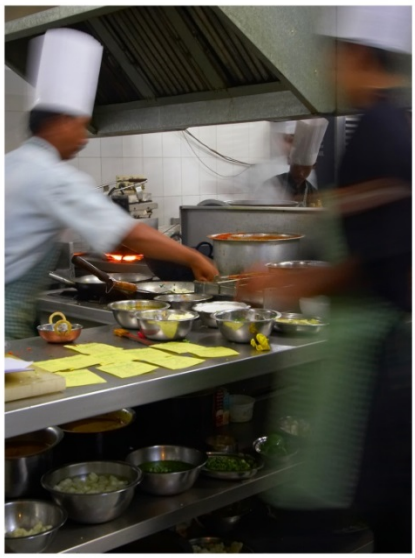
About Nordic Ecolabelled

Hotels, Restaurants and Conference Facilities


Version 4.7

Background to ecolabelling
10 November 2020

Nordic Ecolabelling

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This document is a translation of an original in Swedish. 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 Ecolabel. These organisations/companies operate the Nordic ecolabelling system on behalf of their own country's government. For more information, see the websites:

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1 Summary

This document explains the background to the criteria set out in the criteria document "Nordic ecolabelling of hotels, restaurants and conferences v. 4". It also provides justification of the criteria for applicants, users and other interested parties. When setting out criteria at Nordic Ecolabelling, the product's environmental impact is assessed throughout its entire life cycle and in selecting the criteria the RPS (relevance, potential and steerability) of the individual requirements are assessed.

The main criteria for ecolabelling hotels, restaurants and conference facilities are criteria related to energy, chemicals and water consumption, and to minimising waste. The purpose is to reduce environmental impact by setting criteria that encourage:

- Operations with low energy consumption
- Operations that use chemicals with a low environmental impact and have a low water consumption
- Sorting and recycling of waste
- Restaurants with a high proportion of organic food and beverages

The criteria are divided into a common section applicable to all kinds of business. This is followed by a number of sections that are specific to particular types of business (such as the section on "Food" for restaurants and the section on "Guest rooms" for hotels).

The most important changes made in this version of the criteria are:

Technical/structural changes

- The criteria for hotels and restaurants have been merged into one document. This merging leads to for instance a tightening for the hotels that have a restaurant that earlier had easier requirements for their restaurant business. It also leads to a tightening of requirements for restaurants that earlier did not have requirements on limit values neither for energy, water or waste.
- The criteria now also include conferences (without accommodation).
- If several of these different elements are part of the same business or are marketed/perceived as a unit, all of them must be included in the licence.
- It is now possible to apply for a licence in the Baltic States.
- An energy tool has been developed to calculate business-specific limit values relating to the type of business, plus its heating method, area, number of guests, climate zone, etc.
- There is a new electronic application guide, My Swan Account that also are further developed with a product data base for chemicals.

Environmental improvements/tightenings

- The business must fulfil the energy limit value and another limit value of the applicant's choice. For hotels there were also a limit value for energy in the previous version, but for restaurants this means a tightening as the requirement on energy limits is obligatory even for them. Also conference facilities must fulfil the obligatory requirement on energy limit. For hotels the energy limit is tightened.
- New in this version is point requirement on CO_2-emissions.
- The limit values for water and waste have been retained, but are calculated in a different way compared with previous criteria for hotels. For restaurants limit values on these parameters are new in this version and therefore a tightening.
- New obligatory requirement on the use of fossil oil in oil boilers at the premise.
- The limit value requirement for chemicals has been removed, and instead stricter requirements have been set regarding the proportion of ecolabelled chemicals. The proportion of ecolabelled chemicals for cleaning has been raised from 50% to 80% compared to the earlier version for hotel. For restaurants the proportion of ecolabelled chemicals for cleaning and dish washing was earlier 70%.
- The requirement to non-ecolabelled chemicals also includes special cleaning products.
- The requirements on the proportion of organic food and beverages have been tightened up. For hotels with restaurant the requirements will be a tightening compared to earlier version as there is an obligatory limit on the proportion of ecolabelled food and beverages served.
- The requirements on fish that may not be served have been tightened up.
- The requirement on serving vegetarian dishes is now obligatory.

Alternative requirements for restaurants (from 2017-11-08)

Nordic Ecolabelling has noted that restaurants that are not part of a hotel business have had major difficulties documenting our required demands on water and energy. We have therefore developed an alternative section for these requirements. It is our hope that this section will be easier applied within the restaurant industry.

The new alternative environmental requirements apply only to restaurants that are not part of a hotel / conference operation and can be found in the criteria document as Chapter 5, Alternative Requirements for Restaurants.

The most important changes are:

- There are no obligatory limit values for energy and water. Such alternatives are required to:

  1. There must be routines for new purchases of energy-intensive equipment.
  2. The staff shall be properly trained of the efficient use and maintenance of energy-intensive equipment.
  3. The restaurant shall meet energy and water efficiency measures.

- The restaurant must have control over its food waste through obligatory measurement.
- The restaurant is encouraged to take actions to reduce its food waste.
- The requirements for organic food and beverages has become stricter and as an obligatory level, the lowest level of existing organic labelling systems for restaurants in Norway[1] and Denmark[2] has been chosen.

[1] http://debio.no
[2] http://oekologisk-spisemaerke.dk

2 Basic facts about the criteria

2.1 Products that can be labelled

Hotels, youth hostels, restaurants and conference facilities (see definitions below) can be awarded the Nordic Ecolabel.

If several of these different elements are part of the same business or are marketed/ perceived as a unit, all of them must be included in the licence.

Hotels and youth hostels
Establishments that offer accommodation can be Nordic Ecolabelled. In general, this means hotels and youth hostels. The businesses that do not offer breakfast must meet a stricter limit value, see chapter "Limit values for energy"

Restaurants
The term restaurant includes all businesses that serve prepared food that is to be consumed on the premises. This includes restaurants, institutional kitchens, canteens, street kitchens, and cafés, as well as canteens in schools, hospitals, etc. Catering operations and take away restaurants can also be awarded the Nordic Ecolabel.

The primary function of the operation must be to prepare and serve food.

Conference facilities
Conference facilities that do not offer accommodation can only be awarded the Nordic Ecolabel if the licence includes a Nordic Ecolabelled restaurant, either run by the business itself or under a contract with a sub-contractor. This means that if the conference facility has its own restaurant, the requirements in this criteria document must be fulfilled. If the conference facility has an agreement with a sub-contractor, this sub-contractor must be a Nordic Ecolabelled restaurant.

Spas
If the applicant business includes spa operations, this operation must, as a starting point, be included in the limit value requirements for energy (obligatory requirement) and water (optional to fulfil). Exceptions may be made if the business through measurement or through an external professional assessment is able to separately account for its consumption of water and energy. Note that it is not possible to market a business as a "Nordic Ecolabelled spa" even if its consumption is included, because the Nordic Ecolabel's criteria do not cover the health treatments that are often associated with a spa.

Limitations
Only businesses that are located in the Nordic or Baltic countries can be Nordic Ecolabelled as the obligatory energy limit value necessitates a geographical restriction within these climate zones.

Accommodation/restaurants/conferences on cruise ships/ferries/trains cannot be awarded the Nordic Ecolabel within the framework of these criteria.

See further justification for limitations in Section 5.1, What can carry the Nordic Ecolabel.

2.2 Justification for Nordic Ecolabelling

Hotel, restaurant and conference operations are central services in the tourism industry. Tourism has been steadily growing in recent decades and today is one of the most important industries in the global economy.

Hotels, restaurants and conferences are similar operations from an environmental perspective. The most important environmental areas are energy, water, waste, chemicals, purchasing and food. These are shared by all these businesses, however to varying degrees.

As in previous revisions of the criteria, the building is not included due to the length of its lifetime. Environmental criteria regarding the building, e.g. from an energy perspective, are set on the basis of the usage phase.

The criteria thus focus on operation of the business.

The RPS is high for the areas of energy for operation and maintenance (heating, cooling, hot water, etc.), consumables, carbon emissions, dishwashing chemicals and food. It is medium for energy consumption for kitchens, lighting and machinery, and medium for waste water and chemicals. However, the RPS is low for transport and certain chemicals (where steerability is low). For more information about RPS and environmental impact from hotels, restaurants and conference facilities, see chapter 4.

The criteria have had an impact on the market and we are seeing continued demand for Nordic Ecolabelled hotels and restaurants. Interest has also been expressed from the conference and meetings industry in being able to Nordic Ecolabel conferences.

2.3 Version and validity of the criteria

Criteria for **hotels** version 1.0 was adopted on 1 October 1999. The criteria were revised and version 2.0 was adopted on 3 October 2002. The most significant changes in this revision were that the requirements were clarified, the number of requirements cut, and the document generally made more user-friendly. Version 3.0 of the criteria was adopted in June 2007[3]. Certain adjustments were made, including the requirement on chlorine, and a number of editorial changes were made and the current version is version 3.5, which is valid until 30 June 2015.

In 2004 a pilot study was carried out for **restaurants** which resulted in completed criteria, version 1.0 in December 2006[4]. The criteria were extended in November 2009 and the current version is version 1.5, which is valid until 30 June 2014.

An RPS study for **conferences** was presented to SLM in November 2009 and it was decided to incorporate conferences in the upcoming development of the criteria, provided that ecolabelling also covers serving food or accommodation.

The new version 4.5 including a new Chapter 5 Alternative Requirements for Restaurants not included in a hotel / conference business, was decided by The Nordic Ecolabelling Board on 2017-11-08.

[3] Background Hotels, http://lli.sis.se/livelink/livelink?func=ll&objId=4852552&objAction=browse&viewType=1
[4] Background 08.02.2007, http://lli.sis.se/livelink/livelink?func=ll&objId=4853084&objAction=browse&viewType=1

2.4 The Nordic Market

Information on the total capacity and the distribution of occupied rooms per target group for hotels in the Nordic market is shown below. Turnover information is also provided for restaurants in the Nordic market.

Hotels

Table 1 Total capacity[5]

	Sweden		Denmark		Norway		Finland		Iceland[6]	
Total capacity (beds)	No. of beds	No. of establishments	No. of beds	No. of establishments	No. of beds	No. of establishments	No. of beds	No. of establishments	No. of beds	No. of establishments
Total hotels	224,444	1,985	111,488	504*	146,197	1,075	106,413** 137,165***	632** 1,061***	19,907	325
Cottage villages	41,528	271	Included above		79,064	168				39
Youth hostels	42,642	782		100	8,859				1,514	37

**only hotels with more than 40 beds are included in the statistics*
***hotels only*
****including cottages and hostels*

Table 2 Distribution of target group, occupied rooms

Distribution of target group, occupied rooms as %, data from 2010	Sweden	Denmark	Norway	Finland	Iceland
Number of nights	18,293,840	14,626,919	968,606	11,101,377 (hotels only)	1,309,691
Corporate market					
Business and professional travellers	51.1%	25.1% (3,664,327)	44.3% (429,200)	-	-
Conference guests	12.1%	11.6% (1,692,878)	10.5% (101,866)	-	-
Private market					
Group guests	8.1%	9.2% (1,340,244)		-	-
Leisure travellers	28.6%	53.0% (7,758,594)	45.2% (437,540)	-	-
Other		1.2% (170,876)			

[5] Figures refer to 2010

[6] http://hagstofan.is/?PageID=684&src=/temp/Dialog/varval.asp?ma=SAM01200%26ti=Frambo%F0+gistir%FDmis+%E1+h%F3telum+og+gistiheimilum+2000%2D2010%26path=../Database/ferdamal/GiHotGist/%26lang=3%26units=Fj%F6ldi

Restaurants

Table 3 Total turnover restaurants

	Sweden (2010)[7]	Denmark (2009)	Norway (2009)[8]	Finland (2010)[9]	Iceland
Total turnover	SEK 74 billion (excluding VAT)	DKK 28 billion[10]	NOK 0.36 billion	EUR 7.06 billion (including VAT at 13%)	-
Restaurants		43%			
Hotel restaurants	13.4%	13%[11]	72.0% (26,013.6)		-
Cafés	5.0%	16%[12]		EUR 0.67 billion (including fast food) including VAT	-
Fast food	13.1%	22%[13]			-
Lunch and local restaurants	43.0%	Included in other figures			-
Roadside restaurants	7.9%	Included in other figures			-
Entertainment	12.0%	6%[14]	5.3% (1,916.8)		-
Staff	5.7%	-	22.7% (8,192.4)	EUR 1.01 billion (including catering) including VAT	-

2.5 The impact of the Nordic Ecolabel in the market

The Nordic Ecolabel's criteria for hotels have had a major impact in the markets in all of the Nordic countries, with the greatest impact in the Swedish market. The number of licences has more than doubled in several years and the trend is set to continue. The evaluation from 2009 found a significant environmental benefit from the measures that the hotels have carried out to meet the criteria.

The table below shows the number of hotels and restaurants respectively in the different Nordic countries.

Table 4 No. of licences

Country	No. Hotels (November 2011)	No. Restaurants (February 2011)
Denmark	27	0
Finland	29	8
Iceland	3	1
Norway	62	5
Sweden	291	36
The Nordic countries	412	50

[7] http://www.scb.se/Pages/PressRelease____309494.aspx
[8] http://www.ssb.no/reiseliv/
[9] Restaurant data is from the sector organisation (http://mara.fi). Their figures (restaurants) include VAT (13%) which data from central statistics offices (hotels) does not. Also the categorisation of restaurants is different in Finland.
[10] www.horesta.dk/Oekonomi-Statistik/Tal-Statistik/Restaurantmarkedet
[11] Other restaurant businesses
[12] Cafes, inns, discos, etc.
[13] Pizzerias, grill bars, ice bars, etc.
[14] "Event catering"

A report by the Swedish Environmental Management Council estimated that in early 2010 the number of ecolabelled hotels and conference services would amount to a market share of 20%[15] in Sweden, calculated as number of hotel nights.

This proportion is less than the 30% that is the Nordic Ecolabel's general target for the number of hotels that comply with the criteria. The number of licences is also considerably lower in the other Nordic countries, which further considerably reduces the Nordic Ecolabelled proportion of the total Nordic market.

We currently have no available data to evaluate whether the remaining hotels would be able to meet the criteria although they have not applied. However, on the basis of the difficulties and changes which have been necessary in conjunction with renewal of the licences from version 2 to version 3, the assessment is that many hotels are not capable of complying with our criteria.

The criteria for restaurants have only a few licences, here too with the emphasis in Sweden. In the Nordic countries there are only 50 Nordic Ecolabelled restaurants, but there are thousands of restaurant businesses in every country; in Sweden alone there were approximately 19,000 restaurants in 2009[16]. There are no Nordic Ecolabelled conferences as there have not been any criteria for these.

2.6 Other labels

There are some other labels for hotels, restaurants and conferences/events and these are described briefly below.

Official type 1 labels

EU Ecolabel is a type 1 ecolabel and has had criteria for hotels since 2003, it is now in version 2. There are also criteria for campsites (the Nordic Ecolabel's criteria do not cover camping).

The hotel criteria contain a total of 90 requirements, 29 of which are obligatory. There are no obligatory requirements on energy consumption, partly due to a lack of data. In general the EU Ecolabel can be seen as a weaker criteria document than the Nordic Ecolabel.

In 2011 there were 446 hotels and 84 campsites in Europe with an EU Ecolabel licence[17].

Management systems

A number of management systems with a bearing on environmental work and with a special focus on events have been drawn up or are in the process of being drawn up.

EMAS or **ISO 14001** are general environmental management systems that can also be implemented at hotels and youth hostels and they can also serve as guidance and documentation for the Nordic Ecolabel.

[15] http://www.msr.se/Documents/rapporter/MSR_2008_13.pdf
[16] SHR's website:
http://sogetitest4.episerverhosting.com/stat.asp?lan=Riket&kommun=noKommun&verksamheter=Restaurang
[17] According to a search on http://www.eco-label.com and Tourist accommodation 09.09.2011.

What is characteristic of environmental management systems is that no exact criteria levels are set but the business is obliged to analyse its operations and then constantly improve. Only a few hotels have chosen to use these certification systems.

Since 2007 there has also been **the British standard BS 8901**, "Sustainability Management Systems for Events". This is largely based on the principles of ISO 14001 and ISO 9001 (quality management systems), and businesses are able to certify their event processes[18] against this standard[19]. This standard is geared towards temporary activities/events and meeting types which largely have a bearing on our criteria that also apply to meeting businesses but also include the business' buildings.

Currently work is in progress to draw up a global standard for sustainability at events, **ISO 20121**. It will be possible to certify the organisation against the standard to show customers and the outside world that the business is working systematically to make the event more sustainable. ISO 20121 is planned to be ready during 2012[20].

Private/industry labels

Den Gröna Nyckeln (the Green Key) was developed in Denmark in 1994 and was developed by the industry itself through HORESTA, DANHOSTEL and Campingrådet.

After the EU's hotel criteria were adopted in 2003 the European hotel industry decided to expand Den Gröna Nyckeln to the rest of Europe under the name the Green Key. Since then the label has been established in over 20 countries.

Den Gröna Nyckeln has criteria in the same areas as the Nordic Ecolabel, grouped as follows: Environmental management, staff involvement, guest information, water, washing and cleaning, waste, energy, food and beverage, indoor environment, parks and parking areas, green activities, administration. In addition to imperative criteria with a limit, there are a number of voluntary requirements without limits.

As a starting point the same things are required in all countries but a few requirements can also be added formulated specifically for the country in question.

In the geographically closest countries there are the following numbers of licences[21] (2011):

- Sweden: 6 mountain stations, 30 youth hostels, 20 hotels/conference facilities, 8 campsites, 0 restaurants.
- In Denmark there are 9 campsites, 8 youth hostels, 94 hotels and a large number of sports facilities.

Green Globe is an international ecolabel for travel and tourism operations owned by Green Globe Ltd., a company based in the UK. From their website it is not immediately obvious what the criteria involve[22]. It is necessary to log in and become a member in order to see the criteria.

[18] Michael Luehrs, Sustainability Services Manager, MCI group, orally 19.10.2011
[19] http://www.bsigroup.co.uk/en/Assessment-and-Certification-services/Management-systems/Standards-and-Schemes/BS-8901 (05.05.2011)
[20] http://www.iso.org/iso/pressrelease.htm?refid=Ref1281 (05.05.2011)
[21] According to a search at http://www.green-key.org/ and country.
[22] www.greenglobe.org

There are approximately 160 labelled businesses globally. There are approximately 60 businesses in Europe with the label (as at April 2011) the majority of which are in Germany. There are no licences in the Nordic countries.

The Eco-Lighthouse Foundation (Miljøfyrtårnet) is a Nordic label geared towards businesses in the private and public sector with a special emphasis on small and medium-sized businesses.

The aim is for the businesses to gain help in producing environmental and climate measures that are concrete, measurable and profitable. Together with an approved consultant the business carries out an environmental analysis and then draws up an action plan to meet the industry criteria of the Eco-Lighthouse Foundation. When the business has met the industry criteria, they are approved by a public certifier and allocated a logo and a certificate. The label is valid for three years.

The hotel criteria are divided into obligatory criteria and specialist criteria where at least half of all specialist criteria must be introduced before approval. This system can be compared with the Nordic Ecolabel's division into obligatory and points score requirements. There are also requirements that the business is obliged to meet to comply with the law and regulations.

Many of the hotels that are awarded the Nordic Ecolabel have previously been Eco-Lighthouse Foundation businesses. In Norway the label is considered to be a first step on the way to becoming a greener business, while the Nordic Ecolabel is considered to be harder to achieve. The basis for this is that the requirements of the Eco-Lighthouse are more focused towards environmental management, by, for example, recording energy consumption and carrying out energy economy analyses. However, there is no limit value for energy.

Today there are different **national and international web-based calculation systems adapted for hotels**, which set out environmental statistics for energy consumption and key ratios, and which **calculate CO_2 emissions per hotel night**. In Sweden, Norway, Denmark and Finland there are different but similar calculation systems geared towards the hotel and meetings sector and it is likely that in the future we will see many more labelling systems of varying quality which in various ways evaluate and advocate limits on CO_2 emissions.

There is both a demand and scepticism from the Nordic Ecolabelled hotels about whether and how they are to communicate the CO_2 issue to customers, but there are licensees who choose to report CO_2 emissions. Several of these communicate actively on their websites how they work to make the environmental impact of their hotel operation carbon neutral and on selected meetings/events that they organise themselves.

VISITA, formerly SHR (the Swedish Hotel and Restaurant Association), has an environmental guide tool (miljöguiden) for its members which helps hotels with their environmental work and reporting their energy consumption. They can obtain environment statistics and comparative key figures.

HORESTA (the Danish sectoral organisation for hotels, restaurants and tourism) also sees a lasting green trend in the conference and meeting industry. The facilities must report the measures they are applying to limit their CO_2 emissions, in order to be selected for procurement.

In Finland the industry organisation for the hotel and restaurant sector, MARA, has encouraged the drawing up of voluntary energy saving agreements. Approximately 50 hotels and restaurants, including entire chains, have signed up (2011)[23].

Today there is a greater focus on and awareness of climate considerations and CO_2 emissions among companies when purchasing accommodation and conferences. CO_2 is required as a parameter in environmental reports and in procurement suppliers have to set out the measures that are being taken to minimise emissions.

Organic labelling of restaurants

KRAV is the Swedish organic label which only exists in Sweden. Today **restaurants and caterers can be KRAV-labelled**. The criteria are only set for ingredients, i.e. there are no requirements in other areas such as food preparation. Restaurants and caterers can choose between several different KRAV memberships but these are basically divided into two sections: those who have registered KRAV-approved food and those with KRAV-labelled menus.

KRAV's restaurant rules involve a grading system for the amount of KRAV-approved products the restaurants use. KRAV also approves the inclusion of MCS-labelled goods in these percentages. They also approve the inclusion of KRAV-certified goods that are not bought in (which the business has access to by other means) based on an estimated market price[24]. According to their website they have approximately 600 member restaurants/catering enterprises[25]. Around half of these are schools and preschools[26].

In Finland there is a voluntary programme **"Steps to Organic", Portaat luomuun**, whose purpose is to provide professional kitchens with guidance in increasing their use of organic products[27] The programme is run by EkoCentria and funded by the Ministry of Agriculture and Forestry. Approximately 140 businesses are members of the programme.

[23] http://www.mara.fi/?file=582 (20.10.2011)
[24] http://www.krav.se/KravsRegler/9/2/ (05.05.2011)
[25] http://www.krav.se/For-foretag/Anslutna-foretag/Restauranger-och-Storhushall/ (05.05.2011)
[26] http://www.krav.se/Om-KRAV/Helenas-svar/Dates/2011/4/Finns-det-nagon-sida-pa-natet-med-ekologiska-restauranger/ (05.05.2011)
[27] http://www.portaatluomuun.fi/index.asp?language=3

3 About the criteria revision

3.1 Purpose of the criteria revision

Main aim

- To produce a revised criteria document for hotels and restaurants, including requirements that make it possible to award the Nordic Ecolabel to conference premises that serve food and/or provide accommodation. The criteria must be harmonised with each other and include an "application key" that describes which criteria apply to which facilities and how the different businesses within the enterprise are to be weighted. The revised criteria are to have considerably fewer but clearly formulated requirements with the documentation required clearly set out.
- More stringent energy limit value requirements. Also more stringent climate impact criteria, with an emphasis on the areas where the business has good steerability. In the evaluation the aim is formulated as "Focus on energy with more stringent limit value requirements and criteria that reward low CO_2 emissions – which are not technology steering and with a clearer designation of what must be included and what can be discounted".

Sub-objectives

- Increase the visibility of the environmental benefit given by the criteria. This means revising the requirements for disposable items (in the dining room/rooms/conference suite) and other issues that the guests can see as "environmentally disruptive". The Nordic Ecolabel's criteria regarding energy and climate impact must be sufficiently clear as to meet the information requirement on climate issues (the licensee feels that there is no need for additional climate labelling).
- Revise the criteria for food, including requirements on organic, locally produced and Fairtrade.
- Revise the chemicals requirements to make them clearer, easier to work with and comprehensible to licence applicants.
- Revise the laundry criteria.
- Revise the transport criteria.
- Climate zones in the area near the Nordic region must be incorporated into the criteria to enable hotels from these regions to apply for a licence.
- Otherwise revise the requirements specifically pointed out in the evaluations.
- Draw up a clear, RPS-based background document.

Message

Nordic Ecolabelled hotels, conferences and restaurants have stringent environmental requirements that lead to major environmental benefit.

3.2 About this criteria review/revision

The project has been conducted as an internal project within Nordic Ecolabelling. ÅF-Industry has provided consultancy services for the development of the energy tool (which is used to establish energy limit values and points score requirements for energy

and carbon dioxide and to show the extent to which these limits are complied with). Konsultfirma Marie Fahlin has also been used for other consultancy work.

In conjunction with the work of developing the new criteria structure, the energy tool and the requirements and requirement levels, we have maintained a dialogue with several licensees, particularly in the context of testing requirement levels and point levels.

Project manager:	**Lena Axelsson/Marte Thommesen**
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Nordic area coordinator:	Karin Bergbom

4 RPS

This chapter justifies Nordic Ecolabelling of hotels, restaurants and conference facilities on the basis of a life cycle perspective and the largest areas for which Nordic Ecolabelling sets criteria on the basis of an assessment of relevance, potential and steerability.

Hotels, restaurants and conferences are similar operations from an environmental perspective. The most important environmental areas are energy, water, waste, chemicals, purchasing and food. These are shared by all these businesses, however to varying degrees. It is also these areas which are named in the studies and programmes scanned to update environmental impact from the accommodation, restaurant and tourism industry (here are references to some of them) [28] [29] [30] [31] [32].

Regarding conferences, in late 2009 Nordic Ecolabelling carried out a minor study (light-RPS)[33]. It concludes that there are environmental benefits to be gained in all the areas for which the ecolabel sets criteria in its hotel/restaurant criteria today[34]. The conclusions of the light RPS are that the greatest potential for environmental benefits can be obtained through savings in the property's use of energy, water and chemicals. In addition to this, environmental benefits can also be obtained by using green conference technology. Opportunities to set requirements for transport are, however, limited.

As many aspects of conference businesses are run by external partners, it is particularly important that requirements are also made of subcontractors to these businesses (catering, restaurants, cleaning, laundry, etc.). This does not only apply to conferences. A

[28] Business Hotel Utility Consumption and Saving Opportunities, Paul Bannister BSc (Hons) PhD, From the Proceedings of the World Conference SB08 - ISBN 978-0-646-50372-1, 21-25th September 2008 in Melbourne, Australia
[29] International Tourism Partnership (ITP), former International Hotels and Environment Initiative (IHEI) http://www.tourismpartnership.org 2011
[30] The Green Key Kriterier og ansøgningsskema Hoteller, Danhostels, Konference- og Feriecentre Gældende fra januar 2012; http://www.green-key.dk/
[31] Sustainable Business Associates, Switzerland, Best Environmental Practices for the Hotel Industry, 2011
[32] The Green Key Kriterier og ansøgningsskema Restauranter, Gældende fra januar 2010; http://www.green-key.dk/
[33] For an explanation of the concepts Relevance, Potential and Steerability, see Nordic Ecolabelling's Environmental Philosophy.
[34] Light-RPS for conferences, Internal report to SLM 06.11.09

new focus in version 4 of the criteria is therefore to ensure that contracts with subcontractors are in place.

