About Nordic Swan Ecolabelled

Hotels and other accommodation

Version 5.11 • 19 November 2021 – 31 October 2028

Nordic Ecolabelling

Content

055 Hotels and other accommodation, version 5.11, 05 May 2026

This document is a translation of an original in Norwegian. In case of dispute, the original document should be taken as authoritative.

Addresses

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Swan Ecolabel. These organisations/companies operate the Nordic Ecolabelling system on behalf of their own country's government. For more information, see the websites:

Denmark
Ecolabelling Denmark
www.svanemaerket.dk

Iceland
Ecolabelling Iceland
www.svanurinn.is

Finland
Ecolabelling Finland
https://joutsenmerkki.fi/

Norway
Ecolabelling Norway
www.svanemerket.no

Sweden
Ecolabelling Sweden
www.svanen.se

1 Summary

The criteria consist of 44 obligatory requirements and 6 point score requirements.

Nordic Ecolabelled facilities meets the strictest environmental requirements within their industry and have taken a holistic approach to their environmental work. The Nordic Swan Ecolabel is an effective tool for reducing the company's environmental and climate footprint and actively contributes to meeting several of the UN's Sustainable Development Goals, especially Goal 12.

Changes compared to previous criteria generation 4:

Generation 5 of the criteria and product group 055 will only be relevant for hotels with or without a restaurant and/or conference facilities.

Previously, requirements for restaurants and conference facilities without accommodation have been included in the product group 055 Hotels, restaurants and conference facilities. These have now been removed from the product group 055, and separate criteria have been developed, "Food services and conference facilities (without accommodation)", product group number 110.

Environmental management: We want a greater focus on a good dialogue with the licensee and the requirement for annual follow-up has been adjusted. A new mandatory requirement for "continuous improvement" has also been introduced».

Energy: The energy requirements have been changed and tightened. An upper limit value has been defined for the use of energy, in order to prevent companies with too high energy consumption from being Nordic Ecolabelled. Fossil oil and gas is not allowed for heating. Businesses that are energy efficient with low energy consumption have passed the energy requirement and do not need to document their energy efficiency further. Businesses with medium energy consumption must carry out energy-reducing measures.

Water: The requirements for water consumption have been changed and tightened. The limit value for water consumption is obligatory for everyone, unlike in generation 4, where the hotel could choose between the limit value for either water or waste.

Waste: The requirements for waste have been changed and tightened. There is an obligatory limit value for unsorted waste, unlike in generation 4, where the hotel could choose between the limit value for either water or waste.

The requirements contain a new and comprehensive requirement for food waste, which involves measurement, analysis, information to guests, training of employees and annual follow-up. The requirements for disposable items have been tightened considerably, and prohibition requirements for PVC in plastic film have been added.

Sustainable food and drink: New requirements have been introduced regarding palm oil and GMOs, and the requirements for organic food and drink, and vegetarian food have been changed and tightened. Locally produced food is rewarded more than before. Table service of bottled water tapped at brewery is

prohibited. The requirements for food and drink include point score requirements to encourage improvements.

Biodiversity: New requirements for biodiversity have been introduced for hotels with gardens/outdoor areas over 1000 m^2, in order to limit the loss of biodiversity.

Chemicals: The requirements have been changed and tightened. 100% of the products for general cleaning, dishwashing, window cleaning and laundry must be ecolabelled. In addition, we have requirements regarding classification and ingredients for the other chemicals that are used in smaller quantities.

Purchasing: Requirements for the purchase of ecolabelled products and services have been changed, tightened, and simplified. 100% of tissue paper and copy paper must be ecolabelled. 100% of all printed matter must be from an ecolabelled printing company. The business is rewarded with points for purchasing other ecolabelled products and services.

2 Environmental impact of hotels and other accommodation

2.1 Relevance, potential and steerability (RPS)

The environmental impact of hotels and other accommodation is mainly associated with energy, water, food, waste, chemicals and purchasing. This is true of all combinations of businesses, with or without restaurants and conference facilities, but to a varying extent.

Nordic Ecolabelling sets requirements based on relevance, potential and steerability (RPS). Are there any major environmental challenges associated with the service? Are environmental improvements achievable, and will setting requirements make a difference compared with other, non-Nordic Swan Ecolabelled businesses? And finally – is Nordic Ecolabelling able to steer the choices that the business makes.

All this has been discussed with regard to a range of themes associated with hotels and other accommodation, leading to an RPS analysis. The results of the analysis are shown in the table below, and they underpin Nordic Ecolabelling's decisions on which areas to assign requirements in the product group, and the extent of these requirements.

Table 1 **RPS analysis**

Overall priority	Area	Comments
HIGH	**Food** R: high P: high S: medium	High relevance and potential. Steerability is medium since there are major local and Nordic differences in the availability of various foodstuffs. There are large differences in environmental impact depending on farming methods and the origin of the raw ingredients. Organic: Organic products are better for the environment, but steerability ranges between medium and low in the Nordic region, due to varying availability of organic produce. MSC: Relevance and potential are high for MSC-labelled fish, which ensures a lower environmental impact since the fish comes from sustainable stocks. Vegetarian: Food based on vegetarian ingredients has a smaller environmental impact than meat and, to a lesser extent, fish. There are major variations in trends across the Nordic region, but vegetarian options have become a trend in many places, with more of a focus on vegan food than was previously the case. Local food: One trend that applies to the whole Nordic region is a focus on national food, preferably certified by a national labelling scheme. There is also an emphasis on local produce, and achieving the UN's Sustainable Development Goals will require a transition to more sustainable food, making local production important.
	Food waste R: high P: high S: medium	Food waste presents a challenge to the climate and the environment, commercial profitability and social ethics. Food waste has moved further into the spotlight in recent years, and relevance and potential are high, with medium steerability, all depending on the type of food being provided. There are many possible measures to reduce food waste.
	Chemicals: dishwashing R: high P: high S: high	Relevance and potential are high, since the chemical consumption of dishwashers accounts for the vast majority of chemical use at companies with a large-scale restaurant business. Steerability is high, since there are many ecolabelled options on the market. Large dishwashers have automatic dosing, and most facilities use these.
	Consumables: tissue paper R: high P: high S: high	There are variations across different businesses, but the consumption of large quantities of tissue paper creates high relevance and potential. Steerability is high since there are many ecolabelled products on the market.
	Water R: high P: high to medium S: medium	The relevance is particularly high for hotels. The potential varies from high to medium, since water consumption has seen considerable reductions in recent years due to new water-saving technologies, both for laundry and dishwashing. Hotels can save a great deal of water through flow-limiting valves, water-saving showers and other measures.
	Waste R: high P: high S: medium	The relevancy is high, since the businesses generate large amounts of waste. The potential is also high, since it is possible to work on reducing quantities of waste, and on sorting the waste properly in pursuit of a circular ecocycle. The amount of waste has dropped in recent years, due to good sorting at source, with sorting of organic waste important. Sorting options vary depending on the provision of the local municipality, and whether they accept all waste fractions. Steerability can therefore be low in those municipalities where the businesses have no influence over the waste fractions that are accepted.
	Chemicals: daily cleaning R: high P: high S: high	Relevance and potential are high. The use of chemicals varies across the different businesses. There is a good choice of ecolabelled options for daily cleaning, and there are a large number of good dosing solutions on the market, with lower consumption as a result. Chemical-free cleaning methods and effective microfibre cloths can also reduce consumption.
	External laundry R: high P: high S: medium	Relevance and potential are high for hotels, since they generate large quantities of laundry (bedlinen and towels), and particularly high for hotels with restaurants (workwear, aprons, cloths, etc.). Most hotels send their laundry to an external laundry service, and there are many ecolabelled options available. However, access to ecolabelled laundry services may be limited in certain territories, and steerability is judged to be medium.
MEDIUM	**Energy for operation and maintenance**	Operation and maintenance include heating, refrigeration, hot water, ventilation and so on. Relevance is high, but steerability can be challenging, particularly if another party

	R: high P: medium S: low	owns the building or premises. Investments in operation and maintenance are expensive.
	CO_2 R: high P: medium S: low	Emissions of CO_2 can be reduced through energy savings and careful choice of energy source. Relevance is high, but as with energy, steerability can be challenging if another party owns the building or premises.
	Energy for energy-intensive kitchen equipment (new purchases) R: high P: medium S: low	Kitchens require a significant amount of energy, and the energy consumption of a restaurant comes mainly from the refrigeration, cooking, ventilation, and dishwashing. There is considerable potential regarding new purchases of energy-intensive equipment, but such equipment is replaced infrequently because it is expensive, so it is best to use the equipment that is already available and works. Newer equipment/white goods are always more energy efficient.
	Energy for energy-intensive kitchen equipment (in usage phase) R: high P: medium S: medium	Relevance is high since energy consumption from the kitchen is considerable. Potential and steerability are medium, and energy can be saved by establishing training and good procedures for the use of energy-intensive equipment.
	Disposable items and packaging R: high P: medium S: medium	There has been an increase in the tendency to use disposable items for eating and drinking outside restaurants, and there is also a growing trend of taking uneaten food home from to avoid food waste. Disposable items are a waste problem, but not for the business itself. Steerability can be low in view of determining factors such as quality, logistics and chain membership. Steerability is higher with individual takeaway products since ecolabelled options are available.
	Biodiversity R: medium P: medium S: high	With different sizes of garden / outdoor area, the relevance and potential for requirements for biodiversity varies. Nevertheless, controllability is high, and hotels with a large outdoor area can, with simple measures, ensure that the garden's biodiversity is improved, by avoiding the use of herbicides, preserving nature worthy of conservation, and fighting foreign species.
	Ecolabelled products R: high P: medium S: medium	Relevance and potential are high for consumables that are used regularly. For furniture and fittings (beds, office furniture, bed linen, etc.) relevance is high, but the service life of such products is long, and the potential is thus judged to be medium. Although more and more ecolabelled options are coming onto the market, potential and steerability are rated medium, since the choice is not yet great enough to cover all needs in terms of function and design.
	Chemicals: laundry (own laundry) R: medium P: medium S: high	Relevance, potential and steerability are judged to be medium, since most businesses do not wash bed linen and towels themselves, sending it all to an external laundry instead. However, this depends on the size of the business. They do tend to launder mops, cloths and sometimes pillows and bathrobes themselves. There are plenty of good dosing solutions and ecolabelled laundry detergents on the market.
LOW	**Other chemicals and specialist cleaning agents** R: medium P: medium S: low	Some businesses use larger amounts of other chemicals and specialist cleaning agents (as defined by Nordic Ecolabelling) than others, and the relevance is thus judged to be medium. The potential lies in using smaller amounts of special cleaning agents, which is important since these are products that cannot be ecolabelled due to their ingoing substances. Steerability is therefore judged to be low. Examples of such products include drying agents, polish, stain remover, metal polish and oven cleaner.
	Transport: goods transport R: medium P: low S: low	Small businesses have very little control over goods transport, while larger businesses and chains may have some influence in this area. Catering businesses include transport as part of their service, which increases the level of steerability.
	Electronics R: medium P: low S: low	Electronics are complex and generally contain many substances that are problematic for the environment. The scope to reduce the environmental impact is relatively low, but it is crucial to use ecolabelled options, and to dispose of electronics correctly. Unfortunately, there are not many Nordic Swan Ecolabelled alternatives on the market, but other labelling schemes such as TOC may be relevant.

2.2 MECO analysis

MECO stands for Materials, Energy, Chemicals and Other.

The Nordic Swan Ecolabel as a life cycle-based ecolabel following the ISO 14024 standard. The standard describes that the criteria are based on environmental indicators found when assessing the full life cycle of the product, and by identification of the areas in the life cycle where the environmental impact can be reduced, and the manufacturer can influence.

In this connection a MECO analysis is carried out, to get an overview of which parts of the service's life cycle it may be relevant to set requirements for when preparing ecolabelling criteria.

The MECO analysis is used to pinpoint the most important environmental pressures in the life cycle for the product group, in a table. The MECO table does not show the sum of environmental impacts for the total life cycle, but where in the life cycle the environmental impact occurs.

Table 2 **MECO analysis for Hotels and other accommodation**

	Raw material	Production	Use/operation	End of life
Material	Raw materials for food and drinks Raw materials for textile fibre and textiles (works wear, bedlinen, towels, mops and cloths) Raw materials for furnitures and other hotelmaterials and equipment		Food in restaurant Water use in rooms Cleaning equipments Use of works wear, bedlinen, towels, mops and cloths Furnitures and other hotel equipments Tissue paper	Food waste Other waste fractions from the hotel textiles, furnitures etc.
Energy/ CO_2	Energy and climate impact from material extraction of food, textiles and other hotel equipments Energy resources for heating/cooling and electricity	Energy and climate impact from production of food, textiles and other hotel equipments	Energy for heating, lighting and cooling of hotel building and operation Energy for restaurant and kitchens Energy for laundry cleaning (either in internal or external service). Energy in operational processes may account for approx. 80 % of energy use of total energy use (Beatriz Roselló-Batle et al., 2009). Increased share of renewable energy sources used on site e.g. for heating in hotels will reduce CO_2 emissions	Energy in handling of food waste especially. Waste water treatment from hotel- and laundry opretations
Chemicals	Raw material extraction for chemical products used in the hotel (general cleaning, dishwashing and laundry detergents etc)	Chemical impact from textile production	Chemicals for cleaning of hotel Chemicals for laundry cleaning (either in internal or external service) Exposure to chemicals that are harmful to health: personal care products, cleaning products and washing the textiles	Risk of passing unwanted chemicals further into the cycle when reusing textiles without traceability Risk of environmental harmful chemical realesed into waste water from personal care products, cleaning products and washing the textiles.
Other	Land use and water use (food, hotel materials, textile production etc.): Sustainable cultivation of raw materials and water to ensure biodiversity and safeguard natural areas. Land use change and indirect land use change (LUC/ILUC)		Biodiversity in the hotelgarden	

Sources for MECO:

Nordic Ecolabelling, Background document, 055 Hotels and other accommodation, Chapter 2, Environmental impact of hotels and other accommodation - RPS, page 6-7, version 5.6, 28 May 2024, https://www.nordic-swan-ecolabel.org/criteria/hotels-and-other-accommodation-055/

Candela Vidal-Abarca et al.: Revision of European Ecolabel Criteria for Tourist Accommodation and Camp Site Services, JRC Science for policy report, 2016. https://ec.europa.eu/environment/ecolabel/documents/ecolabel_tourist_accomodation_service_technical_report.pdf

Cristina Campos Herrero et al. 2022: Tourism under a life cycle thinking approach: A review of perspectives and new challenges for the tourism sector in the last decades, Science of the Total Environment 845 (2022) 157261, 2022 http://dx.doi.org/10.1016/j.scitotenv.2022.157261

Viachaslau Filimonau, Janet E. Dickinson, Derek Robbins & Maharaj Vijay Reddy (2011): A critical review of methods for tourism climate change appraisal: life cycle assessment as a new approach, Journal of Sustainable Tourism, 19:3, 301-324, http://dx.doi.org/10.1080/09669582.2010.527345

3 Other labels

There are several labelling schemes for the hotel and accommodation industry. In the food industry, there are several labelling schemes, including international and national organic labels, which give some indication of the properties of the food or its production. Examples of these labels are Green Key, Fairtrade, MSC, ASC, Animal Protection Denmark, Vegan, Whole Grain and the Norwegian Bread Scale.

