for Greening Government Operations, decided at the Council of Ministries and Agencies, concerning the promotion of the Basic Environment Plan, states in the section on the Purchase and Use of Goods and Services that: "The eco-labelling program products or the equivalent recycled paper shall be used in printed materials prepared by subcontractors and in reports produced by contracted research institutes"<sup>83</sup>.

The market penetration of eco-labelled products has never been evaluated. The portion of Eco-Mark labelled products on the market is considered to be relatively small. The programme does not cover complicated products such as household appliances, office machines, automobiles or detergents.

The most successful product categories so far seem to have been printing and copy paper which have succeeded in promoting increased recycled pulp content which can meet the Eco-Mark criteria. When the Eco-Mark for paper products was first introduced, industry was not ready to comply with the criteria for obtaining the Eco-Mark which required a high level of recycled paper. However, along with increasing consumer awareness of environmental issues, consumers demonstrated their preference for Eco-Mark paper products and industry increased the recycled paper content of their products in order to qualify for the Eco-Mark.

---

<sup>82</sup> Outline of Green Purchasing Network, February 1996

<sup>83</sup> The Action Plan for Greening Government Operations, June 13, 1995

### *Trade effects*

The Eco-Mark very often covers products which in themselves serve an environmental purpose (e.g. environmental publications, containers for collecting used bottles, hot-water supply systems using solar energy, biodegradable engine oil for two cycle engines, products using solar battery modules, flow-reducing valves and water-saving faucets, filters for cooking oil, energy-saving gas leak detectors). The criteria for the attribution of the eco-label to these products will also guarantee their environmental performance during the use and disposal phase of the product.

The Eco-Mark requires the use of recycled paper for the attribution of the Eco-Mark on various paper products, such as absorbents for used cooking oil, publications on environmental problems, toilet paper from recycled pulp, recycled paper for office use. For cleaner water, an eco-label was developed for soap made of used cooking oil. One of the criteria requires 50 per cent of the fat and oil used to be made from used cooking oil. An eco-label was developed for cellulose sponges made from 100 per cent vegetable cellulose. The Eco-Mark clearly encourages recycling of used products such as used plastic, used lumber, used tires, waste wood (e.g. lumber scraps) and promotes unbleached products.

The criteria for paper products is limited to setting thresholds for wastepaper content. The priority environmental effect that the eco-label is attempting to deal with is waste reduction and the consumption of non-renewable resources through recycling of waste paper rather than potential negative impacts of forest management and pulp and paper production. Similarly, the criteria for textiles require a certain percentage of recycled material to be used, and do not contain any requirements which address the manufacturing process as such.

Only in very few instances will criteria be developed to address environmental externalities which occur during the production process. Such criteria have been established for thermal insulation for buildings, soundproof and vibration-proof mats, tiles and blocks made from waste materials, in order to avoid toxic gases or toxic materials or materials that could have a negative effect on the environment, being used during the manufacturing process.

Sixty one products manufactured in foreign countries, out of a total of 2 023 products, bear the Eco-Mark within the following product categories: filter bags for kitchen disposal, product made from used lumber, product made from used plastics, cellulose sponges, unbleached coffee filters, board made from waste wood, household gloves of natural rubber, cloth shopping bags and laminated fiberboard of recycled pulp.

There have been no cases where foreign companies obtained a license to label their products with the Eco-Mark. Foreign products are usually labelled in the following manner. The first possibility is that a Japanese trading company or a subsidiary company in Japan (e.g. 3M-Japan, Melita Japan) would import the product and package it in Japan. The second case is that a Japanese company sells its own brand of products which are manufactured in a developing country. Finally, in the third case a Japanese and foreign company set up a joint venture company in a developing country to manufacture a product that will be exported to Japan.