4.1 Limitations – what isn't included?

As in previous revisions of the criteria, environmental impact from the building is not included due to the length of its lifetime. In other words, no environmental evaluation of the material of the windows and similar in the building has been carried out. Environmental criteria regarding the building, e.g. from an energy perspective, are set on the basis of the usage phase. The criteria thus focus on operation of the business. This is in accordance with the references in this chapter.

4.2 LCA

Hotel, restaurant and conference operations are central services in the tourism industry. Tourism has been steadily growing in recent decades and today is one of the most important industries in the global economy. This is reflected in a rising need to assess the environmental impact of the tourist industry. So far only a small number of life cycle analyses (LCA) have been carried out for hotels/restaurants. The reason why so few LCAs have been carried out is probably the complexity of tourist systems, the lack of specific LCA databases for the tourism sector and the fact that the tourism industry only takes into account environmental impact from the areas normally included in LCA methodology to a limited extent[35].

4.3 RPS- and MECO-analysis

During this revision project, an RPS analysis has been carried out, as well as an introductory MECO analysis. MECO analysis is a structured way of carrying out a simplified LCA. MECO stands for Material, Energy, Chemicals and Other. The MECO analysis was carried out such that accommodation, restaurants and conferences were examined simultaneously and divided into 4 sub-groups:

- Operation of the business, general part
- Consumables
- Durable goods
- Food

In the MECO analysis each parameter is then analysed separately and evaluated in comparison with the others. As the number of parameters quickly grew, the evaluation was only carried out on the basis of the divisions above and on the basis of previous experiences. The following tendencies could be confirmed:

Operation of the business – Highest relevance. Operation has a continuous impact through energy consumption, water, waste and use of chemicals. It is reasonable that the majority of the environmental requirements concern operation.

Consumables – High relevance for the products used to a major extent, e.g. tissue. The products' production phase and waste phase are significant, as is the usage phase.

[35] De Camillis C, Raggi A, Petti L (2010) Tourism LCA:state-of-art and perspectives. Int J Life Cycel Assess 15:148-155

Durable goods – Not equally high relevance as the products are used for a longer period. More important parameters are the product's energy consumption and impact on the environment during the usage phase.

Food – High relevance because consumption is considerable in the majority of businesses. For hotels that only serve breakfast, food is of lower relevance (and without breakfast being served, it will naturally be zero). Reducing the environmental impact of food is important to the environmental impact of the entire business, particularly in restaurants.

These conclusions match the conclusions of the RPS analysis (see Table 5 below for a summary of the RPS analysis). More detailed information on the RPS is provided in the individual sections that follow.

Some of the facts in this section come from drawing parallels with an LCA of the activities of one family[36] and analyses of restaurants' environmental impact[37].

[36] "Danske husholdningers miljøbelastning" Report from the Danish Environmental Protection Agency No. 13, 2002, Copenhagen 2002; and the Swedish Environmental Protection Agency, Biff och Bil? 1997:27 (concentrates on recommendations for action)
[37] TTS et al 2001, Seppänen et al 2006

Table 5 Summary of the RPS analysis

Overall priority	Area	Comments
High	**Energy** for operation and maintenance. High R, medium P, medium S	Operation and maintenance includes heating, cooling, hot water, air conditioning, etc. High relevance but difficult steerability as another party often owns the building.
	Consumables High R, medium P, medium S	E.g. tissue paper (toilet paper and kitchen paper). Large quantities give high R, scope for influence if ecolabelled options exist.
	Carbon dioxide High R, medium P, medium S	Follows the reasoning for energy: high relevance but difficult steerability as another party often owns the building. Emissions of carbon dioxide can be reduced through energy savings and to a certain extent through choice of energy sources.
	Dishwashing chemicals High R, medium P, medium S	Dishwashing chemicals account for the single greatest chemical consumption in hotels with restaurants. The impact can be reduced through ecolabelled alternatives and correct dosing.
	Food High (to medium) R and P, medium to low S	High priority if restaurant activity exists, medium if only breakfast is served. Environmental impact from growing or rearing, distribution, etc. Vegetarian food makes less of an impact than meat and fish. Organic products reduce environmental impact.
Medium	**Energy** for kitchens, lighting, machinery and appliances. Medium R, medium to low P and S	Energy consumption from the kitchen (if food is served) is considerable, as is consumption from lighting, machinery and appliances such as washing machines and dishwashers. Possible to set requirements for energy efficient light sources and appliances, if alternatives are available.
	Waste Medium R and P, medium to low S	Significant quantities of waste; environmental impact can be reduced by reducing amounts of waste (with return packaging depending on suppliers' systems) and by sorting and then recycling waste. Opportunities for recycling depend to a large extent on the municipality in which the business is run.
	Electronics Medium R and P, low S	Substances of a complex environmental nature are used in the production of electronic goods, and these goods also contain many substances of very high concern. The scope to reduce environmental impact is quite low, but it is possible to use ecolabelled alternatives and to sort waste correctly at source.
	Water Medium R, medium P and S	Water consumption for laundry and dishwashing, plus shower and toilet use by guests. Higher relevance with regard to hot water. The relevance is also higher in areas with less access to water.
	Chemicals for washing and cleaning and from overnight guests. Medium R, medium P and medium to low S	For example detergent, cleaning chemicals, shampoo and soap. Come from many different activities. The impact can be reduced through ecolabelled chemicals and laundries and correct dosing. Guests' usage is more difficult to affect.
Low	**Transport** Transport of goods and guests to and from the business. Medium R, low P and low S	A business has very little control over goods transport and the transport used by guests. However, larger businesses and chains can exert some influence over goods transport.
	Chemicals other Low R and P, medium to low S	For example, rinsing aids, drying aids, descaling products, WC cleaners, polishes. Low steerability, since ecolabelled alternatives are not available in all categories.
	Fittings and furniture Medium to low R, low P and S	The useful life of these items is relatively long and the environmental impact from the production phase and waste phase is not particularly high. Ecolabelled alternatives reduce environmental impact.

4.3.1 Energy use

Operation and maintenance
Energy for operation and maintenance, for example heating, cooling, lighting, ventilation and hot water, accounts for a great deal of energy consumption in all types of business. The importance of saving energy is mentioned in all the reference works examined[38]. The relevance is very high, and many studies highlight the good impact of various measures.

Hotels generally consume more energy per guest than simpler lodgings, since hotels have more energy intensive spaces such as restaurants, bars and pools, plus the rooms are often large. Nordic Ecolabelling's own experience also shows that energy consumption varies.

An Australian survey[39] of 15 business hotels in Australia in 2008 looked at their environmental impact, primarily in terms of energy and water. The survey showed that the greatest energy consumption came from heating, ventilation and air conditioning (50%), followed by lighting (14%), hot water (13%), kitchens and food preparation (11%) and laundry (5%). An average of 22% electricity and 7% gas could be saved by focusing on heating, ventilation and air conditioning, hot water, the pool and laundry. All measures paid for themselves within no more than three years. The considerable variation in energy consumption and the scope to reduce energy consumption show that it is relevant to set requirements regarding energy, and that there is potential for businesses to improve.

Energy optimisation is probably the most important environmental effect of giving a hotel a Nordic Ecolabel licence. In contrast to other systems, Nordic Ecolabelling's limit values mean that the building may need to be optimised for energy consumption (and refurbished) in order to qualify for the Nordic Ecolabel.

Kitchens, lighting, machinery and appliances
Energy use in the kitchen can be roughly divided into three main functions:

- refrigeration
- preparation
- dishwashing

Distribution between these different areas varies depending on the type of restaurant business.

According to a US survey, energy use in restaurants breaks down as follows: 35% comes from preparing food, followed by heating and ventilation (28%), dishwashing (18%), lighting (13%) and cooling (6%)[40]. According to an older Finnish survey, in a **restaurant** food preparation takes up the most energy (49%), followed by refrigeration (37%) and dishwashing (14%). In a **school kitchen** that heats up food, refrigeration takes the most energy (56%), followed by dishwashing (29%) and preparation (15%). In a **hospital kitchen** dishwashing consumes the most energy (47%). Refrigeration accounted for a

[38] International Tourism Partnership (ITP), former International Hotels and Environment Initiative (IHEI) http://www.tourismpartnership.org 2011
[39] Business Hotel Utility Consumption and Saving Opportunities, Paul Bannister BSc (Hons) PhD, From the Proceedings of the World Conference SB08 - ISBN 978-0-646-50372-1, 21-25th September 2008 in Melbourne, Australia
[40] Baldwin C, Wilberforce N & Kapur A (2010) Restaurant and food service life cycle assessment and development of a sustainability standard, The International Journal of Life Cycle Assessment, Vol 16 No. 1 40-49

larger proportion in **small kitchens** than in larger kitchens.[41] Training staff to use kitchen appliances correctly can reduce kitchen energy consumption by 10-60%.

This is a relevant area to work on, and total energy consumption can be reduced considerably by optimising energy use in the kitchen. However, the total energy consumption depends to a great extent on the type of restaurant; is it an à la carte restaurant or a lunch canteen with one heated dish on the menu?

Energy consumption from lighting can be reduced through planning and by switching to low energy lighting sources.

It is more difficult to save energy from the machinery and appliances (e.g. dishwashers and washing machines) used. Planning (dishwashing and laundering with full machines, for example) and switching to energy efficient appliances can reduce consumption.

Greenhouse gases
A highly topical environmental problem is emissions of greenhouse gases. Many of the measures in society are aimed at cutting emissions of greenhouse gases, particularly carbon dioxide. A major reason for saving energy is to reduce carbon emissions. Just as with energy, it can be difficult for businesses to control reductions, since many businesses do not own the building. Carbon emissions are governed by the points score requirement for carbon dioxide.

4.3.2 Water

There are many different reasons why it is important to save water, even if water is not usually in short supply in the Nordic countries. After use, water is normally treated in a traditional water treatment plant – which also requires energy and chemicals. Saving hot water is extra important as energy has also been used to heat up the water (apart possibly from Iceland, or other places with access to geothermal heat).

There are many measures that cut consumption, for example, water-saving showers and installing energy-saving taps and dishwashers. The Nordic Ecolabel sets a number of requirements for measures, but the most important is a limit value for water.

4.3.3 Chemicals

Reducing the environmental impact of chemicals has high relevance, particularly the type of chemicals used in large amounts, dishwashing chemicals, for example. Using ecolabelled alternatives, not using chemicals with problematic content and using the right dosage reduces the environmental impact. Some basic requirements are also set for the non-ecolabelled chemicals used in the business.

4.3.4 Waste

Hotels, restaurants and conferences produce large amounts of waste. The restaurant is a particularly major source of waste. It produces large amounts of packaging as well as organic waste, glass and metal. The more waste that is sorted and recycled, the better it is for the environment. It is even better if the waste does not arise in the first place or is reduced through using reusable materials.

[41] TTS, 1998

4.3.5 Purchasing

The purchases the business makes are important for the business' environmental impact. The environmental impacts may vary considerably depending on the choice of goods. Requiring ecolabelled alternatives can reduce the environmental impact of purchasing.

The environmental impact of durable goods (such as furniture, fixtures and fittings, etc.) is most important during the usage phase, seen from a life cycle perspective. Generally, therefore, the environmental impacts during the production and waste phases are of lower priority than impact during the usage phase. Exceptions to this are electronics and, to a certain extent, furniture, where the environmental impact of certain chemicals and raw materials recycling can be so large that it is relevant to also follow up the environmental impact of the production and waste phase.

It is important to monitor the use of consumables that are used to a large extent with environmental requirements that cover the product's entire life cycle and this can be achieved by choosing ecolabelled products wherever possible.

4.3.6 Guest rooms

The environmental impact from guest rooms comes from the use of disposable items, and TVs and minibars. The hotel has an opportunity to influence this by focusing on reduced use of disposable articles and by purchasing TVs and minibars with low energy, or by not having a minibar in guest rooms at all. Use of ecolabelled furniture, textiles and fittings also reduces environmental impact.

4.3.7 Food and drink

Food has a major environmental impact. Many measures can also be carried out to reduce environmental impact. There are also environmental impacts in the kitchen during cooking. Furthermore, large amounts of waste often arise in conjunction with restaurant operations. Here the Nordic Ecolabel works to reduce the use of disposable items.

A fifth of all the food consumed in Sweden is served in public sector catering. This is 1.2 billion meals a year[42]. In Finland almost 700 million portions are cooked in just over 20,000 catering kitchens. Energy consumption from this cooking amounts to 600 GWh per year[43].

An LCA analysis of restaurants that has been used as a basis for the Green Seal's environmental labelling criteria in the USA[44] [45] showed that food had the highest environmental impact in a restaurant. Food production uses energy, and artificial fertiliser and herbicides are often used. In Finland, about 50% of emissions of nutrients and 9% of emissions of greenhouse gases come from agriculture[46]. Energy consumption, for example, from fridges and in food preparation had a comparatively insignificant impact on the restaurant's total life cycle impact.

[42] Gustavsson & Kretschmann 2001
[43] TTS et al 2001
[44] Baldwin C, Wilberforce N, Kapur A (2010) Restaurant and food service life cycle assessment and development of a sustainability standard. The International Journal of Life Cycle Assessment, Vol 16 No. 1 40-49
[45] www.greenseal.org
[46] Seppänen et al 2006

One of the most important measures for reducing the environmental impact of food is reducing the amount of waste from restaurants. The largest amount of waste arises due to the fact that it is hard to predict the number of bookings. In gourmet restaurants it can be difficult to maintain a large menu without a certain amount of waste as a large number of different ingredients are required. Storing ingredients can also be a problem. Buffets may result in a particularly large amount of waste as the food may only be laid out for a limited period for hygiene reasons and as diners tend to take larger portions than they manage to eat[47].

Table 6 Summary of information on amount of waste in restaurants and catering kitchens.

Type of kitchen and type of food	Amount of waste	Comments	Source
Total amount of food purchased	15 – 22%	Weight, including unavoidable waste such as peelings.	Karlsson Rebecka (2002): "Svinn in storhushåll", Stockholm University.
Plate waste	9 – 11%	Weight	Same as above
Plate waste	0.01 – 0.5 kg per portion	Weight	Nordic Council of Ministers (2012)[48]
School kitchens, Plate waste	0 – 18%	Weight	Carlsson-Kanyama (2003) on a 2002 study by Tyresö municipality
Catering, e.g. County Council, total waste	Reduced from 47% to 20% after measures to combat waste	Weight, including unavoidable waste such as peelings, bones.	Carlsson-Kanyama (2003) on a 1983 study
Hospital catering	Approximately 1/3 of hot meals and 1/6 of desserts	Weight	Kujala (2009) "Biojäte Tampereen yliopistollisen sairaalan keskussairaalan potilasruokailussa"
Different types: Restaurant with 1-3 sittings, catering, fast food	3-10% waste before the food reaches the dining room. The diners leave on average 17% of their portion uneaten	Weight	Baldwin, Wilberforce & Kapur (2010)

Choice of ingredients also considerably reduces the environmental impact of restaurants. Vegetarian food takes far less energy to produce than meat. It takes approximately ten times the energy to produce one kg of protein from meat than to produce the same amount of energy from vegetables such as beans.[49]

By focusing on the use of organic and vegetarian food, and on food, particularly fish and shellfish, which is threatened with extinction or represents an extremely high burden on the environment from an international perspective, the environmental impact of serving food can be reduced. See the description in the chapter on "Food".

47 Swedish Environmental Protection Agency (2008) Svinn i livsmedelskedjan, Möjligheter till minskade mängder, SNV Rapport 5885
48 Marthinsen et al. 2012. Prevention of food waste in restaurants, hotels, canteens and catering. TemaNord 2012:537. Nordic Council of Ministers.
49 Nordic Ecolabelling (2006) Nordic Ecolabelled Restaurants, Background to Version 1

4.3.8 Transport

Transport is a difficult area to work on from the point of view of ecolabelling. The businesses that are Nordic ecolabelled have, in principle, no steerability when it comes to the way in which guests travel to and from the hotel, conference or restaurant. Large businesses may have a certain impact on their goods transport.

Businesses are able to influence the environmental impact of their own vehicles although they tend not to own very many vehicles. This is an area which has medium relevance but low potential and very little steerability. Nevertheless, businesses can reduce the environmental impact from transport by focusing on vehicles with low fuel consumption, eco-driving and by using Nordic Ecolabelled fuel.

4.3.9 Alternative requirements for restaurants

In autumn 2016, Nordic Ecolabelling noted that the desired goals behind ecolabelling of restaurants had not been achieved. A project to identify the reasons for this was consequently launched.

It became apparent that the RPS (Relevance – Potential – Steerability) for restaurants did not match the requirement levels and the available points Nordic Ecolabelling had set. A restaurant's primary focus is food and waste. Only then do energy and water enter the picture. But that is not how our criteria are set out. Here, fulfilment of the energy requirements takes priority. We also realize that we have too small a focus on the requirements concerning food and food waste.

The energy requirements are not tailored to restaurants and staff canteens that are based in office buildings or shopping centres, for example. Few restaurants of this type have their own electricity meter, and it is both difficult and expensive to have a meter installed in order for them to monitor their own energy consumption. The same applies for water consumption. Restaurants located in the same premises as other commercial operations find it hard to pin down their exact water consumption. In addition, many staff canteens have little or no steerability when it comes to the water and energy-demanding equipment that already exists in the premises where they run their business. They simply have to make do with the equipment there is.

Nordic Ecolabelling has therefore developed alternative requirements for restaurants, in the hope that these will better match the reality in the business. In practice, this means more focus on food and food waste, and less focus on energy and water consumption.

5 Justification of the requirements

5.1 "What can carry the Nordic Ecolabel"

The criteria document states that hotels, youth hostels, restaurants and conference facilities in various combinations (see definitions below) can be awarded the Nordic Ecolabel.

It has been important to find a clear way of limiting what is to be included in the licence. If there are several businesses in the same building, all of them must meet the relevant

requirements set by the Nordic Ecolabel i.e. **if several of these different sub-businesses are included within the same business or marketed as a unit, they must all be included in the licence**. The main focus has been the perception to the guests. As an example; for a guest staying at a hotel that have a restaurant, it is difficult to understand that the restaurant is not a part of the Nordic Ecolabel licence – therefore the restaurant must be a part of the licence.

In this criteria document, as in previous such documents, we have set geographical limits on where applicant businesses are to be located. What has been added is that (in addition to the Nordic countries) businesses in the Baltic States can now also be awarded the Nordic Ecolabel (the obligatory energy limit value requirement necessitates a geographical restriction within these climate zones).

Accommodation/restaurants/conferences on cruise ships/ferries/trains cannot be awarded the Nordic Ecolabel within the framework of these criteria as we do not consider that we have sufficient documentation in order to assess how the criteria operate in these cases, and as it would be extremely complicated to set limits on what is to be included and what is not to be included in terms of energy consumption in these types of businesses.

Hotels and youth hostels:

Establishments that offer accommodation can be Nordic Ecolabelled. In general, this means hotels and youth hostels.

If the hotel:

- has its own restaurant, this must be covered by the licence.
- has its own conference facility, this must be covered by the licence. If a hotel has meeting rooms, it is also considered as a conference facility.
- has both its own restaurant and its own conference facility, these must be covered by the licence.
- does not serve breakfast, it must meet a more stringent energy limit value.
- has an external breakfast supplier which serves breakfast in the hotel's own premises, these must meet the requirements regarding serving food and drink, see the section "Suppliers O3" below.

Restaurants

The term restaurant includes all businesses that serve prepared food that is to be consumed on the premises. This includes restaurants, institutional kitchens, canteens, street kitchens and cafés, as well as canteens in schools, hospitals and similar. Catering operations and take away restaurants can also be awarded the Nordic Ecolabel. The primary function of the operation must be to prepare and serve food.

If the restaurant has:

- conference facilities, these must be covered by the licence and fulfil the requirements to conference facilities in this criteria document.

If a restaurant is not part of a hotel / conference operation, it can apply according to Chapter 5, Alternative Requirements for Restaurants, which can be found in version 4.5.

Conference facilities

The ability to Nordic Ecolabel a conference is new to this version of the criteria. Conferences that do not offer accommodation can only apply for the Nordic Ecolabel in combination with a restaurant, which excludes separate fairs, exhibition premises, theatres, concert premises and similar. The criteria specify that the main income must be from conference activities like lectures, seminars, information or discussions.

Conference facilities that do not offer accommodation can be awarded the Nordic Ecolabel if the licence includes a Nordic Ecolabelled restaurant (or catering restaurant), either run by the business itself or through agreements with sub-contractors. This means that if the conference facility has its own restaurant, the requirements in this criteria document must be fulfilled. If the conference facility has an agreement with a sub-contractor, this sub-contractor must be a Nordic Ecolabelled restaurant. The motivation for this is firstly the major environmental impact that food has in conjunction with running conferences. Secondly, as the requirements are set out today, labelling a conference on its own would mean that the requirements only covered general operation, which Nordic Ecolabelling does not consider to be relevant in the situation as it stands today.

For further information on what applies when hiring an external supplier of food, see the heading "O2 Conference facilities: External suppliers of restaurant services".

A conference facility often has large open spaces and is designed to be able to receive large numbers of guests. Important spaces in a conference facility are the lobby, auditoriums, lecture theatres, meeting rooms and exhibition spaces. There are also usually restaurant spaces, group rooms, areas for the press and changing rooms, as well as registration and information areas. The technical equipment plays an important role, including computers and other audiovisual equipment.

In this revision, Nordic Ecolabelling has evaluated whether special requirements should be set for conferences, and if so which. During this process it has become evident that conferences should not be included under a separate heading but should be covered by the general requirements that apply to all types of business. The requirements previously found under "extra requirements for conferences" in the criteria for hotels and youth hostels version 3.2 have therefore been included at relevant points in the new criteria document.

Examples of combinations of hotel and restaurant

The criteria states: "If several of these different businesses are part of the same business or are marketed as a single unit, all of them must be included in the licence." It is then referred to this document for examples of when different businesses should be included in the licence.

The list of possible combinations of hotel, restaurant and conference is long. Below is a description of four relatively common examples of combinations of hotel and restaurant:

- A hotel has its own restaurant as part of the hotel's premises. It is then obvious that the restaurant is part of the business and the restaurant must be included in the licence.

- A hotel has a restaurant as part of the hotel's premises. The restaurant has the same name as the hotel, but is own by another company. Since the restaurant will be perceived as part of the hotel, the restaurant must be included in the licence.
- A hotel has a restaurant in connection to the hotel's premises - it may for instance be that one is able to get directly to the restaurant from the lobby. The restaurant has a different name than the hotel and is owned by another company. The guest will perceive the restaurant and the hotel as two separate units and the restaurant do not have to be included in the licence. A precondition for this is that hotel do not promote the restaurant as part of the hotel on its webpage or as part of any other information about the hotel.
- A hotel has a deal with a restaurant nearby. The restaurant does not have the same name as the hotel and is owned by another company. The hotel promotes itself as a hotel with a restaurant. In this case the restaurant can be excluded from the licence provided the hotel changes its webpages and informs the guests that the restaurant is a separate business.

Stage performances, exhibitions and nightclubs

Hotels, restaurants and conference facilities often also include activities such as stage performances, exhibitions, nightclubs and similar which affect the establishment's ability to gain Nordic Ecolabel licence approval. The energy tool does not specifically take these activities into account in relation to operation and the number of guests.

In certain circumstances, Nordic Ecolabelling may grant permission for a hotel, restaurant or conference facility to ignore a particular activity. In order to do this, it must be possible to separately account for the energy consumption of that activity.

Stage performances are often extremely energy intensive. There is a need for stage lighting, sound equipment and other technology that can result in high energy consumption. It is the customers of the venue who rent it for various events and it is they who order what is to be arranged, e.g. on stage. This may thus have the result that the electricity consumption for certain events is so high that over the course of the year the venue is unable to meet the Nordic Ecolabel's limit value for energy and thus is not eligible for a licence. When an operation occasionally (max two times/month) hosts major events as above, this can be seen as energy consumption that is separate from the energy required to run the venue in general. Electricity consumption for events (such as stage lighting, sound systems and other technology that can result in high energy consumption, e.g. not heating, ventilation or permanent lighting) can after approval by Nordic Ecolabelling thus be discounted from other operating electricity as there is low steerability. In order for it not to be counted, the electricity use for the event must be metered separately.

Exhibition operations can be seen as similar to stage performances and deductions from energy consumption for exhibition events can follow the same principles.

Nightclubs attached to a restaurant and hotel may also have major stage activities occasionally (max two times/month) with music events, etc. According to the same model for theatre performances, high electricity consumption when there is major music arrangements can be discounted from other operating electricity provided that the business has separate metering of consumption for these events.

Baths and spas

Where baths and spas are run, the starting point is that their consumption of energy and water must be included in the limit value requirements. Despite this, it is not permitted to market the business as a Nordic Ecolabelled spa as our criteria do not cover the different functions traditionally covered by spa operations, such as various treatments, health cures, gyms, water slides, etc. It may give consumers a misleading picture if the business markets its spa as being ecolabelled.

Merging the criteria documents

Attention should be drawn to the fact that this revision merges two different criteria documents (Nordic Ecolabelling of hotels and youth hostels version 3.3 and Nordic Ecolabelling of restaurants version 1.3) to create a joint criteria document which also covers the Nordic Ecolabelling of conference facilities. In this process certain requirements from the previous restaurant criteria have been transferred to hotel and conference businesses and certain requirements from the former hotel criteria have been transferred to restaurant and conference businesses. This is partly because we are seeking a set of basic requirements that apply to everyone and partly because we will now be requiring that businesses owned or marketed jointly are licensed as a single unit. This transfer of requirements, for example, means tightening up the requirements for those hotels and restaurants which previously had less stringent requirements for their restaurant business. Correspondingly, this means that the requirements are more stringent for restaurants, which did not previously have any limit value requirements on energy, water or waste.

5.2 About the business

O1 General description of the business

Under this requirement, a number of details need to be provided, including pure identity information, and information that describes to the case officer what business is conducted and provides data for calculations later in the document. These details differ somewhat, depending on the type of business that applies, but are obligatory.

All the limit values are based on calculations "per guest", making this a core concept. The different concepts of the guest are described below:

- A **hotel guest** is a guest who stays at the hotel overnight. A hotel guest that stays 2 nights at the hotel is counted as 2 hotel guests, 2 guests that stays 2 nights in a double room are counted as 4 hotel guests.
- A **restaurant guest** is a guest who visits and stays in the areas that are considered as restaurant area. This comprise guests that eats and/or drinks in the restaurant (which includes breakfast, lunch and dinner guests), as well as bar guests, concert guests and night club guests. For hotels that also have their own restaurant, this means that guests who use the restaurant are to be reported separately as restaurant guests. The number of breakfast guests assumes 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 (which may also include stage performances). 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. This is accounted for in the requirement level. A conference guest shall be

calculated as a restaurant guest only if they eat breakfast, lunch or dinner. Coffee/tea -breaks with simple serving will not qualify the conference guests to be calculated as restaurant guests. A conference guest participating for 2 days is calculated as 2 conference guests. If the conference guest eats 2 lunches and 1 dinner at the facility, the guest shall also be calculated as 3 restaurant guests.