Below is a list of the most widely used labelling schemes and management systems for the industry in the Nordic region.

Table 3 **Other labelling schemes and management systems**

Labelling scheme	Focus area	Distribution	Comments
EU Ecolabel	Hotels and campsites	European	The official European ecolabel, run by the European Commission. Widely used in Europe. Type 1 ecolabel. Established in 1992. (75 businesses in the product area.)
Green Key	Hotels and conference facilities	International	Independent international labelling scheme. Run by the Foundation for Environmental Education (FEE). The label was established in Denmark in 1994 by the Danish industry body HORESTA. (2900 businesses.)
Miljøfyrtårn	Hotels, restaurants and conference facilities	Norway	Miljøfyrtårn (Eco-Lighthouse) is a national environmental certification scheme run by the Eco-Lighthouse Foundation. Businesses are certified, not products. Established in 2003. (Over 178 businesses in the product areas HFC).
Debio grading labels	Food service and food retail	Norway	The grading scheme provides a marketing label to promote the proportion of organic/Debio-approved products. The bronze label requires a minimum of 15 products or 15%, silver a minimum of 50% and gold a minimum of 90% organic products.

Krav	Food products, food services, restaurants	Sweden	National label for organic production. Includes requirements concerning health, animal welfare, social responsibility, and climate. Established in 1985. (14 businesses in the product area restaurants.)
Organic Cuisine Label	Restaurants	Denmark	Free, state-backed label indicating amount of organics used in the restaurant. Has three levels: gold (90-100%), silver (60-90%) and bronze (30-60%). Established in 2009. (3179 businesses.)
Green Restaurant	Restaurants	Denmark	New ecolabelling scheme aimed at restaurants, catering and food services. Established by HORESTA and the Danish Outdoor Council. Established in 2019. (1 business.)
Environmental management	Companies in general	International	Internationally recognised standard that forms the basis for establishing an environmental management system. Can be applied to any type of organisation in any industry. Established in 1992. (No data on number of businesses.)

4 Justification of the requirements

This section presents proposals for new requirements and explains the background to the requirements and the requirement levels.

Hotels and other accommodation, restaurants and conference facilities are core businesses in the tourism industry. Tourism has seen steady growth in recent decades, and it is currently one of the global economy's most important industries.

The criteria have broken through quite widely, with interest from the industry continuing to increase. The criteria have been revised and updated, with a focus on ensuring satisfied licensees and the greatest possible environmental benefit.

In the audit, Nordic Ecolabelling decided to divide the criteria for hotel, restaurant and conference in two separate product groups. Hotels and other accommodation are still product group 055, but we created a separate criteria document for "Food services and conference facilities (without accommodation)", product group 110. This was done so that the requirements would appeal to the different part of the industry in the best possible way. There has been a growing interest in canteen operations and commercial kitchens in recent years, and the criteria were revised with this as one of the focus areas. We also see potential in the conference industry, especially in day conferences, and the new criteria for "dining and conference venues without accommodation" therefore also include requirements adapted to these.

Some of the requirements for the product group 055 "Hotels and other accommodation" are therefore at the same level as in the product group 110 "Food services and conference facilities (without accommodation)".

4.1 The UN Sustainable Development Goals

The UN Sustainable Development Goals form the world's shared action plan for combating inequality and poverty, protecting the planet and stopping climate change by 2030. The Nordic Swan Ecolabel is a good tool for ensuring a sustainable future, and in general terms the Nordic Swan Ecolabel contributes towards Goal 12: responsible consumption and production. A Nordic Swan Ecolabelled business has less of an impact on the environment.

More specifically, the criteria for hotels and other accommodation contribute to the following targets under Goal 12:

- "Sustainable management and efficient use of natural resources" by setting strict limit values for energy, water consumption and waste. In addition, there is a requirement for a high proportion of organic food and drink, and that all fish served must come from a sustainable source.
- "Reduce waste generation through prevention, reduction, recycling and reuse" by setting comprehensive requirements for sorting at source to ensure optimal opportunity of material recovery; by focusing on keeping waste levels down through limit values for waste; and by prohibiting disposable items.
- "Halve per capita global food waste" by setting strict requirements for reducing food waste through measurement, analysis, guest information and staff training.
- "Achieve environmentally sound management of chemicals and all wastes [...] and significantly reduce their release to air, water and soil" by setting the requirement that 100% of the chemicals used for daily cleaning, dishwashing and laundry must be ecolabelled. In addition, other chemicals must meet strict requirements concerning ingoing substances and classification. The Nordic Swan Ecolabel prevents pollution, as well as stopping people from being exposed to harmful chemicals during production and use.
- "Adopt sustainable practices" by setting requirements concerning progress, employee training and internal communication on the sustainability work of the business.

5 General requirements of the business

Background to requirement O1 concerning description of business

Nordic Ecolabelling requires a detailed description of the business, to ensure the setting of appropriate and relevant requirements, tailored to your type of business. It is especially important that this information is correct, as it forms the basis for the application process and the requirements that apply to your particular business.

All the limit values that we set in this criteria document are based on calculations that take business-specific facts as their starting point. This includes guest numbers, total area, occupancy and the proportion of sales derived from the restaurant. The definition of guest numbers can be found in the section below.

Applicants who do not have a good enough basis for providing information on the number of guests must estimate this at the time of application. A licence may be given with remarks, and the requirements must be met after a given period of

time (minimum three months). This may be relevant if the business is newly established or if the operation of the business has been abnormal due to renovations, a pandemic or similar.

If you are uncertain about any of the points, contact your case officer for help and advice.

Definition of guests

- A hotel guest is a guest who stays at the hotel overnight. A hotel guest who stays at the hotel for two nights is counted as two hotel guests, and two guests that stay two nights in a double room are counted as four hotel guests.
- A restaurant guest is a guest who eats in the restaurant (which includes breakfast, lunch, and dinner guests). The number of breakfast guests is assumed to be the same as the number of hotel guests.
- A conference guest is a guest who takes part in activities on the premises of the conference facility. If a conference guest stays overnight within the business, they will be counted twice in the total guest numbers for the business – once as a conference guest and once as a hotel guest. A conference guest should be counted as a restaurant guest only if they have one or more meals in the restaurant, e.g. breakfast, lunch or dinner. Conference guests who have catered coffee/tea breaks do not count as restaurant guests. A conference guest participating for two days is counted as two conference guests. If the conference guest eats two lunches and one dinner at the facility, the guest has eaten three meals, and must also be counted as three restaurant guests.
- An external pool guest is a guest who only uses the pool facilities and does not spend the night at the hotel.

Documentation requirement

- The guest number is to be stated to the nearest 1,000 if the total guest number is 100,000 or higher. If the guest number is lower than 100,000, it is to be stated to the nearest 100. As documentation, we can accept summaries based on overviews from booking systems. The underlying data for the calculation of guest numbers is to be enclosed with the application.
- Total heated area, m^2 (heated to over 10°C). Area is defined as the internal space in the building that is heated to more than 10°C. Documentation of the total heated area in square meters can come from the hotel's energy labelling, from an official register in the country or from measurements and calculations done manually from drawings of the hotel's buildings.

6 Environmental management

Background to requirement O2 for a responsible person

A responsible person is required to ensure that Nordic Ecolabelling's requirements are fulfilled throughout the entire validity period of the licence and that the annual follow-up and reporting is completed. The company may comprise several departments but should in the first instance appoint just one person to be responsible for the licence and contact with Nordic Ecolabelling. The company may internally split responsibility between different departments and several people.

A large turnover of staff can be a challenge in the industry, not least with regard to the Nordic Swan Ecolabelling of the business. When a person who has had responsibility for producing documentation and carrying out annual reporting leaves, important experience may be lost. Passing on information and knowledge to their successor is thus vital.

Background to requirement O3 concerning annual follow-up of the licence

A requirement to submit annual reports is included to control that the facility complies with the requirements in the criteria document during the validity period of the Nordic Swan Ecolabel licence.

The business is responsible to comply with all requirements in the criteria during the validity period of the licence. Annually, there must be an internal follow-up and reporting to Nordic Ecolabelling. Nordic Ecolabelling may review and control all requirements, or only selected ones. We inform about the control and deadline for submitting documentation in advance of an annual follow-up. Information is usually given before the end of the year, with a deadline during the following year.

It is always the latest version of the annual report that forms the basis for ensuring that the criteria are met. If the annual report reveals that circumstances have changed, Nordic Ecolabelling must be informed of this.

Background to requirement O4 concerning procedures for continuous improvements

It is important that the facility regularly improves its environmental performance. A range of environmental targets need to be formulated, along with an action plan containing various measures to improve the environmental work of the company. The review should be conducted at the beginning of each year, for example before 31 January, so that new targets can then be set for the year ahead.

The targets must be measurable to allow an assessment of the improvements resulting from the measures. The targets may be measured in absolute figures, or even better using key performance indicators such as litres per guest, food waste per guest, and so on.

The review meeting must include a follow-up of the previous year's targets and action plans to analyse whether the targets have been met.

Background to requirement O5 concerning changes and unforeseen non-conformities

Ensuring that the company has a quality management system with procedures for always reporting to Nordic Ecolabelling in the event of changes and unforeseen non-conformities also ensures constant compliance with the requirements of the Nordic Swan Ecolabel.

Background to requirement O6 concerning customer complaints

Nordic Ecolabelling requires that companies have implemented a complaint handling system for customers. In order to document the company's handling of customer complaints, the company must have a procedure in place that describes

how these activities are managed. The procedure should be dated and signed and will normally be part of the company's quality management system. If the company does not have a procedure for handling customer complaints, it is possible to submit a description of how the company handles customer complaints. During inspection visits, Nordic Ecolabelling will check that the complaint handling procedure has been implemented in your company as described, and check the customer complaint archive.

Background to requirement O7 concerning information and training for staff

Training in the work of Nordic Ecolabelling is important in creating engagement across the whole organisation during the licence period. It is important that the contact person does not feel alone in this work and that all the departments are on board from the outset. The departmental managers are the key people for building up good environmental work at the facility from the beginning and for motivating the rest of the employees.

The training must contain both basic environmental knowledge and the knowledge that is necessary to maintain the Nordic Swan Ecolabel licence.

Each year, all employees are to be informed about the environmental work of the company and matters associated with the Nordic Swan Ecolabel licence – for example which environmental improvements the company is working towards, the results of measurements relating to the limit values, and changes to procedures for the Nordic Swan Ecolabel licence.

7 Energy requirements

Icelandic companies are exempt from the requirement "Limit value for energy consumption" and must instead meet the requirements "Routines/system for daily energy saving" and "Energy and CO_2-reducing measures".

7.1 Requirements concerning energy consumption

Background to fossil fuel requirement O8

Nordic Ecolabelling wishes to encourage fossil-free operation, and consider that better environmental options are available for hotels and conference facilities.

In Norway the government has introduced a ban on the use of fossil oil to heat buildings from 2020. The ban covers residential, public and commercial buildings, including hotel buildings.

Oil is most often used for top load/peak load, for example when the heat demand is so great that the hotel's regular heating system is not enough. Typical plants that use heating oil are plants outside the cities that do not have access to district heating. In cases where fossil oil is used for peak loads, Nordic Ecolabelling recommends looking at the possibility of making minor adjustments to the oil boiler to switch to liquid biofuels. For example, RME (rapeseed methyl ester) or HVO (hydrogenated vegetable oil) of renewable origin can be used.

Gas used for peak load/top load in hotels is allowed. In some cases, gas is used to cover the majority of the demand for heat and hot water. This is not allowed according to the requirements, and the hotel must switch to energy gases of

renewable origin, such as biogas or biogas oil, or possibly switch to other energy sources.

Fossil fuels are sometimes used for outdoor heating, for example in outdoor cafés. Please note that the requirement also applies for the use of patio heaters etc.

The requirement does not apply to district heating produced using fossil energy, since the hotel company is not able to influence the fuel composition of the district heating.

Background to requirement on energy consumption O9

It is important that the company has a good grip on its energy consumption and Nordic Ecolabelling therefore requires a follow-up of consumption. The energy consumption in kWh must be related to the heated area, to have a common reference value for comparing with other, equivalent companies. However, it may also be relevant to look at energy consumption per guest day. Large guest numbers may explain high energy consumption.

The energy at a hotel is for heating, cooling, hot water, ventilation, lighting, the kitchen, technical equipment, TV screens, minibars, office machines and laundry (of mops and cloths; most hotels launder everything else externally). Energy in gas form is typically used in a kitchen.

If the hotel has a restaurant, and not just a breakfast service, the kitchen is a major contributor to energy consumption. Energy-intensive appliances in a kitchen are typically ovens, dishwashers, fridges and freezers, chiller and freezer rooms, chiller units and food warmers. If a hotel also has a conference department, the energy consumption for this section relates largely to heating, lighting and ventilation.

It is permitted to deduct the following energy consumption, if it can be documented via separate meter readings, estimates conducted by an independent third party or other competent metrics:

- Electricity for vehicle charging
- Energy for spa operation
- Energy for internal laundry

Energy consumption figures are affected by whether the company has one or more vehicle charging stations. The electricity for vehicle charging can therefore be deducted from the figure for annual purchased energy.

If a company has a spa or pool, the energy consumption is significant. Nordic Ecolabelling does not ecolabel spa facilities, and the energy used to operate a spa or pool can therefore be deducted.

Hotels have a major need for laundry services. Most hotels send their laundry (with the exception of mops and cloths) to an external laundry service. However, a few choose to do their own laundry, which leads to higher energy use compared with other companies. The energy used for internal laundering of more than mops and cloths can therefore be deducted.

Background to requirement on limit values for energy O10

The limit values for energy consumption comprise one upper and one lower limit value. The limit values are also split into different categories, based on the circumstances of different hotels.

The upper and lower limit values have the following function:

- Exceeding the upper limit is not permitted.
- If energy consumption falls below the lower limit, the company is considered to be energy-efficient, and thus does not need to meet the "Requirements concerning energy efficiency" ("Routines/system for daily energy saving" and "Energy and CO_2-reducing measures").
- If the energy consumption is between the lower and upper limit values, the "Requirements concerning energy efficiency" ("Routines/system for daily energy saving" and "Energy and CO_2-reducing measures") must be fulfilled.