The following list indicates the countries in which foreign products bearing the Eco-Mark are manufactured:

Country	No. of awarded products
Singapore	2
Indonesia	2
Thailand	11
Portugal	1
China	4
Germany	1
USA	14
New Zealand	2
Malaysia	17
Canada	1
Sri Lanka	2
Hong Kong	1
Taiwan	3
<b>Total</b>	<b>61</b>

### *Environmental Effectiveness*

An Opinion Poll regarding Environmental Protection was conducted in 1990 and 1993 by the Prime Minister's Office to evaluate the recognition level of the Eco-Mark by consumers. 53 per cent of respondents said the Eco mark was familiar, which is a considerable increase compared with 22.3 per cent three years earlier. Broken into sex and age groups, results indicated that the Eco mark was better known to female and older people, and particularly well known to the extent of 82 per cent to female in their 20s. But 47 per cent of people said they did not know anything about it, and, therefore, it was concluded that the Eco mark system had not spread well enough.<sup>84</sup>

<sup>84</sup> Paper, Film & Foil CONVERTECH JAPAN, October 1994, Shigeyuki Hashizume, "Ecological System in Japan The Eco Mark System"



## **NF ENVIRONNEMENT**

Discussions over the creation of a French eco-label started in 1989. Following a long consultation process, involving government, environmental NGOs and industry, the development of an eco-label based on a life-cycle analysis was finally accepted.

### ***Market Impact***

An NF Environnement eco-label has been developed for the following product groups: paints and varnishes; garbage bags; glues for floor coatings; mechanical washing aids; vacuum cleaners.

Out of these five product categories, eco-labels have been awarded for paints and varnishes and garbage bags.

In June 1996, under the paints and varnishes product group, 20 companies had obtained the eco-label for their products. Although all of these companies are located in France, three of them have their factories located outside of France, in Germany and Denmark. As of September 1996, 14 companies had obtained the eco-label for garbage bags, of which four foreign companies (2 from England, 1 from Italy and 1 from Belgium). Over 200 products bear the eco-label on the market.

Paints and varnishes was the first product category for which an eco-label was developed. Certain distributors or retail chains require from their paints and varnishes suppliers that at least one of their lines of products bear the eco-label. Some distributors also use their own brand name to sell paints and varnishes bearing the NF Environnement.

For garbage bags, certain municipalities or local authorities have included in the technical specifications applying to their purchases that garbage bags must meet the NF Environnement criteria.

Labelled paints and varnishes have been evaluated by AFNOR to cover 20 per cent of the market of paints and varnishes. The market share of labelled garbage bags has not been evaluated.

### ***Trade Effects***

NF Environnement has not developed eco-labels for products of particular export interest to developing countries.

It is interesting to note that all companies which have obtained the NF Environnement eco-label for their products are European companies and all products are manufactured in Europe.

The criteria developed for the product groups covered by NF Environnement take into account the whole life-cycle of the product and contain requirements related to the production phase. In order to be awarded the NF Environnement label, the products must also respect certain requirements regarding their suitability for use. Their suitability for use will be evaluated on the basis of existing French standards or regulations.

It is interesting to look at one of these eco-labels in more detail which requires compliance with an EEC directive. The criteria developed for paints and varnishes address the whole life cycle of the product and includes a number of criteria related to the production phase. A number of substances are prohibited from the production while acceptability levels are set for others. One criterion addresses the production of titanium Dioxide, the white pigments which are used in the production of paints. The criterion requires compliance with the EEC directive No. 89 428. This extends the application of the EEC directive to all products applying for the eco-label.

### ***Environmental Effectiveness***

The environmental effectiveness of the NF Environnement eco-label has not been evaluated.

## V. GENERAL REMARKS ON THE ACTUAL EFFECTS OF THE SCHEMES

### *Market impact*

The information gathered for this study suggests that the impact of eco-labelled products on the market is directly linked to the general level of environmental awareness and consequently the consumer demand for green products. In a country such as Sweden with a relatively high level of environmental awareness of green products there has been a significant impact on the market. In general however, eco-labelled products have not had a significant impact on the market, except in specific product categories. The involvement of environmental NGOs, consumer organisations and the media are key factors which have contributed to increasing the level of consumer awareness of environmentally preferred products in certain countries (e.g. Sweden, Germany).

Overall, eco-labelling has been, at best, moderately successful with individual consumers. The proliferation of all types of environmental labels on products has created confusion among consumers and official eco-labelling programmes have not succeeded in avoiding this problem. Also, the current difficult economic situation has stimulated consumers to “buy cheap” rather than “buy green”.

