

Environmental information on paper and paper products

A buyer's guide to ecolabels, environmental declarations and other environmental information

“Eco-friendly” and “climate neutral” are strong sales arguments today. A good way to find genuine environmentally friendly products is to check whether they are ecolabelled or come with an environmental declaration. But it can be difficult to compare different labels and declarations. And some provide very little information at all. Through this document, Nordic Ecolabelling tries to get to the bottom of the various labels and terms concerning environmental information.

The environmental information used to market paper falls primarily into one of four categories: environmental labels, forest certification, environmental declarations and environmental management systems. These all have different purposes, target groups and sources. But there are also significant differences within each category that as a buyer you should know about.

1. Ecolabels

A reputable ecolabel is a simple and effective way to make environmentally sound purchases.

- The organisation behind the label sets all requirements and limits and assesses the product's environmental impact.
- An independent third-party checks whether a product fulfils the requirements.
- Products that do not meet the requirements are easy to eliminate since they do not carry an ecolabel.



The Nordic Ecolabel

Nordic Ecolabelling has labelled paper since the early 1990's. Tissue paper became the first product in 1992. Several years later, criteria were established for printing and copying paper.

Today, there are Nordic Ecolabelling criteria for:

- Printing and copying paper
- Printing companies/printed matter*
- Envelopes
- Tissue paper - kitchen towelling, toilet paper, tissues, napkins and wash towels
- Greaseproof paper
- Coffee filters

*) Nordic Ecolabelled printing companies produce various types of ecolabelled printed matter, such as newspapers, books, brochures and writing blocks on Nordic Ecolabel approved paper.

The Nordic Ecolabel is the official ecolabel in the Nordic countries. According to ISO terminology, the Nordic Ecolabel is a Type I ecolabel. This means that there is a set of predetermined criteria for the product and that an independent third party must assess the product before it can be awarded the ecolabel. The Nordic Ecolabel complies with the recognised ISO standard for ecolabelling, ISO 14 024.

Criteria are based on an analysis of the environmental impact during a product's entire lifecycle. For example, Nordic Ecolabelled printed matter must fulfil requirements on forest management, pulp and paper production, printing and waste management.

The wood used to make the paper must come from sustainable forestry. Fibres derived from forest environments meriting protection must not be used. At least 20 per cent of fibre must come from certified forests (unless 75 percent of the raw material comprises recycled fibre or woodchips). Forest certification means that there are standards with particular rules governing forest management, and that an independent control body verifies compliance with these. The standards must be adapted to local conditions and fulfil Nordic Ecolabelling requirements. Currently, some standards within the FSC and PEFC systems are approved (see below).

The requirements set by Nordic Ecolabelling for pulp and paper mills include low energy consumption and stringent emission limits, such as for substances that can cause acidification, eutrophication or affect the marine environment. Mills must also limit their use of environmentally dangerous chemicals. Waste must be sorted at source and dealt with in an environmentally suitable way.

Printing companies must eliminate the use of environmentally hazardous chemicals and minimise energy consumption. The requirement of low energy consumption during paper production and printing is important to reduce climate impact. Nordic Ecolabelled printed matter must be printed on paper fulfilling Nordic Ecolabel requirements.

The criteria are revised and successively tightened, often each three to four years. In this way, the Nordic Ecolabel distinguishes the most environmentally suitable alternatives on the market and promotes progress towards sustainable products. Besides environmental requirements, requirements are also set on good quality and function.

There are many Nordic Ecolabelled paper products within each product group. A list of Nordic Ecolabelled products can be found at www.svanen.nu.



EU Eco-label

The EU Eco-label, the Flower, is the direct equivalent in the European Union to the Nordic Ecolabel in the Nordic area. The label was established in 1992.

The EU Eco-label has criteria for the ecolabelling of copying and printing paper and tissue paper. There are however no criteria for printed matter.

The principles behind the EU Eco-label are the same as for the Nordic Ecolabel. It is a Type I label with predetermined criteria and third-party assessment. The criteria are established by national “responsible bodies” appointed by each European Member State in collaboration with the European Commission. The criteria are based on an analysis of the environmental impact during a product’s entire lifecycle. Criteria are valid for 3-5 years and subsequently tightened.

The requirements address forest management and pulp and paper production. The EU Eco-label is not as comprehensive as the Nordic Ecolabel, which also has requirements for printed matter and thus covers the environmental impact of printing.