Upper limit value

The upper limit is set based on data from companies already holding the Nordic Swan Ecolabel. There is potential for energy efficiencies in many companies and the upper limit has been set to exclude those who waste energy.

Nordic Ecolabelling's experience shows that energy consumption varies, in part due to the many different types of Nordic Swan Ecolabelled hotels. Varying factors, such as the age and geographical location of the building, also affect energy consumption. Nordic Ecolabelling is aware that certain companies have little control over energy consumption. This is particularly the case for listed heritage/cultural-historical valuable buildings which are protected from external and internal changes, as well as companies that are under renovation. These can therefore be exempted from the upper limit value for energy.

Exceptions are also made for Iceland as the Icelandic energy system is very different from the rest of the Nordic region. Iceland uses geothermal energy for both electricity production and district heating. Most buildings are heated by district heating. Unlike other Nordic countries, which measure district heating consumption in kWh, district heating consumption in Iceland is measured in cubic metres. Heat and hot water are often connected to the same meter, and it can therefore be challenging to distinguish between water consumption for daily operation and water consumption for heating. It is also challenging to convert water consumption in cubic metres to energy consumption (kWh), as all water for heating and hot water is discharged directly to the recipient after use. Based on this, we exempt Icelandic operations from the limit value for energy consumption.

The upper limit value is raised by 5, 10 or 15% depending on the geographical location. This is to ensure climate adaptation, so that a hotel is not excluded simply because of its geographical location.

Lower limit value

The starting point is that around 20-30% of the current Nordic Swan Ecolabelled hotels are expected to fall below the lower limit. The lower limit values are based on data from existing Nordic Swan Ecolabelled facilities and on official building

regulations in the different Nordic countries[1]. Norway's building regulations require the net energy demand of a newly built hotel to be less than 170 kWh/m^2. Finland uses a different calculation method, and the Environment Ministry's regulations set the limit at 160 kWh/m^2. This is a technical requirement and should not be confused with the actual, real-life consumption of an operating hotel.

Nordic Ecolabelling has decided that there is no reason to adjust the lower limit to take into account geographical location. If the hotel does not reach the lower limit, it is not excluded, but needs to fulfil the "Requirements concerning energy efficiency". By not adjusting the lower limit to the geographical location, measures for reduced energy use will be required for more hotels, which is in line with the purpose of the new requirement structure – to ensure that hotels take energy-saving measures.

If the energy consumption of a company is between the upper and lower limits, the "Requirements concerning energy efficiency" must be fulfilled. The purpose of these requirements is to implement energy efficiency measures in those cases with the greatest potential.

7.2 Requirements concerning energy efficiency

Background to requirements O11 concerning routines/system for energy savings

The company must have routines/system for energy savings. Automated lighting controls, whether via room card sensors in guest rooms or motion sensors in corridors and other areas, are the most effective way of saving energy on lighting. However, different companies operate under different circumstances, and not all of them have modern technical installations. Nordic Ecolabelling therefore requires those who do not have demand or sensor controls on guest room lighting to have clear and simple energy-saving procedures for staff to follow. The routines must contain a description of what is carried out in accordance with the requirement, and who is responsible for the implementation of the routines. The conduct of the guests also has a major impact on energy consumption, and it is therefore desirable to encourage the guests to switch off lighting and close windows.

The company must ensure that outdoor lighting is not used unnecessarily. Outdoor lighting and façade lighting can be controlled by a timer or sensors, since there is often no need for lighting, not least during daylight hours. In some cases, outdoor lighting is necessary in the evening/at night for safety and security reasons, but lowering the power of the lighting could still be considered. Outdoor lighting for car parks and garages can be controlled via a timer or sensors.

Some companies have decided that they need outdoor heating for areas on an incline – for example steps, entrances or garage driveways. In this case, it is important to make sure that heating is not used unnecessarily, and that the

[1] Byggteknisk forskrift (TEK17) https://dibk.no/byggereglene/byggteknisk-forskrift-tek17/
Boverkets byggregler (föreskrifter och allmänna råd), https://www.boverket.se/sv/lag--ratt/forfattningssamling/gallande/bbr---bfs-20116/
Finlands byggbestämmelsesamling , https://www.ym.fi/sv-FI/Markanvandning_och_byggande/Lagstiftning_och_anvisningar/Byggbestammelser

heating is controlled according to factors such as season, weather and temperature.

Covering over heated pools can save significant amounts of energy. A cover is only required for outdoor pools. Doing this indoors would also save energy, but there is a debate about whether it has a negative effect on water quality. This is why it is not required by Nordic Ecolabelling.[2]

Background to requirement O12 concerning energy and CO_2-reducing measures

Nordic Ecolabelling has listed a number of concrete energy saving measures. The list also includes some measures (e.g. solar panels, electric vehicles) that in the first instance reduce carbon emissions rather than energy consumption. The applicant must achieve at least 6 points in the list by documenting measures they have already implemented, or plan to in the coming year.

Energy analysis: An energy analysis is highly rewarded as it is a systematic control and analysis, with the aim of identifying energy flows and potential for improved energy efficiency. The analysis will provide proposals for measures to use energy in a more efficient way. The analysis will serve as a basis for decisions on how the company should proceed with implementing energy efficiency measures.

Own measures: The company achieves points by introducing one or more energy-reducing measures. The measures must be measurable and show a 5% reduction in total energy consumption. A theoretical calculation is accepted as documentation. Own measures that are approved are measures that have been introduced in the last year, or measures that are planned in the coming year, no later than one year from the licensing date.

Examples of own measures can be replacement of old energy-intensive equipment, such as heat pumps, air conditioning, energy-intensive equipment for kitchens or light fixtures, light sources etc. Replacement of old windows, re-insulation, installation of a centrally controlled system that controls heating and ventilation as needed, and installation of automatic shut-off of heating and air conditioning if windows are opened, are other examples.

Own production of energy: The company can achieve points by producing its own energy for the operation of the company. For example, by using solar energy via solar panels or solar cells. To achieve points, the energy must go into the operation of the company.

Examples of what do not score points are lamps or other small electronics that are controlled by solar cells.

Heat production: Different facilities have different needs when it comes to heat consumption, depending on the age of the building, windows, location, season and occupancy. It is desirable for a company to have clear procedures for heating its facilities in the most efficient way possible, despite the differing circumstances.

[2] IVL 2015, *Aktiva badhus,*
https://www.ivl.se/download/18.343dc99d14e8bb0f58b76cf/1446478783895/B2231.pdf

Ventilation: Ventilation systems in large buildings with many rooms are particularly energy-intensive. It is therefore important that the ventilation system is properly controlled according to demand, depending on how many guests are on the premises. Ventilation may, for example, be controlled by CO_2 sensors, or occupancy sensors. Timer controls are not as effective, so if these are used, it is particularly important to have good and detailed timer controls for the best possible effect.

Advanced control of the extractor in the kitchen: The ventilation in the kitchen generally needs to operate as long as the kitchen is in use. Demand- and time-controls are both effective methods to ensure that the extractor does not run unnecessarily.

Heat exchangers: Heat exchangers use the residual heat in e.g. ventilation air or wastewater and ensure that it is not wasted.

Demand-controlled lighting: Automatic demand-control of lighting, whether it is sensor control by room cards in guest rooms or motion sensors in corridors and other areas, is the most efficient way to save energy from lighting. To achieve points, over 90% of the hotels' rooms must have demand-controlled lightning.

Light sources: Energy efficient light sources have significantly higher light output and longer life than other light sources.

Transport: Good planning and logistics management can reduce the frequency of deliveries to the company, which in turn is cost-effective and good for the environment.

Environmentally friendly driving: Training in economical driving leads to reduced fuel consumption, which in turn leads to environmental benefits, as well as reduced costs.

Sustainable fuel: Using sustainable fuel reduces the climate impact. The climate impact is different for the different types of fuel, but Nordic Ecolabelling wants to reward those who have replaced fossil fuels.

CO_2 calculation: The CO_2 calculation is to be made using a method that draws on the standards of the GHG Protocol, for example the HCMI method, which relates to "Scopes 1, 2 and 3" as set out in the GHG Protocol. The CO_2 calculation is to be based on the same emission sources each year so that the company can compare its CO_2 emissions from year to year. The GHG Protocol describes the following parts:

- Scope 1: Direct emissions from sources that the company itself controls, such as natural gas, propane and biofuel.
- Scope 2: Indirect emissions from purchased electricity, district heating, district cooling, fuel for the hotel's vehicles, refrigerants and so on.
- Scope 3: Other indirect greenhouse gas emissions, such as emissions from transport, and purchased goods and services. (If the HCMI method is used, only external laundry is included in Scope 3.)

HCMI is an international, industry-specific method used by over 24,000 hotels around the world[3]. HCMI follows the principles of the Greenhouse Gas (GHG) Protocol and ISO 14064. The method gives:

- The hotel's CO_2 emissions per room night (taking into account occupancy rate)
- The hotel's CO_2 per area for meeting rooms (taking into account hourly occupancy)

The calculation also produces a figure for an individual guest's CO_2 emissions (for accommodation: per room or for a conference: use of meeting room).

8 Water requirements

Background to requirement concerning water consumption O13 and requirement regarding limit values O14

There are many different reasons why it is important to save water. After use, water is normally treated in a traditional water treatment plant – which requires energy and chemicals. Saving on hot water is particularly important, as energy is required to heat it up.

During the recent warm and dry years, water has begun to be in short supply in the Nordic region at certain times of the year.

It is obligatory for everyone to meet the limit value for water. The limit value for water is based on the combination of operations within the company (e.g. hotel with restaurant or hotel with pool and restaurant). The requirement asks for water consumption figures per guest. The requirement must be documented by providing information on total water consumption and an overview of the number of guests in the respective categories (hotel, restaurant or conference guest).

In order for companies to be able to obtain a licence, it is essential that they are able to establish their consumption via measurements for each specific operation, using either their own meter or data from the water supplier.

The industry uses the key performance indicator "number of litres per overnight guest", without considering other types of guests, such as restaurant and conference guests. According to Pandox's annual report, water consumption at their hotel properties averaged 179 litres per guest night[4].

If a Nordic company fails to comply with the water limit value at the point of application or renewal, they have 12 months to implement measures to reduce water consumption and comply with the limit value. German and Polish businesses are given 18 months' grace period. An action plan must be drawn up with targets for achieving the limit value within 12 months. Nordic Ecolabelling must approve the action plan.

[3] https://www.tourismpartnership.org/carbon-emissions/

[4] Pandox Annual Report 2018: https://www.pandox.se/globalassets/annual-reports/2018/pandox-ar18-sv.pdf

It is important for the company to ensure that it remains within the parameters set out in the criteria document. Companies must therefore have procedures in place to document the limit values for water consumption.

The annual summary of water consumption is to be included in the hotel's annual follow-up, which must be updated every year and may be checked by Nordic Ecolabelling. The annual follow-up must confirm compliance with the limit value.

Hotels with spa: Most spa areas consist of different types of facilities that use large amounts of water. To have good control over the water consumption in a spa, the department should have one or more water meters that measure the consumption of the installations. Hotels with spas that do not have the opportunity to deduct the water consumption, will usually have difficulties with the limit value. This is because the set limit values have been developed for normal hotel operations without a spa.

Water consumption for the company's spa can be deducted if it can be documented with own measurements, estimates performed by a third party, or other qualified calculations. If the company does not have these possibilities, Nordic Ecolabelling's calculation sheet «Water consumption in spa» can be used. This calculation considers showers, as well as evaporation, filter cleaning and water change for indoor pools. The calculations are conservative and do not consider all the water-intensive equipment that can be found in a spa. Accurate measurements will therefore always be preferred. The calculation sheet is available in the Nordic Ecolabelling Portal.

Background to requirement O15 concerning procedures for resource savings for laundry

Considerable resources can be saved by avoiding unnecessary cleaning of towels, bed linen and guest rooms. A great deal of water, energy and chemicals are used in laundry, so reducing the laundering of towels can generate substantial resource savings.

Good communication with guests about resource-saving measures can contribute to a positive guest experience. Nordic Ecolabelling is able to provide communication material on request. For example:

Towels: "Cutting down on unnecessary laundry is a simple way of reducing the consumption of water, energy and detergent. You can help by hanging up your towel and using it again tomorrow. Small changes can make a big difference – when lots of people get involved."

Background to requirements concerning new purchases O16 and water-reducing measures P1

Nordic Ecolabelling require facilities to have procedures in place for the purchase of new water-related equipment such as mixer taps, shower mixers, toilets, urinals and dishwashers. We consider it important for facilities to be aware that they must purchase the products that are the most water-efficient alternative on the market at that moment. At the same time, we have taken into account that the company must buy products that ensure good water circulation, that the drain is flushed with enough water to prevent clogging and that the shower must be able to rinse out soap and shampoo well enough.

The company can achieve points by implementing water efficiency measures. The requirement table contains examples of measures that the facility has or must put in place. In addition to measures regarding mixer taps, showers, toilets and dishwashers, we have included the option of a facility having its own measures that reduce water consumption by at least 5%.

One example from Sweden is the renovation of bathrooms at three different hotels, which included replacing mixer taps and shower heads. This resulted in a 25% reduction in water consumption, on average, during 2018.[5]

Dishwashers: The water consumption for undercounter machines is set at 2.5 litres per rack. As part of the process, information on water consumption has been obtained from various different producers.[6],[7],[8] There are hood dishwashers available with water consumption figures as low as 1-1.5 litres per cycle.[9] There are also conveyor machines available with water consumption figures as low as 1.4 litres per rack.[9] However, the total water and energy consumption cannot be measured in water use alone. It is important that good procedures are in place to ensure efficient dishwashing/optimum use of the machines' capacity.

Toilet cisterns: The amount of water used for flushing varies, depending on the cistern. Information from manufacturers shows that water consumption varies from 2-6 litres per flush.[10],[11] Toilets with just one flush option/button consume more water than toilets with two flush options/buttons.