- A **pool guest** is a guest that has access to the pool at the premises, normally the same as a hotel guest. i.e. a guest who stays at the hotel overnight. If the hotel does not have any external pool guests, pool guests do not need to be counted separately, but the limit value "Hotels with pool" are to be used (see chapter 5.1.4 Limit values for water, O5 and P2). Pool guests are counted in the limit value for water, but should not be entered in the energy model, as this calculates energy consumption per m^2 of pool area. Pool guests are not considered in the limit value for waste.
- An **external pool guest** is a guest who only uses the pool facilities and does not spend the night at the hotel. They are counted in the limit value for water as "external pool guest", but should not be entered in the energy model, as this calculates energy consumption per m^2 of pool area. External pool guests are not considered in the limit value for waste.
- With **occupancy** means occupancy per room or per permanent bed in percent per year.

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 data systems. For restaurant guests and conference guests it is also accepted that the number of guests can be based on the number of guests in at least two weeks during a representative period, alternatively a calculation based on total sales and average spends or number of servings for restaurants. The base for the calculation of the number of guests shall be submitted.

Another important parameter is area and the different area terms are described below:

- With **total area** means spaces that are intended to be heated to at least 10ºC, but not garages.
- If the business only include hotel service the **hotel area** equals the total area. If the business includes some other type of business, like restaurant and/or conference facilities, the entrance lobby, guest rooms, toilets, staff rooms, additional stores and bin rooms are to be counted as hotel area.
- If the business only include a restaurant the **restaurant area** equals the total area. If the business includes some other type of business, like hotel and/or conference facilities, the area for the restaurant kitchen, including dishwashing area, food storage, dry storage, chilled room and freezer room plus all serving areas, including breakfast room, dining room and bar directly connected to dining room, be included in the restaurant area. Other areas that are used occasionally when serving many guests like entrance lobby, conference rooms, party floors, banquet halls and a like are not considered as restaurant area.

- If the business only includes conference facilities the **conference area** equals the total area.
  If hotel is included in the business, entrance lobby, guest rooms, toilets, staff rooms, additional stores and bin rooms are to be counted as hotel area. If a restaurant is included in the business the area for the restaurant kitchen including dishwashing areas, food storage, cool storage rooms and all serving areas including dining rooms for breakfast, lunch and dinner and bars in direct connection with the dining rooms are to be calculated as restaurant area. Conference facility areas that occasionally are used as serving areas like party floors, entrance lobbies and a like are to be calculated as conference facility area, not restaurant area.
- **Related pool areas** are areas like pool room, showers, sauna and dressing rooms.

Documentation requirement:

- For total area a tenancy agreement or drawing with any calculations showing the business total area shall be submitted.
- For other areas, this will be checked at the on-site visit.

O2 Conference facilities: External suppliers of restaurant services

As stated above, conferences that do not offer accommodation can be Nordic Ecolabelled provided that they have a Nordic Ecolabelled restaurant, either under their own operation or run under contract by a Nordic Ecolabelled supplier. This means that if the conference has its own restaurant the requirements in this criteria document are to be fulfilled. If the conference has an agreement with a sub-contractor, this supplier shall be Nordic Ecolabelled.

Requirement O2 is worded such that it is essential for a conference that do not offer accommodation and must have a supplier to cover the needs for food serving must have a contract with a supplier which in turn must be Nordic Ecolabelled. This means that both businesses must meet the Nordic Ecolabel's requirements for the respective business and that they must have a contract between them that applies throughout the period of validity of the version of the criteria. Note that if the contract is terminated and the partnership dissolved, the consequence may be that the conference facility loses its licence. For this reason, a conference facility must incorporate a notice period in its contract with the restaurant which gives the conference facility time to enter into a new contract with a new partner such that the licence remains valid. A partnership agreement in conjunction with Nordic Ecolabelling should have the same period of validity as the period of validity of the criteria document. If the conference facility has a cooperation agreement with several restaurants, all of them must be Nordic Ecolabelled.

For public businesses that need to follow the Directive 2004/18/EC of the European parliament and of the Council regarding procedures for the award of public works contracts, supply contracts and service contracts, a declaration from Nordic Ecolabelling can be accepted as verification showing that the supplier fulfils the requirements to Nordic Ecolabelled restaurants. Such a supplier cannot market itself as Nordic Ecolabelled unless it has a valid license. If Nordic Ecolabelling shall look into suppliers without awarding a license, there will be an extra administrative fee.

In Sweden it is common in the industry[50] for contracts to be entered into with restaurateurs in existing buildings. The contract usually runs for 2-3 years. The notice period is usually 6-12 months.

It is also important that the contract states that the restaurant must provide a fixed proportion of the conference's need for food to be served to their conference guests. The Nordic Ecolabel requires that at least 95% of all food served to conference guests (based on turnover or number of guests) is to be provided by a Nordic Ecolabelled restaurant. In some cases there is a need for special arrangements for flexibility in the event of unforeseen occurrences where conferences need to bring in additional resources and procure additional suppliers. This justifies not setting a requirement for 5% of the requirement for food served to conference guests.

O3 Hotels with external suppliers of breakfast in the hotel premises

For hotels **that offer their guests breakfast in their own premises but contract an external supplier to provide it**, the supplier of breakfast must fulfil all the requirements as if the breakfast were served by the hotel itself, i.e. all the requirements in the section 5.10 "Serving food and drink".

Hotels that do not serve breakfast

If the hotel **does not serve breakfast** but instead refers the customer to an external breakfast provider off the hotel premises, this is not included in the Nordic Ecolabel licence, since the environmental benefit of setting requirements for external breakfast is minimal and is compensated for by the fact that hotels that do not serve breakfast have to meet the stricter limit value of 1.6 for energy. This also applies if breakfast is part of the room price, but is served by an external supplier in their premises.

5.3 Limit values in general

It is obligatory for all businesses to meet the limit value for energy plus one of the two optional limit values for water and for waste.

Hotels

In the previous version of the criteria for hotels, it was obligatory to meet the energy limit value plus another limit value relating either to water, chemicals or waste. Under these criteria, hotels were divided into different classes (A, B or C) depending on the hotel's occupancy, whether the hotel had high restaurant sales and whether the hotel had a pool.

According to its classification, the hotel would then be given a specific limit value for each area (energy, water, waste and chemicals).

For this revision, we have decided the following:

- To retain **the obligatory limit value for energy**, but this is calculated specifically for each business. In order to calculate and document this requirement, the

[50] SHR, http://www.shr.se/Branschfragor/branschfragor1/Hyresfragor/ and Interview with Christian Giertta, Svenska Möten.

applicant must use the Nordic Ecolabelling energy tool, read more in sections 5.3.1 "Limit values for energy" and 5.3.2 "Energy tool".

- The businesses must still meet one other limit value in addition to energy. They can choose between waste and water.
- **The limit values for water and waste** remain (cf. the previous version of the hotel criteria), but these are also calculated in a different way than before, see information on and the justification for this in sections 5.3.3 "Limit values for water" and 5.3.4 "Limit values for waste".
- We no longer set a limit value requirement for chemicals – for more information on and justification of this, see 5.17 "Summary of changes compared with previous versions of the criteria".

For all the limit values, in this version of the criteria it is possible to score points for performing better than the limit value. The better you are compared with the limit value, the higher the points.

Restaurants

The restaurants must meet the same limit value requirement as described above (energy plus one optional requirement of either waste or water) for hotels, which can be seen as a major tightening of the requirement level, as there was previously no limit value requirement for restaurants. There was only a requirement to measure the electricity consumption of the activity. Note that restaurants have their own factors when it comes to water and waste, see below, and that account is also taken of this type of activity in the energy tool.

Conference facilities

Conference facilities must also meet the same limit values, as these are included in the obligatory section that applies to all types of business. Note that, as with restaurants, conference facilities have their own factors when it comes to water and waste, and specific account is taken in the energy tool.

5.3.1 Limit values for energy

The RPS-analyses in chapter 4 points out that energy is a central parameter when evaluating the environmental impact related to hotels, restaurants and conferences. Both the operation and management and food preparation uses a lot of energy, for instance to lightning, heating, cooling, warm water, ventilation, kitchen equipment like ovens, dishwashers and washing machines. To reduce the energy consumption is therefore important to reduce the environmental impact from these businesses. Reduced energy consumption also contributes to lower emissions of greenhouse gases. For more details about environmental impact and RPS, see chapter 4.

O4 Limit values for energy, P1 Energy

As in the previous criteria, **an obligatory limit value for energy consumption** is retained for hotels, as this is one of the areas with the greatest environmental impact. Restaurants face a major tightening of the requirement, since the energy limit value is now also obligatory for them. Conference facilities are also covered by this obligatory energy limit value requirement. The ambition behind the new requirement level is to weed out the worst hotels in terms of energy (an estimated 10% to 20% of establishments) that currently have a license today and that do not intend to make improvements in order to meet the requirement. In addition to the obligatory limit value, the business

can also score points (max 5 points) for doing better than the limit value. Since energy carries a great deal of weight in life cycle terms, a business with low energy use will score a relatively high number of points.

In this version of the criteria, the business must report its annual consumption of purchased energy in an energy tool. The purchased energy consumption is then compared with a target value for an equivalent business under optimum conditions. The target value is calculated in the energy tool based on a number of parameters (e.g. floor area, number of buildings, number of guests and amount of laundry washed). If the business produces its own energy, this does not need to be counted in the energy model. The reason for this is that the quantities are often small (usually relates to solar panels) and it is often difficult to document an exact amount. Purchased energy (ordinary electricity) used in the production of self-generated energy must be included. In this revision (as in earlier revisions), the age of the building or whether it is a cultural heritage building, is not considered. Even so we have included parameters to evaluate the building's energy performance and will as far as possible induce the businesses to reduce their environmental effect on this area.

The limit value for energy is set such that the ratio between consumption of purchased energy and the target value must not exceed **1.7**. Hotel operations that do not offer breakfast must meet a stricter limit value of **1.6**, since energy use from the serving of breakfast does not apply.

5.3.2 Energy tool

To make the necessary calculations to document requirements O5 and P1, the business must use a specific energy tool (which also calculates carbon emissions, which are reported in requirement P4) developed by Nordic Ecolabelling. This will be available in the electronic application guide, My Swan Account.

Brief description

Nordic Ecolabelling has chosen to move away from the previous rather rough division of hotels into classes. Instead we now want to set a more relevant limit value for permitted energy consumption for a particular type of business and combinations of different activities.

In line with this wish, we have developed our own energy tool, in partnership with ÅF Energi.

The energy tool calculates the specific annual consumption of purchased energy for the business and it calculates a specific target value for the business with regard to energy (electricity and heating), which is calculated based on the type of activity and the climate zone.

The target value states energy consumption for the business (and its subsidiary activities) under optimum conditions and using the best technology, making it an ideal value. The target value assumes that the business has low electricity use and that the building is relatively well insulated.

Target value energy: A target value for energy that Nordic Ecolabelling's energy tool produces. The target value states a specific, guiding value for energy use for a very well run establishment of a certain size, located in a known climate zone and with a known number of guests.

Limit value energy: A limit value that determines how much more energy a business may have, compared with the business-specific target value.

Based on the target value, Nordic Ecolabelling then sets a limit value for energy, which the business needs to meet in order to receive a licence. This limit value is set at a slightly more generous level than the ideal target value for the business. The reason for this is that it is relatively rare for the businesses to have entirely ideal conditions, or for it to be possible to run the businesses entirely optimally.

Based on the energy consumption, corresponding specific annual emissions of carbon dioxide are calculated, as well as specific target values for carbon dioxide. The target value for carbon dioxide assumes that the heating method is district heating.

It should also be borne in mind that, although energy consumption is an extremely important environmental parameter, the business also has other environmental impacts that are significant from a life cycle perspective. Energy consumption must therefore not be the only decisive parameter that determines whether the business receives a licence.

In order to use the energy tool, the applicant business must state the following:

The energy use of the business

- The amount of purchased energy used over a full year (electricity, fuel, district heating and district cooling if applicable).

Description of the building and the extent of the business:

- Which **zone** the business is in (governs assumptions about outdoor temperature for a normal year). For a zone map, see Appendix 1. This version of the criteria opens the way for businesses in the Baltic states to apply. To make applying easier, the number of zones has been reduced. It is also possible, if the business wishes, to use specific climate data, see below under "Non-standard climate calculations". For businesses in Norway it is obligatory to use local normal average temperatures per month.
- Which **country** the business is in. This is not significant information for the calculations in the model, but can be used to control whether the climate zone is correctly stated, as some zones not exist in all countries.
- The **area** for the various operational activities (i.e. the floor area of the hotel, restaurant and conference spaces). The model assumes that restaurant spaces have higher energy needs than hotel spaces, which in turn have higher energy needs than conference spaces. Catering businesses only need to state the area of the kitchen, since they have no dining room, but they are instead weighted with a model value for quantity of servings delivered (see below).
- **Building type** must also be given – standalone building, gable building (one wall shared with other buildings) or block building (several walls shared with other buildings), as well as **the area for each building** and **the number of floors**. The building type affects how much energy the business is permitted to consume (several external walls require more heating).
- **The number of guests at the hotel, in the restaurant and/or at the conference facility** and whether these vary over the year (i.e. are seasonally dependent). Catering businesses are required to state **how many servings are delivered** from the establishment, i.e. the servings that are prepared in the building but not consumed there (the model calculates 2 kWh electricity per catering serving). A limit value for keeping unused rooms heated has been

incorporated into the energy tool. The limit value represents "at least one person per fifty square metres during a period corresponding to a tenth of the heating season". Fewer guests than that suggests that part of the building occupied by the business should not be kept fully heated.

- If there is a pool or spa facility, only **the area of the pool(s)** that are heated is to be stated (square metres of water surface, heated outdoor pools must also be included). The model assumes energy consumption for the pool and surrounding spaces based on the Swedish Energy Agency's statistics on energy use in sports halls[51]. The heat loss surface has the most impact on energy consumption, but also how much the surface is disturbed. The area of the associated pool and spa areas must also be stated (e.g. pool rooms, saunas, showers and changing rooms).
- **The amount of laundry in kg** must be stated. Also **whether the laundry is cleaned in house or at an external laundry**. This does not apply to daily laundering of items such as mops, dusters and the like, but does apply to large quantities of laundry, such as bed linen, towels and tablecloths, items that are commonly sent to an external laundry.
- If the laundry is sent to an external laundry firm, the applicant must **state whether or not this laundry firm carries the Nordic Ecolabel**. Based on this, a certain quantity of energy and CO_2 emissions is added to the applicant business' values. Energy consumption for a non-Nordic Ecolabelled laundry is estimated to be 1.5 times higher than that of a Nordic Ecolabelled laundry. If the applicant business sends its laundry to a laundry firm that is not Nordic Ecolabelled, it will be more difficult to achieve the target value.

Non-standard climate calculations:

- The calculations must be corrected for a normal year. This means that, in the application, account is taken of an unusually cold or warm year and this is corrected for. If this correction is to be made, the average monthly temperatures must be entered for the period to which the energy figures relate. This type of temperature data can be found at the respective country's meteorological institute[52]. The business must save the data and information about the source of that data, so that Nordic Ecolabelling can check and approve this.
- If, instead of the climate zone map, the business wishes to use more precise data that is specific for the location of the business, climate zone 0 is to be chosen and the normal average temperature per month is to be stated for the period in question. This is so that actual energy use can be corrected for a normal year. This type of data can be found at the respective country's meteorological institute (the business must save the data and information about the source of that data, so that Nordic Ecolabelling can check this). **For businesses in Norway it is obligatory to use local normal average temperatures per month**, as it can be large local differences in temperature and the climate zone map do not consider this sufficiently.

Non-standard occupancy:

[51] STIL2, Swedish Energy Agency, 2008.
[52] For example: http://met.no/Forskning/Publikasjoner/metno_info/2010/

- If the business' occupancy is particularly high or low during different months, this is to be corrected for. If the business has different trading seasons, e.g. accommodation only in winter, or only in summer, this will be reflected in the target value. A shorter trading season gives a lower limit for annual energy consumption. Time of year is also taken into account, such that more energy is permitted to be used by a winter business than a summer business. It is also possible to correct for the level of occupancy that the business experiences in different months.

The energy tool is designed so that specific energy use per square metre of area and year is the main measure of energy performance for the business. In the previous version of the hotel criteria, applicants were able to state their energy consumption per guest night. In this update, this option has been deleted, since energy use per square metre of area is judged to be the most relevant parameter.

In order for the energy tool to be the same for all applicants, it is important that the area is defined in the same way for all businesses. It has not been possible to find a single concept of area for businesses in those countries that will be using the model. It must therefore be very clearly defined which concept of area the data on area relates to (is it indoor area, the building's outdoor area, etc.). The model values used in the energy tool are based on "A_{temp}", a concept used by the Swedish National Board of Housing, Building and Planning (Boverket) that briefly means the area within the external walls that is intended to be heated to over 10ºC. Areas taken up by inner walls, stairwells, shafts and so on are to be included[53]. A garage should, however, never be counted[54]. If the concept of area on which the business has data and which is used in other contexts differs greatly from A_{temp}, it may be worth the business converting its area data into A_{temp} before the area values for the business are entered into the model. In Norway, the floor area concept of "bruksareal" (BRA) is closest to A_{temp}. Bruksareal is the total area in a building that lies within the external walls. Internal dividing walls are included in the bruksareal figure, but deductions are made for dividing walls between units/residences and channels/chimneys with a cross-section of over 0.5 m^2. There must be a ceiling height of at least 1.9 m.

In restaurants it is generally the case that energy use is strongly linked to the kitchen. According to a US study, on average around 60% of total energy use derives from the kitchen (preparation, dishwashing, refrigeration)[55]. This figure is incorporated into the energy tool. It should, however, be noted that the same study gives food as the greatest overall source of environmental impact from restaurants, not energy use.

Model values in the energy tool

It is important to make clear that the model values used in the model determine the outcome. These model values have a major impact on the calculation of the target value for each individual applicant.

[53] http://www.boverket.se/Kontakta-oss/Fragor-och-svar/Boverkets-byggregler-BBR/Om-avsnitt-9-i-BBR/Atemp/
[54] http://www.boverket.se/Kontakta-oss/Fragor-och-svar/Boverkets-byggregler-BBR/Om-avsnitt-9-i-BBR/Atemp/Varfor-har-areabegreppet-Atemp-inforts/
[55] Baldwin C, Wilberforce N & Kapur A (2010) Restaurant and food service life cycle assessment and development of a sustainability standard, The International Journal of Life Cycle Assessment, Vol 16 No. 1 40-49

The target value that the model calculates is based in part on the actual conditions of the business, such as floor area, number of floors, number of detached external walls, number of guests and so, i.e. the data that the business enters about itself.

The calculations are also based on a number of model values. These model values may relate to factors such as what area of wall is assumed to be windows – which in turn affects assumptions on heat loss. Another model value is energy use for ventilation, which is assumed to depend on the number of guests that the business has. For more in-depth information about the model values used by the model (and their sources), see Appendix 2.

The model values used in the model are based on data published as part of the Swedish Energy Agency's project STIL2 2010 Hotels, restaurants and public venues.

STIL2 is a project by the Swedish Energy Agency that describes energy use in premises, and in particular breaks down electricity use for different purposes. Detailed energy inventories were carried out for a total of over 1,000 buildings selected by statistically sound methods. The project began in 2005 with an inventory of offices. Then came schools (2006), health facilities (2007), sports facilities (2008), retail spaces (2009) and hotels and restaurants (2010). STIL2 studied the entire energy use of the buildings, but with a primary focus on electricity consumption. The electricity consumption figures include electricity for the building and for the activity conducted in the building, and divide the electricity consumption into different categories such as lighting, fans and other electricity use specific to the activity in question.

The values presented in statistical reports such as STIL 1990 and STIL2 describe the actual situation in Swedish hotels, restaurants and conference facilities. They relate to an average geographical Swedish zone, a building with average occupancy and an average number of prepared servings per year. These values are thus not extremely good or extremely poor, but average.

The values taken from the STIL surveys have been used for guidance, with the values in the model falling below the averages in STIL. In developing the model, ÅF started with the Swedish Energy Agency's averages from 1990 and 2010, and then made them more stringent by around 15%.

According to the STIL2 statistics, the average electricity consumption, excluding electric heating, per square metre is 117 kWh/m² for hotels and 360 kWh/m² for restaurants.

The model value of 100 kWh/m² has been used in the model for hotel areas. Around 30% of the hotels surveyed as part of STIL2 come in at less than 100 kWh/m².

The model value of 260 kWh/m² has been used in the model for restaurant areas. This value is somewhat more stringent than the figure for hotels (but entirely achievable), since around 25% of the restaurants in the STIL2 statistics fall below 260 kWh/m².

The model value of 75 kWh/m² has been used in the model for conference facilities. STIL2 does not report conference facilities separately, but it is reasonable to assume that the energy use in these activities is slightly lower than in hotels, since they do not offer functions such as showers and minibars.

The key figure for energy use on pools is based on data from STIL 2008 sports facilities and is 700 kWh/m^2. This value includes the energy use specifically related to the pool, as well as energy use in surrounding areas such as changing rooms.

Facilities that use a Nordic Ecolabelled laundry firm are weighted with 1.35 kWh/kg (and 310 g CO_2e/kg) for hotel laundry (bed linen and towels, usually only lightly soiled) and 2.45 kWh/kg (and 540 g CO_2e/kg) for restaurant laundry (tablecloths, napkins and so on from restaurants and catering kitchens; these textiles are often medium soiled but they may have stains that require relaundering). Where the laundry firm is not Nordic Ecolabelled, there is no guarantee that the laundry would have such low energy use. Non-Nordic Ecolabelled laundry is therefore weighted with 1.5 times these factors.

In developing the energy model, ÅF has used Swedish statistical data, while also having access to data from licensed hotels in the Nordic countries. The optimum situation would have been to gather statistics from all the Nordic countries and the Baltic states in order to check for any major differences. It is, however, assumed that the Swedish statistics are representative of hotels, restaurants and conference facilities in the Nordic countries and the Baltic States, and that this does not have a significant impact on the outcome in the model.

Based on energy use, the model similarly calculates an optimum target value for carbon dioxide. The following carbon dioxide factors are used to convert from energy use to carbon dioxide:

Table 7 Carbon dioxide factors

Carbon dioxide factor	
Electricity	0.3852
Oil-fired boiler in the building	0.28082
District heating	0.1243
Natural gas	0.20442
Town gas	0.281
LPG	0.2342
Pellets	0.0
District cooling	0.251

Sources:
1) Energi&Miljöfakta, www.energiochmiljo.se.
2) Nordic Ecolabelling's criteria for Textile Services 2.1 Appendix 3, with data from the Danish Energy Agency (2008): Energy Statistics 2007.
3) Nordic Ecolabelling's criteria for Grocery Stores.

When it comes to calculations for carbon emissions from electricity use, the calculations are based on the EU's energy mix value for carbon dioxide, since the Nordic and Baltic countries are connected to the European electricity grid. A business' own carbon dioxide values cannot be used, even if the electricity is "ecolabelled" or from a renewable source. The reason is that the supply of renewable electricity is not based on demand, which means that increased demand will not necessarily lead to increased production of renewable electricity; it is simply a redistribution of the existing supply.

The district heating factor is based on Nordic conditions and is from Nordic Ecolabellings' criteria for textile services (version 2). A pellet-fired boiler produces lower CO_2 emissions, while an oil-fired boiler gives higher emissions, which pushes in the

direction of converting from oil to pellets in the areas where district heating is not available.

Summary of changes in the energy parameters

Compared with previous ecolabelling criteria for hotels, the following key changes have been introduced:

- The revised criteria use the hotel's area and number of guests as key figures. The hotel's economic turnover is not considered as relevant a parameter when calculating and apportioning energy use. The number of people using the premises has been identified as a more suitable measure, which justifies the choice of number of hotel guests as a parameter. The number of hotel guests also indicates the occupancy rate, which in turn affects energy use. The same reasoning applies for restaurants and conference facilities, in this case expressed as the number of conference and restaurant guests.
- Applicants must know what the establishment's annual energy use is in order to be able to use the energy tool, and also which climate zone the establishment is in (or alternatively the average monthly outdoor temperatures). The business can, if it wants, choose to use values for average monthly outdoor temperature. This can be appropriate for some businesses dependent on the local climate conditions. The values for average monthly outdoor temperature and for energy use must apply to the same period. The business described must also relate to the same period. This is new compared with the previous version of the criteria for restaurants. Producing average monthly values is also new for hotels.
- In order to reduce the complexity in the model, fewer climate zones are used.
- The model takes account of seasonal variations in opening times and occupancy.
- Type of building and number of floors must be stated.
- The model takes account of whether the establishment has a pool, and requires the dimensions of the water surface.
- Laundry can no longer be discounted from energy use. The amount of laundry cleaned at the hotel or by an external laundry firm must be stated.
- The energy limit value is a brand new requirement for restaurants.

Summary of the factors that affect the outcome of the energy calculation

The factors that affect the target value for the business (and the limit value set in the Nordic Ecolabelling criteria) are:

- The geographical location of the building.
- Area of different types of activity (hotels, conference facilities and restaurants). Restaurant activities, for example, are allowed higher energy use than hotel activities, so it is important that the area of the restaurant is entered correctly in a business that includes both activities.
- The layout of the building.
- Whether there is a pool and how big it is.
- The number of guests, with account taken of whether occupancy or food preparation is unusually high or low. Having few guests (low occupancy) makes it more difficult to meet the limit value, while more guests makes it easier.
- Season, i.e. how much business is conducted in the building for each month.

- The amount of laundry and whether this is cleaned by a Nordic Ecolabelled laundry firm. It is easier to meet the requirements if the laundry is sent to a Nordic Ecolabelled laundry firm. If the laundry is sent to a non-Nordic Ecolabelled laundry firm, the business is weighted with 1.5 times more (for energy and carbon dioxide) than if it was a Nordic Ecolabelled laundry firm.
- Whether heat sources with high carbon dioxide factors are used. This will make it more difficult to score points on the carbon dioxide requirement.

Impact analysis for Nordic Ecolabelled hotels and restaurants

For the majority of businesses that currently have a licence, according to preliminary testing[56], the energy tool produces a target value for energy use that is considerably lower than the actual energy use of the business today. This means that the businesses have greater energy use than they should optimally have. On average, the businesses have energy use that is 1.52 times higher than the target value (ideal value). As has already been stated, it is however rare that a business is able to function under optimum circumstances. There may be many reasons for this: The building may have poor insulation, the technology may be older, and the kitchen may be a relatively large consumer of energy.

14 out of 16 businesses fulfilled the limit value for energy in a test that was done during the public consultation.