The EU Eco-label requires that at least 10 per cent of the raw material in printing and copying paper comes from certified forests. The requirements on forest management standards are less extensive than the Nordic Ecolabel requirements. The Flower criteria prohibit the use of wood derived from forest that are not managed sustainably.

Emission requirements are set of pulp and paper production. Stringent limits are set for emissions to air of acidifying substances and greenhouse gases, as well as for emissions to water of chemicals and eutrophic substances. There are also requirements similar to those of the Nordic Ecolabel on chemicals and waste.

The availability of products carrying the EU Eco-label varies between European countries. Information on labelled products and where these are sold can be found in the Eco-Label catalogue, www.eco-label.com.



Bra Miljöval

Good Environmental Choice

Good Environmental Choice is the ecolabel of the Swedish Society for Nature Conservation. While the Nordic Ecolabel and EU Eco-label are state labelling systems, Good Environmental Choice is run by an independent, national member association. The label was established in 1987 as a shelf marking in food stores. The round logo with a falcon was launched in 1992.

Good Environmental Choice, just as the Nordic Ecolabel and EU Eco-label, is a Type I label according to the ISO definition. There are predetermined criteria and third-party assessment. The requirements of Good Environmental Choice cover the entire manufacturing chain, from forestry to pulp and paper production. Printing paper must comprise a minimum of 30 per cent recycled fibre or fibre from FSC certified forests. The figure for tissue paper is 90 per cent. Other requirements are a totally chlorine free (TCF) bleaching process and that a certain proportion of electricity used for production fulfils Good Environmental Choice requirements.

There are Good Environmental Choice criteria for several types of paper products including copying, printing and writing paper, tissue paper and paper pulp. There are special additional criteria for processed paper products such as printed matter and

envelopes. At present (2008) there are few products marked with the Good Environmental Choice label.



Blue Angel (Blaue Engel)

The Blue Angel is a German ecolabel. The label was established in 1978, making it the oldest ecolabel in the world. The Blue Angel, as the Nordic Ecolabel, is a voluntary, state-run ecolabel. The criteria are established by the German Federal Environment Agency.

Products marked with the Blue Angel have started to appear in the Nordic countries, partly due to an increased presence of German chain stores.

There are Blue Angel paper criteria for printing and copying paper as well as toilet tissue and similar.

The paper must comprise a majority of recycled fibre. If the product contains a certain proportion of virgin fibre this must be produced in a sustainable way. No wood must be derived from forest meriting protection. The Blue Angel criteria also cover chemicals use.

There are however no Blue Angel criteria for printed matter.

2. Forest certification



FSC

The Forest Stewardship Council (FSC) is an international initiative to promote sustainable forestry by addressing ecological, social and economic aspects.

FSC is not an ecolabel such as the Nordic Ecolabel, EU Eco-label or Good Environmental Choice, since the requirements are not based on the total environmental impact of the product. FSC only considers the origin of the wood raw material by requiring forest management that is ecological and ethical sound. The requirement on reforestation is also important in regard to climate change.

Each country establishes regulations based on a set of international principles. Different stakeholders are invited to consult on the national standards: environmental groups, local and indigenous people, the forest and paper industry, and trade unions.

FSC certification means that an independent control body has verified that the forest is managed according to the national FSC standard. In addition, there is a chain of custody certificate. This is a guarantee that the wood raw material can be traced all the way from

the forest to the finished product. No requirements are set on emissions, energy consumption or similar in pulp and paper production or printing.

Provided that the forest and chain of custody are certified, the products can carry the FSC logo. There are three versions of the label:

- FSC Pure (100% FSC raw material)
- FSC Recycled (100% recycled material)
- FSC Mixed Sources (at least 10% FSC raw material, the remaining percentage from other controlled origin or recycled material)



Example of different FSC labels: Pure, Recycled and Mixed Sources.

Products labelled “FSC Mixed Sources” must comprise at least 10 per cent FSC certified raw material. The remaining virgin fibre must come from a “controlled source”. It must be possible to demonstrate that the raw material does not come from illegally harvested wood, natural forests, forests of high conservation value, wood harvested in violation of traditional and civil rights, or genetically modified trees.

The FSC label only addresses forest management. To minimise overall environmental impact, besides the FSC certificate, the product must have a well-reputed ecolabel, such as the Nordic Ecolabel.



PEFC

The Programme for the Endorsement of Forest Certification (PEFC), like FSC, is a system for the certification of sustainable forest management. The program originates from European forest owners and has not won the same support of environmental organisations as FSC. The working model is however the same. Stakeholders are invited to participate in establishing the regulations.