Eco-labelling schemes have greater impact when eco-labels become a requirement imposed by retailers and/or when they are used as tools to identify green products for government procurement and institutional purchasing. In this context, the demand for eco-labelled products has encouraged and sometimes even forced manufacturers to obtain an eco-label for their products. This is the case for detergents and cleaning agents sold in retail chains in Sweden; for paints purchased by public authorities in Canada; for products sold to public authorities in Germany; and for products sold to Green Seal Environmental Partners in the US.

For both of the private eco-labelling programmes the Swedish Environmental Choice and the Green Seal, and also for the ECP, the privately managed government programme, eco-labelling is part of a broader strategy aiming to educate consumers at various levels (individual, institutional, governmental), guide them in their purchasing decisions and sometimes grant them a “green” image. The eco-label is only one of the tools used. For the Green Seal and the Falcon, a variety of other tools have been developed, e.g. green shopping guides, campaigns (Green Seal -- University Outreach Program including the “Campus Green Buying Guide”; Good Green Buy: Shop and Act Green Campaigns).

While official government supported eco-labelling programmes have traditionally limited their focus to product eco-labelling, they seem to be increasingly shifting their attention towards government and institutional purchasing. Some eco-labelling programmes, such as the Canadian ECP and the Nordic Swan, are now turning to the eco-labelling of services.

The impact of the eco-label on the market for a specific product is difficult to evaluate. The eco-label is only one of many factors which can influence the market penetration of products. Nevertheless, in choosing the eco-label for their products, manufacturers are often motivated by the potential competitive advantage the eco-label may procure them.

It should be stressed that market impact of eco-labelled products is only one indication of an eco-labelling programmes success. In fact, eco-labelled products should not cover more than a small percentage of the market in order to attain their goal of selectivity. For eco-labels to reach their optimal objective, a balance should be reached between the stringency of the criteria and the number of eco-

labelled products. The number of licensees and the number of eco-labelled products are considered by those running eco-labelling programmes as the main indication of a programmes' success.

### *Trade Effects*

Information gathered during the course of this study, recognising data limitations, did not reveal hard evidence of changes in trade flows arising from the selected eco-labelling programmes. However, fears and concerns have been voiced as to potential effects.

Although eco-labels are increasingly based on a life cycle analysis, the eco-label criteria developed for certain schemes, such as the Blue Angel, the Japanese Eco-Mark, and the Canadian Environmental Choice Programme generally focus on the use and disposal phase of the product.

The extent to which production related requirements are included in the eco-label criteria varies between the schemes. For instance, the Eco-Mark, the Blue Angel and the Canadian ECP eco-labels for paper products specify thresholds for recycled content whereas the EU, the Nordic Swan and the Swedish Environmental Choice eco-labels for paper products include criteria which address directly the environmental effects which occur during the production of pulp and paper in the producing country.

In the selected eco-labelling programmes, the only eco-labels which have been developed for product categories of particular export interest to developing countries are the eco-labels for textiles. The eco-label for reusable utility bags developed in Canada which addresses the use and disposal phases of the product has not been a source of trade concern. The Japanese eco-label for textiles does not seem to have caused trade concerns either. Both the Nordic Swan and the EU eco-labels for textiles contain criteria on the manufacturing process which may be difficult to comply with for domestic as well as foreign manufacturers.

Overall, few eco-label criteria have been developed to address exclusively the environmental effects which occur during the manufacturing process or production phase of a product, thereby limiting one set of the potential trade concerns of eco-labels. Also when criteria are developed which do address the life cycle of a product, the products are in most cases not of particular export interest to developing countries.

A concrete example is the case of Thailand:

*To date, the impact of eco-labelling schemes in Thailand's key markets - North America, East Asia and Europe - has been negligible. None of the Thai Export Promotion Offices in those had heard of any products from Thailand which had either been granted or refused an eco-label.*

*So far, few Thai producers have shown any concern about the potential negative effects of eco-labelling on their export opportunities. However, this may change as Canada, Japan, Scandinavia and the EU are all planning to bring out labels for textiles, one of Thailand's key exports.*<sup>85</sup>