There has not previously been an energy limit value for restaurants (and conference facilities). However, Nordic Ecolabelling has received certain information about energy use via requirements for energy measurement that has been used when developing the energy tool and setting requirements. As with hotels, it has also been possible to draw on data from the STIL statistics for restaurants and conferences. This forms the basis for determining the target value and limit value. Nordic Ecolabelling is aware of that the requirement on energy is a tightening compared to previous version of the criteria for restaurants, and that it can be a challenge as many restaurants do not have their own meters and because of lack of resources and knowledge to find the information that is required. However, Nordic Ecolabelling means that the energy tool is a good way to measure a business' energy consumption and consider it as important for the restaurant's environmental work that the energy consumption is known. After the public consultation it is introduced in the requirement that restaurants that are located in a building with central electricity measurement and that are unable to separate all or part of its electricity consumption from other businesses (e.g. a restaurant located in a shopping centre), do not have to install a permanent meter, but must have a measurement of the electricity consumption. There are to alternatives; either install permanent electric meters on the energy-demanding installations like fridge, dishwasher, stove etc., and estimate the rest of the consumption (e.g lightning) or have an energy review by a third party including reading of electric meters for energy-demanding installations (fridge, dishwasher, stove etc.) during a representative period, together with an estimation of the total annual consumption. This will make it possible for restaurants that have problems with installing permanent meters to get figures on electricity consumption.

It should also be borne in mind that a restaurant's energy use is of subsidiary importance from a life cycle perspective, compared with the environmental impact of the food. It is

[56] carried out in October 2012

also the case that energy use varies greatly across different types of restaurant, depending on the type of kitchen that the restaurant has[57].

The energy tool does, however, take account of the restaurant's size (kitchen and dining room). For catering restaurants (with no dining room), the target value is calculated based on the area of the kitchen and the number of servings produced.

What the energy tool does not take into account

In life cycle analyses, it is common to include energy losses associated with the production and distribution of electricity, heating or fuels used. This is done by multiplying a primary energy factor that takes account of such energy losses. In Europe, for example, it is common to use a primary energy factor of 2.5 for electricity. This means that for every 1 kWh of energy purchased, a business has actually used 2.5 kWh. The losses come from the conversion of energy into electricity and from the distribution to the customers. Similar energy losses have been attributed to district heating and various fuels.

Nordic Ecolabelling has considered the possibility of including energy losses when calculating energy use. In this way, businesses with heating systems that carried major energy losses (such as electricity) would be punished. However, we realise that businesses tend to exert little influence over the choice of heating system. This lack of steerability means that businesses may have economic or technical limitations with regard to heating systems.

It is often also the case that businesses do not own the buildings in which they operate. Last but not least, there are major differences in the Nordic countries when it comes to energy policy and priorities. While the district heating network is well developed in Sweden, there is not the same level of availability in Norway.

In this product group, it is important that the requirements are achievable for businesses across the whole of the Nordic region. A good range of ecolabelled restaurants in Denmark is of little help when the destination is Finland or Norway. Against this background, we have therefore decided that the energy tool for this version of the criteria should not deal with primary energy factors.

Measuring electricity, heating and cooling consumption

As the parameters of electricity, heating and cooling are crucial to establishing whether the business complies with the limit values for energy and carbon dioxide, it is important that these parameters can be satisfactorily documented. They can usually be documented via information from the supplier. However, it is sometimes the case that suppliers of electricity, heating and cooling are unable to provide documentation for the specific business in question. If this is the case, the following applies:

Measuring electricity consumption

The business must have an electricity meter for monitoring electricity consumption and must regularly be able to document the consumption of the entire business.

If the business' electricity consumption cannot be documented, there must be a measurement of the electricity consumption. For restaurants that are unable to account for its electricity consumption separately from other businesses (e.g. a restaurant located in a shopping centre) there must be a measurement of the electricity consumption. There are

[57] TTS, 1998

to alternatives; either install permanent electric meters on the energy-demanding installations like fridge, dishwasher, stove etc., and estimate the rest of the consumption (e.g. lightning) or have an energy review by a third party including reading of electric meters for energy-demanding installations (fridge, dishwasher, stove etc.) during a representative period, together with an estimation of the total annual consumption. The review shall be done every second year. Third party can be electric installer, energy consultant, energy company or similar.

Nordic Ecolabelling may in exceptional cases allow certain parts/premises of the business which do not include energy-intensive installations or equipment to be exempt from regular measurements. This may, for example, apply to what are known as "satellite kitchens", in other words a small kitchen connected to a conference suite or entertainment suite used only sporadically for heating up food (not preparing food).

For businesses where various events are held occasionally (max two times/month) such as stage performances or exhibitions, whose energy consumption cannot be considered to be included in the day-to-day energy consumption for operation, that section may in exceptional cases be discounted with the approval of Nordic Ecolabelling, provided that the energy consumption is metered and accounted for separately. This provides an opportunity for businesses to host major events on special occasions, outside their ordinary operations.

Measuring heat, cooling and ventilation
The business' use of heat is normally much more complicated to measure compared with electricity consumption, particularly if the business is a small unit in a larger building containing many other businesses (a common situation for restaurants). Nordic Ecolabelling can therefore accept a calculation based on the energy consumption for heating being correlated with a percentage of the total surface area.

For ventilation in a restaurant, the calculation can be based on the floor area plus 30 kWh[58] for ventilation electricity per restaurant area. For hotels and conference facilities the calculation can be based on surface area plus 5 kWh/m^2 for ventilation electricity. This only applies if the electricity for ventilation is not included in other electricity consumption.

5.3.3 Limit values for water consumption O5, P2

O5, P2 Water

In the same way as in the previous hotel criteria, the limit value for water is optional but is now calculated based on the number of sub-businesses that the applicant business has (e.g. hotel with restaurant or hotel with pool and restaurant). The requirement is calculated as water consumption in litres per guest.

For restaurants this is a more stringent requirement as in version 1 of the restaurant criteria points were scored if the business had a separate water meter. In order for businesses to be able to obtain a licence based on meeting the limit value for water, it is essential that they are able to establish their consumption by measuring the water consumption of the specific business, either using their own meter or by using data from

[58] According to information from Anders Hemmingson, based on STIL statistics

the water supplier. This is also required if points are to be scored for performing better than the limit value requirement.

If the business does not need to meet the limit value for water in order to obtain a licence, it is acceptable for water consumption data to be produced by other means, for example on the basis of invoices or a calculation of the proportion of water consumed as part of a larger business. This is accepted as in practice it is often impossible to install a meter for the specific business in question. Subsequently the business can investigate whether consumption is lower than the limit value or choose to comply with another optional limit value and thus not score points for this requirement.

The water limit value is calculated using the following formula:

Limit value for water consumption for the entire business = 200 litres/guest x no. hotel guests + 45 litres/guest x no. restaurant guests + 45 litres/catering portion x no. catering portions + 25 litres/guest x no. conference guests +75 litres/guest x no. external pool guests

If the hotel business has a pool, 275 litres/guest applies.

The limit values for the different sub-businesses are based on water consumption for licensed hotels and restaurants and literature data.

For **hotels** the limit value is set at 200 litres/guest, which corresponds to average consumption in a licensed hotel serving only breakfast. The water consumption of the licensed hotels varies considerably but average figures show that hotels with a restaurant and a pool consume more water (average 275 litres/guest) and hotels with only a restaurant (average 228 litres/guest) and hotels with only breakfast (average 200 litres/guest). Information from Statistics Norway's report "Water consumption in Food Processing and the Service Industry in Norway"[59] gives estimated water consumption in a high standard hotel with a pool as 500 litres/guest, while for a normal standard hotel water consumption is estimated at 275 litres/guest. Here it is not stated whether the values include any restaurant business in the hotel. Our figures, however, show that water consumption of 500 litres/guest seems very high, as few of the hotels (8% of the hotels which have both a pool and a restaurant) have such high water consumption.

For **restaurants** the limit value is set at 45 litres water/guest and 45 litres water/catering portion. Any bar guests are also counted in the number of restaurant guests. The limit value is based on figures from licensed restaurants and values for water consumption in SSB's report. The report states a consumption value for cafeterias of 50 litres/guest. This consumption value agrees with the figures that Nordic Ecolabelling has for restaurants, although these figures do vary considerably. There are also many different types of restaurant (canteens, cafés, take aways, à la carte etc.) with varying water consumption. It must be pointed out that the underlying data is limited and that it is uncertain how the requirement will affect different types of businesses.

For **conference facilities** the limit value is 25 litres/guest. As we do not have any licence data for this type of business, Nordic Ecolabelling has based its figures on values in the literature and calculations based on the water-consuming activities a conference guest carries out during a day. The water consumption of conference guests is mainly

[59] Svein Erik Stave, "Water consumption in Food Processing and the Service Industries in Norway", SSB 2006

associated with use of the toilet. The water consumption of a school pupil/student is given as 20 litres/day in SSB's report and can be considered to be a relevant comparison with a conference guest. Comparisons can also be made with household consumption. Water consumption per person in a household varies. Different sources state consumption ranging from 130-200 litres/person per day[60] [61] [62]. It is assumed that 23% of water consumption comes from visits to the toilet. This data concerned water consumption for 24 hours, while a conference guest would not spend an entire 24 hours in the conference facility. One toilet manufacturer states on their website that approximately 35 litres of water per person per day is used in flushing[63]. Based on the values above, water consumption for a conference guest is set at 25 litres/guest.

For **hotels with a pool** the limit value is 275 litres/guest. As hotels do not record how many of their hotel guests use the pool, it has been difficult to set a value for water consumption per pool guest. The limit value of 275 litres/guest is based on data from licensed hotels that shows that water consumption for hotels with a pool is 275 litres on average. Pool refers to a pool where the water is recirculated and disinfected. Jacuzzis do not count as pools as it is not considered correct to have additional water consumption for such a small pool. Water consumption associated with pools is extremely dependent on the number of people who use the pool (as it must be filled with a number of litres of water per user) and the temperature of the water and of the location, due to evaporation[64]. There is also a certain amount of water consumption linked to the fact that guests must shower when they use the pool. Spa facilities which have guests who only visit the spa for the day can add these guests to their limit value calculation for water consumption. In this case, these are calculated as pool guests at 75 litres/guest, equivalent to the extra consumption added per guest for hotels with pools.

In tests carried out prior to the consultation period, results showed that there was sufficient information on 9 businesses to calculate the limit value for energy and water consumption. The data included hotels with and without restaurants, and with and without a pool, but no businesses that were solely restaurants or conference facilities. The result showed that 8 out of 9 businesses met the limit value for water.

The starting point is that all businesses must be included in the water limit value. For spa businesses an exception may be made if the business, through metering or by means of an external professional assessment, is able to separately measure its water consumption. The reason behind this is that hotels are often unable to measure their consumption (of water, electricity or heating) separately for the spa alone[65]. Some are able to measure one of the parameters but rarely all of them.

The water limit value does not take into account whether laundry is carried out internally within the business or whether it is sent out to an external laundry. This means that sending laundry out to an external laundry is encouraged as in many cases it is judged to be better from an environmental perspective overall. Most professional laundries wash hotel and restaurant laundry in equipment systems with much lower water consumption

[60] www.regjeringen.no, accessed 08.03.2011: www.regjeringen.no/nb/dep/oed/dok/NOU-er/1994/nou-1994-12/22/2.html?id=333897
[61] Store Norske Leksikon, accessed 08.03.2011:www.snl.no/vannforsyning
[62] Klimaklubben, accessed 08.03.2011: hwww.klimaklubben.no/gh/layout/set/print/Nettsider/Groenn-Hverdag/Tm/Artikler-uten-tema_id/Siste-nyheter/Miljoekonsekvenser-ved-vannforbruk
[63] www.hansgrohe.no
[64] Truls Krogh, Norwegian Institute of Public Health, oral information, October 2011
[65] Contact with licensed hotels

than conventional machines[66]. If businesses also send their laundry to a Nordic Ecolabelled laundry (Textile services), it is even easier to meet the energy requirement as Nordic Ecolabelled laundries have lower values in the energy and carbon dioxide calculations.

The requirements must be documented by providing information on total water consumption from the water bill, for example, and an overview of the number of guests in the respective category (hotel, restaurant or conference guest).

5.3.4 Limit values for waste O6, P3

O6, P3 Waste

Amounts of waste can be reduced by encouraging sorting and recycling/reuse. For a discussion on a separate limit value for organic waste, see requirement P33 "Measuring organic waste" in section 5.1.17 "Food". The requirement concentrates on supporting precisely this through a limit value and a sorting requirement, see the section on waste sorting.

In the same way as in the previous hotel criteria, the limit value for waste is optional but is now calculated based on the number of sub-businesses that the applicant business has (e.g. hotel with restaurant or hotel with pool and restaurant). The requirement is calculated as kg unsorted waste per guest. For restaurants, this requirement is more stringent, as there were no limit value requirements for waste in the version 1 criteria for restaurants. Here too, more points are scored the lower the amount of unsorted waste there is compared with the limit value.

The limit value for **hotels** is set at **0.20 kg unsorted waste per hotel guest**. The value is set based on an analysis of the requirement in the previous version (version 3) of the hotel criteria and data from licensing, which, however, only shows the total amount of unsorted waste and not how much waste comes from the various sub-businesses (accommodation, restaurants and conferences). Licence data for businesses with (almost) only accommodation points to a median value of 0.4 kg unsorted waste per guest, including restaurants and conference facilities. The guest concept has now been changed and a hotel guest excludes breakfast, which is instead calculated under restaurants. This change also applies to the waste limits. Licence data also indicates that there are major variations in how waste is recorded in the Nordic countries, as Norway, Denmark and Sweden are on average approximately 30% better than the limit values and Finland approximately 58% better, which may indicate a difference in systems.

The limit value for **restaurants** is set at **0.8 kg unsorted waste per restaurant guest and 0.8 kg unsorted waste per catering portion**. This value is a cautious estimate as specific data describing the total amount per restaurant guest is lacking. In the license data for hotels the requirement does not relate to the same number of guests as the number of guests of the restaurant and can therefore not correctly be used in this context.

The limit value per **conference guest** is set at **0.20 kg unsorted waste**. Waste is expected to be material that the conference organiser and guest have produced, e.g. paper, cardboard, fruit and biscuits. Where food is served at a conference, the waste

[66] Oral information, Jeppe Frydendal, internal expert.

associated with serving food will normally be calculated together with the kitchen and restaurant section of business.

The relationship to the previous requirement levels for hotels, restaurants and conferences is hard to ascertain, partly because previously no distinction was drawn between hotels, conferences and restaurants in terms of waste. During the revision process the required level has been tested in 28 businesses (including hotels, restaurants and conference facilities), 15 of which met the requirement and three of which were unable to provide any information. This is equivalent to 36% of the businesses failing to meet the criteria.

5.3.5 Constant measurements

O7 Constant measurements

It is of the utmost importance that the business ensures that they continue (after the licence has been awarded) to remain within the limits set out by the criteria document. For this reason businesses must have procedures in place for measuring and documenting the limit values for energy, carbon dioxide, water and waste. Measurement and documentation are to take place at the following intervals:

- Energy – every month that the facility is open. For restaurants that do not have a permanent electric meter that cover the whole consumption of electricity, the following applies:
  – Restaurants that have chosen alternative a) in O4 must follow up the electricity consumption on the permanent meters every month
  – Restaurants that have chosen alternative b) in O4 must do measurements every second year
- Water – every month that the facility is open
- Amount of waste – at least one representative week per quarter when the facility is open

To document the requirement, procedures describing how measurements and readings taken as above are to be submitted.

5.4 Energy

O8 Oil for heating

Oil is a fossil energy source that generates major carbon emissions. Nordic Ecolabelling does not want businesses that rely largely on oil for heating to be able to obtain the Nordic Ecolabel. The requirement comprises businesses that have oil boilers, not oil boilers that are used in district heating facilities. The requirement is fulfilled if less than 40% of the heating need is met by oil. The heating need is calculated by the energy tool. The requirement will not exclude businesses that use oil-fired boilers to cover the extra heating need that arises during the coldest months.

The share from the oil boiler is calculated as follows[67]:

Share from oil boiler kWh/year) = volume oil per year (m^3/year)* efficiency of the oil boiler*energy factor (kWh/kg)*density (kg/liter)*1000 (l/m^3)

[67] Factors are from Nordic Ecolabellings criteria for Textile service, version 3.0

Energy factor for oil is 11,29 kWh/kg

Density for light fuel oil: 0,89 kg/liter

Density for heavy fuel oil: 0,98 kg/liter

If more specific information is available from the fuel supplier (for energy factor the lowest heating value for the fuel shall be used), these can be used instead.

P4 Carbon dioxide

New for this version of the criteria is a points score requirement for carbon emissions. An applicant can score max 3 points if they have an energy source that produces relatively low carbon emissions.

Carbon dioxide has been weighted as a high priority area within the RPS. The energy tool therefore also takes account of the carbon emissions of the various energy types. In the model, these are weighted with different carbon dioxide factors, see table 7. Based on Nordic Ecolabelling's energy guidelines, in this version of the criteria we will no longer encourage "ecolabelled electricity", since such a system does not automatically lead to any actual environmental improvements. This means that all electricity used will be weighted with a factor for carbon emissions that equates with the European energy mix. The European energy mix factor has been used, since the European energy market is open, and this will put the businesses on an equal footing in terms of electrical energy. As described in the section about what the energy tool do not consider, the energy loss at the production of electricity is not considered when calculating the business' CO_2-value.Through the optional carbon dioxide limit value we will still, to some extent, steer applicants away from fossil energy sources, since the use of renewable fuels produces low carbon emissions.

The limit for 1, 2 and 3 points, for example, is set according to the principle that around 40% of the businesses should be able to achieve 3 points and 70% or so 1 point. Based on the preliminary testing, the limit for carbon dioxide was set according to these principles.

P5 Solar thermal panels and solar photovoltaic panels

Nordic Ecolabelling wishes to promote the use of heating solutions that reduce energy consumption and carbon emissions. The use of solar energy for heating, hot water or premises is a good environmental measure, where the energy is "free" and emissions of carbon dioxide are practically zero. The same applies for the use of solar photovoltaic panels for production of electricity. Points are given if more than 20% of the heating need is met by solar panels. The heating need is calculated by the energy tool. The applicant must document that the installed solar panels have a power output corresponding to 20% of the heating need. Businesses that have installed solar panels are also likely to score well in both P1 and P4, since energy use and carbon emissions are reduced. 0,5 point is also given for businesses that have solar photovoltaic panels that cover more than 2 % of the total electricity needed.

P6 Heat pumps for heating premises or water

A heat pump moves heat from cold to warm surroundings based on physical laws regarding pressure and temperature. It converts high value energy (electricity) into low value energy (heat). The output from a heat pump can vary a great deal, but will generally

be 3-4 times the input energy. This means that 3-4 kWh heat is produced for each kWh electricity[68]. To score points, the applicant needs to be able to document the fact that the output meets more than 30% of the heating need. The heating need is calculated by the energy tool. Businesses that have installed heat pumps are also likely to score well in both P1 and P4, since energy use and carbon emissions are reduced.

The calculations of installed capacity for heating of premises or hot tap water shall be based on the heat pumps' annually estimated operating time and their Seasonal Coefficient of Performance (so called SCOP). If the SCOP is not known, the efficiency for brine/water heat pumps is set to 2.5 for heating and hot tap water. For air/water and air/air heat pumps the efficiency is set to 2.0 for heating and hot tap water[69].

P7 Refrigerant

The obligatory ban on CFCs as refrigerants previously in the hotel and restaurant criteria has been removed as this is now governed by legislation in all the Nordic countries. Instead we have chosen to retain the slightly reworked version of the restaurant criteria's points requirement for refrigerants in fridges and freezers.

The new requirement is a points score where points are awarded if more than 50% of the refrigerants (calculated on fill weight) at the facility have a GWP_{100} value (global warming potential) of less than 5. This seeks to encourage the use of refrigerants with a low climate impact while still being possible to fulfil. Examples of such coolants are carbon dioxide, ammonia, butane, propane, ethylene and propylene.

The requirement has been clarified after the public consultation as it was unclear what kind of aggregates that was covered. The requirement covers all aggregates for cold-storage chambers, refrigerators/freezers, coolers for drinks, minibars and similar. The requirement does not include heating pumps or air conditioning (cooling of the premises).

P8 Energy analysis

The requirement is retained practically unchanged, since it is still relevant, shows potential and has a certain amount of steerability.

The purpose of setting a requirement for an energy analysis with proposed measures is to clarify the potential for improvement at the establishment in energy terms, and to highlight cost-effective measures that are worth implementing.

By relevant measures means cost-effective measures that are relevant to conduct. For instance, changing windows in the entire building may be a very good energy and environmental measure, but maybe not realistic or economically viable. The purpose of the requirement is to stimulate to conduct good measures and the requirement shall not be assessed too strict.

Through our criteria (with support of the RPS), we wish to set requirements for energy use that **cover both the property and the business** that takes place within the property. In the Nordic countries, there is currently a statutory requirement for energy declara-

[68] http://no.wikipedia.org/wiki/Varmepumpe
[69] Factor values ar taken from the Norwegian Standard "NS 3031:2007 Beregninger av bygningers energiytelse – Metode og data"

tions/certificates[70]. At the moment, these only apply to the property. In order to address the whole picture, we set a requirement that the establishment's energy analysis must contain a survey **both of the property's conditions** (consumption, including potential for improvement and costs) **and the business' conditions** (consumption, including potential for improvement and costs).

If the applicant so wishes, there is the option of using a specially developed guide to ordering an energy analysis. It is, however, not obligatory to use this guide. The guide explains which areas the energy analysis should cover, and it also gives a rough outline of how it may be structured. It is based on the statutory requirements regarding what a Swedish energy declaration should contain[71], but has naturally been reworked so that it functions in all Nordic countries.

P9 Lighting

The points score requirement for lighting, aimed at promoting low energy use, has been retained (compared with previous versions of the hotel criteria), but has been reworded. For restaurants there is still a possibility of scoring points for lighting with low energy consumption, but here too the requirement has been slightly reworded. Since conditions vary for the different establishments, we have a rising points scale, with higher points for a higher proportion of light sources no lower than class B or LEDs.

In order to be less prescriptive of technology in an area where rapid technical advances are taking place and where relatively stringent statutory requirements have come into force (such as the phasing out of filament bulbs within the EU under the Ecodesign Directive[72]), we have chosen to set requirements that promote light sources with a good energy classification.

The energy classification system is obligatory[73] for non-directional lamps and applies across the EU countries. It has also been incorporated into Norwegian law, which means that it works well in all Nordic countries.

The EU's energy labelling of light sources does not cover reflector lamps, and so does not apply to ordinary "downlight" halogen lamps. Reflector lamps (directional) therefore require energy efficient LEDs (Light Emitting Diodes). The requirement means that downlights, for example, with ordinary halogen lamps do not score points.

The requirement regarding EU energy labelling of light sources also does not apply to light sources below 4 Watts. This means in practice that much of the LED lighting available cannot be energy labelled, even though it saves energy[74]. Nordic Ecolabelling accepts LEDs despite the possibility that there may be environmental problems associated with some of the components.

This requirement now applies to the whole business, both indoors and outdoors, and Nordic Ecolabelling has chosen to include all types of lighting, even if it is not permanently installed.

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[70] Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings, http://www.buildup.eu/publications/1147
[71] Boverkets föreskrifter och allmänna råd om energideklaration för byggnader BFS 2007:4 BED 1 (plus ändringar) http://webtjanst.boverket.se/Boverket/RattsinfoWeb/vault/BED/PDF/BFS2007-4BED1.pdf
[72] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:285:0010:0035:SV:PDF
[73] http://energimyndigheten.se/sv/Foretag/Energimarkning---ditt-ansvar/Fragor-och-svar/
[74] According to contact with Peter Bennich, Swedish Energy Agency, May 2011.

P10 Automated lighting controls

Within this requirement, higher points are awarded where a greater proportion of the establishment's lighting is connected to automated lighting controls. In the previous version of the criteria for hotels, outdoor lighting and lighting in guest rooms was covered by a similar requirement. This requirement now covers the whole of the licensed business, and therefore represents a tightening of the criteria for restaurants.

Automatic lighting controls for indoor lighting save energy. In this context, we accept several different solutions: for example daylight sensors, movement sensors, or preferably a combination of the two. Keycards for guest rooms are also an approved form of automated lighting control. The energy consumption in this area is also governed by the energy limit value, but we have chosen to retain the requirement, since it is a measure that in itself can produce savings and acts as a signal for guests of the business.

P11 Ventilation controls

The requirement is considered to still be relevant and has been retained practically unchanged (it was previously merged with the requirement on automated lighting controls in the hotel criteria). Although, in this version of the criteria, we place great emphasis on the limit value, we see it as relevant to continue highlighting an area where energy savings can be made. The previous version of the hotel criteria also contained a requirement regarding how much of the ventilation was connected to a heat recovery system. This requirement has been deleted, since it was difficult to document and the area is now governed by the energy limit value requirement.

After the public consultation there has been an adjustment so that ventilation to hotel rooms no longer shall be included, and conference premises and dining rooms shall be included. Also, the requirement has two levels that give 1 point if 50% of the ventilation is tailored to demand and 2 points if 90% of the ventilation is tailored to demand. Ventilation in the kitchen is excepted as it is often timed. Also, in principle it is always on and need to be on, when the kitchen is used. It is also not relevant that the ventilation in the kitchen should be regulated based on the amount of carbon dioxide in the air – there are other parameters that decides the ventilation needed. Air conditioning is here considered as ventilation as it is a part of the indoor air regulation in a premise. Also it is more common that ventilation and air conditioning are controlled together. If also the air conditioning is tailored to demand, it will contribute to a lower energy consumption and effect on the environment[75].

With "tailored to demand" we mean in this criteria version that the ventilation is tailored after the number of people in the premises. This can be done through controlling of presence or amount of carbon dioxide in the air. Time clocked controlling is not approved. One of the reasons for this is that how the time clocked controlling is done, is affecting whether there is a notable effect or not. This is difficult to control for Nordic Ecolabelling.

5.5 What counts as ecolabelled?

Several of the requirements in the criteria document usually state that the business must purchase a certain proportion of ecolabelled products, for example in the requirements for chemicals and purchasing (including consumables, printed matter, durable goods and services). In this revision, products labelled with the Nordic Ecolabel and the EU

[75] According to conversation with Martin Fogelkvist, Ventilationsutveckling AB 2013-08-29

Ecolabel are always counted as ecolabelled. For some products also other labels are approved. When assessing whether other labels should be rewarded, there are several factors that are assessed. Especially important are the different labels' credibility. The Nordic Ecolabel's credibility is basically dependent on the following:

- Is an official label (supported by the government)
- Have public requirements that are reviewed and tightened regularly in dialogue with important parties.
- Is an independent third party certification
- Have fees that are publicly available and known.
- Is a type 1 environmental label

When evaluating other labels it is done by evaluating whether they fulfil the same characteristics. As the Nordic Ecolabelling is a type 1 environmental label requirements are set to the whole product chain. Many environmental labels focus only on one environmental problem or only parts of the product chain. In addition there are many labels with a more social and ethical focus. Nordic Ecolabelling have looked at the level on the requirements in labels that have been rewarded in previous versions of hotels and restaurants or labels that could be awarded in the new criteria, like Good Environmental Choice, GOTS and TCO. The conclusions are that for some product groups other labels can be approved. For purchasing of consumables, durable goods and services Nordic Ecolabelling do not want to award other labels where the requirement level are lower than the requirement level in corresponding product groups that the Nordic Ecolabel/EU-Ecolabel have requirements for. This means that for instance Good Environmental Choice is not approved for these product groups.