Mixer taps/washbasin taps: Non-touch washbasin taps are an effective way of saving water. There are several types on the market, including examples that consume 3.4 litres per minute.[12] Non-touch washbasin taps with sensors that dispense water in timed streams are also highly efficient, and are available with water consumption as low as 0.56 litres per use.[13] These taps are ideal for public areas, but are not well suited to guest rooms in a hotel, since guests need to be able to easily adjust the temperature of the tap water. There are washbasin taps available that consume only 1.7 litres per minute.[14] The washbasin tap has an aerator – a flow regulator that dispenses a constant amount of water, whatever the pressure. To avoid purchasing new mixer taps, it is also possible to install water-reducing valves. The most commonly used of these reduce the water flow to between 3.5 and 8 litres per minute.[15]

Showers: There is considerable scope to save water by replacing showers or fitting a water-saving valve to older showers. An older shower can use up to

[5] Pandox Annual Report 2018: https://www.pandox.se/globalassets/annual-reports/2018/pandox-ar18-sv.pdf
[6] https://www.metos.se/
[7] www.winterhalter.com
[8] www.hobart.no
[9] www.wexiodisk.com
[10] www.grohe.no
[11] www.ifosanitar.no
[12] https://www.oras.com/no/produkter/oras-electra/product/6150F-104/
[13] https://www.oras.com/no/produkter/oras-electra/product/6150F-080/
[14] https://www.oras.com/no/produkter/oras-electra/product/6150F-102/
[15] https://www.divello.com/wp-content/uploads/Product-Data-Sheet-Divello-Classic-Aerator-ECONOM.pdf

24 litres of water per minute, while a water-saving shower uses 6-10 litres per minute.[16]

Urinals: There are two types of urinals, those that use water and those that operate without water. Water-flushing urinals can be sensor-controlled or manual with pressure. The most modern water-flushing urinals have a system that the supplier can calibrate so that the water consumption is adapted to need and water capacity. It is normal to set the urinal consumption between one and five litres of water per flush. Less than one litre is not recommended for hygiene reasons. The water consumption of the most modern urinals on the market varies between 0.5 and 3.5 litres. Nordic Ecolabelling therefore sets a recommended maximum limit for new purchases of 3.5 litres, at a pressure of 3 bar.

9 Waste requirements

9.1 Waste management and limit value for unsorted waste

Background to requirement O17 concerning sorting at source

Nordic Ecolabelling sets strict requirements for waste to ensure that the companies focus on generating the least possible amounts. The aim is also to encourage correct sorting of the fractions that are generated, to ensure the highest possible degree of recycling.

In addition, the requirements are set to make sure that the companies constantly work on meeting the limit value for unsorted waste, and that those who do not get their unsorted waste weighed sort their waste as well as possible.

The number of fractions into which a business can sort its waste is not a measure of how good the company is at sorting its waste. The most important thing is to have good procedures in place so that staff carry out sorting correctly, thus enabling the waste to be recycled.

There are considerable national, and regional, differences in the fractions that the different waste management contractors accept. This is not something the company have any control over, and the requirement has therefore been adapted to take account of all the differences.

Fractions that must be sorted by law are not included on the list. These are fractions that all companies must sort.

Background to requirement O18 concerning amount of unsorted waste

It is important that the company has control over the amount of unsorted waste, and we therefore require monitoring of annual consumption, to ensure compliance with the “limit value for unsorted waste”. Unsorted waste is to be measured in kg per year, and in the annual follow-up the amount is to be compared with the preceding year. An increase in the amount of unsorted waste could be due to higher numbers of visiting guests, renovation work, major events and so on.

[16] https://www.enok.no/enokguiden/07_2.html

Nordic Ecolabelling wants to strive for all waste contractors to be able to deliver measurements of the amount of waste they handle for their customers. In this way the company can use data to monitor changes and assess whether further measures should be implemented to increase the sorting rate. If they are unable to deliver measurements, this must be documented. The company itself must then show that they work actively to minimize the amount of residual waste, by having established an action plan with objectives and measures. It is possible to reduce the residual waste by, for example, increasing the sorting rate, having good training routines and follow-up, encouraging suppliers to reduce packaging, etc.

Background to requirement O19 concerning limit value for unsorted waste

The operation of hotels, restaurants and conference generates large quantities of waste. Companies with larger restaurants are major sources of waste, in the form of packaging and food waste. Nordic Ecolabelling therefore set strict requirements to ensure that the companies focus on generating as little waste as possible, while at the same time ensuring that the waste that does arise is sorted so that it can be sent for recycling. The requirement does not apply to those who are unable to obtain information on the amount of unsorted waste in kg per year.

By setting strict limit values for unsorted waste, we ensure that the company has good procedures for sorting into different waste fractions, while at the same time maintaining a focus on keeping down amounts of waste.

If the requirement is not met at the time of application, we are open to the possibility of the company establishing and implementing an action plan demonstrating that measures are being taken to ensure compliance with the requirement within a year. The nature of the action plan will vary depending on the kind of company involved, but improved procedures for waste management and increasing the level of sorting are likely to be key measures.

Companies that have their waste weighed by a waste management contractor must conduct regular checks of unsorted waste levels.

It is important for the company to ensure that they always meet the limit value, which is why they must submit an annual report of how much unsorted waste they generate.

Background to requirement O20 concerning waste sorting for guests

Nordic Ecolabelling wishes to encourage correct sorting of the waste generated by guests, to ensure a high degree of recycling. Having sorting facilities for several relevant fractions also sends a clear signal to guests that they are visiting an environmentally aware company.

Hotel: Nordic Ecolabelling requires two fractions in addition to unsorted waste. It is up to the company to decide which two fractions are available to the guests for sorting, depending on which fractions the company has, and the physical conditions on site.

Guest rooms: We encourage sorting to be performed by the guests themselves, but understand that this can be a challenge, and that in some cases the best option is for sorting at source to be performed by the staff. If the guests are

expected to sort the waste themselves, it is important to provide clear instructions about sorting. The guests must have the opportunity to leave other factions that may arise, e.g. batteries, larger packaging, bottles, etc., which must be sorted by the staff.

Conference lobby: Guests must be able to sort their waste into at least two fractions, in addition to unsorted waste. If food is served in the conference lobby/area, food waste must be a fraction.

Conference/meeting rooms: Guests must, as a minimum, be able to sort paper waste, since this is often genereated at a conference, and unsorted waste in the meeting rooms. If food is served inside meeting rooms, food waste must either be sorted by the staff, or a food-waste bin must be available.

Restaurants: Where guests are required to deal with their used plates, cutlery and so on themselves, it is important to have an option for sorting food waste, if the waste contractor offers food waste as a fraction. Bearing in mind our requirement concerning "food waste", it is particular important that both guests and staff sort correctly.

9.2 Food waste

Background to requirement O21 applicable amount of food waste

Organic waste consists of a combination of usable and non-usable food. Usable food waste is defined in these criteria as food waste. Nordic Ecolabelling has its own requirements for the prevention of food waste, but still wants the company to have an overview of the total amount of organic waste. EU regulations[17] operate with the term "food waste", which in their definition includes both usable and non-usable food, and an ISO standard for measuring "food waste" is under development. Nordic Ecolabelling follows the development of the ISO standard and wants to prepare companies for the measurement of organic waste/food waste in this context.

Organic waste must be measured in kg per year. More visiting guests, large events and parties, are some of the reasons that may explain the increased amounts of organic waste. It is therefore relevant that the requirement is connected with the number of guests served.

Background to requirement O22 concerning prevention of food waste

Throwing away food is not sustainable. Food waste is a significant problem all over the world, with around a third of all the food produced ending up in the bin.[18] This is ethically indefensible, bad for the environment and makes little financial sense for company.

The aim of reducing food waste is incorporated in the UN Sustainable Development Goals (SDG), with Goal 12.3 expressing a target to halve food waste per person by 2030. All the Nordic countries are committed to this target. EU

[17] Article 2 of Regulation (EC) No 178/2002
[18] Food and Agriculture Organization of the United Nations, FOA: http://www.fao.org/save-food/resources/keyfindings/en/

regulations[19] operate with the term “food waste”, which includes food waste that is both fit and unfit for human consumption. Nordic Ecolabelling distinguishes between food waste fit for human consumption and food waste unfit for human consumption. We set strict requirements for food waste fit for human consumption, as this is where the food services have controllability. Food waste is already a priority theme in the restaurant industry, and we want Nordic Swan Ecolabelled companies to take a conscious approach to food waste and contribute towards less food being thrown away.

The requirement has been developed in dialogue with Nordic food waste organisations, including Norwegian non-profit Matvett.[20] Their “Guide for tracking food waste in the food service sector”[21] has been used in the development of the requirement. Similarly, Denmark has the association Stop Spild Af Mad[22], in Sweden the National Food Administration, the Swedish Environmental Protection Agency and the Swedish Board of Agriculture work together with several actors in “Matsvinnsnätverket”, formerly known as SAMMA[23]. In addition, there is “Cooperation for reduced food waste”, an agreement between players in the food industry, which cooperates to reduce food waste.

There are various national frameworks for food waste, such as an industry agreement between the authorities and the food industry. There are differences between the national agreements in the Nordic, but if all parts in the requirement "Prevention of food waste" are covered (responsible person, measurement, annual follow-up, analysis, information and training) the requirement is considered fulfilled, and the documentation according to the agreement can also be used to meet the requirement. The agreements that have been approved are "Accession declaration, industry agreement on reduction of food waste"[24] and the Danish agreement "Denmark against food waste".[25] Other industry agreements can be approved on request and after examination by Nordic Ecolabelling.

The food waste being referred to here is avoidable food waste, which should not be confused with unavoidable food waste. Avoidable food waste is all the food that could have been eaten by humans, but for one reason or another has not been. Examples of avoidable food waste are brown bananas, stale bread, soft tomatoes, mouldy cheese, off yoghurt, inedible buffet leftovers and so on.

Unavoidable food waste is the inedible parts, such as bones, skin, shells, coffee grinds, potato peel, fish innards, etc. The aim is to use all the edible parts of the food, so that only unavoidable food waste is thrown away. If a large amount of edible food remains attached to inedible parts, for example meat on a bone, this is to be counted as avoidable food waste.

[19] Article 2 of Regulation (EC) No 178/2002
[20] Matvett: https://www.matvett.no/
[21] Veileder for kartlegging av matsvinn, 2018: https://www.matvett.no/uploads/documents/OR.10.19-Veileder-for-kartlegging-av-matsvinn-serveringssektoren.pdf
[22] Stop Spild Af Mad: https://stopspildafmad.org/
[23] Matsvinnsnätverket: https://www.livsmedelsverket.se/om-oss/samarbeten/samarbeten-for-minskat-matsvinn
[24] Tilslutningserklæring: https://www.regjeringen.no/contentassets/1c911e254aa0470692bc311789a8f1cd/matsvinn---tilslutningserklaring-endelig.pdf
[25] Fødevarebranchens gudie til at reducere madspild: https://danmarkmodmadspild.dk/

Measurement of food waste can, according to the requirement, be carried out in two alternative ways. Either by measuring eatable food waste over two periods of the year at least two weeks each time, or by measuring uneatable food waste daily throughout the year.

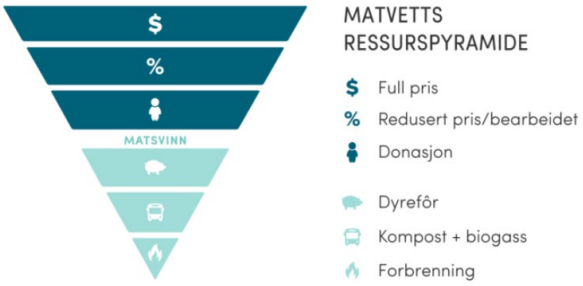
The proportion of eatable food waste in food waste can be calculated based on key figures for the industry, if relevant:

- Hotels: 61%
- Canteen: 65%
- Restaurant: 63%

The key figures are taken from picking analyzes that were carried out in the research project KuttMatsvinn2020.[26]

Background to requirement P2 concerning measures for reducing food waste

Measuring food waste creates an awareness of how much food is being thrown away. It is essential, however, to focus on implementing measures to reduce the amount of food waste – measuring is not enough on its own. Nordic Ecolabelling wants the company to implement concrete measures to reduce food waste. The measures proposed are based on Matvett's resource pyramid[27], and measures such as sending food off to be turned into animal feed, compost or biogas are therefore not approved in this context.



9.3 Disposable items

Background to requirement O23 concerning the ban on disposable items and portion packaging

The aim of the requirement concerning disposable items is to reduce the consumption of disposable items and save on resources, as disposable items are often unnecessary, and they are used for only a few minutes. Portion and small packages with food are also the source of food waste. Companies such as hotels, restaurants and conferences have good alternatives to the use of disposable items

[26] KuttMatsvinn2020 -forskning, 2020 s. 13:
https://www.matvett.no/uploads/documents/KuttMatsvinn2020-Forskning-sluttrapport.pdf
[27] Veileder for kartlegging av matsvinn i serveringssektoren, 2018 s. 6:
https://www.matvett.no/uploads/documents/OR.10.19-Veileder-for-kartlegging-av-matsvinn-serveringssektoren.pdf

and portion packaging in serving situations, and Nordic Ecolabelling therefore ban this.

The EU's Directive on the reduction of the impact of certain plastic products on the environment entered into force on 3 July 2021[28], which point the requirement concerning cutlery, drinking straws, cocktail sticks and toothpicks in plastic are being governed by the directive.

An exception has been made for restaurants that offer takeaway, catering and fast food. Such companies need to be able to use disposable items. In addition, an exemption can be made when serving over 500 guests, if the company does not have sufficient reusable tableware or if the logistics of cleaning are unfeasible.

Coffee capsules:

Nordic Ecolabelling has assessed the use of coffee capsules in hotels, restaurants, food services, conference facilities and venues as a part of an overall evaluation of environmental impact, evolving EU regulations, and Nordic Swan Ecolabel principles. Based on this assessment, coffee capsules are not permitted for use in these settings.

The cultivation and production of coffee have a significant impact on the environment and nature. Coffee is ranked as number five on the list of the most climate-impacting raw materials in our food system per kilograms, following products such as beef, chocolate, and lamb. It is also ranked as number six among raw materials that require the most farmland[29]. In addition, coffee production is one of the leading (7–8) drivers of deforestation worldwide[30], and is therefore regulated by the EU deforestation regulation[31]. While this may suggest a need to reduce coffee consumption overall, Nordic Ecolabelling considers such requirements difficult to implement due to limited controllability, especially in the Nordic countries, which are among the world's largest coffee consumers. However, measures can be taken to promote a shift towards more sustainable coffee, and third-party certification of raw materials and organic farming[32] will therefore play an important role in documenting more sustainable production.

There is variation in the amount of coffee, in grams, used across different machines, including both capsule machines and fully automatic machines. The amount of coffee used to brew a single cup varies depending on the type of beverage selected, the machine system, the capsule manufacturer, and the settings of fully automatic machines. In some cases, users may also adjust these settings themselves, resulting in low controllability.