---

<sup>85</sup> House of Commons, Session 1995-96, Environment Committee, Fourth Report, World Trade and the Environment, Volume 1, p. lix, Box 9 -- The Impact of Eco-labelling Schemes in Thailand: Portion of text was extracted from "Trade and Environment - Thailand and Eco-Labelling - First Draft" by Sophia Wegzell for the Thailand Environment Institute. Text distributed at the UNCTAD workshop on Eco-labelling and Trade in June 1994. p. 25

Foreign products are often labelled by the importer or distributor of the country in which the product is to be sold. It is therefore very difficult to determine which products have been manufactured or produced in foreign countries. Products can be formed of inputs manufactured in foreign countries, assembled in the country where it will be labelled and labelled through the domestic distributor. It has been possible however to determine how many of the licensees in each of the selected eco-labelling programmes are foreign, as illustrated in the following table. These figures on the number of foreign licensees however should not be interpreted to mean “foreign companies”. Eco-labels obtained by foreign companies through their local representative, such as a subsidiary or a distributor, would be counted as domestic licensees.

#### FOREIGN LICENSEES - PARTICIPATION IN SELECTED SCHEMES

	Total No. of licenses	No. of foreign licensees*	No. of Product Groups	Total No. of Products
EU Eco label Award Scheme <sup>86</sup>	24	0	11	24
Nordic Swan	215	12	45	over 1000
Swedish Environmental Choice	N.A.	N.A.	27	695
Canadian Environmental Choice Program	169	15	48	1600
Blue Angel <sup>87</sup>	754	145	75	3 206
Green Seal	17	4	19	318
Japanese Eco-Mark	N.A.	0	71	2023
NF Environnement	34	4	5	200

\* “Foreign Licensees” is not equivalent to “foreign products” or “foreign firms”.

As mentioned under the Eco-Mark section, no licensees have been awarded to foreign producers under this scheme, however, 61 products manufactured abroad have been eco-labelled.

It is interesting to note that within a product category, successful eco-labelled products often exceed 30 per cent of market coverage, e.g. detergents in Sweden, recycled paper in Japan and many others. Eco-labels are therefore no longer effective in identifying a small selection of products which are environmentally preferable to other products in the same product category but tend to become a *de facto* voluntary standard. The need for a transparent process becomes essential and the choice of product categories covered by the scheme also becomes critical. If the product group chosen is a product which is largely imported from foreign countries and if the eco-label contains production and process related criteria, the eco-label may constitute a barrier to competing in the market place for foreign products which do not conform to the eco-label criteria. The same may apply when retailers wish to carry a majority of eco-labelled products. *De facto* barriers to market entry for non-labelled products may be created if eco-labels or similar criteria become a requirement in government procurement or institutional purchasing (which may also have direct economic effects).

In general, industry has not been very supportive of Type 1 environmental labelling and some industry representatives, particularly in the US, are clearly against it. Industry criticisms have generally focused on the lack of scientific basis for criteria, the potential for inhibiting innovation, concerns that symbols do not educate consumers, and the trade restricting nature of schemes that reflect national or

<sup>86</sup> Data from September 1996.

<sup>87</sup> Data from October 1996.

regional environmental priorities. Eco-labels are meant to identify a portion of products in one product category that are environmentally preferable. Therefore, only a small number of producers are likely to benefit from the eco-label.

### ***Environmental Effectiveness***

The environmental effectiveness of eco-labelling in terms of measuring improvements to the environment due to eco-labelling is very difficult to evaluate. Some attempts have been made for the Nordic Swan, the Swedish Environmental Choice and the Blue Angel. For other schemes, it is considered too early or too difficult to isolate the environmental benefit achieved through eco-labelling from environmental benefits attained through other environmental measures.

Public awareness and attitudes to eco-labels vary considerably depending on the country. In a country with a high level of environmental awareness, such as Sweden, the level of consumer awareness to eco-labels is significant and there is a demand for eco-labelled products. The market presence and therefore the visibility of eco-labelled products have contributed to the awareness of consumers. Eco-labels have also had an impact on the behaviour of manufacturers in specific product categories, such as detergents and cleaning agents. Indeed manufacturers were forced to modify their products to obtain the eco-label criteria in order to maintain their products in retail chains. From the perspective of eco-labelling programmes, the constant upward revision of environmental criteria is essential to ensure continuously improved environmental performance. In countries such as Germany, Canada and Japan the level of consumer awareness of eco-labels seems to vary between 45 to 50 per cent.