Chemical products labelled with Good Environmental Choice are approved. Products labelled with Good Environmental Choice in this category consider to fulfil the requirements to a lower environmental impact and it is relatively widespread on the Nordic market.

Textiles labelled with Good Environmental Choice class 1, Good Environmental Choice class 2 and GOTS are also considered as ecolabelled.

5.6 Chemicals

The RPS-analyses in chapter 4 shows that chemicals are an important parameter when evaluating the environmental burden for hotels, restaurants and conferences. Especially chemicals for dishwashing, but also chemicals for laundry and cleaning are important areas. The environmental impact can be reduced by using chemicals that contain a minimum of substances that are toxic for the environment and through correct dosage. Therefore, the requirements that are set to chemicals focus on these parameters. See also chapter 4 for more details on RPS for chemicals.

O9 Ecolabelled dishwashing chemicals

The requirement means that a high proportion (90%) of the dishwashing products must be ecolabelled. The requirement covers dishwasher detergent, drying agents and hand dishwashing detergent. Soaking agents and decalcification agents are not included.

This requirement has been changed. Previously the proportion was calculated based on the active substance, but now it is calculated on the basis of the amount of product

purchased in kg, litres or kr/€. For hotels the percentage remains the same, but restaurants were previously subject to a requirement that 70% of the chemicals for dishwashing and cleaning combined must be ecolabelled.

Experiences from hotels show that dishwashing products constitute the largest proportion of total use of chemicals – irrespective of the size of the restaurant element. For businesses with just a restaurant, this proportion will only increase in relation to cleaning and laundry products. By setting a requirement that almost everything used for dishwashing must be ecolabelled, we ensure that eco-friendly products are used. Access to ecolabelled dishwashing chemicals is good in the Nordic market.

Soaking agents and decalcification agents are exempt from the requirement. Soaking agents are included in the criteria for Nordic Ecolabelled dishwasher detergent for professional use but not in the criteria for dishwasher detergent for consumers. As not all the businesses use professional products, particularly small hotels, it is difficult to require the inclusion of soaking agents. This would force small businesses to buy more of these products than they need. Hotels and restaurants largely find it essential to use soaking agents. Decalcification agents are used in areas with hard water, for instance Denmark. The need for decalcification agents is thus dependent on the geographic location and the hotels, restaurants or conferences cannot affect this.

The requirement is worded in the same way as in the version 3 criteria for hotels, with the exception that the percentage is now to be based on the amount purchased in kg, litres or kr/€, not amount of active substance as previously. Hotels, restaurants and conference facilities have an overview of the amounts purchased and what they have paid for the products. The amount of active substance can be obtained from their suppliers but it is not a parameter that they themselves monitor changes in over time or when switching product. There are also some suppliers who do not wish customers to be aware of the content of active substance in the products they sell. Nordic Ecolabelling has therefore chosen to move away from active content and instead set a requirement based on the amount purchased in kg, litres or kr/€. This will make it easier for the business to relate to and they will be less dependent on information from chemical suppliers.

O10 Ecolabelled laundry chemicals

The requirement means that 90% of the amount of products used for laundering textiles, internally at the hotel, must be ecolabelled (excluding fabric softener, decalcification agents and special cleaning products).

Studies[76] [77] show that laundering textiles is one of the activities of an ordinary family that places the greatest burden on the environment. It uses water, energy and chemicals. Hotels and restaurants give rise to even larger amounts of textiles per person that need to be washed as hotel guests often stay one night or two. In a restaurant tablecloths and napkins must be washed after use, which means that this is an important area for which requirements must be set.

The requirement is worded in the same way as in version 3 of the criteria for hotels, with the major difference that the percentage is now to be based on the amount purchased in kg, litres or kr/€, not amount of active substance as previously. For an explanation for

[76] "Danske husholdningers miljøbelastning" report from the Danish Environmental Protection Agency No. 13, 2002, Copenhagen 2002 and
[77] "Miljøbelastningen ved familiens activiteter", Danish Competition and Consumer Authority, report 1996.1, Copenhagen1996.

the change, see O10. The requirement is therefore new for restaurants, as no corresponding requirement was made previously. Access to ecolabelled laundry chemicals is good in the Nordic market.

By setting a requirement that almost all laundry detergents used must be ecolabelled, we ensure that eco-friendly products are used. Fabric softener, decalcification agents and special cleaning products is exempt from the requirement. Fabric softener is included in the criteria for Nordic Ecolabelling of laundry detergents for professional use, but not in the criteria for laundry detergents for consumers. As not all facilities use professional products, particularly in small hotels, Nordic Ecolabelling chooses not to include fabric softener in the requirement. We do not wish to force small businesses to buy more of these products than they need. The use of fabric softener is often necessary as the hotels and restaurants must wash bed linen, towels and table linen.

Requirement O10 covers only laundry carried out internally within the business, i.e. laundry washed by external laundries is not covered by the requirement. Sending the laundry to a Nordic Ecolabelled laundry ensures that the textiles are washed in the most eco-friendly way possible. Points are scored for this in points score requirement P14.

O11 Ecolabelled cleaning products

This requirement means that 80% of the amount of cleaning products must be ecolabelled (products intended for daily cleaning of areas such as floors, bathrooms, toilets and kitchens; floor care, decalcification agents, pool chemicals and special cleaning are exempt).

Buying ecolabelled cleaning products ensures that eco-friendly chemicals are used without including substances that are harmful to health or the environment. Access to ecolabelled cleaning products for professional use has increased considerably in recent years and Nordic Ecolabelling therefore wishes to test tightening up the requirements compared with the corresponding requirement in version 3 for hotels. There the limit was 50%, which has now been set at 80%. The requirement applies to products for daily cleaning; floor care, decalcification agents, pool chemicals and special cleaning products are exempt. Normally floor care products are not part of the daily cleaning, but if it is used daily, for instance wash-and-wax care products, these shall be included. There are criterias for ecolabelling of floor care products, see also P21 for awarding of ecolabelled floor care.

Special cleaning products

The background to the exclusion of special cleaning products from the percentage calculation in O11 is that their use is necessary for hotels, restaurants and conference facilities, but they cannot currently be Nordic Ecolabelled.

Special cleaning products refers to products that are only used periodically, i.e. not for daily cleaning.

Special cleaning products are now defined as:

Kitchens: Dishwasher/coffee machine cleaner, descaler, drain cleaner, copper/silver polish, freezer cleaner, stainless steel protector (for kitchens), oven cleaner, hob cleaner, stainless steel polish, etc.

Cleaning: Stain remover for solid surfaces, chewing gum remover, carpet cleaner, drain cleaner, interior cleaners etc.

Laundry: Stain remover, washing enhancer and similar.

O12 Requirements for non-ecolabelled products

The chemical cleaning, laundry and dishwashing products may not be classified:

Classification	Danger symbol and R-phrase under Directive 67/548/EEC	CLP Regulation 1272/2008
Toxic to the environment	N with R50, R50/53, R51/53	Acute toxicity 1: H400 Chronic toxicity 1, 2: H410, H411
	R52/53, R52, R53	Chronic toxicity 3, 4: H412, H413
Carcinogenic	T with R45 and/or R49 (Carc 1 or Carc 2) or Xn with R40 (Carc 3)	Carc 1A/1B/2 with H350, H350i and/or H351
Mutagenic	T with R46 (Mut 1 or Mut 2) or Xn with R68 (Mut 3)	Mut 1B/2 with H340 and/or H341
Toxic to reproduction	T with R60, R61, R64 and/or R33 (Repr1 or Repr2) or Xn with R62, R63, R64 and/or R33 (Repr3)	Repr 1A/1B/2 with H360, H361, H362

The classification applies in relation to the EU's Dangerous Substances Directive 67/548/EEC with subsequent amendments and adaptations and/or the CLP Regulation 1272/2008 with subsequent amendments. For a transitional period, i.e. until 1 June 2015, classification under the Dangerous Substances Directive or the CLP Regulation may be used. After the transitional period, only classification under the CLP Regulation applies.

The product must not contain the following substances:

- Alkylphenol ethoxylates (APEO) or alkylphenol derivatives (APD)
- Diallyldimethylammonium chloride (DADMAC)
- Linear alkylbenzene sulphonates (LAS)
- Reactive chlorine compounds
- Silver nanoparticles
- Substances of very high concern (SVHC)
- PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable), under EU Regulation (EC) No 1907/2006, Annex XIII, see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:396:0001:0849:SV:PDF

Ingoing substances are defined, if not otherwise mentioned, as all substances in the chemical product – including additives (e.g. preservatives or stabilisers) in the raw materials/ingredients, but not residuals from the production, incl. the production of raw materials. Residuals from production and from production of raw materials are defined as residuals, pollutants and contaminants derived from the production of the raw materials, which are present in the final product in amounts less than 100 ppm (0.0100 %w/w, 100 mg/kg), but not substances added to the raw materials or product intentionally and with a purpose – regardless of amount. Residuals in the raw materials above 1.0 % are regarded as ingoing substances. Known substances released from ingoing substances are also regarded as ingoing substances.

This requirement also includes disinfectants, soaking agents, special cleaning products, rinsing agents, decalcification agents and floor care.

Exceptions:

- Pool chemicals do not have to fulfil the requirements.
- Exceptions are made to the prohibition on substances classified as dangerous to the environment where the classification is due to content of quaternary ammonium compounds.
- Exemption from the prohibition on reactive chlorine compounds is made if the authorities require that these are to be used (for example to disinfect shower heads in Norway).
- Exception is also given under specific circumstances, like outbreak of infectious diseases.
- In addition a minimal limit is set of 5% special cleaning products (of the total amount of special cleaning products purchased in kg, litres or kr/€) that does not need to comply with the criteria.

It is the chemicals suppliers who must state that the requirement has been met.

In version 3 of the criteria for hotels no requirements were set for special cleaning products, including floor care products; the amounts were included in the total limit value. They were not to be included when calculating the proportion of ecolabelled products and nor were they to meet the requirement set for non-ecolabelled products. In principle it could therefore be possible to use unlimited volumes of special cleaning products while there were no limits in terms of classification and content. In version 4 of the criteria the requirement has been tightened up in that the chemicals requirements now include special cleaners. This has been done to ensure that the products which place the least burden on the environment are used. A need for special cleaning may sometimes arise at a hotel, restaurant or conference facility and we therefore approve the exemption from the requirement of 5% of special cleaning products. The amount is calculated based on the total amount (kilos or litres) of purchased special cleaning products.

Disinfectant is covered by the requirement in version 3 of the criteria for hotels and no change to this requirement is proposed in version 4.

Nor has any other change to the wording of the requirement been made compared with version 3 of the criteria for hotels, apart from the addition of the requirement that the products may not contain silver nanoparticles. Silver nanoparticles are being used to an increased extent in floor care products – a development which Nordic Ecolabelling considers is unfortunate from a precautionary principle. Silver nanoparticles are antibacterial, and concern is expressed that this may lead to increased antibiotic resistance. Also there is lack of knowledge of the consequences of nanoparticles in the environment.

For restaurants the requirement was previously that non-ecolabelled dishwashing and cleaning products had to meet the equivalent requirement for products as set in version 3 of the hotel criteria. For restaurants the requirement has therefore been changed with the introduction of a ban on silver nanoparticles. Laundry chemicals are now also included in the requirement.

Consideration has also been given to the implementation of the new CLP Regulation in classifying products.

P12 Chemical-free cleaning methods

In general, vacuuming and the use of damp/dry microfibre cloths are often sufficient for a good cleaning result in general cleaning. Having procedures for using vacuum cleaners, microfibre cloths or water for cleaning is seen as an important measure for minimising the use of chemicals. The requirement is therefore set such that points are given if chemical-free cleaning methods are used on all surfaces in communal spaces and in any guest rooms and conference premises.

Areas where it is necessary to use chemicals to comply with hygiene requirements are kitchens, dining rooms and baths/toilets, which are therefore not covered by this requirement. In addition, cleaning using chemicals is necessary where special needs arise, e.g. removing stains, floor care, cleaning windows/mirrors and cleaning floors with tough stains from shoes, suitcase wheels, etc. Therefore exceptions are made for using chemicals to clean windows, care for floor and for cleaning the lobby and entrance where necessary as these often contain stains which can be hard to remove without using cleaning chemicals.

O35 Dosage of dishwashing chemicals

Automatic dosage systems ensure that no more chemicals are used than are necessary to ensure hygienic dishwashing. As dishwashing chemicals constitute the highest proportion of total chemicals use in both hotels and restaurants, correct dosing of these chemicals is particularly important and therefore all dishwashers (with the exception of dishwashers intended for private households) must have automatic systems for dosing dishwasher detergent.

Automatic dosage systems for detergent are usually fitted by the chemicals supplier and are usually found in all equipment of the type: pass-through/flight, hood and "under counter" dishwashers[78].

A distinction should be made between dosage systems for detergent and for drying agents. The latter tends to be something included with the machine either as standard equipment or as additional equipment when purchased. A dosage system for drying agent alone is not sufficient for compliance with requirement O13. It is required that there is a dosage system for dishwashing. Points are scored for a drying agent dosage system under requirement P13.

O14 Dosage of cleaning chemicals

The requirement that chemicals used for daily cleaning must be dosed either automatically or manually using dosage equipment has been changed for hotels and restaurants. It is now an obligatory requirement. In hotels this was previously a points score requirement and points were only awarded for automatic dosing. The criteria for restaurants awarded points if the chemicals were dosed automatically or using a dosage pump.

Here automatic dosing means a system which mixes the product and water to make a solution ready for use. This ensures that no more chemicals are used than that necessary to ensure a good cleaning result.

[78] Bernhard Moe, retailer in Norway

The majority of products used for regular cleaning can be bought in units which can be attached to an automatic dosage system that provides a ready-made solution for use. It is essential that there is access to water where the business doses its products. There are systems which dose an equally large amount of concentrate each time they are pressed and then the water is added manually. Other dosage methods are using a dosing measure, measuring vessel or similar. Nordic Ecolabelling wishes to focus on the use of chemicals and the use of dosage systems better ensures that the correct dose is used.

As there are several types of business covered by the criteria, including small hotels and youth hostels, it is also permitted to use manual dosing systems with pumps, measuring vessels and similar. These businesses often use such small amounts of chemicals that an automatic dosage system is irrelevant. Where manual dosage equipment is used, instructtions must always be provided and it must be ensured that the chemicals are dosed correctly.

P13 Automatic dosage of cleaning chemicals

To reward the businesses that have automatic pump systems, a points score requirement has been introduced.

Pump systems or the use of other dosage equipment is in itself not a guarantee that the correct concentrate and water ratio will be attained. An automatic dosage system is therefore better to ensure that more chemicals than necessary are not used.

P14 Dosage of dishwasher drying agents

Automatic dosage equipment ensures that no more chemicals are used than are necessary to ensure clean and hygienic dishwashing. As dishwashing chemicals account for the largest proportion of total chemical use in hotels and in restaurants, correct dosage of these chemicals is particularly important. There should be a distinction between dosage equipment for dishwasher chemicals (see O13) and for drying agents. The latter tends to be something included with the machine either as standard equipment or as additional equipment when purchased. An important aspect of the requirement is to ensure the correct dosage, and it is therefore important that the business ensures regular servicing of the dosage equipment.

If drying agents are not used at all, the same amount of points is awarded as if all of the dishwashers have automatic dosage equipment. This way the businesses that do not use drying agents can still receive points.

P15 External textile services/laundries

Studies[79] [80] show that laundering textiles is one of the activities of an ordinary family that places the greatest burden on the environment. It uses water, energy and laundry chemicals. For hotels and restaurants, which give rise to even larger amounts of textiles which must be washed per person, , it is natural to assume an even greater impact. Nordic Ecolabelled laundries are subject to stringent requirements on laundry chemicals, energy and water use, waste, packaging and laundry quality. Today rewarding the use of Nordic Ecolabelled laundries is the best way of ensuring that textiles from hotels, restaurants and conference facilities are washed in the most optimum manner for the environment.

[79] "Danske husholdningers miljøbelastning" report from the Danish Environmental Protection Agency No. 13, 2002, Copenhagen 2002 and
[80] "Miljøbelastningen ved familiens activiteter", Danish Competition and Consumer Authority, report 1996.1, Copenhagen 1996.

Access to Nordic Ecolabelled laundries is good across much of the Nordic countries (with the exception of Finland). Note also the fact that the laundry is included in the total energy use of the business and the obligatory limit value is thus affected by whether the business does its own laundry or whether the laundry is Nordic Ecolabelled.

Within the requirement, there is different point scoring opportunities, depending on the business, and on how it handles its laundry. Whatever the business, a maximum of 4 points is available in total. Accommodation businesses score four points for sending all textiles (with the exception of drying cloths and mops) to a Nordic Ecolabelled textile service/laundry. If the hotel business sends either bed linen or towels to a Nordic Ecolabelled laundry, two points are scored.

Restaurants score three points if a Nordic Ecolabelled laundry is used for all textiles (apart from drying cloths and mops).

Where a business washes all its textiles itself and where all washing machines used for this have automatic dosage equipment checked by an independent third party or the supplier of the dosing equipment at least two times a year, one point is scored. It is considered better for the environment to wash textiles on a Nordic Ecolabelled laundry than to wash the textiles themselves at the premise. This is due to strict requirements on ecolabelled laundries to laundry chemicals, energy-and water consumption, waste, packaging and quality of the washing process. It is therefore given only 1 point compared to 4 and 3 points if textiles are washed at a ecolabelled laundry. There are no requirements to the premise's own machines and their consumption of water or energy as this is handled in the energy tool and water requirements.

Washing of cleaning mops is not included in the requirement and no points are scored if the business washes its own mops as mops only account for a small amount of the volume to be washed.

O15 Purchasing procedures – chemical products

This requirement is new to version 4 of the criteria and means that the businesses must have a purchasing procedure for their chemical products that shows that they comply with the requirements set for chemicals. The business must also appoint one person per department (e.g. cleaning, restaurant/kitchen and relaxation/pool department) who is responsible for purchasing chemicals. It is the person responsible for purchasing who must ensure that the purchasing procedure is complied with. When the person responsible for purchasing changes, the business must have routines to secure that the chosen chemicals accounted for in O9 - O12 will still be in use.

Previous experience from hotels shows that it is important to have clear procedures in place for how chemicals purchasing is to be carried out and to have one person responsible for purchasing chemicals to ensure that the products purchased meet the requirements set in the criteria document.

O16 Handling of chemical products

To minimise the risk of unnecessary waste and overdosage and to minimise the risk of work-related injuries, there must be clear, easily comprehensible instructions easily accessible to staff such that they can easily ascertain the right dosage and handle the chemical products safely and correctly.

This requirement applies to chemical products for dishwashing, laundry, cleaning, disinfection and floor care.

An up-to-date list of all the chemical products used in the business, including area of use and handling must be documented and be held by every purchasing department manager and person responsible for the Nordic Ecolabel licence. The overview of chemicals in the guide can be used as a template.

5.7 Water

P16 Water consumption for dishwashers

The requirement has been tightened up compared with the previous versions for hotels and restaurants and the requirement now includes counter-top dishwashers. The requirement has been easy to comply with and contact with a producer confirms that the level can be made stricter.

In setting new requirement levels for water consumption, information has been obtained from the websites and product catalogues of different producers[81] [82] [83] [84] and we have contacted one producer.

For hood dishwashers, the requirement has been increased from 4.5 litres/cycle to 3.0 litres/cycle. For pass-through/flight dishwashers, the requirement has been increased from 2.5 litres/cycle to 2.0 litres/cycle. A requirement has also been introduced for counter-top machines with a consumption limit of 2.0 litres/cycle. The requirement for counter-top dishwashers has been introduced as small restaurants may have this kind of machine.

The requirement must be documented by sending in technical data on the dishwasher's water consumption per cycle or confirmation from the producer stating the water consumption per cycle. There have been certain difficulties in documenting water consumption/cycle as this is not always stated in the product data sheets, but it is confirmed by both dealers and producers that this is the best and most reliable means of documenting water consumption. It is common for dishwashers to have two speed settings, the choice of which has a bearing on the water consumption per cycle. In these cases it is the water consumption related to a contact time of 2 minutes that shall be used. This is in accordance with the standard DIN 10510.

P17 Water-saving taps

This requirement has been tightened up compared with the previous versions of the hotel and restaurant criteria.

Now 2 points are scored when at least 90% of the number of mixer taps for washbasins have a flow of a maximum of 5 litres/minute and 1 point if the flow is a maximum of 8 litres/minute compared with the previous 8 and 10 litres/minute. This requirement does not cover kitchen taps or bath mixer taps.

[81] www.kromosrl.com
[82] www.winterhalter.co.uk
[83] www.metos.fi
[84] www.hobart.no

The decision to tighten up the criteria is based on information on flow per minute on the websites and in the product catalogues of various producers[85] [86] [87] and the fact that licensing has demonstrated that the previous requirement was easily complied with.

Water consumption varies but for those products stated to be water-saving, the flow is between 2.5 and 7 litres/minute. The tightening up of the requirement is based on this information and will reward businesses that have invested in water-saving taps.

The requirement is documented by information from technical data sheets or similar in which the water flow in litres per minute is stated or through confirmation from the producer stating the water flow in litres per minute. Where it is difficult to obtain this information, the requirement can also be documented by the hotel itself measuring the water flow per minute. In addition to this, an overview is to be sent in of the proportion of mixer taps with a maximum water flow of 5 or 8 litres/minute.

P18 Water-saving showers

This requirement has been tightened up compared with the previous version. In order to score 2 points, at least 90% of the number of showers must have a flow of a maximum 9 litres/minute, while a flow of a maximum 11 litres/minute scores 1 point. The requirement was previously for 10 and 12 litres/minute respectively. There are major opportunities to save water by switching to new showers or by fitting a shutoff valve to older showers. An old shower can consume as much as 24 litres of water per minute. A water-saving shower uses 6-10 litres of water per minute[88] [89]. Tightening up the requirements so that the showers that are within the current definition of "water-saving" can be used offers great potential for reducing water consumption.

The requirement is documented by information from technical data sheets or similar in which the water flow in litres per minute is stated or through confirmation from the producer stating the water flow in litres per minute. Where it is difficult to obtain this information, the requirement can also be documented by the hotel itself measuring the water flow per minute. In addition to this, an overview is to be sent in of the proportion of mixer taps with a maximum water flow of 9 or 11 litres/minute.

P19 Toilets

The opportunity to score points if a toilet has 2 flush options remains unchanged.

Information from producers shows that water consumption varies from 2-6 litres/flush using the two different flush options[90] [91]. Ifö states, for example 2 and 4 litres/flush for the two flush options, while Gustavsberg gives 3 and 6 litres/flush. Toilets with only one flush option generally have higher water consumption per flush compared with the lowest consumption for toilets with two flush options. This shows that there are excellent opportunities to save water by having toilets with two flush options. This, however, does require that guests use the button that produces the lowest water consumption.

[85] www.grohe.no
[86] www.hansgrohe.no
[87] www.oras.no
[88] Grønn Hverdag, accessed 8 March 2011:
www.gronnhverdag.no/nor/Bolig/Energi/Sparedusj/%28language%29/nor-NO
[89] ENØK, accessed 8 March 2011: www.enok.no/enokguiden/07_2.html
[90] www.ifosanitar.no
[91] www.gustavsberg.no

The requirement is documented in a list of the proportion of toilets with two flush options.

5.8 Waste

Amounts of waste can be reduced by encouraging sorting and recycling/reuse and by reducing the use of disposable items, for example. The requirement has been concentrated on supporting precisely this through a limit value (see the sections on limit values for water consumption and waste) and a sorting requirement.

O17 Sorting

In previous versions of the criteria for hotels, there has been an obligatory requirement that the business must sort waste into at least four of the following fractions: uncoloured and coloured glass, crockery, food/organic waste, fat/cooking oil, combustible waste, waste paper, corrugated cardboard, cardboard packaging, rigid plastic, soft plastic, metal, textiles and lamps.

In addition, 1 point was awarded for each fraction sorted out in addition to the four obligatory ones. A total of 4 points were available.

In version 4 of the criteria, the requirement has been changed so that it only includes an obligatory requirement to sort out in at least 3 of the fractions choosing from glass, metal, paper, cardboard, organic waste, rigid plastic and soft plastic. These are fractions that occur in relatively large quantities. These fractions are to be sorted and documentation must be submitted showing that organic waste, rigid plastic and soft plastic is sent for material recovery. Organic waste (food and garden waste) must go to biological treatment/recovery to be counted as a fraction. With biological treatment/recovery means composting, biofuel production or animal feed. Please note that the regulation regarding organic waste to animal feed must be fulfilled.

Note: Fractions that are not included in the list above are fat/cooking oil, crockery, batteries, lamps, textiles and combustible waste. The reason for this is either that they are incorporated in other requirements, that the sorting of the fraction is a statutory requirement or that only small amounts occur at hotels, restaurants and conference facilities. Where organic waste is sorted and sent for biological treatment/recycling, hotels receive 2 points and restaurants 3 points in P20. It is rare for waste such as crockery, fat/cooking oil, batteries, lamps, metals and textiles to occur in large amounts, and combustible waste is practically the same as general waste that everyone has. Lamps and batteries are considered hazardous waste that the authorities require to be sorted out.

The opportunity to score points by sorting out more fractions has been removed. There are several reasons for this. One reason is that there are major national differences in the way that the fractions are sorted. Norway, for example, does not differentiate between coloured and clear glass. Metals also go into the same container as glass. The separation of glass and metal is then carried out by the waste processor. This is a circumstance that the businesses themselves have little control over, and the requirements should be adapted so that the geographical location does not affect how many points a business can score. The expansion of the product groups to take in restaurants and conference facilities brings greater variation between the establishments that apply for ecolabelling. This also means major differences in the types of waste that occur; at some establishments the operation generates many different fractions while other, less complex establishments will only be able to sort waste into a few fractions.

Finally, the number of fractions that the waste is sorted into is not, in itself, a measure of how good the establishment is at sorting its waste or how great the environmental benefit is. If the business chooses to sort fractions of modest amounts during normal operation, the environmental benefit is limited.

Nordic Ecolabelling wants its requirements for waste to ensure that as little waste is generated as possible. It is also important that the large fractions are sorted and processed with a focus on material recovery.

For fast food restaurants, it used to be specified that disposable articles were to be sorted but this has now been removed as steerability is low. The previous requirement for restaurants which stated that they should have instructions on sorting is included in requirement O31 on own checks and in requirement O18 on waste sorting for guests.

The previous requirement, for hotels and restaurants, where points are scored if the business has at least three suppliers who use returnable packaging has now been deleted, since it is generally met by all applicants.

O18 Waste sorting for guests

The requirement means that conference and hotel guests must have the opportunity to sort their rubbish into at least 2 fractions (excluding the residual fraction), or alternatively it must be sorted by the staff.

Previously it was obligatory for conference guests to be able to sort paper, while more fractions scored 1 point (0.5 points if the staff sorted the waste), while sorting in guest rooms scored 1.5 points (1 point if staff carried out sorting). It has now been specified how residual fractions are to be calculated and the points do not differ depending on whether it is the guests or the staff who sort the waste. The requirement has now been tightened by making it obligatory.