Life cycle assessments (LCAs) from a producer shows that capsule-based systems can have a relatively low climate impact, as the capsules included in the studies

[28] DIRECTIVE (EU) 2019/904 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019, on the reduction of the impact of certain plastic products on the environment
[29] PLATFORM ON SUSTAINABLE FINANCE: TECHNICAL WORKING GROUP PART B – Annex: Technical Screening Criteria, March 2022
[30] Wedeux B, Schulmeister-Oldenhove A (2021): STEPPING UP? THE CONTINUING IMPACT OF EU CONSUMPTION ON NATURE WORLDWIDE
[31] https://green-business.ec.europa.eu/deforestation-regulation-implementation_en
[32] 2 Eyhorn F, Muller A, Reganold JP, Frison E, Herren HR, Luttikholt L, Mueller A, Sanders J, Scialabba NEH, Seufert V, Smith P (2019) Sustainability in global agriculture driven by organic farming. Nature Sustainability 2:253–255. https://doi.org/10.1038/s41893-019-0266-6

contain a reduced dose of coffee compared to fully automatic machines.[33],[34] These analysis covers a single capsule supplier and, as mentioned earlier, there is a variation in coffee dose between machines. Also, available LCAs do not fully capture the broader environmental considerations. Nordic Ecolabelling's assessment therefore also considers a more general principle of reducing disposable packaging and acknowledges that the choice of machine also can have an impact on the flexibility in the selection of coffee beans, for example, the opportunity to choose certified coffee.

Packaging legislation[35] within the EU and the Nordic countries is guided by a fundamental objective: to prevent waste generation and reduce the use of disposable products wherever possible. Single-serve coffee capsules are explicitly treated as packaging under the regulation and are designed to be used once per beverage. This functional single-use design poses challenges in relation to the preventive principles of packaging legislation. In professional, high-volume environments such as restaurants and conference facilities, capsule systems also risk encouraging unnecessary consumption of packaging per serving, especially when compared to bulk solutions.

A key principle of the Nordic Swan Ecolabel is to promote efficient resource use and material recycling.[36] Coffee capsules are often made of aluminium, plastic, or composite materials,[37] and despite the existence of take-back or recycling schemes, actual collection and recycling rates remain limited in practice.[38] This creates a risk that capsules are treated as residual waste, which is inconsistent with circular economy objectives.

For hotels, restaurants, food services, conference facilities and venues, there are already well-functioning and environmentally preferable alternatives to capsule systems, such as professional machines using whole coffee beans or ground coffee in bulk. These solutions are well suited for high-volume use and offer greater control over both resource efficiency and waste management. If we only look at the packaging and not at the environmental impact from the coffee beans themselves compared to capsule-based systems, these solutions significantly reduce packaging per cup[38].

In addition, maintaining flexibility in coffee delivery solutions is important, particularly in view of future Nordic Ecolabelling requirements, where e.g. the use of certified coffee will be introduced. Bean-based systems are better adapted to such requirements, as they allow easier substitution without relying on system-specific capsule formats.

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[33] Nespresso (2025). *Life cycle assessment of a cup of coffee made from a Nespresso Professional capsule compared with other coffee systems (France).*
Executive summary. Study conducted by Quantis for Nestlé Nespresso
[34] Nespresso (2019). *Comparative life cycle assessment of coffee systems – Original (B2C), Switzerland.*
Executive summary, Quantis
[35] EU Packaging and Packaging Waste Regulation: Regulation - EU - 2025/40 - EN - PPWR - EUR-Lex
[36] Nordic Swan Ecolabel. *How the Nordic Swan Ecolabel contributes to a circular economy.* https://www.svanemaerket.dk/en/business/about-nordic-swan-ecolabel/circular-economy
[37] Nespresso. *FAQ – What are the capsules made of?* https://www.contact.nespresso.com/faq-3/czp/en
[38] Moresi, M., & Cimini, A. (2025). Streamlined life cycle assessment of packaging waste in coffee preparation and consumption. *Italian Journal of Food Science*, *37*(4), 436-477. https://doi.org/10.15586/ijfs.v37i4.3256

As there is clear potential to reduce the use of coffee capsules by switching to bean-based or bulk coffee solutions, and these are well suited for high-volume use and significantly reduce packaging waste, Nordic Ecolabelling excludes coffee capsules in hotel, restaurants, food services, conference facilities and venues.

An exemption from the ban on coffee capsules applies in hotel guest rooms. Read more about this in the background to requirement "O24 Disposable items not permitted in guest rooms."

Background to requirement O24 concerning disposable items not permitted in guest rooms

Nordic Ecolabelling has introduced a ban on disposable items in guest rooms. This is because they are an unnecessary use of resources, and there are plenty of good alternatives. Disposable glasses and cups can be replaced with actual glass and ceramic alternatives, and toiletries can be offered in refillable containers. Other disposable products such as slippers, shower caps, cotton buds, brushes, nail files, shoe polish, sewing kits and so on are not products that all hotel guests need, and the latter disposable products should therefore not be available in the guest rooms. Exceptions are made for the requirement regarding slippers, for hotels with 5 stars according to hotelstars.eu criteria 2020-2025, as this is required to maintain 5 stars.

Exceptions to the requirement:

It is permitted to offer guests disposable items in reception, if the guests have forgotten something or have specific requirements. The requirement also does not apply to single-portion packs of hot chocolate, tea, instant coffee, cocoa, and sugar and milk substitutes, making it possible to offer guests a hot drink if they want one. Stirring sticks in a renewable material and paper coasters are permitted. The use of portion packs that are appropriate in the context of room service is permitted, such as salt, pepper, ketchup, mustard and similar.

It is acceptable to use disposable capsules for coffee machines in guest rooms and/or in the corridor, where it is a question of brewing individual cups. This is permitted to enable hotels to offer guests in-room coffee preparation. In such cases, there are few practical alternatives to capsules and single-serve instant coffee, which both come in individual packaging.

Disposable capsules are not allowed in conference/restaurant or other general/public areas. Read more about this in "Background to requirement O23 concerning the ban on disposable items and portion packaging."

Exemptions are also made for hotels that are rated 5 stars according to Hotelstars.eu, or that are members of recognized luxury hotel segments complying with established standards. E.g. exemption for slippers for hotels with 5 stars according to hotelstars.eu criteria 2020-2025, or cotton pads/makeup pads, Q-tips, and shower caps for hotels that are members of The Leading Hotels of the World or Preferred Hotels & Resorts (collections: Legend, L.V.X., Lifestyle), in accordance with the Leading Hotels of the World Quality Assurance Standards or the Preferred Hotels & Resorts Integrated Quality Assurance Program. For hotels in the Lifestyle collection, the same exceptions apply except for slippers. Other standards may be evaluated if documentation is provided.

Background to requirement O25 concerning disposable items in contact with food and drink, for takeaway, catering and fast-food services

Nordic Ecolabelling wants as few disposable items as possible to be used, but we see that there is a need for takeaway, catering and fast-food. The requirement deals with disposable items in contact with food and drink, such as coffee cups, drinking cups, pizza boxes, salad bowls, sushi trays, containers and paper for wrapping food.

Nordic Ecolabelling wishes to promote products made from renewable raw materials. However, the waste phase is considered an important parameter, since disposable items generate large amounts of waste, and we wish to promote products that can be recycled. Compostable/degradable plastics such as PLA cannot be recycled in today's systems and can also present problems for the existing recycling of materials. These compostable/degradable plastics therefore do not match the EU's objective of increased recycling in the circular economy. Composting and biogas facilities do not wish to have these plastics either, as they create problems in the facilities.

Nordic Ecolabelling wishes to point out that the requirement can be adjusted if, in the future, a recycling system is created for compostable/degradable plastics.

Plastic may, however, be used in cardboard/paper products as a laminate or plastic windows, for example in a baguette/bread bag as a film. In such cases the plastic will still be sorted and sent for incineration, as the situation is today. It is thus exempted from the requirement. Products with plastic windows are relevant for use where the food should be visible.

If it is easy to separate the lid from other packaging, lids are exempted from the requirement. The exception is made as there are several disposable items that meet our requirements, but the associated lids don't. For example, a salad bowl can meet our requirements, while the associated lid does not. The exception only applies if the lid consists exclusively of PET / PE or PP, without added pigment. Other materials are not allowed. This is to ensure the possibility of recycling of the lids that are used. We encourage everyone to choose lids that meet our original requirements for disposable items where possible.

We do not permit metal disposable items, as there are now good alternatives for serving hot foods – the area where this is particularly relevant. One exception is made for large aluminium trays for multiple portions, where return of serving equipment is not possible.

Nordic Ecolabelling wishes to set requirements that ensure a greater degree of recycling, so that the materials can be used again and so contribute to the circular economy, The EU's Waste Framework Directive introduces a waste hierarchy indicating an order of preference for legal and political action to prevent and manage waste, and is usually presented diagrammatically in the form of a pyramid. The most important action is to prevent waste, followed by preparation for reuse, recycling, energy recovery and disposal. The aim is for the waste to be dealt with as close to the top of the hierarchy as possible. The EU document "Closing the loop – An EU action plan for the Circular Economy"[39]

[39] 5 Closing the loop – An EU action plan for the Circular Economy, European Commission 2015 https://eur-lex.europa.eu/legal-content/FR/TXT/HTML/?uri=CELEX:52015DC0614&from=EN

highlights increased recycling and material recovery as a key factor in the circular economy. Nordic Ecolabelling therefore believes it is important to have recycling requirements. It should also be noted that incineration with energy recovery is not considered recycling or material recovery.

Background to requirement O26 banning PVC/PVDC in plastic film

PVC (polyvinyl chloride) and PVDC (polyvinylidene chloride) are often found in plastic film to make the plastic film soft and provide good adhesion. There are currently several alternative plastic films without PVC/PVDC that are well suited for wrapping food. From 1 january 2025 Nordic Ecolabelling therefore bans PVC/PVDC in plastic film at Nordic Ecolabelled companies, due to a number of environmental and health problems associated with chlorine-based materials. The date is set to 1 January 2025 to give businesses time to find good alternative solutions.

PVC (polyvinyl chloride) is one of the most widely used thermoplastic materials. The environmental impact of PVC is primarily associated with emissions of harmful organic chemicals from the entire production chain for PVC, the use of endocrine disruptors such as phthalates as plasticizers in soft PVC and challenges with waste management during production and elimination.

The industry has changede, and soft PVC has now been added to softner for plastic that are less harmful to health. Modern incinerators in Europe have become far more efficient, and emissions of polyaromatic hydrocarbons (PAHs), benzo-α-pyrene, dioxins and furans have been significantly reduced.[40] It is still the case that not all Nordic countries allow the incineration of used PVC due to the amount of neutralization waste it gives rise to. Denmark has waste legislation which states that all PVC must first be sorted out and sent for material recycling, otherwise it must be sent to landfill.[41]

As mentioned, there are other alternatives that are environmentally better, and it is therefore still relevant to ban the use of plastic film based on PVC / PVDC.

10 Sustainable food and drink

10.1 Organic food and drink

Background to requirement concerning organic food and drink O27, O28 and P3

The aim of the requirement is to increase the proportion of organic food in the company.

Achieving the UN Sustainable Development Goals requires a transition to more sustainable food and farming systems that maintain ecosystems, are better

[40] Vallette, Jim & Murtagh, Connie & Dedeo, Michel & Stamm, Rebecca. (2018). Chlorine and Building Materials A Global Inventory of Production Technologies, Markets, and Pollution Phase 1: Africa, The Americas, and Europe. 2018
[41] Kortlægning af PVC i Danmark 2018. Miljøprojekt nr. 2049. Miljø- og Fødevareministeriet, Miljøstyrelsen. November 2018.

adapted to climate change, and improve soil quality.[42] Organic farming is one way to achieve this.[43,44]

Organic farming places an emphasis on ecological balance, local ecocycles and ecological, economic and social sustainability over the long term.[45] Organic methods increase biodiversity and thus help to maintain ecosystem services on which agriculture depends.[46,47,48] The UN's nature panel IPBES also advocates organic farming as a system for promoting biodiversity and ecosystem functions.[49] The UN's climate panel IPCC points out that organic farming can contribute to sustainable land management.[50]

Organic methods lead to higher numbers of active microorganisms in the soil, which give better soil health and soil quality.[51] Artificial pesticides and fertilisers are not permitted, because they have a negative impact on biodiversity, and can leach into groundwater, rivers and seas, thus affecting water quality.

Building up fertile soil and combating weeds and pests instead involves a system of crop rotation with more perennial plants, companion planting, cover crops and green manure, and less tillage of the soil.[52] This also contributes to biodiversity, prevents soil erosion and creates the conditions for carbon storage in the ground. Biological means of controlling pests and mechanical weed prevention methods are usually used. In livestock farming, an emphasis is placed on animal welfare and on the animals being able to exhibit their natural behaviour.

Other discussion points

The greatest criticism levelled against organic farming concerns land use, and the question of whether organic farming can produce enough food to feed the

[42] UN, 'UN Sustainable Development Goals' www.fn.no/Om-FN/FNs-baerekraftsmaal [2 March 2020]
[43] Eyhorn F, Muller A, Reganold JP, Frison E, Herren HR, Luttikholt L, Mueller A, Sanders J, Scialabba NEH, Seufert V, Smith P (2019) Sustainability in global agriculture driven by organic farming. Nature Sustainability 2:253–255. https://doi.org/10.1038/s41893-019-0266-6
[44] Reganold JP, Wachter JM (2016) Organic agriculture in the twenty-first century. Nature Plants 2(2):15221 https://doi.org/10.1038/nplants.2015.221
[45] Arbenz M, Gould D, Stopes C (2016) Organic 3.0 – for truly sustainable farming and consumption, IFOAM Organics International, Bonn and SOAAN, Bonn.
www.ifoam.bio/sites/default/files/organic3.0_v.2_web_0.pdf
[46] Tuck SL, Winqvist C, Mota F, Ahnström J, Turnbull LA, Bengtsson J (2014) Land-use intensity and the effects of organic farming on biodiversity: a hierarchical meta-analysis. Journal of Applied Ecology 51:746–755. https://doi.org/10.1111/1365-2664.12219
[47] Rahmann G (2011) Biodiversity and Organic Farming: What do we know? vTI Agriculture and Forestry Research 3(61):189–208. Metaanalysis of 766 studies.
www.fao.org/fileadmin/user_upload/suistainability/pdf/11_11_28_OA_biodiversity_Rahmann.pdf
[48] Dainese M et al. (2019) A global synthesis reveals biodiversity-mediated benefits for crop production. Science Advances 5(10) eaax0121. https://doi.org/10.1126/sciadv.aax0121
[49] IPBES (2019) Summary for policy makers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.
https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf
[50] IPCC (2020) Summary for policy makers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.
www.ipcc.ch/site/assets/uploads/sites/4/2020/02/SPM_Updated-Jan20.pdf
[51] Lori M, Symnaczik S, Mäder P, De Deyn G, Gattinger A (2017) Organic farming enhances soil microbial abundance and activity – A meta-analysis and meta-regression. PLoS ONE 12(7):e0180442. https://doi.org/10.1371/journal.pone.0180442
[52] Scialabba NEH (2013) Organic Agriculture's Contribution to Sustainability. USDA Organic Farming Systems Research Conference. Conference Proceedings. www.fao.org/3/a-aq537e.pdf

world. Switching to 100% organic farming globally would require more land than conventional farming due to lower yields (at least in industrial nations; in developing nations use of organic farming methods has proven to produce better yields), but there would be less excess nitrogen, and less use of pesticides.[53] If food waste was reduced and food was grown on land that is currently used to grow animal feed, more space would not necessarily be needed.[53] Switching to organic could cut emissions of greenhouse gases, but getting enough nitrogen could be a challenge.[53]