In general, eco-labels seem to be more credible to consumers than other types of environmental labels. However, the proliferation of environmental labels may have turned consumers away from eco-labelled products. Surveys have shown consumers' limited willingness to pay extra for environmentally preferable products.

Surveys conducted for some of the schemes indicate that eco-labels are better known to women than men and to younger people than older people.

## ANNEX: LIST OF PRODUCT CATEGORIES

### EU ECO-LABEL AWARD SCHEME December 1996

Published OJ	Washing Machines	L 198 of 07 August 1993
Published OJ	Dishwasher	L 198 of 07 August 1993
Published OJ	Soil Improvers	L 364 of 31 December 1994
Published OJ	Toilet Paper	L 364 of 31 December 1994
Published OJ	Paper Kitchen Rolls	L 364 of 31 December 1994
Published OJ	Laundry Detergents	L 217 of 13 September 1995
Published OJ	Single-ended Light Bulbs	L 302 of 15 December 1995
Published OJ	Paints & Varnishes	L 4 of 06 January 1996
Published OJ	Bed-Linen and T-shirts	L 116 of 11 May 1996
Published OJ	Double-ended Light Bulbs	L 128 of 29 May 1996
Published OJ	Revised criteria for Washing Machines	L 191 of 01 August 1996
Published OJ	Copying Paper	L 192 of 02 August 1996
Published OJ	Refrigerators	L 323 of 13 December 1996
Study complete	Footwear	
Study complete	Cat-litter	
Study underway	Bed Mattresses	
Study underway	Batteries for consumer goods	
Study underway	Floor cleaning products	
Study underway	Sanitary-cleaning products	
Study underway	Detergents for dishwashers	
Study underway	Shampoo	
Study underway	Rubbish bags	
Study underway	Converted paper products	
Study temporarily suspended	Growing media	
Study temporarily suspended	Insulation materials	
Study temporarily suspended	Hairsprays	
Preliminary phase	Personal computers	
Preliminary phase	Textile products	

## SWEDISH ENVIRONMENTAL CHOICE

11th April 1996

1. Detergent for coloured wash
2. Detergent for white wash
3. Stain removers
4. Dish washing liquids
5. Detergents for dishwashers
6. Detergents for dishwashers in large cantinas
7. All-purpose cleaners
8. Heavy duty cleaners
9. Sanitary cleaners
10. Shampoo
11. Soap
12. Shower soaps (bottled combined products)
13. Hand cleaners (a kind of heavy duty soap)
14. Disposable diapers
15. Re-usable diapers (no licenses)
16. Sanitary napkins
17. Toilet tissue
18. Household tissue
19. Drying paper
20. Paper towels
21. Napkins
22. Paper handkerchiefs
23. Wash cloths
24. Coffee filters
25. Baking pan paper
26. Office paper
27. Textiles



**NORDIC SWAN**  
**November 1996**

<b>Approved Criteria</b>	<b>Licenses</b>
1. Adhesives	2
2. All purpose cleaners	16
3. Automatic dishwashing detergents	8
4. Building materials: clipboard, fibre board and gypsum board	7
5. Button cell batteries	1
6. Car care products	47
7. Chain lubricants	1
8. Coffee filters	
9. Closed toilet systems	
10. Composters	9
11. Copying machines	3
12. Correction fluids	
13. Detergents for sanitary facilities	7
14. Diapers/nappies	5
15. Dishwashing machines	
16. Fine paper for copying and printing	66
17. Flooring materials	5
18. Grease proof paper	
19. Guidelines for packaging	
20. Hand dishwashing detergents	1
21. Household and toilet paper	1
22. Lawnmowers	7
23. Light sources	
24. Marine engines	
25. Newsprint paper	
26. Oil burners & oil burner/boiler combinations	5
27. Paper envelopes	12
28. Personal computers	1
29. Primary batteries	2
30. Printed matter	4
31. Printers and telefaxes	
32. Printing paper	1
33. Processed fine paper products	33
34. Rechargeable batteries	6
35. Refrigerators and freezers	
36. Shampoo & soap	
37. System for towels in dispensers	
38. Textile detergents	21
39. Textiles	3
40. Tissue paper	1