For restaurants, if customers sort their washing up themselves, there must be clear waste sorting instructions. This requirement remains unchanged but used to be under the sorting requirement. The requirement aims to reduce the amount of unsorted waste and is supported by the sorting requirement.

P20 Processing organic waste

Hotels and conferences score 2 points and restaurants score 3 points if organic waste is sorted out and sent for biological treatment/recycling, for example as compost, animal feed, or is used to produce biofuel. Please note that the regulation regarding organic waste to animal feed must be fulfilled. The requirement scores a maximum of 3 points.

The requirement remains as a separate points score requirement as it covers a fraction of particularly major importance for restaurants, caterers and similar but the points score has been increased from 1 point. The text of the requirement has been modified such that all types of biological treatment/recycling are approved. Combustion of organic waste in incineration plants is not considered as biofuel in this document.

See also P33 for the points score requirement for measuring organic waste for restaurants.

5.9 Purchasing

The purchasing of ecolabelled products and services is constantly prioritised, as these are assumed to have a lower environmental impact compared with non-ecolabelled purchasing. It is referred to chapter 5.1.8 "What counts as ecolabelled" for a description of Nordic Ecolabel's attitude to other labels.

O19 Low energy lamps, fluorescent tubes and LEDs

When purchasing new low energy lamps and fluorescent tubes, the requirement is unchanged but a supplementary requirement has been introduced for LEDs which must have a lifetime of at least 25,000 hours. Alternatively the light sources are to be ecolabelled. The technology for new energy-efficient low energy lamps and LEDs is developing quickly and today there are major variations in testing methods, the quality of light sources and lifetime. When building new buildings or carrying out renovation work, the business can make major savings in choosing light fittings, the location of light sources and smart control systems.

O20 Ecolabelled kitchen roll, paper towel and toilet paper

The requirement is unchanged compared with the previous version of the criteria for hotels and restaurants. At least 90% of the volume of purchased tissue products, i.e. kitchen roll (kitchen towel), paper towel(s) and toilet paper must be ecolabelled.

The Nordic Ecolabel's environmental requirements for this type of paper products covers 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. It is still relevant to increase environmental benefits by setting requirements for a high proportion, by volume, of ecolabelled tissue purchased by the business.

O21 Ecolabelled photocopying paper

Today the requirement means that 90% of the business' purchased photocopying paper must be ecolabelled. The hotel criteria used to include a points score requirement (the same percentage scored 2 points) while the restaurant criteria used to include 1 point for purchasing at least 50% ecolabelled photocopying paper.

Ecolabelled photocopying 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 raw forest material. Paper labelled with the Nordic Ecolabel or the EU Ecolabel ensures that, as well as the raw forest material, the manufacturing process has low emissions to air and water. It is manufactured with efficient energy use and a limited amount of chemicals.

P21 Ecolabelled consumables

In general the requirement in this version of the criteria remains unchanged regarding percentages for the purchase of ecolabelled consumables compared with the previous version of the criteria. The previous restaurant criteria included a points score requirement on the purchasing of ecolabelled consumables and services amounting to half of the restaurant's requirement. The requirement is now set such that it is either 50% of the restaurant's requirement or 90%. Sometimes both levels are shown for one group of items but here different numbers of points apply (e.g. 1 point is scored if soap and

shampoo are purchased amounting to 50% of the requirement and 2 points are scored if soap and shampoo are purchased amounting to 90% of the requirement or more).

A new addition is that points are scored for purchasing ecolabelled items such as tooth-paste, shampoo and soap which the business offers for sale, for example in its hotel shop or at reception. To score points, the purchasing must be equivalent to at least half of the total purchase of products offered for sale.

This requirement also incorporates a requirement on the purchase of ecolabelled soap and shampoo which was previously included as a separate requirement. The same applies to requirements on notepads, flip charts and pens, which were previously under a separate requirement for conferences.

It is not possible to score one point for ecolabelled bed linen and towels and simultaneously score 0.5 points because they are made from organic fibres.

O22 Nordic ecolabelled printed matter

Here an obligatory requirement is now introduced stating that at least 50% of the total purchasing of printed matter ordered by the business must be Nordic ecolabelled and printed by a Nordic ecolabelled printing firm.

Similar requirements were previously found in both the hotel and restaurant criteria. In the hotel criteria, the requirement was worded such that different numbers of points were scored depending on whether the business purchased a certain proportion of Nordic ecolabelled printed matter (here there were two requirement levels) or whether they purchased printed matter from a Nordic ecolabelled printing firm without the printed matter itself necessarily having to be ecolabelled. This has now been combined in this version of criteria. For restaurants it was previously the case that they scored points if they purchased Nordic ecolabelled printed matter amounting to at least half of their total requirement.

Printed matter refers to, for example, advertising, brochures, writing paper and other stationery carrying the hotel logo, plus all the forms used at the hotel for dry cleaning and room service, etc. The requirement also covers the printed matter that the hotel chain orders centrally.

Note that Nordic ecolabelled printed matter must be actively requested when ordering. Even if the printing firm has a Nordic Ecolabel licence, the printed matter is not necessarily automatically ecolabelled. The person responsible for purchasing is respon-sible for ensuring that the Nordic Ecolabel logo and licence number are shown on proofs before approval and printing. If the logo is not shown, the person responsible for purchasing must contact the printing firm and request that this be changed. The alternative text "Ecolabelled printed matter" and the licence number, can replace the Nordic Ecolabel logo.

P22 Nordic ecolabelled printed matter

In addition to the obligatory requirement on printed matter (see O22 above) a points score requirement has been introduced where points are scored if at least 90% of the total purchasing of printed matter ordered by the business is ecolabelled and printed by an ecolabelled printing firm.

P23 Ecolabelled durables

The requirement on durable goods has been tightened up slightly both in terms of the percentage limits for which points are scored and the number of points scored. The business can score a maximum of 4 points on this requirement.

For example, points are now scored for purchasing of ecolabelled projectors amounting to at least half of the business' requirement. This concerns purchasing special technology primarily for conference promises, such as ecolabelled audiovisual technology. See the Nordic Ecolabelling criteria for TV and projectors.

The points system previously shown in the restaurant criteria remains unchanged.

Our experience shows that there is an increased interest from purchasers at hotels, conference facilities and restaurants in buying more high-quality ecolabelled durable goods with a long lifetime.

P24 Ecolabelled services

The points score requirement remains largely unchanged from the previous versions of the hotel criteria and the restaurant criteria. One difference is that ecolabelled cleaning services now score two points rather than one. The change is justified by the fact that this is a frequently recurring activity which thus has a major environmental impact and should therefore be encouraged. The aim is to increase the proportion of purchasing of ecolabelled services and our experience shows that there is increased demand, for ecolabelled cleaning services in particular. The business can score a maximum of 2 points on this requirement.

5.10 Serving food and drink

O23 Disposable items

The purpose of the requirement is to reduce the use of disposable items with a short turnover, which gives a resource saving. The disposable items can often be characterised as "unnecessary", e.g paper plates, plastic glasses and small packages of ketchup and mustard. Compared with the previous version of the hotel criteria, the requirement now covers all areas in hotels, restaurants, including outdoor areas, and conference facilities. Only take away sales, room service and fast food serving are exempt from the total prohibition on disposable items. With fast food serving means simple, ready-to-eat meals. An example is hamburger chains. For a coffee-machine in the lobby where the guest itself buys coffee for take-away without involving the staff, disposable mugs and lids are allowed. The mugs and lids shall fulfil O24. This means that coffee machines with e.g. capsules are not allowed.

Because the bar is also included, exceptions are made for straws and cocktail sticks handed out in person. As in the previous criteria for restaurants there is also an exception for napkins, tooth picks and tea bags, and for items for sale in individual portion packs, e.g. ice cream, chocolate and soft drinks.

It is no longer permitted to use tablecloths which can be used for extended periods, as it has proved difficult to define what an extended period is and we want to focus on requirements which minimise elements that guests may perceive as environmentally problematic.

As was previously the case, exceptions may be made if the dishwasher is out of order or an exceptionally large number of guests are expected. These cases must be justified and approved by Nordic Ecolabelling. In the description it shall be clearly described that the number of guests is considerably more than the number of guests normally served.

O24 Disposable items for take away, room service, catering and fast food establishments

It has been judged that the Nordic Ecolabel can do the greatest environmental good by not excluding this type of businesses but instead setting strict environmental requirements on the materials used. The limit for the smallest amount of renewable materials in disposable items has been raised from 67% to 75%. This means that a maximum of 25% can come from fossil oil or other non-renewable materials.

P25 Ecolabelled disposable items

This requirement scores 1 point if 20% or more of the volume of disposable items purchased by take away, room service, catering and fast food outlets are ecolabelled. 1 point is also given if no disposable items are used.

O25 Minimum proportion of organic food and drink for hotels serving breakfast (not wild caught fish and shellfish)

The purpose of the requirement is to increase the proportion of organic food in the business. In the ecological agriculture chemical pesticides or herbicides, fertilizers or genetically modified organisms are not used. The basic idea is a circulation approach and striving for a long-time sustainable production. The environmental benefits of ecological production are amongst others benefits for the biodiversity and that the nature will not be exposed to chemical pesticides. The requirement means that where hotels serve breakfast, at least 5% of their annual purchasing volume must be organic, or alternatively at least 10 products served during breakfast must be organic.

For the justification behind this requirement, see requirement O38.

For all hotels, this requirement is more stringent compared with the previous version, in that there is an obligatory limit for the proportion of organic food at the hotel which did not exist previously. As the requirement has been increased quite considerably for certain countries (Finland and Norway, for example, go from having scored points for 3 products to an obligatory requirement of 10 products at breakfast) we will be generous in the way in which the number of products is calculated. Coffee, tea and spices may only be counted as one product each, while milk with different fat contents will be counted as different products.

5.11 Transport

The RPS-analysis in chapter 4 points out that relevance is relatively large, while the potential and steerability for requirements on transport are in total low. Few hotels and restaurants have their own vehicles for transporting staff and goods, but this is more common for restaurants with major catering operations and conference facilities. Therefore there is an obligatory requirement to restaurants that have catering business with their own vehicles. The establishments normally have established subcontractors who drive for them. For this reason, the requirement covers both the establishment's own vehicles and established subcontractors. Nordic Ecolabelling also wants to award

different measures, e.g. the use of Nordic ecolabelled fuel that reduces the environmental impact from transport.

O26 Transport using own vehicles (catering businesses)

This requirement is new and applies to all establishments which own and use their own vehicles for transport related to catering business. The requirement has been set particularly bearing in mind businesses which regularly use their own vehicles. The requirement means that the business' drivers must be trained in eco-friendly/economical driving. New employees must have been trained within six months. The business must have procedures in place to ensure that new employees receive training. It is the training organisation/supplier which must document that the drivers have received such training.

The Swedish Transport Administration has drawn up criteria for what they consider training in eco-friendly/economic driving should contain and the results that should be achieved[92]. This states that such training must have documented good effect on fuel consumption (on average a 10% reduction for cars and 8% for heavy vehicles) in densely populated areas. It also states a number of practical and theoretical elements that should be included. These criteria can serve as support for those procuring such training.

When purchasing or leasing new vehicles that are used at catering business there is also a requirement that the vehicles shall fulfil the latest Euronorm. This applies from the date when the application for a Nordic Ecolabel license is delivered. Euronorm has requirements to the vehicles emissions of exhaust. For trucks Euro VI is the current norm to be fulfilled and for vans and smaller cars there is now Euro 5, but during 2014 the Euro 6 norm will be implemented. As new vehicles shall fulfil the latest approved Euronorm, this means in practice that the requirement is fulfilled as long as new vehicles are bought, while buying used vehicles, documentation is required showing that the latest Euronorm is fulfilled.

The requirement is derived from criteria for textile services where a corresponding requirement is set for the transport of laundry to and from customers, a requirement which has proved to work well.

P26 Other transport using own vehicles

This requirement scores 1 point if 5% or more of the vehicle fuel that the business purchases is Nordic Ecolabelled. This requirement is entirely new and opens up an opportunity for all businesses to score points if they reduce their environmental impact by choosing Nordic Ecolabelled fuel. The requirements must be documented by the business sending in a specification of the total amount of purchased fuel and the proportion of Nordic Ecolabelled fuel showing that the requirement above has been met.

P27 Other transport (not using own vehicles)

In version 1 of the criteria for restaurants a points score requirement was set on whether measures had been introduced to significantly reduce the environmental impact of the establishment's deliveries to and from the business. This now covers all types of business.

Through various measures, emissions can be reduced by reducing the total need for transport, by sharing vehicles and transporting as many deliveries as possible in the same

[92] http://www.trafikverket.se/Foretag/Trafikera-och-transportera/Trafikera-vag/Sparsam-korning/Trafikverkets-kriterier-pa-utbildningar-i-sparsam-korning/

vehicle and by influencing route planning together with suppliers. The type of fuel the vehicle uses is also important, as is how it is driven and how fuel-efficient the vehicle is. Producing a survey of transport can help to produce a lower environmental impact. Points can be approved by Nordic Ecolabelling if the establishment can demonstrate documentation that its need for transport has reduced considerably.

5.12 Procedures

O27 Statutory procedures

This requirement retains the same wording as was used in the restaurant criteria. For hotels with restaurants this means that it has been clarified that they must not have any negative comments from authorities that have not been tackled within the deadline issued by that authority.

O28 Information about the Nordic Ecolabel for staff

This requirement has been reworded but generally follows the current requirement in the restaurant criteria. The requirement means that all staff must be given information on the requirements of the Nordic Ecolabel and the environmental improvements that the business is carrying out. As was previously the case in the restaurant criteria, new employees must be informed of this within 4 weeks. The requirement covers all employees, including temporary staff. For hotels, this requirement is less stringent as the section covering staff training on environmental issues has been removed.

O29 Customer information

This requirement has been reworded compared with previous versions of the criteria both for hotels and restaurants. It is now required that the business clearly provides information that the business is Nordic Ecolabelled, on-site and on websites, e.g. through advertising material. Hotels that need to hire sub-contractors to meet food demand must inform the customer during reservation of stay that the sub-contractor is not ecolabelled.

Restaurants were previously to inform customers of the importance of ecolabelling for the restaurant's work to improve the environment. This has been removed as it is hard to assess and hard to document. Previously fast food and take away businesses had to provide visible information on the restaurant's work to improve the environment at the till. This was to particularly highlight measures to reduce the use of disposable items. Catering businesses which used disposable items were also to similarly inform customers.

O30 Purchasing and supplier procedures

Because the business is responsible for ensuring that the Nordic Ecolabel's requirements are met throughout the period of validity of the licence, the business must have procedures in place for purchasing the products subject to these requirements. The procedures must as a minimum cover consumables (requirements O19, O20, O21, O22), organic food and drink (O25 for hotels with breakfast, O38) and change of supplier for printing firms and laundries. For organic food and beverages it is sufficient that regular monitoring of the amount of organic products is carried out.

The requirement must be documented through a purchasing and supplier procedure.

O31 Own checks on environmental work

The requirement is completely new and means that the business must gather and process complaints from guests and, at least once a year carry out its own check (audit) on the business with the aim of improving work on the environment. A check plan must be drawn up including at least the following points:

- Complaints.
- Check that information for guests is visible.
- Checks that the waste sorting instructions for guests and staff are clear.
- Checking what energy-demanding equipment is present.
- Check that no prohibited disposable items are used.

O32 Annual follow-up

The businesses must carry out a follow-up of the Nordic Ecolabel's requirements every year. Nordic Ecolabelling may request a written report on environmental requirements or on-site checks.

This requirement need not be documented at the time of application.

O33 Documentation on Nordic Ecolabel requirements

This requirement means that all documents concerning the Nordic Ecolabel licence must be easily available at the business and that the person responsible for the licence in the business is responsible for ensuring that the documentation is kept up to date and easily accessible. The only difference compared with the previous requirements is that the documentation need only be accessible rather than having to be gathered in one place.

O34 Marketing

On 17 November 2014 the Board of Directors decided to remove requirement O34 Marketing.

5.13 Food

The background document to Restaurants Version 1[93] contains detailed descriptions of food's environmental impact. This concerns environmental problems linked to agriculture – e.g. energy consumption, herbicides, eutrophication, greenhouse gas emissions, use of genetically modified organisms (GMOs) – production/processing of food, transport, cooling and freezing, and preparation. Some species are threatened with extinction and/or face an enormous negative environmental impact. Instead of eating vegetables that are seasonally available, we eat others that are imported long distances and/or grown in greenhouses with major energy consumption.

The Nordic Ecolabel works to reduce the environmental impact of food in several different ways. Firstly, the Nordic Ecolabel requires that a certain proportion of the raw ingredients used by the restaurant are organic and additional use of organic food is rewarded. Secondly, the use of fish and shellfish which are either threatened with extinction or whose farming/fishing is extremely harmful to the environment is prohibited and restaurants are rewarded if they do not use other problematic ingredients. In addition to this, the Nordic Ecolabel also works to increase the use of vegetarian ingredients, at the expense of meat and fish. The former points score requirement that

[93] About Nordic Ecolabelled Restaurants Version 1, Nordic Ecolabelling, December 2006

gave points for a vegetarian meal has become obligatory and a new points score requirement has been produced. New areas where the Nordic Ecolabel is setting criteria are the use of bottled water and the treatment of organic waste.

Finding ways of reducing the amount of organic waste through ecolabelling has been difficult. Several different alternatives have been discussed. The Nordic Ecolabel has not incorporated the proposal that restaurants should offer "doggy bags" so that guests can take their leftovers home with them, because the environmental benefit is doubtful as it increases the consumption of disposable materials.

Measuring amounts of organic waste and setting a limit value is the most appropriate way of limiting waste. However there is a limited opportunity for the business to measure the amount of organic waste and compare it with the amount of ingredients purchased. See more information in the section RPS, "Food and drink", Limit values for water consumption and waste, the section on Waste and requirement P33 Waste in restaurants.

As previously, the requirement is set to minimise the use of disposable items.

The requirements in this chapter apply to all types of restaurants and cafés but do not cover hotels which only serve breakfast. Some hotels have a very simple kitchen which in principle only heats up ready-made meals. These are not classified as restaurants.

O35 Origin of meat and fish

This requirement is based on the restaurant being able to inform guests of the country of origin for the meat and fish served as main ingredients. The new criteria propose limiting the extent to only apply to meat and fish due to the minimal environmental gains in combination with the major administrative burden involved in fulfilling the requirement (previously the requirement also covered main ingredients in the form of potatoes, pasta and beans, for example).

O36 Non-sustainable ingredients – fish and shellfish

Nordic Ecolabelling wants that ingredients from species that are threatened with extinction and/or whose production has a major negative environmental impact must not be used in Nordic Ecolabelled restaurants. In this revision, Nordic Ecolabelling has maintained a special focus on marine ingredients. Nordic Ecolabelling would also have liked to set requirements for meat as an ingredient, since meat production has a considerable environmental impact. However, Nordic Ecolabelling has decided that restaurants currently have little scope to influence the environmental impact of meat. In a future revision, we will reconsider proposals for requirements in other food groups. We do, however, have indirect requirements concerning meat in that we promote vegetarian alternatives, which have no environmental impact, and we promote organic foods with a focus on animal welfare.

The marine ecosystem is exposed to a number of different threats, such as overfishing, eutrophication, pollution and climate change. One of the most basic relationships in the marine ecosystem is the interaction between prey and predator. That means, it is not only fishing of single species that affect the population. Although the industrial fishing is regulated by international agreements and national licenses and quotas the populations of commercially exploited fishing stocks is not satisfactory, which has a negative effect on some marine ecosystems' ability to maintain its productivity and function. To secure sustainable fisheries so that fishing stocks are not reduced due to fishing is a complex task. There must be knowledge about populations and their dynamics, different fishing

techniques and regulations to prevent overfishing. Measures that are used are e.g. use of quotas, licenses, control with illegal fishery, prohibition of harmful fishing tools, regulation of by-catch and protected areas. According to a report on biodiversity that Albaeco, Sensegroup and U&We wrote for Nordic Ecolabelling in 2012, 84% of the worlds' fisheries were assumed to be fully exploited or overfished in 2008. In comparison the number was 66% in 1995.

Nordic Ecolabelling has reviewed the possibility of banning particularly damaging fishing practices that have a major impact on the environment. Such fishing practices include bottom trawling and particularly outrigger trawling, since they have a considerable effect on the seabed and the bycatch is large. The problem is a lack of traceability regarding the fishing practice used, which would mean poor steerability for such a requirement.

Nordic Ecolabelling has produced lists of fish and shellfish that are particularly vulnerable and must not be served in Nordic Ecolabelled restaurants. The purpose of the lists is to be able to avoid serving the least sustainable fish and shellfish. The list of species is based on an overall assessment of information from various sources, including the IUCN (International Union for the Conservation of Nature), the national red lists of the Nordic countries and OSPAR's list of endangered and/or vulnerable species[94]. The red lists operate with the following categories of threatened species: CR (Criticially Endangered), EN (Endangered), NT (Near Threatened), VU (Vulnerable) and DD (Data Defficient).

From the red list it is first of all the fishes that are classified as "critically endangered" and "endangered" according to the international adopted criteria from IUCN that are considered the least sustainable.

Nordic Ecolabelling's list of fish and shellfish is divided in three parts, A, B and C. On the A-list there are fish species that are on the international list of IUCN. Some of the species are also on OSPARs list. The species that are on the A-list cannot be served in a Nordic Ecolabelled restaurant. Fish species on the B-list can not be served on Nordic Ecolabelled restaurants if they are on the national red list in the country where they are caught. The national red lists are drawn up as commissioned by authorities in respective countries and list the risk of species dying out in an area. This can mean that the same fish species may be listed as being at risk in one country but not in another. Note that Denmark and Iceland do not have any red lists of marine fish and shellfish species. Tropical prawns are on the C-list.

A short background for the species on the different lists is given:

A-list:

- Shark species. The ban covers species of shark that are classified as endangered or critically endangered by the IUCN. This comprise around 20 species.
- Skate species. The ban covers species of skate that are classified as endangered or critically endangered by the IUCN.
- Species of wild-caught Sturgeon (Acipensiformes sp.). Many species of sturgeon are in the categories critically endangered or endangered on IUCN's red list. European sturgeon (Acipenser sturio) is also on the OSPAR list.

[94] OSPAR is an organisation in which fifteen European governments and the European Community work together to protect the marine environment in the north-east Atlantic.

- Tuna, both bluefin and southern (Thunnus thynnus and Thynnus maccoyii). Classified as endangered and critically endangered respectively by IUCN. Bluefin tuna is also on the OSPAR list.
- Eel (Anguilla anguilla). Classified as critically endangered by IUCN. Eel is also on the OSPAR list.

B-list:

- Catfish (Anarhichas lupus). Redlisted (EN) in Sweden
- Halibut (Hippoglossus hippoglossus/Reinhardtius hippoglossoides). Redlisted in Sweden (EN)
- Redfish (Sebastes mentella, Sebasted marinus). Redlisted (EN) in Norway
- Sea trout (Salmon trutta). Redlisted (CR) in Finland.

C-list:

- Tropical prawns i.e. scampi/tiger prawns/king prawns/giant prawns (the penaeid family: Penaeus sp., Metapenaeus sp. and Macrobrachium rosenbergii)[95]. Must not be served because the fishing and farming causes major environmental problems (this ban is in line with the earlier version of the criteria for restaurants).

The requirement is changed after the public consultation and is more based on the red-list principle and what species that is on the IUCN or national red lists. Species of wild-caught sturgeon that are critically endangered or endangered on the IUCN list are added to the A-list based on hearing comments. Most species of sturgeon are classified as critically endangered or endangered and also trade is not allowed according to CITES. It is specified that the ban on serving sharks and skate only comprise species that are classified as critically endangered or endangered by IUCN. The B-list is also changed as the redfish is moved from the A-list to the B-list, sea trout fished in Finnish waters are added to the B-list and monkfish and witch flounder are removed. Sea trout are critically endangered in Finland and is added based on hearing comments. Redfish that was on the A-list is moved to the B-list as it is not on the IUCN list, but is redlisted as endangered in Norway. Monkfish and witch flounder, that was on the B-list, have been removed as these species are not on international or Nordic countries' red lists as critically endangered or endangered. Tropical prawns is moved from the A-list to an own list, the C-list. Tropical prawns are not on the IUCN list, but are banned as the fishing and farming causes major environmental problems like cutting down mangrove forest in the farming countries (like Thailand, Bangladesh and Indonesia). The mangrove forest are one of the earth's most productive ecosystems and is important nursery areas for fish, shellfish and other animals. The mangrove forest also protects the coast against flooding and erosion.

There is also introduced an exception for serving of shark and skate on the A-list. The exception is given for traditional serving of the shark species Somniosus microcephalus and the skate species Dipturus batis/Raja batis for restaurants on Iceland. This applies only if there is full traceability to the fishing place and fish port and that there can be documented that the fishery is in accordance with regulations on Iceland. This means that so-called "catch certificates" shall be available. The exception is given as these are

[95] These are approved if they are labelled with a sustainability labelling approved by the Nordic Ecolabelling

traditional dishes on Iceland and are served in a limited time. The shark is served in February and the skate is served primarily on the 23rd of December. In total 19 tons of the shark and 145 tons of the skate is fished annually.

The documentation requirement is also changed after the public consultation, and now there is only necessary with traceability to the country in which the fish is caught and not declarations from the authorities, with the exception of serving of shark and skate on Iceland where declarations from the authorities are needed. There is also referred to O34 where the restaurant shall have knowledge about the origin of the fish that are served.

The purpose of permitting the serving of fish on list B under controlled conditions is that there may be sustainable stocks of these fish locally. Restaurants that can show that they have good traceability back to the fishing may therefore serve these species.

On the B-list there are only 4 species, but there are more species that are red-listed in the Nordic countries and that could be on the B-list. The reason for having catfish, halibut and redfish on the B-list is because these fishes get mature late and therefore have a low reproduction rate. Naturskyddsföreningen in Sweden have written a report in 2012 about the problematic deep sea fishing and have examined the sale of deep sea fish species in Swedish stores. The results show that monkfish, catfish, halibut, redfish and ling are common fish species for sale. There is a general lack of information on how sustainable these fish stocks are. The EU started regulating deep sea fish stocks in 2002 through its Total Allowable Catch (TAC) system, but there has yet to be a detailed review of how effective the regulation has been. The regulation of deep sea species through TAC is a challenge, since knowledge of the deep sea fish stocks is limited. In addition, the fishing practices tend to have major environmental effects[96]. Nordic Ecolabelling has also looked at the possibility to ban the use of especially harmful fishing techniques that have a huge impact on the environment. Examples of such techniques are bottom trawling and especially beam trawling as this largely affects the sea bottom and have great by-catches. There is however a low steerability on what kind of fishing techniques that is used and such a requirement is therefore difficult. The EU is basing the determination of TAC on amongst others scientific advice from the International Council for the Exploration of the Sea (ICES). Fishing, especially deep-sea fishing, will be in focus in the next revision of this criteria.

The list of fish and shellfish that are prohibited/restricted (sections A, B and C) may be revised if new information emerges during the period of validity of the criteria, in other words species may be added or removed.