It is uncertain whether organic farming is currently helping to cut emissions of greenhouse gases. Literature reviews from Switzerland and Germany show that when the EU's LCA guidelines are followed, greenhouse gas emissions for organic and conventional foodstuffs are on a par for each kg of product.[54],[55] Both organic and conventional farming have scope for improvement in this area. Organic methods help to store more carbon in the ground, which increases soil quality, but it does not necessarily deliver much of a climate impact.[56]

Differentiation of requirements

Sales of organic food and drink have risen steadily in recent years across the Nordic region. However, there are major differences between the countries. Nordic Ecolabelling has therefore tightened all the minimum thresholds for organic food and drink products for the Nordic countries but has continued with differentiated requirements for each of the countries. Finland and Norway have seen a strong percentage growth in organic food in recent years but are still a long way behind Sweden and Denmark. Denmark has led the way in organic sales per person[57], while Sweden has led the way in switching to organic farming and is also the best in the Nordic region at public sector procurement.[58] The limit values for Germany and Poland are new for version 5.3 of the criteria and have been set after dialogue with the hotel industry in the two countries. The limit value for Lithuania is new for version 5.8 of the criteria and have been set after dialogue with the hotel industry and investigation of the status in the country. Compared to Sweden, Sweden has a significantly more developed and accessible organic food and beverage market compared to Lithuania. While Lithuania is making strides in organic farming and policy support, Sweden offers broader product availability and higher consumer spending. Norway has a smaller share of organic farmland compared to Lithuania, but it maintains strict regulations

[53] Muller A, Schader C, Scialabba NEH, Brüggemann J, Isensee A, Erb KH, Smith P, Klocke P, Leiber F, Stolze M, Niggli U (2017) Strategies for feeding the world more sustainably with organic agriculture. Nature Communications 8:1290. https://doi.org/10.1038/s41467-017-01410-w
[54] Meier MS, Stoessel F, Jungbluth N, Juraske R, Schader C, Stolze M (2015) Environmental impacts of organic and conventional agricultural products – Are the differences captured by life cycle assessment? Journal of Environmental Management 149:193–208. https://doi.org/10.1016/j.jclepro.2017.05.041
[55] Treu H, Nordborg M, Cederberg C, Heuer T, Claupein E, Hoffmann H, Berndes G (2017) Carbon footprints and land use of conventional and organic diets in Germany. Journal of Cleaner Production 161:127–142. https://doi.org/10.1016/j.jclepro.2017.05.041
[56] Gattinger A, Muller A, Haeni M, Skinner C, Fliessbach A, Buchmann N, Mäder P, Stolze M, Smith P, Scialabba NEH, Niggli U (2012) Enhanced top soil carbon stocks under organic farming. PNAS 109(44):18226–18231. https://doi.org/10.1073/pnas.1209429109
[57] Bioforsk Report Vol. 9 Nr.139 2014 Økologisk mat i de nordiske landene - tilgang på råvarer og faktorer som påvirker omsetning av økologisk mat, 2014 http://orgprints.org/30184/1/BIOFORSK%20RAPPORT_9_139_2014%20%C3%98kologisk%20mat%20i%20de%20nordiske%20landene.pdf
[58] EKOMATCENTRUM MARKNADSRAPPORT Ekologiskt i offentlig sektor 2019, http://ekomatcentrum.se/wp-content/uploads/2019/06/Rapport-Marknadsrapport-EMC-2019-2.pdf

aligned with EU standards. Availability and pricing are key barriers in Lithuania.[59],[60],[61]

Restaurants with a higher proportion of organic food and drink than the compulsory threshold is rewarded with points. During the annual follow-up, it may be relevant for Nordic Ecolabelling to conduct random checks of the requirement. Restaurants that are part of a chain can obtain points at chain level, if they choose to document purchases of organic products as an average in % (at chain level, for those companies in the chain that are applying for the Nordic Swan Ecolabel).

The background to the major Nordic differences is complex, including various political strategic initiatives, trends and demand, plus price versus profitability.

The Nordic countries have different organic certification systems for food services. These certification systems are based on slightly different definitions of what can be considered organic, and what should be included in the calculation when working out the percentage of organic purchases. Nordic Ecolabelling has therefore chosen a single Nordic definition of organics in our criteria, and a common calculating system for those that measure organic purchases as a percentage and for those that "count" the number of organic products. The requirement is also formulated in such a way that Danish, Swedish and Norwegian food services can document the requirement via a certificate from a national organic labelling scheme, if they wish.

Iceland lacks sales statistics for organic products, but there is certainly a growing range available in supermarkets. The country has been through an economic crisis that has led to significant price rises for food generally, which may have affected demand for organic food.[57] There are few Icelandic producers with organic certification, and it can therefore be difficult to get hold of "fresh produce" that is organic and Icelandic. However, there is growing demand for other organic goods. Nordic Ecolabelling has therefore chosen to tighten the requirement somewhat by increasing from 5 to 16 products that must be served daily by Icelandic restaurants.

Minimum thresholds have only been developed for the Nordic region, Germany, Poland and Lithuania. If companies outside the region wish to apply for the Nordic Swan Ecolabel, Nordic Ecolabelling will consider the possibility of developing requirements for the region in question.

There was previously an organic food requirement for the Baltic states, but there has been little interest from applicants, and therefore requirements for the Baltic states have not been included in this generation of the criteria.

To reduce the administrative burden for applicants, Nordic Ecolabelling allows companies in Sweden, Norway, Finland, Germany and Lithuania to base the calculation of the proportion of organic food and drink on data from their three largest food suppliers. These suppliers typically account for the vast majority of total food purchases and therefore provide a representative basis for calculating

[59] Organic food consumption behavior in Lithuania: Microsoft Word - Report_ORGANIC FOOD_EN_final.docx
[60] Lithuania - Digital country Factsheet
[61] Market analysis of organic foods in the Nordic and Baltic countries

the organic share. This approach maintains accuracy while significantly reducing documentation workload for businesses with many small suppliers.

Denmark is excluded from this simplification because Danish market structure and national regulations already require complete supplier-level data.

Examples of how to count products in Iceland and Finland:

- One red wine and one white wine, from the same producer = two products
- Two red wines from the same producer = two products (as the wines may suit different types of food)
- Two types of orange juice from two different producers = two products (as there are two different producers, and one may be served at breakfast, for example, and one on the à la carte menu)
- One apple juice and one orange juice = two products
- Bread: one rye bread and one white loaf = two products
- Whole milk, low-fat milk, extra low-fat milk, skimmed milk, cream, soured milk and cultured milk are regarded as separate products for counting purposes
- Natural yoghurt with 3% fat and natural yoghurt with 0.3% fat = one product
- One type of tea and one type of green tea = one product (as this is a narrow product type, the decision is that all teas are to be counted as one product)
- Different types of coffee, espresso and regular = two products
- MSC-labelled fish, different fish species = multiple products (If the company has cod, coley, salmon and prawns that are MSC-labelled, these count as four products if the products are a permanent feature of daily service)
- Seasonal produce that is only served during certain parts of the year can only be counted if it is replaced with other organic products when the season is over.
- NOTE: Products that are a fixed feature of a weekly menu may be counted, in consultation with Nordic Ecolabelling, even if they are not served daily, seven days a week – for example, if organic chicken/fish is on the menu four out of seven days a week.

10.2 Other requirements for sustainable food and drink

Background to requirement O29 concerning drinking water

Water bottled off-site has a significantly larger climate and environmental footprint compared with the same amount of water from the tap. Tapwater ensures savings on materials for packaging and bottles, plus energy and emissions from production and transport. The water supply in the Nordic region is safe, fresh and pleasant, so it is basically unnecessary to buy water, if tapwater is available. The requirement does not apply to carbonated water.

The sale of bottled water is permitted in situations other than as part of table service – for example via room service, catering, takeaway, fast-food, a hotel shop, or reception. Restaurants that sell food and drink over the counter and have both table service and takeaway are permitted to sell bottled water but must also have tap water clearly visible as an alternative for their guests.

Background to point score requirement P4 concerning locally produced food and drink

Achieving the UN Sustainable Development Goals requires a transition to more sustainable food and farming systems, according to the UN and other international organisations.[62] Development of local production is part of this. Nordic Ecolabelling therefore wishes to reward those restaurants that choose to support local food production.

Today's system means that large amounts of food are produced for global markets, but the production is dependent on external inputs and requires considerable resources.[63] This has led to environmental problems such as deforestation, water shortages, soil depletion, loss of biodiversity and increased greenhouse gas emissions.[63] In recent years, the UN and its Food and Agriculture Organization (FAO) have promoted agroecology as the path to more sustainable farming.[64] This is a holistic system that applies organic principles to promote biodiversity and ecosystem services, and takes account of the economic and social aspects of food systems. Several UN reports and research projects on sustainable food production state that agriculture based on local resources and knowledge, local needs, local innovation, small-scale farming and short supply chains is a vital component of any sustainable food system of the future.[63],[65],[66],[67],[68],[69].

Several environmental factors support the promotion of locally produced food in the Nordic region, although not all of them apply to all production in every Nordic country.

Much of the region's biodiversity can be found on farmland. Local food production helps to maintain the cultural landscape and to increase the diversity of wild species, habitats and cultivated plants.[70] Ecosystem services are retained, and the farming becomes more robust. Sales to local markets can encourage farmers to produce a greater variety of crops.[71]

With fruit and vegetables, particularly potatoes and other root vegetables, transport accounts for a large proportion of the environmental impact over their life cycle.[70] Use of local, seasonal produce means that less energy is used and greenhouse gas emissions are lower.[72] When it comes to meat, transport makes

[62] www.fn.no/Om-FN/FNs-baerekraftsmaal
[63] www.fao.org/3/i9037en/i9037en.pdf
[64] http://www.fao.org/agroecology/home/en/
[65] http://www.srfood.org/images/stories/pdf/otherdocuments/20130918_UNCTAD_en.pdf
[66] Global summary for decision makers:
www.globalagriculture.org/fileadmin/files/weltagrarbericht/IAASTDBerichte/GlobalSDM.pdf
[67] http://www.ipes-food.org/_img/upload/files/CFP_FullReport.pdf
[68] www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Etude/201809-ST0918EN-tyfa.pdf
[69] http://www.naturvardsverket.se/Documents/publikationer6400/978-91-620-6842-4.pdf?pid=23308
[70] Charlotte Lagerberg Fogelberg, På Väg Mot Miljöanpassade Kostråd. Vetenskapligt Underlag Inför Miljökonsekvensanalysen Av Livsmedelsverkets Kostråd (Swedish National Food Agency) https://www.livsmedelsverket.se/globalassets/publikationsdatabas/rapporter/2008/2008_livsmedelsverket_9_miljoanpassade_kostrad.pdf.
[71] Johanna Björklund and others, 'Local Selling as a Driving Force for Increased On-Farm Biodiversity', Journal of Sustainable Agriculture, 33.8 (2009), 885–902 <https://doi.org/10.1080/10440040903303694>.
[72] Valérie Masson-Delmotte and others, Climate Change and Land. An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems (IPCC, 2019) www.ipcc.ch

up only a small part of the overall environmental impact, but the Nordic region and Europe generally have low carbon emissions per kilo of protein produced, compared with other regions.[73]

Background to requirement O30 concerning vegetarian dishes

Vegetarian produce has a lower climate footprint and requires significantly less energy and land to generate the same amount of protein and energy, compared with meat production.[74]

Agriculture and forestry account for almost a quarter of the world's greenhouse gas emissions and cause a great amount of damage to and depletion of the planet's resources. A new report[75] from the UN's climate panel states that we need to implement radical changes in order to make agriculture more sustainable. They recommend, for example, that we change how we produce food, manage land and eat. The recommendation is to switch to a more plant-based diet, which will also reduce greenhouse gas emissions. Nordic Ecolabelling wishes to see Nordic Swan Ecolabelled restaurants contributing to demand for plant-based food, and therefore sets requirements in this area.

The criteria cover several different types of food service, and some of them, may not serve hot food. These food services often have a simple offering that includes baguettes and a salad buffet. To meet the requirements, bread products with vegetarian/vegan fillings may be approved, along with salad buffets that contain high-protein ingredients, such as beans, lentils, pasta, rice, couscous, tofu, pearl barley and so on. Note that this only applies to food services that serve cold food.

Where hot food is served, there must always be a hot vegetarian/vegan option. This means that a food service that serves hot food one day a week will not have its salad buffet approved as a vegetarian option on the day of the week that hot food is served.

Restaurants that only serve one dish per day, should have a vegetarian option on the menu.

Companies that only have breakfast service, snacks and simple dishes are exempt from the requirement.

Background to requirement O31 concerning sustainable fish and shellfish

Marine ecosystems are threatened by overfishing, eutrophication, pollution and climate change. The fact that many fish stocks are overfished affects not only the individual stocks, but whole ecosystems. According to the UN's nature panel IPBES, overfishing is the key cause of diversity loss in the oceans.[76] This is

[73] P.J. Gerber and others, Tackling Climate Change through Livestock. A Global Assessment of Emissions and Mitigation Opportunities (Food and Agriculture Organization of the United Nations (FAO), 2013) <http://www.fao.org/3/a-i3437e.pdf>.
[74] Lagerberg-Fogelberg. 2008. På väg mot miljöanpassade kostråd- vetenskapligt underlag inför miljökonsekvensanalysen av Livsmedelsverkets kostråd. Report, 2008:9. Swedish National Food Agency, and Röös. 2012. Köttguiden 2012 – kloka val för miljö och djurvälfärd Utkast 2012-10-10. Swedish University of Agricultural Sciences (SLU).
[75] IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems. 2019. Chapter 5.
[76] IPBES (2019) Summary for policymakers of the global assessment report on biodiversity and ecosystem services. www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services (15.08.2019)

followed by changes to land use. In freshwater, the order is reversed. To avoid use of the most endangered species of fish and shellfish and species that are produced in a not particularly eco-friendly way, Nordic Ecolabelling has drawn up a three-part list of species that cannot be served:

A: Species categorised as critically endangered (CR) or endangered (EN) on the red list of the International Union for Conservation of Nature (IUCN)[77]. Several of the species are also on the OSPAR list of threatened and/or declining species. There is a ban on serving any species of shark or skate, even though not all of them are endangered, since there is a great deal of incorrect labelling.