## Nordic Swan cont'd.

41.	Toner cartridges for printing and copying	11
42.	Wall coverings	
43.	Washing machines	1
44.	Wooden furniture and fittings	3
45.	Writing instruments	

### Criteria sent out for review

1. Chemical de-icers (N)
2. Dust binding agents (N)
3. Female sanitary products (FI)
4. Floor care products (N)

### Criteria under development

1. Concrete (S)
2. Folders and ring binders (FI)
3. Forestry, saw-mill products (S)
4. Heat pump plants (S)
5. Packing paper (S)
6. Windows (FI)
7. Wood fired furnaces (S)

### Preliminary study

1. Boats (FI)
2. Industrial degreasing (S)
3. Mobile telephones (FI)
4. Roof materials (S)
5. Tires (FI)
6. Tourism (S)
7. Water and sewage pipes (S)

## CANADIAN ENVIRONMENTAL CHOICE PROGRAMME

February 1997

1. Automotive Engine Oil/Huiles à moteur automobile
2. Products Made from Recycled Plastic/Produits à base de plastique recyclé
3. Batteries/Piles
4. Products Made from Recycled Rubber/ Produits à base de caoutchouc recyclé
5. Water-borne Surface Coatings/Enduits en suspension aqueuse
6. Fine Paper from Recycled Paper/Papier fin fabriqué à partir de papier recyclé
7. Miscellaneous Products from Recycled Paper/Produits divers fabriqués à partir de papier recyclé
8. Newsprint from Recycled Paper/Papier journal fabriqué à partir de papier recyclé
9. Solvent-borne Paints/Pintures en suspension dans un solvant
10. Heat Recovery Ventilators/Ventilateurs-récupérateurs de chaleur
11. Diapers/Couches
12. Composting Systems for Residential Waste/Systèmes de compostage pour les déchets domestiques
13. Automotive Fuels/Carburants automobiles
14. Reusable Utility Bags/Sacs réutilisables
15. Energy-efficient Lamps/Les Lampes à haut rendement
16. Diaper Services/Services de couches
17. Waterconserving Products/Produits favorisant l'économie d'eau
18. Compost/Compost
19. Non-rechargeable Batteries/Piles nonrechargeables
20. General Purpose Cleaners/Nettoyants tout usage
21. Domestic Water Heaters/Chauffe-eau domestiques
22. Building Materials: Acoustical Products/Matériaux de construction : Produits acoustiques
23. Dry Cleaning Services/Services de nettoyage à sec
24. Building Materials: Thermal Insulation/Matériaux de construction : Isolants thermiques
25. Remanufactured Printing Cartridges/Cartouche d'imprimerie remise à neuf
26. Engine Coolant Concentrate/Liquide de refroidissement concentré
27. Adhesives/Adhésifs
28. Sealants and Caulking Compounds/Produits d'étanchéité et de calfeutrage
29. Photocopiers/Photocopieurs
30. Printing Inks/Encres d'imprimerie
31. Gypsum Wallboard/Panneaux de gypse
32. Driveway Sealers/Enduits pour entrée
33. Photofinishing Services/Services de développement et tirage photographiques
34. Lithographic Printing Services/Service de lithographie
35. Toilet Tissue/Papier hygiénique
36. Kitchen Towels/Papier essuie-tout
37. Facial Tissue/Papiers mouchoirs
38. Table Napkins/Serviettes de table
39. Hand Towels/Essuie-mains

40. Rechargeable Consumer Batteries/Piles rechargeables de consommateur
41. Office Furniture and Panel Systems/Mobilier et systèmes de panneaux pour bureau
42. Recycled Water-borne Surface Coatings/Enduits en suspension aqueuse recyclés
43. Biodegradable, non-toxic chain and saw lubricants/Lubrifiants biodégradables non toxique pour chaînes et scies
44. Polyethylene Plastic Film Products/Produits de pellicule de polyéthylène
45. Demountable Partitions/Cloisons démontables
46. Facsimile Machines/Télécopieurs
47. Marine Inboard/Outboard Engine Oil/Huiles pour moteurs marins en-bord et hors-bord
48. Marine Foul Release Coatings/Enduits marins antiadhérence
49. Business Forms and Other Converted Paper products/ Formulaires commerciaux et autres produits en papier dérivés
50. Envelopes/Enveloppes