Fish and shellfish (both from the A-, B- and C-list) that is farmed or wild-caught and labelled as sustainable or organic may be used if the standard and certification system meet Nordic Ecolabelling's guidelines for assessing sustainability labelling of fish and shellfish, see more in requirement P29. Organic means that fish and shellfish are labelled in line with EU Regulation (EC) No 834/2007. This requirement will involve Nordic Ecolabelling comparing a number of fish and shellfish standards (such as KRAV/Debio, MSC, ASC) against its guidelines for sustainable fishing. The fish-and shellfish standards that have been investigated and approved by Nordic Ecolabelling will be available for licensees on Nordic Ecolabelling's electronic application guide.

[96] Swedish Society for Nature Conservation. 2012. Fula fiskar i fina diskat – om fiske på djupa vatten.

O37 Ban on the use of food containing GMOs

GMO means genetically modified organisms (or plants, animals or microorganism) that has been given one or more external genes added with the help of genetic technology. GMO may be used in areas such as research, pharmaceutical production and agricultural and food production. GM plants are used in agriculture since the use of gene technology in plant cultivation can give crops properties that cannot be achieved using other methods. The most common such properties are to make a plant tolerant to herbicides and to make the plant more resistant to insect attack. The purpose is to reduce the use of biocides and to allow plough-free cultivation.

Gene technology is also used to produce crops with better nutritional content. For example, rapeseed has been developed with better oil yield and rice that contains more vitamin A. Other areas where gene technology and genetically modified microorganisms (GMM) are applied is in the production of vitamins, amino acids and enzymes that are then used in the food industry.

The EU and Norway are judged to have the strongest legislation on GMO[97]. Under the EU's legislation on GMO products, the European Food Safety Authority (EFSA) is required to conduct a risk assessment of whether a GMO/GMM product is as safe to eat as a conventional product. Similarly, an assessment is made of the negative consequences that growing a specific GMO crop may have on the environment[98].

Within the EU, a few genetically modified plants are approved for use in food production, including soya, maize, rapeseed and sugar beet. In total, there are just under one hundred food products that contain ingredients from approved genetically modified plants in the EU[99]. In addition, animal feed may contain GM crops, since soya and maize are major feed crops and the import of maize and soya to the Nordic countries is extensive.

Effects of GM crops

Over a short time horizon, the positive effects of GM crops are increased yield/harvest. Over a slightly longer timeframe, knowledge of the consequences is more uncertain[100]. The main negative environmental consequence related to GM crops is pollution (both chemical and genetic)[101]. This has, for example, led to a steep rise in the development of herbicide tolerant weeds[102]. Herbicide tolerant weeds can lead to increased use of herbicides. In the longer term, it might also lead to the use of extremely hazardous biocides. Biotechnology companies are also starting to develop new strains with genes that bring resistance to more herbicides[103]. Other negative consequences related to the growing of GM crops are a risk of reduced[104]:

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97 Catacora-Vargas, 2011. Genetically Modified Organism – A summary of Potential Adverse Effects Relevant to Sustainable Development. Biosafety Report 2011/02. Genok – Centre for Biosafety Tromsø, Norway.
98 Swedish National Food Agency. 2012. http://www.slv.se/sv/grupp1/Markning-av-mat/Genmodifierad-mat-GMO/ (07.05.2012)
99 Swedish National Food Agency. 2012. http://www.slv.se/sv/grupp1/Markning-av-mat/Genmodifierad-mat-GMO/ (07.05.2012)
100 IAASTD International Assessment of Agricultural Knowledge, Science and Technology for Development. 2009. Agriculture as the Crossroads Synthesis Report. Island Press, Washington DC
101 IAASTD International Assessment of Agricultural Knowledge, Science and Technology for Development. 2009. Agriculture as the Crossroads Synthesis Report. Island Press, Washington DC.
102 Heap, I. 2012The International Survey of Herbicide Resistant Weeds. Online. www.weedscience.com (10.05.2012).
103 Meyer & Cederberg. 2010. Pesticide use and glyphosate resistant weeds – a case study of Brazilian soybean production. SIK-Rapport Nr 809. SIK. Gothenburg.
104 IAASTD International Assessment of Agricultural Knowledge, Science

- biodiversity
- local food supply
- knowledge about seeds and seed rights
- conservation of locally adapted species

In addition to the potentially negative effects, Nordic Ecolabelling means that when introducing new technology like gene technology in the agriculture also other parameters than the environmental impact must be assessed. Factors like immaterial rights (like patent rights) and important multifunctional parts at cultivation, biodiversity and ecosystem services must also be assessed.

Labelling GMO products

EU legislation sets strict requirements concerning the labelling of food and feed as containing genetically modified organisms, GMO. All the products that comprise, contain or have been made from GMO are to be labelled (a contaminant level of 0.9% GMO in the product is permitted). Foods that are made from GMO but that through various processes no longer contain any DNA from a GMO must also be labelled, e.g. tomato purée, corn starch and rapeseed oil. However, additives such as enzymes, amino acids and vitamins do not need to be labelled when they are produced in a closed system with the help of GMM (genetically modified microorganisms) and where the specific additive has been stripped out so that the end product does not contain any microorganisms. Meat, milk and eggs from animals that have been raised on genetically modified feed are not genetically modified products and therefore do not need to be labelled[105] [106].

Caterers and restaurants are also covered by the requirement to submit information on demand about the occurrence of GMO in food (Article 12 in (EC) No 1829/2003). If the caterer or restaurant sells prepacked products, they have to be labelled in line with the requirements in the GMO regulations.

Requirement regarding GMO

Nordic Ecolabelling has chosen to tighten the requirement regarding GMO by prohibiting the use of ingredients produced using genetically modified microorganisms (GMM) or made from GM crops. This means that it is a prohibition against products that according to national legislation shall be labelled that it contains GMO. Meat from animals raised on GM crops is not included in the requirement, since there is no steerability for Nordic Ecolabelling's checks. Nordic Ecolabelling would only like to prohibit products made from GM crops and not products produced with the help of GMM. Nordic Ecolabelling believes that it would be too complicated for hotels and restaurants to determine whether there are GM crops in a product or whether GMM have been used in production.

The ban is based on the precautionary principle. GMO is a much debated subject, not least when it comes to food safety and land use. Other important areas in which there is a lack of knowledge are the long-term effects of GM crops on local agricultural/forest environments, the risk of negative environmental and health consequences, and so on.

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and Technology for Development. 2009. Agriculture as the Crossroads Synthesis Report. Island Press, Washington DC.

[105] Swedish National Food Agency. 2012. http://www.slv.se/sv/grupp1/Markning-av-mat/Genmodifierad-mat-GMO/ (07.05.2012)

[106] GMO-compass. 2005. http://www.gmo-compass.org/eng/database/e-numbers/206.citric_acid.html (09.05.2012)

To ensure that the restaurant has control over potential use of GMO, the restaurant must in the application describe how it is checked whether the ingredients for raw materials contain GMO.

O38 Minimum proportion of organic foodstuffs and beverages – for restaurants, and

P28 Organic food and beverages

The purpose of the requirement is to increase the proportion of organic food in the business. Finding the right levels of organic food is not entirely easy but we have taken the development of the organic market as the starting point for this work, see the explanation below. The market has moved forwards in all countries, despite the economic crisis.

For all hotels with restaurants the requirement will be more stringent compared with previous versions, in that there will be a obligatory limit on the proportion of organic food which did not exist previously. Hotels that only serve breakfast will gain a more generous limit value and businesses that work with restaurants; see requirement O25 in the section on "Serving food and drink" for the rules that apply for hotels which only serve breakfast.

The Danish limit value for restaurant businesses is lower compared with the previous version of the restaurant criteria and is now set at the same level as for Swedish restaurants, which is 5% (now for both hotels and separate businesses). Although this is a lowering of the requirement levels for the Danish "separate" restaurants, it is a more stringent criterion for hotels with restaurants.

For Sweden the requirement has been tightened up, changing from 3% to 5% of the annual volume purchased. In Finland and Norway the limit is tightened from 1 organic food/drink as a main ingredient served regularly to the new requirement that five organic products are served daily. Restaurants can also score many points by increasing their proportion of organic food. Restaurants in Iceland must also offer at least 5 organic foods and beverages daily, but they are not limited to ingredients that constitute a significant part of the dish.

In line with the same argument, the percentage limit for scoring points on the proportion of organic food has been increased for all countries, apart from Denmark where the percentage limit has been lowered also for the points score requirement. Compared with the current criteria for restaurants, the tightening up of the requirements made are quite minor. However, the requirements are a considerable increase compared with the current hotel criteria. It has been very difficult to set exact limits because access to organic products is not particularly highlighted for restaurants.

In this draft for consultation, organic means food and drink labelled under the EU's Regulations EC 834/2007, EC 710/2009 (farmed fish and shellfish) or EC 203/2013 e.g. KRAV, Luomu, Debio, Statskontrollerat ekologiskt (Ø-märket) and Tún-lífrænt.

Wild caught fish labelled under KRAV/Debio's regulations for ecological fishing is, in theory, not to be taken under consideration here as it is not part of the EU Regulations. On the other hand, restaurants can include wild caught fish and shellfish in the calculations if they so wishes. Regarding other requirements for fish and shellfish see further details in requirement P29 "Proportion of fish and shellfish labelled as sustainable".

The organic market

The global market for organic food has grown considerably since 2000 and according to the British analysis company Organic Monitor more than tripled up to 2009[107]. However, the economic crisis has had a negative impact on growth, something that was particularly evident in 2009. The Nordic markets have not been affected as negatively as certain other markets. The German organic market, which is the largest in Europe, showed no growth whatsoever during 2009. The organic markets in Sweden and France, on the other hand, grew by over 15%. In total the organic world market grew by approximately 5% in 2009[108].

The use of organic food reduces the amount of herbicides and artificial fertilisers and the food is produced in a way that is sustainable in the long term. Nordic Ecolabelling also considers that from a credibility point of view, it is important that a Nordic Ecolabelled restaurant always serves a certain proportion of organic food.

Although the market for private consumers has grown considerably, access can be limited for private restaurants, where it remains difficult to find products in suitable pack sizes and semi-finished products.

Denmark

The organic market is largest in Denmark compared with the other Nordic countries. In 2010 approximately 7.5% of the market was organic[109]. The Danes spend the most in the world on organic food, EUR 139 per person per year[110]. Due to the economic crisis, the proportion of organic farming has reduced. Figures from 2009 show that 137,000 hectares, equivalent to 5.2% of the total agricultural area, was organic[111]. Despite this, availability remains good.

The figures above are average figures for many types of food: dairy products, meat, vegetables and grain products, with short and long shelf-life. During the period of validity of the hotel criteria, several hotels with major restaurant kitchens stated during licensing that this average value is not entirely relevant to be used as a basis for determining an organic limit value on the number of organic products in a restaurant. The reason for this is that it is primarily grain and dairy products that give rise to the high proportion of organic food and that this works well for the requirement criteria for a hotel breakfast but that these are not the ingredients that are used in large quantities when cooking a conference dinner. In addition to availability, price also has an impact, which is naturally most significant for meetings, conferences and similar where it must be included in the quote before the event is booked.

Finland

Of Finland's agricultural area, 7.5% is used for organic production. The organic farms are slightly larger than the average. Only just over 6% of all farms are covered by the monitoring of organic production. Of these just under 4,000 farms, over 500 also have organic animal production. The cultivated area and the number of animals in organic production has increased in recent years.

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[107] http://www.ekomatcentrum.se/index.htm
[108] The GLOBAL Market for ORGANIC Food & drink:
Business Opportunities & Future Outlook (3rd Edition), December 2010 (http://www.organicmonitor.com/)
[109] Organic Market Memo January 2011, http://www.organicdenmark.dk/
[110] http://www.organicdenmark.dk 2011
[111] NYT fra Danmarks Statistik, Nr. 154 • 4 April 2011

The availability of organic food has improved in Finland in the past year. Growth in the market was +19% from 2007 to 2008 and the total market was worth EUR 74 million (1%) in 2008. Finnish consumers still purchase relatively small amounts of organic food, 0.8% of purchasing in 2005 and 0.9% in 2009. (Source: Ruokatiedon Luomutiedotus/ Nielsen Kuluttajapaneeli[112].)

Although access to organic food has not changed very much over a longer period, we have seen higher availability and demand in recent years, and this means that it is justified to tighten up the limit for organic food slightly.

Norway
In 2009 the proportion of organic food was approximately 1% of the total food market in Norway. In previous years the market grew considerably, with several years demonstrating growth over 25%, but in 2009 growth was only 7.6%, according to a report from The Nielsen Company. Major interventions are required to reach the government's target of 15% in 2020[113].

Here too, availability of organic food has increased over a longer period and although this increase has tailed off in recent years, we consider that there are sufficient grounds to tighten up the limit value for organic slightly.

Sweden
In Sweden the organic market represented 3.5% of total food sales in 2011, an increase of 0.4 percentage points on the previous year. In 2009 the proportion of organic food was up 18%, which must be seen in the context of an increase in 4% of the total food market during the same period[114].

The proportion of certified organic farming in 2010 was just under 11% of the total agricultural market. If land in transition to organic production is included, the figure rises to 14% of the total agricultural land[115]. This is considerably more than the Danish area of approximately 137,000 hectares (see the section on Denmark). Despite this, availability of organic food is considered to be higher in Denmark.

On the basis of this, it is proposed that the minimum level for purchasing organic food in the new criteria for Sweden should be raised from today's 3% to 5%.

We no longer approve the Finnish "Steps to Organic" (Portaat Luomuun) label for restaurants as documentation that the criteria have been met. The reason for this is that this system no longer checks that the number of organic products reported is correct.

Exceptions for businesses with a large bar or nightclubs

In the previous version of the criteria for hotels, organic purchasing was an optional points score requirement. A restaurant which had an ancillary business such as a nightclub could exempt this business as it did not fall under the definition of a restaurant. In this version of the criteria it is obligatory to include all purchasing of organic food and drinks in all sub-businesses included under the same business. This now means a drastic

[112] Ruokatiedon Luomutiedotus/Nielsen Kuluttajapaneeli 2011
[113] http://www.oikos.no/ 2011
[114] Ekoweb. 2012. Ekologisk livsmedelsmarknad - Rapport om den ekologiska branschen sammanställd av Ekoweb.nu 26 January 2012.
[115] Swedish Board of Agriculture (2011). Skörd för ekologisk och konventionell odling 2010. Sveriges officiella statistik, Statistiska Meddelanden SJV JO 16 SM 1102.

change to the conditions for meeting the requirement on the purchasing of organic food for some businesses.

When alcohol purchasing is extremely high in relation to the amount of food purchasing, the consequence may now be that the purchasing of organic food and drink is no longer relevant as it is the purchasing of beer, wine and spirits that is decisive to attaining the level of organic purchasing required. This mainly has to do with the differences in pricing set for food and alcoholic beverages respectively.

With the justification that food purchasing has a high RPS for restaurants and that the new criteria may have consequences as described above, we have decided that sub-businesses with a disproportionately high proportion of alcohol purchasing may exempt their alcohol purchasing from the total annual purchasing volume of food and drink. By "disproportionately high" we here mean that the purchasing of alcohol amounts to 70% of total food and drink purchasing. This is conditional upon this concerning an ancillary business such as a bar or nightclub and that the turnover can be accounted for separately and does not cover beer, wine and spirits bought in and served in the restaurant section in conjunction with serving food.

P29 Proportion of fish and shellfish labelled as sustainable

In recent years environmental problems concerning fish and fish farming (aquaculture) have attracted an increasing amount of attention. Several fish stocks are threatened with extinction as a result of overfishing, the use of bottom trawling destroys the ecosystem on the sea bed and fish farming produces local emissions of antibiotics and nutrients, as well as problems in that the farmed fish escape. Nordic Ecolabelling wishes to contribute towards positive development of the fishing industry and therefore seeks to encourage increased use of fish and shellfish that are certified under standards for sustainable fishing.

One point is scored by businesses where, of the total wild-caught fish, shellfish and farmed fish served, 5% is wild-caught fish or shellfish and/or farmed fish that is labelled as sustainable under standards approved by Nordic Ecolabelling and 2 points are scored if the proportion amounts to 10% or more.

Ecological fish and shellfish labelled under EU-regulation EG 710/2009 shall not be included in this requirement but will be considered in O38/P28. This is to ensure that no product is considered twice.

Requirement regarding guidelines for assessing sustainability labelling for fish and shellfish

In parallel with this revision of the hotels and restaurant criteria, guidelines for approval of sustainability labelling for fish and shellfish have been drawn up, see Appendix 3.

Nordic Ecolabelling has not ourselves developed a standard for sustainability labelling, but has drawn up requirements that we mean is important that a standard contains to be able to label fish and shellfish as sustainable. Already existing standards on the market will be evaluated to check if they fulfil the specific requirements that we mean a standard should contain.

Nordic Ecolabelling has drawn up requirements to both wild-caught and farmed fish and shellfish. It is important that international agreements and guidelines are followed. The

standard shall therefore follow all relevant laws and agreements and comply with the following conventions and guidelines:

- The 1982 UN Convention on the Law of the Sea[116]
- The 1995 UN Fish Stocks Agreement[117]
- FAO Guidelines for the ecolabelling of fish and fishery products from marine capture fisheries[118]
- FAO Guidelines on aquaculture certification[119]
- FAO Code of Conduct for Responsible Fisheries[120]

General requirements that apply for all standards are that the standard shall balance economic and environmental interests. The standard and documents related to the standard shall be publicly available, and the standard must be drawn up in an open process in which environmental, economic and social stakeholders have been invited to take part. This means that there as a minimum must be a public consultation about the standard. The standard shall be evaluated and revised on a regular basis so that the process is developed and environmental impact reduced on an ongoing basis

The guidelines for wild-caught fish are largely based on the FAOs guidelines for ecolabelling of fish and fishery products from marine capture fisheries. Nordic Ecolabellings requirements regarding **wild-caught fish and shellfish** seek to ensure that the raw materials come from sustainable production systems. Nordic Ecolabelling places particular emphasis on standards for wild-caught fish having efficient criteria that protect against illegal fishing and depletion of natural biodiversity. This means that the standard has requirements on consideration of ecosystems, i.e. negative effects of the fishery shall be considered and the stock shall not be overfished. There must be "absolute" requirements in the standard i.e. measurable requirements with a clear formulation and not just based on a wish to improve. The standard shall also have requirements aimed at minimising by-catch/discards. Illegal fishing is defined as in FAO's international plan to prevent and eliminate illegal, unreported and unregulated fishing. Illegal, unreported and unregulated fishing is for instance situations where a ship is fishing in an area without permission, or in violation with national or international rules and fishing that is not reported, or improperly reported, to the governments.

The guidelines for **farmed fish and shellfish** are based on the FAO's Technical Guidelines on Aquaculture Certification[121]. Regarding farmed fish, particular emphasis is placed on the standard having efficient criteria that minimise environmental impact and protect against depletion of natural biodiversity. There should also be a requirement that fishing for feed purposes is sustainable in the long term. It is important to include this point, as the way that such fishing is conducted has a major impact on the environment.

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116 http://www.un.org/depts/los/convention_agreements/convention_overview_convention.htm (accessed 2011-11-30

117 http://www.un.org/depts/los/convention_agreements/convention_overview_fish_stocks.htm (accessed 2011-11-30

118 http://www.fao.org/docrep/013/i1948e/i1948e08.pdf (accessed 2011-11-30)

119 http://www.fao.org/docrep/015/i2296t/i2296t00.pdf (accessed 2011-11-30

120 http://www.fao.org/docrep/005/v9878e/v9878e00.HTM (accessed 2011-11-30

121 ftp://ftp.fao.org/FI/DOCUMENT/aquaculture/TGAC/guidelines/Aquaculture%20Certification%20GuidelinesAfterCOFI4-03-11_E.pdf (Accessed 30.11.2011)

Some of the standards currently in place for farming fish include requirements concerning the fish for feed, while others do not.

On the basis of these guidelines, Nordic Ecolabelling will examine which labels can be approved as evidence that fish and shellfish come from sustainable fishing or sustainable production. Each individual standard and certification system is examined by Nordic Ecolabelling to ensure that all the requirements are met.

No sustainability labels for fish are currently approved, but Nordic Ecolabelling will start to evaluate standards when there is an application where points are wanted on this requirement. Some of the most common labels in the Nordic market are:

- MSC: MSC has developed standards for sustainable fishing and traceability of fish and shellfish. Both the standards are based on evaluations being carried out by an accredited independent third party certification body. Wild-caught fish can be labelled with the MSC logo.
- KRAV: The Swedish organic label has developed standards for sustainable fishing.
- Debio: The Norwegian organic label works with Swedish KRAV and uses their standards as the basis for certification.

A new standard for farmed fish has also been launched. ASC (Aquaculture Stewardship Council) was started as collaboration between WWF and IDH (Dutch Sustainable Trade Initiative) and is expected to be the fish farming industry's version of MSC[122].

In addition, there are standards for organic fish farming – including EU Organic, KRAV and Statskontrolleret Økologisk.

In this criteria document we judge that it is too early to set an obligatory requirement that a certain portion of fish must be labelled as sustainable (organically farmed plus fish that meets Nordic Ecolabelling's guidelines on approval of sustainability labelling for fish and shellfish) as the range of products for restaurants is still limited, particularly regarding fresh fish.

Access to fish labelled as sustainable and organic fish, for example MSC or KRAV, has however increased markedly in recent years. As table 10 shows, the increase in MSC-labelled fish has been greatest in Sweden. Unfortunately, there is no documentation on access to KRAV-labelled fish on the Nordic market but MSC is judged to be the dominant player.

In the Swedish and Danish markets MSC-labelled fish accounts for 11% and 10% percent respectively of total consumption. The corresponding figure for Norway and Finland is 1 percent. According to WWF, the proportion of wild-caught fish sold in Norway that was MSC-certified when caught is in reality considerably higher than 1%, as approximately 75% of all Norwegian fisheries are MSC-certified[123]. However, because players further on in the production chain (dealers and wholesalers) do not have chain of custody certification, they cannot sell the fish as certified. The lack of chain of custody in the industry is the result of little demand from the consumer.

[122] ASC's website: http://www.asc-aqua.org/23,11,.2012
[123] http://www.wwf.no/bibliotek/nyheter_fakta/?31021 (09.09.2010)

Purchasing of MSC-labelled fish in the restaurant sector divided by the total fish consumption in the respective country produces estimated availability of MSC-labelled fish in restaurants of 3.9 % in Sweden, 1.4% in Denmark, 0.14% in Norway and 0.35% in Finland (see Table 8)[124].

Table 8. Availability of MSC-labelled products in the Nordic market and total consumption of fish and shellfish.

	Amounts of MSC-labelled fish sold (tonnes)[125]		Total MSC-labelled to food service (tonnes)	Total consumption (tonnes)[126]	Proportion of MSC-labelled to food service of total consumption 2010
Year	2009/2010	2010/2011	2010/2011	2009	2010
Denmark	3,235	4,316	616	44,322[127]	1.4%
Finland	746	876	118	83,482[128]	0.14%
Norway	705	1,054	311	87,800[129]	0.35%
Sweden	10,410	15,913	5,684	144,800[130i]	3.9%

Of the MSC-labelled fish, approximately 14% went to the food service/restaurant sector in Denmark and Finland and the remainder was consumer products in 2010/2011. The equivalent figures for Norway and Sweden are 29% and 36% respectively. MSC-labelled fish is usually sold as frozen or prepared, i.e. not as fresh fish[131].

Major differences between the Nordic countries in terms of the availability of certified fish make it difficult for Nordic Ecolabelling to set a reasonable limit for the amount of certified fish a restaurant must serve to score points. In this consultation version it is proposed that 1 point be scored by businesses that serve 5% fish that is labelled as sustainable and 2 points if the proportion is 10% or more.

O39 Vegetarian dishes

The points score requirement in previous versions of the criteria for hotels and restaurants has been made obligatory.

Vegetarian food has a lower environmental impact and requires less energy and less space to produce the same amount of protein and energy as meat-based ingredients[132]. Nordic Ecolabelling therefore wishes to increase the focus on serving vegetarian food. Several

[124] http://www.wwf.no/bibliotek/nyheter_fakta/?31021 (09.09.2010)
[125] Statistics from MSC on access to MSC products in the Nordic market. The statistics come from Minna Epps, Manager Baltic, Marine Stewardship Council.
[126] As consumption is not judged to have changed considerably, consumption figurines from 2009 are compared with MSC statistics for 2010/2011.
[127] Calculated figure based on fish consumption of 154 g per week per person in 2008. http://www.eurofishmagazine.com/news/118-denmark-consumption-of-fish-increases
[128] Calculated figure based on fish consumption of 16 kg per person per year and population statistics. Reference for fish consumption: Game and fisheries research, 2011. (http://www.rktl.fi/svenska/statistik/ekonomi_och_marknad/fiskkonsumtionen/fiskkonsumtionen.html) (Accessed 09.12.2011)
[129] Norwegian Directorate of Health, 2010. UTVIKLINGEN I NORSK KOSTHOLD. Matforsyningsstatistikk og Forbruksundersøkelser.
[130] Swedish Board of Agriculture (2011). Livsmedelskonsumtion och näringsinnehåll t.o.m. år 2009. Statistikrapport 2011:2
[131] Minna Epps, MSC Manager Baltic (personal communication)
[132] Lagerberg-Fogelberg. 2008. På väg mot miljöanpassade kostråd- vetenskapligt underlag inför miljökonsekvensanalysen av Livsmedelsverkets kostråd. Report 2008:9. Swedish National Food Agency, plus Röös. 2012. Köttguiden 2012 – kloka val för miljö och djurvälfärd Utkast 2012-10-10. Swedish University of Agricultural Sciences (SLU).

different types of restaurant are covered by the criteria and not all the restaurants in the Nordic countries, such as canteens and staff dining rooms, serve hot meals. These restaurants often have a simpler range, including baguettes and a salad buffet. In order that simpler types of restaurant that do not serve hot food are able to meet the requirements, it has now been added that a salad buffet that contains protein-rich ingredients such as beans and lentils, pasta, rice, couscous, tofu and similar can be approved as a vegetarian dish.

Baguettes/bread with a vegetarian topping can also be approved. It is pointed out that this only applies in businesses which only serve cold food. Where hot food is served, there must always be a hot vegetarian option. This means that a restaurant that serves hot food one day a week cannot have the salad buffet or baguette/sandwiches approved as a vegetarian dish on that day. They must instead serve a hot vegetarian dish. The requirement is documented by a copy of the menu. For restaurants that only serve cold food, a description must be sent in and a list of the ingredients included in the salad buffet and as toppings. Catering agencies that only serve one dish each day and do not offer an alternative, must serve to vegetarian dishes each month.

P30 Vegetarian restaurants, vegetarian and/or meat-free day

In this requirement, points are scored by restaurants that have one vegetarian day a week and/or one meat-free day a week. A vegetarian day scores 2 points and a meat-free day scores 1 point. A vegetarian day is better in environmental terms than only a meat-free day and earns a higher score. A vegetarian day cannot simultaneously be counted as a meat-free day, but if the business has one vegetarian and one meat-free day a week, it can score 3 points. Restaurants that are entirely vegetarian score 3 points. There are separate point limits for catering agencies that only serve one dish each day and do not serve an alternative.