Swedish PEFC has members representing the forestry and processing industries as well as employee organisations, hunters and leisure activities. PEFC focuses on small and mid-sized forests. PEFC is common in Norway (through affiliated Levande Skog) and Finland.

PEFC works in the same way as FSC. A company that uses raw materials from PEFC certified forests can apply for a chain of custody certificate and licence to use the PEFC label on its products.

All products that contain wood fibres are able to carry the PEFC logo. The same proportion of finished product can be labelled as the proportion of PEFC certified raw material in production. (If 50 per cent of the raw material is PEFC certified, then half of the finished products can be labelled as PEFC certified.)

PEFC, as FSC, only set requirements on forest management and traceability. No environmental requirements are set of the subsequent stages of manufacturing such as pulp and paper production or printing. The PEFC label by itself is not proof of low total environmental impact. The product must also carry a recognised ecolabel.

3. Environmental declarations

Environmental declarations differ from ecolabels in two fundamental ways:

- There are no predetermined requirement levels. Declarations can be issued for both “good” and “bad” products.
- The purchaser must themselves compare the environmental data and make an overall judgement.

For some environmental declarations, such as the EPD system and WWF's Paper Scorecard, an independent party must verify the details. For others, such as Paper Profile, certification is voluntary.

Environmental declarations contain relatively detailed figures about the product's environmental performance. Accordingly, environmental declarations are primarily aimed at professional purchasers with in-depth knowledge of the relevant environmental aspects and the time to analyse the declarations. At present, environmental declarations are not commonplace.



EPD/Environmental declaration

Environmental declarations are based on data that a company produces through lifecycle assessments.

Environmental Product Declaration (EPD) is a system found in several countries. Product Category Rules (PCR) are established for each product group. These prescribe the test methods, how the system limit should be set and similar.

EPD is a Type III label according to ISO standard (ISO 14 025) and complies with the standards for lifecycle assessment (ISO 14 040 and ISO 14 044). The data is reviewed by an independent body.

An EPD specifies how the product influences various environmental problems, such as climate change, acidification and eutrophication. EPDs for paper include the environmental impact of both forestry and production processes. However, it is hard to address chemicals and environmental toxins through such declarations.

A harmonized, international EPD system is being developed. The Swedish Environmental Management Council, an organisation working closely with industry, has a leading roll in its development. Environmental declarations established using the international EPD system are published on a common website: www.environdec.com.

There are currently few paper products with an environmental declaration following the international EPD system. National EPD system may have different product category rules (PCR) which makes comparison more difficult.

A special declaration that only concerns climate change has been introduced within the framework of the international EPD system. A climate declaration is simply an extract from an environmental product declaration.



Paper Profile

Paper Profile is a product declaration that has been developed by nine major European paper manufacturers. The system was launched in 2001. A declaration is based on a company's own information, but an independent control body may verify it. There are common rules for the collection, calculation and presentation of data.

A Paper Profile is a single A4 sheet with general information about the product and information on its environmental performance. The declaration covers the origin of the wood, the environmental impact of paper production and information on the company's environmental management system.

The figures disclosed in a Paper Profile are largely the same as those the company must report to the authorities. These include emissions to water and air, the disposal of solid waste and consumption of purchased energy. There are however no figures for total energy consumption or chemical usage.

Paper Profile makes no claims as to enabling the direct comparison of the environmental performance of different products. The founders of the system emphasise for example that different manufacturing methods have different environmental aspects and that environmental issues differ with location.

WWF Paper Scorecard

In autumn 2007, the World Wildlife Fund launched its own system for environmental declarations, the Paper Scorecard. The purchaser sends a questionnaire to suppliers. Different answers are awarded different points. The paper manufacturer completes the questionnaire and a certification body verifies the answers.

This tool aims to allow the purchaser to compare different products on the market using the point scores. There are no fixed levels by which to assess a product. The WWF plans to establish a bank of comparison data that purchasers can access. They aim to encourage paper manufacturers to publish their scorecards on http://www.panda.org/about_wwf/what_we_do/forests/what_you_can_do/business/paper_toolbox/.

The questionnaire contains seven questions addressing the origin of fibre, contributions to climate change, the emission of chlorine compounds, emissions of oxygen-consuming organic waste to water, the dumping of waste materials and environmental management systems.

4. Environmental management system: EMAS and ISO 14 001

An environmental management system is not a product label but may appear in the information provided by a paper producer.