**BLUE ANGEL**  
**October 1996**

	Number of EL Products	Number of Manufacturers
1. retreaded tires	5	4
2. returnable bottles	90	47
3. low waste hairsprays, deodorants & shaving foams	-	-
4. sanitary paper made from recycled paper	86	8
5. low-emission oil burners	69	22
6. low-pollutant paints and varnishes	1 205	102
7. powder paints	-	-
8. salt-free abrasives	46	39
9. recycled paper	153	52
10. zinc-air batteries	16	3
11. potting containers & similar moulded parts made from recycled material	4	4
12. sound-proofed glass collection bins for noise-sensitive areas	11	7
13. car-washing plants low in waste water	15	9
14. environmentally sound pipe cleaners	14	8
15. reusable crates for food products	1	1
16. returnable transportation packagings	18	18
17. products made from recycled plastics	32	16
18. products made from waste rubber	14	4
19. water-saving flushing cisterns	45	8
20. electronic individual shower control systems	7	2
21. products free from insecticides for in-door pest control and prevention	22	10
22. wall paper and woodchip wall coverings made of recycled paper	42	3
23. wall paper covering paper and plastic materials	1	1
24. building materials made from recycled paper	5	3
25. halogen-free cooling and insulating liquids for electrical equipment	3	2
26. low-formaldehyde products from wooden materials (for indoor use)	89	33
27. low-emission gas burners	75	28
28. combined water heaters and circulation water heaters for gaseous fuels	22	6
29. combined burner/boiler units equipped with gas burner and fan	17 2	7 1
30. low-noise and low pollutant mopeds	31	2
31. water-saving flow restrictors	4	4
32. water-saving flushing valves	13	12
33. soil improvers & soil adjuvants made from compost	41	24
34. combined oil burner/boiler units	27	9
35. solar-energy products and mechanical watches	86	7

36.	rapidly biodegradable chain lubricants for power saws	6	3
37.	building materials predominantly made of waste glass	-	-
38.	lithium batteries free of mercury and cadmium	20	13
39.	environment ticket in public transport	12	9
40.	highly heat-insulating multi-layer window glass	159	38
41.	low-noise construction machinery	38	9
42.	low-noise compost choppers	40	23
43.	reusable ribbon cassettes and refillable toner cartridges	2	2
44.	reprocessed photo-conductive drums for laser printers	272	32
45.	recycled cardboard	7	7
46.	thermal processes (hot air) for pest control of ligniperdous insects	8	4
47.	low-noise and low-pollutant municipal vehicles with diesel drive		
48.	low-noise and low-pollutant municipal vehicles with gas drive	-	-
49.	building materials made of recycled gypsum		
50.	low-emission and energy-saving gas-fired calorific value plants	44	21
51.	low-emission and waste-reducing copiers	102	16
52.	rapidly biodegradable lubricants and forming oils	26	9
53.	unbleached filter papers for hot or boiling water	17	5
54.	low-pollutant fire extinguishers	-	-
55.	lead-free seals	2	2
56.	cadmium-free hard-solder	7	2
57.	low-waste, resource-saving text marker	5	3
58.	component-system detergents	1	
59.	independent gas heaters and gas heating elements	22	9
60.	newspaper printing paper (consisting predominantly of recycled paper and bleached without chlorine)	22	14
61.	solar collectors		
62.	low-pollutant nail varnishes	13	8
63.	CFC-free and energy-saving refrigerators and freezers	-	-
64.	low-emission composite wood panel	-	-
65.	fabric towel rolls for use in towel dispensers	-	-
66.	computers	21	5
67.	rapidly biodegradable hydraulic fluids	34	8
68.	low-emission gas burners	-	-
69.	electronic ballasts for fluorescent lamps	2	2
70.	tooth brush with exchangeable head	5	1
71.	low-noise and low-emission chain saws	6	1
72.	sanitary additives compatible with clarification plants	2	1
73.	recyclable video & audio cassettes	-	-
74.	printers		
75.	low energy hot-air driers		
		3 206	754