B: Species categorised as critically endangered (CR) or endangered (EN) on the official red list of the country in which they are fished. Finland, Norway and Sweden have national red lists for both saltwater and freshwater fish, Denmark has a red list only for freshwater fish, and Iceland has no red list. Species that are new to the list in version 5.0 of the criteria are marked*.

C: Tropical prawns. These are not on the IUCN's list, but must not be served because their fishing and farming causes major environmental problems, such as destruction of mangrove forests.[78,79] Mangrove forests are highly productive ecosystems that are home to a huge number of species of fish, shellfish and other animals. They also protect the coasts against flooding and erosion.

Fish and shellfish in category A, B or C may in some cases come from sustainable fisheries or farms. In order for these species to be served, their sustainable production must be documented. They must therefore be certified to standards that meet Nordic Ecolabelling's requirement concerning standards (link to standards requirement). Nordic Ecolabelling currently approves the MSC standard, but not ASC.

An exception is made in Iceland for traditional serving of the shark species Somniosus microcephalus and the skate species Dipturus batis / Raja batis and Raja Amblyraja radiata, because these are traditional dishes served on one day of the year. The shark is served in February and the skate on 23 December. In total, 8 tonnes of the shark species, 145 tonnes of the skate species Raja batis and 614 tonnes of the species Raja Amblyraja radiata are caught each year.[80]

Why does Nordic Ecolabelling not currently approve ASC?

Nordic Ecolabelling assesses standards for raw ingredients when the licensee wishes to use them. Up until now, we have therefore only assessed the ASC standard for tropical prawns (Shrimp, version 1.0, March 2014), and salmon (Salmon, version 1.3, July 2019). At that time, we judged that these did not meet our requirements concerning standards. These were the reasons:

[77] https://www.iucnredlist.org/
[78] Thomas N, Lucas R, Bunting P, Hardy A, Rosenqvist A, Simard M (2017) Distribution and drivers of global mangrove forest change, 1996–2010. PLoSONE 12(6): e0179302. https://doi.org/10.1371/journal.pone.0179302
[79] Richards DR, Friess DA (2016) Rates and drivers of mangrove deforestation in Southeast Asia, 2000–2012. PNAS 113(2):344–349. https://doi.org/10.1073/pnas.1510272113
[80] Statistics Iceland: https://statice.is/statistics/business-sectors/fisheries/catch/

1. Tropical prawns:
- The standard does not contain financial requirements and requirements concerning food safety, something that we require a standard to contain.
- The standard makes no mention that international law/conventions (apart from for chemicals) must be followed. There is only one requirement concerning legality, and that requires local and national legislation to be followed.
- The standard does not contain definitions of the vocabulary used, which makes it vague and open to interpretation.
- It has absolute requirements relating to biodiversity, but these are weak and open to exceptions. It is difficult to see whether the standard really has requirements that are important for the preservation of biodiversity.

2. Salmon:
- Requirements for feed fish are not strong enough yet. It is clear from various reports that in practice there is a lack of traceability and information about where the feed originally comes from.
- There is a risk of GMO soy in feed in countries outside the EU.
- The standard allows the use of copper for fishing nets, which is considered very harmful to the environment.
- The standard does not contain requirements for international law.
- The standard does not contain requirements for food safety.

The tropical prawns standard is under review. There is also a standard for Salmon – 3.1.7 (Sea Lice). Four of the other ASC standards were revised in 2019 (Freshwater trout, Pangasius, Salmon – Smolt [Section 8] and Salmon PTI (Parasiticide Treatment Index). ASC also launched two new standards in 2019 (Tropical marine finfish and Flatfish), and two new standards are under development (Feed and ASC Farm).

We will assess the revised ASC standard for tropical prawns if requested by a licensee. The same applies to the other ASC standards.

Background to requirement O32 concerning palm oil

Different products have different effects, and Nordic Ecolabelling has a particular focus on palm oil. The establishment of palm oil plantations is one of the main causes of rainforest destruction, which threatens the living conditions of indigenous people, plants and animals. The rainforests are particular important for biodiversity, since they are the most species-rich ecosystems on the planet. Cutting down rainforest is also a serious threat to Earth's climate. Other environmental problems relating to palm oil are the use of toxic substances in production, air pollution when burning native forest, soil erosion and sedimentation in rivers and watercourses, and discharges of wastewater from the palm oil mills. Palm oil production is also associated with social issues, including the risk of workers' rights being violated.[81]

To reduce the use of palm oil, a ban is proposed on the use of palm oil in frying oil, which is a product that kitchens often use in large quantities.

[81] OLSEN LJ, FENGER NA & GRAVERSEN J 2011. Palmeolie - Danmarks rolle i forhold til den globale produktion af palmeolie. WWF Rapport DK. WWF Verdensnaturfonden Denmark.

Nordic Ecolabelling has assessed the Roundtable on Sustainable Palm Oil's (RSPO) standard for sustainable palm oil production and judges that it does not fully satisfy our requirements concerning sustainability standards, since it does not give sufficient protection to biological areas and biodiversity. Nordic Ecolabelling therefore wishes to set as strict a requirement as possible concerning palm oil, where there are alternatives to its use.

In product groups where there are still no alternative ingredients or good controls, there is a requirement that the ingredients must hold RSPO certification. In cases where it is difficult to avoid palm oil, certification and the RSPO standard are considered the best tools on the market for more sustainable production.

Background to requirement O33 concerning a ban on GMO

GMO (genetically modified organisms) are a much-debated topic and many countries have banned the cultivation of GM crops. The themes of the debate include food safety, land use, lack of scientific knowledge about the effects of GM crops under local agricultural/forestry conditions and the risk of negative impacts on health and the environment. Nordic Ecolabelling applies the precautionary principle and bases its decisions on regulations that take a holistic approach to GMO. This means that sustainability, ethics, and social benefit are weighed up together with health and the environment. Nordic Ecolabelling is not, in principle, against gene technology and GMO in itself, but is concerned about the consequences of genetically modified plants, animals and microorganisms spreading in nature. Nordic Ecolabelling believes that GMO should be assessed on a case-by-case basis.

Research results have not clearly proven that today's GM plants contribute towards the development of sustainable agriculture with less use of pesticides, and there is a lack of research on the long-term effects of genetically modified plants, including both environmental and socio-economic consequences. There are potential adverse effects of GMO along the entire value chain from research and development of plants, through cultivation, to storage, use and waste management.[82] There is a lack of scientific research concerning several of these phases, plus a lack of wide-ranging assessments.[82],[83],[84],[85] Today's GMOs are also tailored to industrial farming by companies that have established something of a monopoly, and Nordic Ecolabelling wishes to help limit the negative consequences of this.

There is a legal requirement in the EU, Norway and Iceland that all food containing genetically modified ingredients, or ingredients produced from genetically modified organisms, must be labelled as such. Food made from genetically modified organisms, but that no longer contains DNA, must also be labelled. This applies, for example, to cooking oils. Additives such as enzymes, amino acids and vitamins that are produced using genetically modified

[82] Catacora-Vargas G (2011): Genetically Modified Organisms – A Summary of Potential Adverse Effects Relevant to Sustainable Development. Biosafety Report 2011/02, GenØk – Centre for Biosafety.
[83] Kolseth et al (2015) Influence of genetically modified organisms on agro-ecosystem processes. Agriculture, Ecosystems and Environment. 214 (2015) 96–106.
[84] Fischer et al. (2015) Fischer et al. (2015): Social impacts of GM crops in agriculture: a systematic literature review. Sustainability 7:7.
[85] Catacora-Vargas G et al. (2018): Socio-economic research on genetically modified crops: a study of the literature. Agriculture and Human Values 35:2

microorganisms are not in themselves GMOs. They therefore do not require labelling, and their use is permitted in food at Nordic Swan Ecolabelled restaurants. These products are manufactured in closed systems at factories, and Nordic Ecolabelling therefore does not consider their production to be problematic.

11 Biodiversity

The requirement applies to hotels with a garden/outdoor area larger than 1000 m^2.

Background to requirement O34 for improvement of biodiversity in the hotel's garden

Biodiversity deteriorates rapidly, and changes in land use lead to limited habitats, overexploitation of plants and animals, climate change, pollution and foreign, invasive species. The UN's Sustainable Development Goal 15.5 deals specifically with biological diversity and states that the world must reduce the deterioration of habitats, stop the loss of biodiversity and prevent the extinction of endangered species.
Prohibition of herbicides: Pesticides/herbicides are agents that are used to control and kill unwanted plants such as weeds. Historically, several toxic agents have been used, but the industry has developed, and herbicides now degrade more quickly and do not have long-term effects on the environment. Nevertheless, several herbicides can have negative effects on the environment, and it is unclear how their use over time will affect different ecosystems. Nordic Ecolabelling therefore prohibits the use of these, since weeds can be easily removed mechanically without the use of chemicals.

Foreign species: Foreign invasive species are one of the five biggest causes of biodiversity loss. Nordic Ecolabelling therefore wants these species to be removed, and if they return, they must be removed again. In this way, the species are controlled.

Removing these species in favour of local species is good for biodiversity. Objectives to prevent the spread and removal of invasive foreign species are found both in the UN's Sustainable \Development Goals and under the UN Convention on Biological Diversity. These are plant and animal species that can change the living conditions of species that are found naturally in one place, or displace the local species. They can crossbreed with local species, and they can carry diseases. Many alien species of trees and ornamental plants have been imported for horticulture, and have since spread with the wind, with animals or via garden waste. The species that are most at risk of spreading and damaging biodiversity are usually banned from being imported and traded today, but are still found in many gardens and parks. It is not illegal to keep them, but you have a duty to prevent them from spreading. The way that this is followed up varies greatly.

Natural assets: Features of high natural value should be looked after. In some cases, they are mapped by the municipality because they are protected by law. This applies, for example, to old oaks. Nevertheless, the degree of mapping varies between municipalities. There are also features of high value that are not legally

protected, including other large trees, such as beech and birch. Nordic Ecolabelling wants the hotel to take responsibility and ensure that trees that are over 100 years old and natural watercourses are protected as far as possible.

12 Consumption of chemicals

Background to requirement O35 concerning purchasing of chemicals

It is important that the company has good purchasing procedures in place and a person who is responsible for purchasing chemicals, to ensure that only approved chemicals are purchased, in order to uphold that Nordic Ecolabelling's strict chemical requirements are fulfilled throughout the validity period of the licence.

The requirement regarding consumption of chemicals must be fulfilled by any external cleaning service used to clean the hotel as this cleaning is a substantial part of the hotel service.

Background to requirement O36 concerning information on chemicals

Nordic Ecolabelling requires a total overview of all the chemical products and cleaning methods including the use of any type of treated water techniques used by the company. This is in order to understand the demand for and function of the individual chemicals, and to ensure that chemical products or cleaning methods that don't meet Nordic Ecolabelling's requirements are not used. The chemical products must meet all the chemical requirements in the chapter.

Treated water is defined as deionised or demineralised water and other types of "waters" containing not otherwise restricted substances in low concentrations, without surfactants, and with a pH level of 4-10. Each type of treated water must be individually evaluated by Nordic Ecolabelling, who decides whether it fits this product type or not. The amount of treated water does not count as an ordinary cleaning product and shall not be included in the calculation in O37 proportion of ecolabelled chemicals. Water with added washing active ingredients is considered ordinary cleaning. Note that ozone water and electrochemically activated water (ECA water) is not permitted to be used due to requirements O39 and O40 regarding classification and excluded substances.

It is important that the safety of the employees using the chemicals is taken seriously, which is why there is a requirement stating that safety data sheets and user information must be available wherever the chemicals are used either electronically or on paper which is in line with the regulations on the execution of work, which states that "the substance overview must be established electronically and/or be available on paper, and be structured in such a way that it is easy to search for information about the individual chemical".[86]

Background to requirement O37 concerning ecolabelled chemicals

Nordic Ecolabelling sets a strict requirement that ecolabelled products must be used for dishwashing, laundry, and daily cleaning, since the market has a wide choice of ecolabelled products in all categories. Ecolabelled products are products that carry the Nordic Swan Ecolabel, the EU Ecolabel or the Bra Miljöval (Good Environmental Choice) label.

[86] https://lovdata.no/dokument/SF/forskrift/2011-12-06-1357/KAPITTEL_2-1#KAPITTEL_2-1

Chemical consumption has a major influence on the environmental impact of the company. A large amount of chemicals is used in companies such as hotels, restaurants and conference facilities, particularly companies with a large restaurant service and associated dishwashing. The environmental impact can be reduced by using chemicals that contain minimal amounts of undesirable ingoing substances, and by dosing the dishwashing detergent correctly. The requirements concerning chemicals in daily use therefore focus on this.

The requirement also applies if the company uses an external cleaning service.

The use of disinfectant and alternatives to chemical disinfectant products for general cleaning has increased in recent years, and new products have appeared on the market. Among alternatives to chemical disinfectants are ozonated water (ozone water) and electrochemically activated water (ECA water). Nordic Ecolabelling does not allow the use of these, as these products have a harmful effect on the aquatic environment and/or health, and because the use of disinfection in areas where there is no real need for disinfection can contribute to the development of resistance in micro-organisms.

Background to requirement O38 concerning dosing

Correct dosing makes sure that no more than the necessary amount of chemical product is used and also ensures more reliable cleaning. Companies with good procedures for dosing save both money and their environmental footprint.

Dishwasher detergents often account for a significant proportion of the chemicals used by a company, and an automatic system for dosing of dishwasher detergent is recommended. Automatic systems are often installed by the chemical supplier, and tend to come as standard on professional dishwashers. Automatic dosing devices are also recommended for chemicals used in daily cleaning, if the conditions are in place to set up a system that can mix water and chemicals into a solution ready for use. This ensures that no more than the necessary amount of chemicals is used. Manual dosing also works if the right equipment is used, but requires the introduction and training of staff to establish good procedures, which are followed up regularly, to ensure that the dosing equipment is used correctly.

Background to requirement P5 concerning Nordic Swan Ecolabelled laundry services

Nordic Ecolabelling would like the company to use a Nordic Swan Ecolabelled laundry service, if an external laundry service is going to be used. This is because a Nordic Swan Ecolabelled laundry service is more energy-efficient, saves water and has a lower environmental impact than other laundry services. They use chemicals that meet strict chemical and health requirements, and a large proportion of the textiles they purchase are ecolabelled or meet the Oeko-Tex Standard 100. They also reduce the environmental impact that arises from distribution.[87] To obtain the points the majority of the laundry, over 50%, must be cleaned by the Nordic Swan Ecolabelled laundry service. Internal laundering of mops and cloths is accepted.