The most common environmental management systems are EMAS, developed in Europe, and ISO 14 001, which is an international standard. One difference between these systems is that EMAS requires companies to publish an annual environmental audit.

As the name suggests, the schemes concern systems, procedures and work methods within a company to ensure that environmental issues are dealt with in a systematic manner. There are no set requirements or lowest limit levels of environmental performance. The company itself sets its goals for “continual improvement”.

An EMAS or ISO 14 001 certificate means that a certification body has reviewed the company's work regarding the standard in question. EMAS registration and ISO 14 001 certification in themselves say nothing however about how much the company and its products impact on the environment.

5. Other

Climate impact

Recent increased environmental awareness has largely concerned climate change. Accordingly, several stakeholders have expressed a wish for separate labelling regarding the climate. At present there is no reliable label that purely concerns the climate. It is however worth noting that the criteria for the existing ecolabels – the Nordic Ecolabel, EU Eco-label and Good Environmental Choice – all set requirements on low climate impact, including the criteria for paper and paper products.

A label purely addressing climate impact may be established in the future alongside ecolabelling. For example, the European Commission is drawing up a proposal for how climate information can be combined with the EU Eco-label.

Climate declarations also exist within the framework of the international EPD system of environmental declarations. A climate declaration is simply an extract from an environmental product declaration. So far are there very few climate declarations for paper products.

TCF, ECF

Bleaching using chlorine gas is an old-fashioned method that has severe environmental impact. Organic chlorine compounds are environmental toxins. The method is not used in Scandinavia or the rest of Europe. Requirements from the various ecolabelling schemes for environmentally suitable bleaching processes have contributed to this development.

Nowadays, other methods (TCF and ECF) are used to bleach paper pulp. TCF and ECF methods have their pros and cons. They are however better than chlorine gas. TCF is an abbreviation of totally chlorine free. No chemicals containing chlorine may be used in the bleaching process. ECF stands for elemental chlorine free. The pulp is bleached with chlorine dioxide and the chlorine compounds are removed from the waste water.

Information that the bleaching method is TCF or ECF does not say anything about the overall environmental impact of the paper or printed matter.

6. Overview: Comparison of ecolabels, environmental declarations and environmental management systems

PRINTED MATTER		Minimum requirements on					
		Label	Type*	Raw material	Chemicals	Climate impact	Emissions
The Nordic Ecolabel	I	X	X	X	X	X	X
EU Eco-label**	I	X	X	X	X	X	X
Good Environmental Choice	I	X	X	X	X	X	X
FSC***		X					
PEFC***		X					
Environmental declaration, EPD	III						
Paper Profile							
WWF's Paper Scorecard							
EMAS							
ISO 14 000							

PRINTING AND COPYING PAPER		Minimum requirements on				
Label	Type*	Raw material	Chemicals	Climate impact	Emissions	Waste
The Nordic Ecolabel	I	X	X	X	X	X
EU Eco-label	I	X	X	X	X	X
Good Environmental Choice	I	X	X	X	X	X
Blue Angel (Blaue Engel)	I	X	X	X	X	X
FSC***		X				
PEFC***		X				
Environmental declaration, EPD	III					
Paper Profile						
WWF's Paper Scorecard						
EMAS						
ISO 14 000						

TISSUE PAPER		Minimum requirements on				
Label	Type*	Raw material	Chemicals	Climate impact	Emissions	Waste
The Nordic Ecolabel	I	X	X	X	X	X
EU Eco-label	I	X	X	X	X	X
Good Environmental Choice	I	X	X	X	X	X
Blue Angel (Blaue Engel)	I	X	X	X	X	X
FSC***		X				
PEFC***		X				
Environmental declaration, EPD	III					
Paper Profile						
WWF's Paper Scorecard						
EMAS						
ISO 14 000						

*) The International Organisation for Standards divides ecolabels into three categories (ISO 14 025): Type I, Type II and Type III.

Type I – predetermined requirements and third-party certification.

Type II – self-declared environmental claims by the producing company.

Type III – environmental declarations based on lifecycle assessments, no set requirement limits but figures are third-party certified.

***) The EU Eco-label for printed matter demonstrates that the paper fulfils the corresponding EU Eco-label requirements. There are however no EU Eco-label criteria for printed matter. Accordingly, the label does not say anything about the environmental impact of the printing ink or print shop.

****) The FSC and PEFC forest certification labels on printed matter only provide information on the origin of the wood raw material. No requirements are set of pulp and paper production or the printing process. The label does not provide any indication of recyclability.