**GREEN SEAL**  
**September 1996**

1. Tissue paper
2. Re-refined engine oil
3. Energy efficient lighting-compact fluorescent products
4. Water efficient fixtures
5. Printing and writing paper
6. General purpose household cleaners
7. Paper towels and paper napkins
8. Coated printing paper
9. Paints
10. Windows
11. Window films
12. Newsprint
13. Reusable utility bags
14. Refrigerators
15. Freezers
16. Clothes washers
17. Clothes dryers
18. Dishwashers
19. Cook tops, ovens and ranges

**JAPANESE ECO-MARK**  
**August 1996**

**No. of  
eco-labelled Products**

1.	“Spray Products not containing CFCs” abolished in December 1993	
2.	Triangle strainers for kitchen sinks	16
3.	Strainers for kitchen sinks	28
4.	Filter bags for kitchen disposal	157
5.	Absorbents for used cooking oil	38
6.	Composting containers	31
7.	Magazines & books on environmental problems	21
8.	Toilet paper using 100% recycled paper	92
9.	Returnable containers	10
10.	Containers for collecting used bottles	0
11.	Soap made from used cooking oil	52
12.	Products made from used lumber	27
13.	Products made from used plastics	197
14.	“Cans with stay-on tabs” abolished in January 1995	2
15.	Recycled paper for office use	102
16.	Recycled paper for printing	234
17.	Recycled paper for stationery	126
18.	Recycled paper for packaging	190
19.	Hot-water supply systems using solar energy	3
20.	Cellulose sponges	46
21.	Cloth diapers for infants	49
22.	Products made from used tires	29
23.	Thermal insulation for buildings	3
24.	Tissue paper using recycled paper	12
25.	Biodegradable engine oil for two-cycle engines	7
26.	Products using solar battery modules	2
27.	Straw matting (Tatami made from rice straw)	9
28.	Flow-reducing valves & water-saving faucets	10
29.	Sound-proof & vibration-proof mats	5
30.	Blast furnace fine powder slag & blast furnace cement	7
31.	Refillable containers	77
32.	Unbleached coffee filters	9
33.	Paint containing no aromatic hydrocarbon compounds	82
34.	Filters for cooking oil	6
35.	Boards made from waste wood	49
36.	Waste can collectors	6
37.	Drainage fixtures for rainwater dissipation	8
38.	Storage tanks for rainwater	0
39.	Packing materials made from recycled pulp	33
40.	Wallpaper, Fusuma paper & Shoji paper made from recycled pulp	32
41.	Filter bags of recycled paper for vacuum cleaners	7
42.	Tiles & blocks made from waste materials	8



43.	Household gloves of natural rubber	23
44.	Unbleached clothes, bed linen & towels	44
45.	CFC recovery systems for air conditioners	3
46.	Biodegradable hydraulic oil	9
47.	Biodegradable lubricant oil	16
48.	Cloth shopping bags	24
49.	Multi-pass thermal transfer ribbons	1
50.	Wooden products made of culled logs & small-diameter logs	11
51.	Textiles made of waste fibers	15
52.	Briquettes made of waste	2
53.	Low-waste printers for business machines	5
54.	Replaceable ink cartridges & ribbon cassettes	3
55.	Resource-conserving containers for edible oils	10
56.	Recycled paving materials	4
57.	Fancy sound-absorption panels of iron-slag mineral wool	5
58.	Laminated fiberboard of recycled pulp	7
59.	Combustion apparatus using waste cooking oil	0
60.	Buffer materials made of culled logs & used timber	0
61.	Vegetation-supporting concrete paving blocks	1
62.	Energy-saving gas leak detectors	2
63.	Load-stabilizing devices for energy conservation	2
64.	Products made from recycled cullet	5
65.	Building materials of fly ash	1
66.	Clothing made of used PET resin	2
67.	Inert-gas smothering systems & apparatuses using no ozone-layer depleting gases	1
68.	Easily repairing office chairs	2
69.	Low-benzene gasoline for vehicles	1
70.	Agricultural mulch sheeting of recycled pulp	1
71.	Solar-powered clock or watch	
<b>TOTAL</b>		<b>2023</b>

**NF ENVIRONNEMENT**  
**June 1996**

1. Paints and varnishes
2. Dustbin bags
3. Glues for floor coatings
4. Mechanical washing aids
5. Vacuum cleaners