[87] Background document for Nordic Swan Ecolabelled Textile Services, version 4.0, 12 June 2018 – 30 June 2023

Choosing an ecolabelled laundry service makes a significant difference, and the distribution between the laundry and the customer is of less environmental significance than many people think. A life cycle assessment of towel rolls[88] shows that distribution accounts for 5% and the laundry accounts for 80% of the energy consumption over the life cycle.[89]

Background to requirement O39 concerning classification of other chemicals

The requirement has been amended in relation to the previous generation. Nordic Ecolabelling has now chosen to specify the types of products that must meet the requirements concerning hazard classification. Cleaning products used for maintenance, typically of equipment such as coffee machines and so on, are exempt from the requirement. Fabric softeners and silver polish are not included in the text of the criteria, as ecolabelled versions of these are available. The market offers fabric softeners with the Bra Miljöval label and silver polish with the EU Ecolabel. Fabric softeners are also considered a product which use is unnecessary in this context.

Use of chemicals is of great significance to the environmental impact of the company. Hotels, restaurants and conference facilities need to be able to use a number of chemical products for purposes other than daily cleaning. Although the products may only be used periodically, their volume over the course of a year can mount up to a considerable amount. There are therefore strict requirements concerning classification of other chemical products, as these products often contain ingoing substances that are harmful to health and the environment that Nordic Ecolabelling want to avoid. The requirement concerning other chemicals that cannot be ecolabelled has been set on the basis of Nordic Ecolabelling's objective to reduce ecotoxic substances in the aquatic environment, and in order to safeguard the working environment for the staff.

Regarding air fresheners/fragrance diffusers, these must not be classified according to CLP Regulation (EC) No 1272/2008. Air fresheners include fragrance diffuser, fragrance sprays, and any fragrances used in scent machines, intended to disperse into indoor areas.

Background to requirement O40 regarding prohibited substances

Poly- and perfluorinated alkylated substances (PFAS) constitute a group of substances, which have adverse properties. The substances are often found in floor care products. Certain compounds are divided into stable PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid) and similar substances. The substances are very persistent and are easily absorbed by the body[90], at the same time as they affect biological processes, are suspected of being endocrine disrupting, carcinogenic and have a negative effect on the immune

[88] Schmidt, A. (2000): Life cycle assessment of towel rolls (3rd ed.). dk-TEKNIK ENERGY & ENVIRONMENT
[89] Frydendal, J; Schmidt, A. & Zeuthen, J. (2000): Towel rolls in a life cycle perspective. Sophus Berendsen A/S & dk-TEKNIK ENERGY & ENVIRONMENT
[90] Borg, D., Tissue Distribution Studies And Risk Assessment Of Perfluoroalkylated And Polyfluoroalkylated Substances (PFASS),Doktorsavhandling, Institute Of Environmental Medicine (IMM) Karolinska Institutet, Stockholm, Sweden 2013
http://publications.ki.se/xmlui/bitstream/handle/10616/41507/Thesis_Daniel_Borg.pdf?sequence=1

system.[91] On the basis of these unfortunate properties, Nordic Ecolabelling has decided to ban such floor care products.

Disinfectants:

“Chemical-free cleaning" has become more popular in recent years, and ozone water is one of many competitors. The idea of producing ozone in water became popular in the 2010 in the Nordic countries. Ozonized water is produced by infusing water with ozone gas. Ozone itself is a toxic gas and dangerous to humans even at low concentrations. According to the 23rd ATP (Adaptation to Technical Progress) to the CLP Regulation [92], ozone is classified as: Ox. Gas 1 H270 may cause or intensify fire, oxidizer, Carc. 2 H351 suspected of causing cancer, Muta. 2 H341 Suspected of causing genetic defects, Acute Tox 2 H330 fatal if inhaled, STOT SE 2 H370 causes damage to organs (nervous system). The new classification will enter into force on 1st February 2027. Nordic Ecolabelling has decided to ban the use of ozone water, due to this classification. It is a concern that occupational exposure limit values can be exceeded when the product is produced, in addition to the gas's high reactivity and possible harmful reaction products.

The Finnish Institute for Health and Welfare (THL) does not recommend the use of ozone water produced at home from household water and have several concerns about the use. [93]

Organic and reactive chlorine compounds, such as sodium hypochlorite, are ingredients used in disinfectant and antibacterial products. The ingredients may be toxic or lead to the formation of toxic non-degradable bioaccumulative substances. On the basis of this, Nordic Ecolabelling has decided to ban these ingredients in disinfectants.

Electrochemically activated water (ECA water) is often marketed as harmless and consisting only of water and salt. This is not completely correct. The product is produced at the user site by sending electricity through the salt water, which causes the formation of hypochlorite. ECA water can also increase the use of disinfectants in areas where there is no real need for disinfection, which can contribute to the development of resistance in microorganisms. Nordic Ecolabelling therefore does not allow the use of ECA water at Nordic Swan Ecolabelled companies.

Background to requirement O41 concerning plastic granules for dishwashing

Nordic Ecolabelling wants the use of non-degradable plastic granules in specially adapted dishwashers to be phased out. These are machines that use plastic granules, chemicals, high pressure and heat to clean commercial kitchen equipment.

[91] Heilmann, C. et al, Persistente fluorbindelser reducerer immunfunktionen, Ugeskr Læger 177/7, 30.3.2015 OSPAR 2005: Hazardous Substances Series, Perfluorooctane Sulphonate (PFOS), OSPAR Commission, 2005 (2006 Update), MST, 2005b: Miljøprojekt nr. 1013, 2005, More Environmentally Friendly Alternatives to PFOS-compounds and PFOA, Miljøstyrelsen, 2005.
[92] the 23rd ATP (Adaptation to Technical Progress), April 2025: Commission Delegated Regulation (EU) 2025/1222 of 2 April 2025 amending Regulation (EC) No 1272/2008 of the European Parliament and of the Council as regards the harmonised classification and labelling of certain substances
[93] Käykö otsonivesi pintojen tai ihon desinfiointiin? THL, 2023

The dishwashers that use plastic granules for cleaning continuously release plastic granules, and fragments of plastic granules, into the drain, unintentionally. Some is captured in the grease trap, while some goes on to the water treatment plants. The plastic often ends up in the sludge. Also, a small proportion of the microplastic that is generated is emitted together with the treated wastewater.

The sludge from the treatment plants is used as a fertiliser/soil improver in agriculture, and the microplastic is thus spread over large cultivation areas. Microplastics can have harmful effects on health and the environment. This is due to size, low degradability, and the fact that they accumulate in living organisms such as fish and shellfish and affect them physically or because they carry harmful chemicals with them. There is a lack of knowledge about the effect of plastic, and Nordic Ecolabelling therefore wants to contribute to reducing emissions of microplastics to the environment.
If granules of degradable material are developed, these may be used. This presupposes that the granulate is degradable in soil in the Nordic climate, and does not contribute to emissions of plastics and microplastics, or have other negative environmental consequences.

Background to requirement O42 concerning water treatment

Nordic Ecolabelling does not want water treatment at Nordic Swan Ecolabelled companies, unless a risk assessment of the internal piping system and any aerosol spread of Legionella has been carried out, documenting the need for water treatment. Increased presence of biocides and heavy metals, such as silver and copper ions, in the water is bad for the aquatic environment, and may contribute to increased antibiotic resistance.

Water treatment that is applied to all the water coming into a company means that all the drinking water and water for cooking contains larger amounts of harmful chemicals than are strictly necessary. The requirement is made to reduce the use of harmful chemicals, and to prevent the implementation of unnecessary preventive chemical treatments to combat Legionella.

The Norwegian regulation on environmental health protection[94] states that companies (such as hotels) have a duty to provide sufficient protection against the aerosol spread of Legionella. A risk assessment is to be carried out and procedures put in place to ensure that the operation and maintenance of the company provides satisfactory protection against Legionella. “The facilities shall be inspected regularly, and routines shall be established on the basis of a risk assessment to ensure that operation and maintenance provide satisfactory protection against Legionella.”

The Norwegian Institute of Public Health (FHI), for example, is able to provide risk assessments, advice and guidance on surveys and management. In Appendix 6, Nordic Ecolabelling has collected recommendations from FHI, which we require as a minimum for a risk assessment, if it is decided that water treatment with chemicals is necessary at the hotel.

[94] Forskrift om miljørettet helsevern, kap. 3, §11a

FHI recommends that all water in water heaters should regularly be heated to at least 70°C. A properly designed system and established operational procedures that ensure good circulation and sufficiently high water temperatures and low cold water temperatures are the best insurance against the growth of Legionella bacteria. In addition, hot water systems, and in some cases cold water systems, must be cleaned and disinfected under the following circumstances:

- As part of a plan drawn up based on risk assessments and if routine inspections and analyses indicate that this is necessary.
- If the system has been out of use for more than a month, such as at a hotel in low season.
- If a system or parts of it have been subject to significant changes or been opened for maintenance purposes in such a way that the risk of Legionella growth has increased.
- During or after an outbreak or suspected outbreak of Legionnaire's disease, but only after samples have been taken to check for Legionella bacteria.[95]

13 Purchasing of ecolabelled goods and services

Background to requirement O43 concerning purchasing

Nordic Ecolabelling requires the purchasing of ecolabelled products and services, as these have a lower environmental impact compared with non-ecolabelled purchases.

We require that 100% of all printed matter comes from ecolabelled printing companies. Printed matter means, for example, flyers, brochures, pads and stationery with a logo. It is not obligatory for the printed matter to be ecolabelled but note that ecolabelled printed matter must be actively requested when ordering. Even if the printing company is ecolabelled, the printed matter is not marked automatically. The purchasing manager is responsible for ensuring that the Nordic Swan Ecolabel or EU Ecolabel logo and the printing house's licence number are on the ecolabelled printed matter.

Nordic Ecolabelling's environmental requirements for tissue paper cover everything from forestry and the choice of raw materials to low energy consumption and low carbon emissions, cleaning emissions to air and water and control of the use of chemicals and eutrophying and acidifying substances such as sulphur and nitrogen oxides.

Ecolabelled copy/printing paper means that the fibre comes from sustainable forestry and/or recycled paper. Labelling only with the PEFC or FSC logo is not sufficient, however, as these labels only cover the forest raw material. Paper labelled with the Nordic Swan Ecolabel or the EU Ecolabel ensures that, as well as the forest raw material being sustainable, the manufacturing process has low emissions to air and water. It is manufactured with efficient energy use and a limited amount of chemicals. Copy/printing paper refers to ordinary white, A4 office paper.

[95] Norwegian Institute of Public Health: Forebygging av legionellasmitte – en veiledning. 2015

Background to requirement P6 concerning purchasing of ecolabelled products and services

Nordic Ecolabelling rewards the use of ecolabelled goods and services by having a point score requirement containing a list of goods and services for the facilities to choose between.

Nordic Ecolabelling has introduced a common point score requirement bringing together consumables, durable goods and services in one table. We have tightened the requirement, so that to obtain points 100% of the total purchase of the good/service in question (per category) must be ecolabelled. This makes it easier to document the requirement and to check compliance on site.

Ecolabelled electricity: Nordic Ecolabelling wishes to promote electricity production with as low an environmental impact as possible. There are various ecolabel systems that ensure that renewable production meets certain minimum environmental requirements. The systems are often based on the EU's guarantees of origin for renewable electricity, but also ensure extra environmental value.

To achieve this point requirement, it is not enough to just buy renewable electricity. The electricity must be ecolabelled by a labelling scheme approved by Nordic Ecolabelling. What is approved must be investigated by Nordic Ecolabelling.

Reuse: Points are awarded for the reuse of furniture, materials and textiles, as this contributes to the circular economy. Regarding textiles, innovative companies have started upcycling discarded textiles. They use the discarded textiles and redesign them for various new clothes, such as workwear, aprons and chef's coats. To obtain points, the purchase must be of a significant scope. Nordic Ecolabelling determines whether the scope qualifies for points.

14 Changes compared to previous generation

Product group change

Generation 5 of the criteria and product group 055 will only be relevant for hotels with or without a restaurant and/or conference facilities.

Previously, requirements for restaurants and conference facilities without accommodation have been included in the product group 055 Hotels, restaurants and conference facilities. These have now been removed from the product group 055, and separate criteria have been developed – "Food services and conference facilities (without accommodation)", product group number 110.

Structure

The structure has been amended to make the criteria intuitive. The aim is to make it clear which requirements apply to whom, since the product group definition includes different combinations of companies. The number of point score requirements has been significantly reduced, while retaining flexibility by introducing obligatory requirements that offer a choice of measures to be implemented.

Environmental management

We want a greater focus on a good dialogue with the licensee and the requirement for annual follow-up has been adjusted. The obligatory requirement for continuous improvement is also new.

Energy

The energy requirements have been changed and tightened. An upper limit value has been defined for the use of energy, in order to prevent companies with too high energy consumption from being Nordic Ecolabelled. Fossil oil and gas is not allowed for heating. Businesses that are energy efficient with low energy consumption have passed the energy requirement and do not need to document their energy efficiency further. Businesses with medium energy consumption must carry out energy-reducing measures.

Water

The requirements for water consumption have been changed and tightened. The limit value for water consumption is obligatory for everyone, unlike in generation 4, where the hotel could choose between the limit value for either water or waste.

Waste

The requirements for waste have been changed and tightened. There is now an obligatory limit value for unsorted waste, unlike in generation 4, where the hotel could choose between the limit value for either water or waste.

The criteria contain a new and comprehensive requirement for food waste, which involves measurement, analysis, information to guests, training of employees and annual follow-up.

The requirements for disposable items have been tightened considerably, and prohibition requirements for PVC in plastic film have been added.

Sustainable food and drink

New requirements have been introduced concerning palm oil, and the requirements concerning organic food and vegetarian food have been amended and tightened up. Locally produced food is promoted to a higher degree than before. Serving of bottled water bottled at a brewery is not permitted when serving water at the table. The requirements for sustainable food and drink include point score requirements to encourage improvements.

Biodiversity

New requirements for biodiversity have been introduced for hotels with gardens/outdoor areas over 1000 m^2, in order to limit the loss of biodiversity.

Chemicals

The requirements have been changed and tightened. 100% of the products for general cleaning, dishwashing, window cleaning and laundering must be ecolabelled. In addition, we have requirements concerning classification and ingredients for the other chemicals that are used in smaller quantities.

Requirements for water treatment have been added, as well as requirements regarding the use of plastic granules for dishwashing.

Purchasing

Requirements for the purchase of ecolabelled products and services have been changed, tightened and simplified. 100% of tissue paper and copy paper must be ecolabelled. 100% of all printed matter must be from an ecolabelled printing company. The business is rewarded with points for purchasing other ecolabelled products and services.