This is a new requirement to increase the use of vegetables as ingredients and which at the same time is easy to check. Vegetarian food has a lower environmental impact and requires less energy and less space to produce the same amount of protein and energy as meat-based ingredients[133]. Vegetarian food is also better for the environment than fish. The idea of one meat-free day a week in restaurants arose in the early 2000s in the USA and the concept "Meat Free Mondays" was launched in the UK in 2009.

The requirement has been inspired by some businesses in Sweden where only a vegetarian lunch buffet is served on Fridays or others that have started "Meatless Fridays". Some have decided not to serve meat for one day a week, while others have introduced a completely vegetarian day.

The restaurant must be able to show menus and any other information that they provide for guests. The requirement must also be able to be checked on site.

P31 Locally produced food and beverages

The Nordic Ecolabel approves food as locally produced if the origin of the product (farm) is known and if all growing/catching/picking processing and storage has taken place within a radius of 250 km of the place of final use (the restaurant, the hotel). For

[133] Lagerberg-Fogelberg. 2008. På väg mot miljöanpassade kostråd- vetenskapligt underlag inför miljökonsekvensanalysen av Livsmedelsverkets kostråd. Report 2008:9. Swedish National Food Agency, plus Röös. 2012. Köttguiden 2012 – kloka val för miljö och djurvälfärd Utkast 2012-10-10. Swedish University of Agricultural Sciences (SLU).

fish the distance which applies is from the fishing port. Locally produced food can also be game or farmed or wild-caught fish. For businesses north of 62°N a limit of 500 km applies. Wine and spirits, coffee and tea are excluded from the calculation as these are seldom locally produced and can be a large part of the volume purchased.

The requirement gives the business up to 1 point if more than 15% of the volume of food or drink purchased is locally produced.

The main purpose of the requirement is to ensure clear traceability in the supply chain from the restaurant back to the local point of production (the farm, wilderness, forest or fishing port). In future versions of the criteria, clear environmental requirements may thus be set with regard to ingredient production.

This requirement has been changed since previous versions of the hotel and the restaurant criteria. As previously, there is a limit for locally produced but this limit has been reduced from 500 to 250 km. The limit with a 500 km radius tended to be criticised for being too generous and for production taking place too far from the place of final use.

A discussion is currently underway in the Swedish food industry to agree what should be defined as locally produced food. The distance that most bodies use is 250 km (e.g. Bondens Marknad) which is the same as that proposed by the Nordic Ecolabel.

The reduction of the limit means that restaurants in the Stockholm area can no longer count fish from the port of Gothenburg as locally produced, which is a desired effect. For Danish businesses, the limit is still generous, but for businesses in the northern parts of the Nordic countries which are sparsely populated the limit could be considered too strict. In the public consultation version there was possible to get an exception from the requirement after approval from Nordic Ecolabelling for businesses in sparsely populated areas north of the Arctic Circle. They could use the previous limit of 500 km. After the public consultation this has been changed to all businesses located north of 62°N (the line Trondheim-Umeå-Vasa-Kuopio).

The foremost argument for locally produced food is that production contributes towards increased biodiversity both at species level and at habitat level. High biodiversity is also important for maintaining ecosystem services that are important for the development of more sustainable agricultural production. The increased consumption of locally produced food also produces a change in the organic production units as these are also geared towards local markets. These farms look different in that production is broader with several sorts of crops and an increase in different sorts of products. The consequence is a larger range of products and this is in demand. Biodiversity is also higher on these farms[134].

It is also possible, in more general terms, to draw the conclusion that more locally produced food may be more beneficial from an environmental perspective. In 2008, the Swedish National Food Agency assessed the environmental impact of food production, with a view to environmentally adapting Swedish dietary advice. The general conclusions were that more seasonal consumption of fruit and vegetables would be good for the environment, since Swedish production of apples and root vegetables was shown to be better in environmental terms (climate, biodiversity and toxin free environment) than

[134] Milestad, R. et al. Local selling as a driving force for increased on-farm biodiversity.

imported fruit and vegetables. Organic products are better environmentally than conventionally grown products, since they do not involve the use of chemicals and preserve greater biodiversity. It was also concluded that the environmental impact of Swedish food consumption could be cut by reducing the consumption of meat. However, Swedish meat production did well environmentally compared with imported alternatives, in terms of climate impact, use of chemicals and biodiversity. This is due primarily to the fact that the intensity of animal production in Sweden is low. The benefits of more locally produced meat are that it can cause animal production to be spread more widely across Sweden, and pasture land can be preserved. The study also concluded that protein from legumes is preferable to meat from an environmental point of view, whether grown domestically or imported. However, the seasonal adaptation of legumes is preferable, since the import of fresh legumes gives a disproportionately large environmental impact[135].

It is not possible to take the conclusions of the Swedish National Food Agency's synthesis report on Swedish food consumption and transfer them wholesale to the Nordic region, but certain parallels can be drawn according to Nordic Ecolabelling. The most important points in terms of locally produced food are:

- The majority of food imported into the Nordic region (does not apply to all environmental aspects in all Nordic countries) comes from more intensive farming systems with a greater total environmental impact, compared with agricultural systems in the Nordic countries.
- For unrefined and relatively unrefined vegetable matter (fruit and vegetables, including root vegetables) transport is a significant element of the climate impact during the life cycle and particularly in cases of refrigerated distribution[136]. This applies in particular to products of high density such as root vegetables (including potatoes).
- Nordic vegetables grown in open fields, such as carrots, parsnips, potatoes and onions, generally have a lower environmental impact than lettuce, cucumber, tomatoes and peppers. These field grown vegetables can be produced and stored in an environmentally effective way in all the Nordic countries, which favours locally produced vegetables.
- Waste can be cut if the time between harvest and consumption is reduced, which favours products from the local area.
- The consuming of fruit and vegetables should be seasonally adapted in order to minimise the import of fruit and vegetables that are transported long distances or grown in greenhouses heated using fossil energy.

Another more general fact that supports locally produced food is that less than 7-8% of the land in Sweden and Finland is agricultural. In Norway the figure is less than 4%, which is the lowest in Europe. In Denmark, agricultural land accounts for 62%[137]. Iceland probably has even less than Norway. Although certain parts of Finland, Norway and Sweden have a greater proportion of agricultural land, such land is actually in short supply in these countries. Much of the biodiversity in the Nordic region can be found in

[135] Lagerberg-Fogelberg. 2008. På väg mot miljöanpassade kostråd- vetenskapligt underlag inför miljökonsekvensanalysen av Livsmedelsverkets kostråd. Swedish National Food Agency.
[136] This is also shown in Röös (2012) Mat-klimat-listan Version 1.0, where Nordic fruit and salad is generally judged to have a lower environmental impact than imported alternatives.
[137] Europe in figures – Eurostat yearbook 2011: Agriculture, forestry and fisheries
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/CH_08_2011/EN/CH_08_2011-EN.PDF

the agricultural landscape and this is threatened by the restructuring of agriculture, with more and more land not being farmed. In these countries, farming is good for biodiversity, while it can be negative in countries with large-scale monoculture production for a large export market.

Variety in the landscape is an important basis for biodiversity. This means that it is important to retain fields and natural pasture in these countries. Increased production of fruit and vegetables would help to ensure a varied landscape in all the Nordic countries, since at the moment cereals or grazing dominates.

The spread of agricultural land at the cost of natural ecosystems is the biggest threat to biodiversity globally. Food imported to the Nordic countries usually comes from countries and areas where agriculture is often conducted over large spaces in monocultures, which has an important impact on the environment. In areas where agricultural land is in short supply, the farmer often compensates for this with a greater proportion of external inputs (such as fertiliser, biocides and more intensive farming), which also increases the environmental impact.

This is exemplified, for example, by the use of chemical biocides in the Nordic region being low from an international perspective. In the report from the Swedish National Food Agency, statistics on the use of biocides in some European countries have been collated for fruit and vegetables, potatoes and cereals. The statistics show that in all these systems the use of biocides is lower in the Nordic countries. The reason is the relatively colder climate and the sparser farming system, which causes lower disease pressure and thus a lower demand for chemical assistance.

The environmental impact of meat production is in part related to intensity in the production system. In Northern Europe the intensity is relatively low, whereas large parts of Europe have much more intensive farming and thus a higher general environmental effect. Naturally grazed meat[138] from the Nordic region (organic and conventional) is the production form that contributes most to greater biodiversity[139]. Natural grazing helps to keep pasture, which reduces the threat to species that are dependent on such land. Naturally grazed meat from South America has a much greater impact, since that form of farming contributes indirectly to forests and bush being converted into agricultural land. Transport usually plays an insignificant role in this context since the overall environmental impact of meat production is so extensive.

In summary, the general conclusion is that all locally produced products are better in all environmental respects. However, agricultural land is in short supply across large parts of the Nordic region. Agriculture is generally less intensive in the Nordic region than equivalent farming in the countries from which imported foods come. The use of biocides is generally lower in the Nordic region than in much of Europe. This suggests that locally produced Nordic food as a category can generally be considered to have a lower environmental impact than corresponding imported alternatives. Nordic Ecolabelling therefore wishes to promote locally produced food.

Nordic Ecolabelling realises that the important thing about locally grown food is that the production chain from producer to end consumer is short, in other words the end consumer knows who produced the product, and that production of the foodstuffs, any

[138] Meat from animals that during the grazing season largely graze in fields and pastureland.
[139] Röös. 2012. Köttguiden 2012 – kloka val för miljö och djurvälfärd Utkast 2012-10-10. Swedish University of Agricultural Sciences (SLU).

refining and the consumption takes place within a limited area. Nordic Ecolabelling believes that direct contact between restaurant/hotel and producer is of value. In future, Nordic Ecolabelling may decide that it is possible to aim requirements at the individual producer of locally produced farm products.

P32 Drinking water

This is a new requirement as we see an environmental benefit from the requirement in that it causes less packaging waste from bottles and cans and less need for energy from the transport and production of bottled water.

The alternative, offering only tap water or having own mineral water production, considerably reduces emissions from transport. Bottled water causes much greater carbon emissions compared with the same amount of tap water. Bottled water means water bottled at a brewery.

The requirement is checked by the business sending in a description of what the restaurant offers instead of bottled water. The requirement must also be checked on site.

P33 Measuring organic waste

Organic waste is a considerable environmental issue for restaurant businesses and the purpose of this requirement is to reduce the amounts of unnecessary organic waste from restaurant kitchens. Organic waste can be divided into food waste and avoidable wastage, where food waste cannot be avoided (egg shells, bones, coffee grounds), while avoidable wastage could have been consumed if handled differently. As food is the greatest environmental burden from restaurants, it is naturally important to ensure that food is used efficiently and does not go to waste. It is therefore crucial that the restaurant monitors the amount of organic waste to reduce this amount of waste in the future.

The restaurant scores 1 point if it regularly measures the amount of organic waste by weight or volume and relates this to the number of guests served during the period in question.

Measurement and monitoring can take place either by the restaurant carrying out its own measurements or using information from the waste company on the amounts of organic waste collected. Drinks are not to be included in the measurement. The result of measurements must be reported at least once a year.

The restaurant can reduce the amount of food waste through good planning and purchasing of food. A summary of the amount of organic waste thrown away every day in different types of restaurant can be found in the RPS section on "Food and drink". According to a synthesis study published by the Nordic Council of Ministers in 2012, restaurants and caterers in the Nordic region are estimated to generate 680,000 tonnes of food waste (27 kg/inhabitant), of which 456,000 tonnes is judged to be avoidable wastage (18 kg/inhabitant)[140]. This means that 67% of food waste may be avoidable. Different types of organic waste arise depending on the type of restaurant, for example, whether it is an à la carte restaurant, a lunch or staff canteen or a catering restaurant, according to a Swedish survey of catering waste[141]. The survey divides food waste into stock waste, food preparation waste, serving waste, serving surplus, plate waste and liquid

[140] Marthinsen et al. 2012. Prevention of food waste in restaurants, hotels, canteens and catering. TemaNord 2012:537. Nordic Council of Ministers.
[141] 2011. Livsmedelssvinn i hushåll och skolor – en kunskapssammanställning. Swedish National Food Agency Report 4:2011.

waste. According to another survey on food waste from restaurants and catering businesses142 between 0.2 and 0.5 kg (typical value 0.3 kg) of solid food waste arises per person. However, this survey is extremely limited in scope and does not give a picture of different types of restaurant, which is an important factor. According to the study published by the Nordic Council of Ministers in 2012, different studies show extremely varied results when it comes to food waste. This is due in part to a lack of clarity about the definition of what is to be counted as unavoidable food waste and avoidable wastage. There is thus a need for better methods of measurement, better definitions and improved statistics on food waste. Poor statistics make it impossible to set targets for reducing waste in restaurants[143].

It would have been desirable to produce a limit value for the amount of organic waste a restaurant may produce in this revision of the criteria. Unfortunately it is not currently possible to set general limit values for restaurants that are fair for the broad spectrum of different restaurant businesses covered by the criteria, since knowledge in this area is poor. Nor has it been possible to find a good way of documenting the requirement, which would involve an unreasonable amount of work for the businesses.

5.14 Guest rooms

P34 Disposable items

If no disposable items are found in the bathrooms/guest rooms, the business scores 4 points. If maximum 25% of the rooms have disposable items in the bathrooms/guest rooms, the business scores 3 points. With disposable items means toilet articles like shampoo, soap and conditioner that are not refillable and other products like shower caps, disposable toothbrushes, shoe shine, sewing kits, slippers, etc. The requirement does not apply to disposable items that the guest can request at reception, nor does the requirement cover individual portion packs of tea, coffee, sugar or milk substitute.

The requirement is changed after the hearing from an obligatory requirement to a point requirement, as it was pointed out that the prohibition is in conflict with the international star classification system. This means that hotels (and especially international chains) could end up choosing between the Nordic Ecolabel and an extra star (4 or 5). However, many points are given if no disposable items are used to clearly signal that the uses of disposable items are considered problematic and that these often are perceived as "environmentally offensive".

P35 Television sets

The requirement has been adjusted and harmonised with Nordic Ecolabelling/EU Ecolabel criteria for televisions in terms of the standby mode requirement. If more than 90% of the televisions have an off switch, the energy consumption in passive standby mode must be ≤ 0.50 W. For other television sets, the energy consumption in passive standby mode must be ≤ 0.30 W. This scores 2 points. Standby mode means that the television set is connected to a power source and reception but is not in use, for programmes/showing of pictures/text.

142 RVF Utveckling 2006. Matavfall från restauranger, storkök och butiker – Nyckeltal med användarhandledning. RVF Report 2006:07. p. 28. RVF is Svenska Renhållningsverksföreningen (Swedish Waste Management).
143 Marthinsen et al. 2012. Prevention of food waste in restaurants, hotels, canteens and catering. TemaNord 2012:537. Nordic Council of Ministers.

If there are no televisions in guest rooms, 2 points are scored (in the previous version of the criteria this scored 1 point).

In the previous version of the hotel criteria, points were also scored for active standby. That has been removed in this version as data on this requirement was often lacking in the product information sent in to document that the requirement was met.

Developments in technology have led to lower levels of standby energy consumption for televisions and the requirements are now harmonised with the requirements of the Nordic Ecolabel/EU Ecolabel on ecolabelled televisions. The aim of the requirement is to increase the proportion of television sets with lower consumption including standby mode.

In this version the opportunity to score points if the hotel staff's procedures include turning off televisions during cleaning has also been removed. There is simply too low steerability for this requirement.

P36 Minibars

The aim of the requirement is to minimise total energy use by setting a requirement for low energy consumption of minibars. We want to encourage greater technological development and the purchase of energy efficient minibars or to have no minibars in the business at all. Our experience is from a technology supplier who sells to hotels.

The requirement has been tightened up considerably in terms of the energy consumption for which points are scored. Furthermore, there are now two energy consumption levels as opposed to the previous three. Two points are scored if more than 90% of the minibars use a maximum of 0.6 kWh/day and one point if more than 90% of the minibars use a maximum of 0.8 kWh/day.

The requirement is documented by the supplier declaring that the requirement has been met.

If the hotel's guest rooms do not have minibars, it scores 3 points, double that of the previous version. If at least half of the guest rooms do not have minibars, the hotel scores 1 point.

P37 Room adapted for allergy sufferers

If at least one guest room has been adapted to allergy sufferers, points can be scored with the approval of Nordic Ecolabelling.

Room adapted for allergy sufferers means a room that as a minimum requirement is non-smoking, where pets are not permitted and no scented washing or cleaning products or perfumes are used. Nor may the room have wall-to-wall carpets. Nordic Ecolabelling wants to point out that the requirement does not take into account all kinds of allergies, as there are many different allergies. The requirement focus on allergies related to pets, dust and perfume.

In the previous criteria for hotels and youth hostels, hotels could score points if they had at least one room adapted for disabled people or for allergy sufferers. The requirement has been rewritten and now covers a separate requirement for rooms adapted for allergy sufferers.

The Swedish Asthma and Allergy Association has previously had guidelines on what rooms and premises adapted for allergy sufferers involve in hotels but these were removed a while back because they were too difficult to follow. They have not been replaced but there are plans to draw up new guidelines in the future, although no firm schedule has been set. The situation is judged to be relatively similar in the other Nordic countries and similar work is underway, but as things stand at the moment there are no finished criteria.

The Asthma and Allergy Association does, however, provide guidance on what it is important to think about from the point of view of allergy sufferers[144]. For allergy sufferers it is important that the inside environment is free of perfumes and scents such as tobacco smoke, scent/perfume, scented cleaning products and pets. In addition, particularly regarding places where the general public sleep, there should be good ventilation and windows that open. From an allergy perspective, not having wall-to-wall carpets and the choice of interior design materials and cleaning procedures/products can be crucial to the health and comfort of an allergy sufferer.

5.15 Pools

P37 Pools – disinfection

Here 2 points are scored if cleaning with chlorine has been replaced with an alternative that is better from an environmental point of view (jacuzzis are not included here). Pool means a pool where the water is recirculated and disinfected.

A small survey into the use of chlorine in Norway shows that there are few alternatives to chlorine treatment for disinfecting pools. In Norway there are only two approved methods:

- Disinfection using chlorine (hypochlorite)
- Disinfection using a method/system called PoolSAN

The PoolSAN method consists of two components as an alternative to chlorine treatment, PoolSAN and PoolSAN regenerator. The regenerator contains peroxymonosulphate which is a powerful oxidant, while PoolSAN consists of metals such as copper and certain amounts of silver.

Disinfection using ozone and UV radiation are methods that can only be used as treatments in addition to methods 1 and 2 and can thus not replace the two approved methods. These methods disinfect the water but do not have any long-term effect as they disinfect the water before it is added to the pool but do not contain components which help to keep the water disinfected in the longer term.

In facilities where UV radiation is used, this should take place after the water has passed through a filtration plant. Regarding ozone this should take place at a point in the circulation system where it is certain that ozone will not leak out into the pool water as it can be harmful to health.

[144] http://www.astmaoallergiforbundet.se/Page.aspx?catid=15&pageid=19>

Disinfection using PoolSAN is a new method that has not been in use long enough to be able to draw any conclusions about the advantages/disadvantages compared with disinfection using chlorine.

The circumstances described above only apply to Norwegian conditions, but we have assumed that corresponding strict requirements also apply in the other Nordic countries, which shows that chlorine cannot be entirely replaced by other alternatives today, which is why the wording of this requirement has been retained.

P38 Hot springs

This requirement applies only to Iceland where 1 point is scored if the energy use for hot springs is regulated and optimised.

5.16 Work on the requirement levels

In the work on this revision we have focused on merging the criteria for hotels and restaurants into one criteria document. We have also made it possible for conference facilities to apply. The result is also that we have reduced the number of requirements and harmonised the shared requirements.

On the basis of licence data and the experience of case officers, requirements have been tightened up in terms of content where this was considered necessary. The point levels have also been adjusted. In this work we have been aware that for restaurants this has involved making the criteria considerably more stringent solely due to the fact that they now have more requirements to fulfil (e.g. obligatory and optional limit values). To make it easier for businesses, Nordic Ecolabelling is seeking to develop a well-designed web-based application system to make the application process easier and less bureaucratic.

In that we have now combined three types of business in one criteria document and that in many cases these will be covered by the same licence, the limit value requirements are now based on how different guests (hotel, restaurant and conference guests) burden the business.

Early on in the revision process it was decided to introduce an energy tool in order to be able to set more relevant energy requirements in that these would be more clearly tailored to the businesses in question.

This major work and the major changes it involves reduce the relevance of comparing the requirement levels with existing licence data, i.e. comparing "backwards". Certain approximations with licence data have been made, but mainly the requirement levels have been set on the basis of the tests carried out during the revision process. We have taken test data from 36 businesses of different types and sizes and from our Nordic countries.

For hotels the largest change is in the energy limit value and the fact that the energy tool must be used. In addition, the limit value requirements have been changed, as has the way requirements for chemicals are set, the limit value has been removed and the proportion of ecolabelled chemicals the businesses must use has been raised. One major change for hotels with restaurants is that if the restaurant is within the same business and marketed as a unit, it must be included in the licence.

For restaurants the greatest differences are the introduction of the limit values, with an obligatory energy limit value, and the fact that the energy tool must be used. The proportion of organic food has been adjusted and labelling of fish and shellfish must be approved under Nordic Ecolabelling's guidelines for sustainable fishing. We have also expanded the requirements on problematic and very problematic ingredients.

The ability to Nordic Ecolabel a conference facility is new. Compared with the other businesses, it is important here to emphasise the fact that the business must have a Nordic Ecolabelled supplier of food that is served if it does not have its own restaurant.

On the basis of the results of these tests, we have set the energy limit value at 1.7 (1,6 for hotels that do not serve breakfast).The limits on the number of requirements that the business must meet is set at 35%, which on the basis of testing will weed out 35% of the businesses simply on the points score requirements. This may appear a large number but we know that a certain proportion of answers from the businesses are based on the current situation and we assume that there are margins for them to make certain changes and improvements before it is time for licensing, so therefore the project group considers that this is a relevant level.

5.17 Summary of changes compared with previous versions of the criteria

Table 8 "Key to changes from Hotel Criteria 3.5 to the current version" and Table 9 "Key to changes from Restaurant Criteria 1.5 to the current version" describes what has happened to the requirements from the previous versions of the criteria. It states whether they have been deleted from the criteria, amended or kept unchanged, and what new requirement number they have been assigned.

Table 8 Key to changes from Hotel Criteria 3.5 to the current version

O-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	NEW REQ. NO.	WHY HAS REQUIREMENT BEEN DELETED OR AMENDED?
O1	Description of the hotel	Amended	O1	Description of all businesses included in the application.
O2	Refrigerants	Req. deleted		Not relevant. Refrigerant CFC governed by law.
O3	Outdoor lighting	Req. deleted		Low steerability.
O4	Sauna	Req. deleted		Low potential. All units have a timer.
O5	Fittings and fixtures	Req. deleted		Low steerability.
O6	New purchases of textiles	Req. deleted		Hard to follow up compliance with the requirement, plus low relevance.
O7	New purchases of low energy lamps and fluorescent tubes	Req. tightened	O19	
O8	Kitchen roll, paper towels and toilet paper	No change	O20	
O9	Non-smoking rooms	Req. deleted		Low relevance. Dealt with in req. regarding room for allergy sufferers.
O10	Disposable items	Amended	O23	

O-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	NEW REQ. NO.	WHY HAS REQUIREMENT BEEN DELETED OR AMENDED?
O11	Ecolabelled dishwashing chemicals	Req. tightened	O9	
O12	Non-ecolabelled dishwashing chemicals	Amended	O12	Merged req. and applies to all non-ecolabelled products.
O13	Non-smoking dining area	Req. deleted		No relevance. Governed by law.
O14	Disinfectant	Req. deleted		
O15	Ecolabelled laundry detergents	Req. tightened	O10	See O11/O9
O16	Non-ecolabelled laundry detergents	Amended	O13	Merged req. and applies to all non-ecolabelled products.
O17	Ecolabelled cleaning products	Req. tightened	O12	
O18	Non-ecolabelled cleaning products	Amended	O13	Merged req. and applies to all non-ecolabelled products.
O19	Hazardous waste	Req. deleted		No relevance. Governed by law.
O20	Waste sorting	Amended	O17	
O21	Batteries	Req. deleted		Low relevance. Batteries now a fraction that the hotel sorts itself.
O22	Waste sorting, conference guests	Amended	O18	Req. now applies to all businesses.
O23	Biocides	Req. deleted		Covered by the req. for non-ecolabelled products.
O24	Composting	Req. deleted		Included under waste as possible category for sorting.
O25	(youth hostels) Dishwashing detergents and cleaning chemicals	Req. deleted		Now included in general req. for chemicals.
O26	(youth hostels) Waste	Req. deleted		Covered by the req. for waste sorting O17
O27	Organisation and responsibility	Amended	O1	Now included in "General description of the business".
O28	Actions to reduce environmental impact	Req. deleted		Covered in part by new req. O33.
O29	Statutory procedures	Amended	O29	
O30	Information about the Nordic Ecolabel for staff	Amended	O30	
O31	Guest information	Amended	O31	
O32	Constant measurements	Amended	O8	
O33	Documentation of Nordic Ecolabel criteria	Amended	O33	
O34	Energy-demanding equipment and service log	Req. deleted		Low relevance.
O35	Handling of chemical products	Amended	O16	
O36	Annual follow-up	Amended	O32	

P-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	REW REQ.	WHY HAS REQUIREMENT BEEN AMENDED OR DELETED?
P1	Energy analysis	Amended	P8	

P-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	REW REQ.	WHY HAS REQUIREMENT BEEN AMENDED OR DELETED?
P2	Heat consumption	Req. deleted		Covered by energy limit value.
P3	Electricity consumption	Req. deleted		Nordic Ecolabelling does not promote renewable electricity.
P4	Refrigerants	Req. tightened	P7	
P5	Heat recovery	Req. deleted		Req. governed by tighter energy limit value.
P6	Control of ventilation and interior lighting	Amended	P11, P10	Req. split into two requirements.
P7	Low energy lamps	Amended	P9	Req. called Lighting and includes LED.
P8	LED	Amended	P9	Req. called Lighting.
P9	Toilets	Req. deleted		Req. governed by dual flush requirement.
P10	Toilets	Unchanged	P19	
P11	Water-saving taps	Req. tightened	P17	Covers all taps.
P12	Toner cartridges	Req. deleted		Low potential.
P13	Office machines	Req. deleted		Req. governed by the limit value and has low steerability.
P14	Req. governed by dual flush requirement.	Req. tightened	O22, P22	Req. split into one O-requirement and one P-requirement.
P15	Ecolabelled soap and shampoo	Unchanged	P21	Now included in req. on purchasing of ecolabelled consumables.
P16	Dispensers for soap and shampoo	Req. deleted		Low relevance.
P17	Drinking glasses and mugs			
P18	Returnable bottles or barrels/tanks	Req. deleted		Low potential and steerability.
P19	Work clothes	Amended	P23	Included in ecolabelled durables
P20	Working environment	Req. deleted		Low steerability.
P21	Purchase of ecolabelled consumables	Amended	P21	
P22	Ecolabelled durable goods	Amended	P23	Included in ecolabelled durables
P23	Ecolabelled services	Amended	P24	
P24	(youth hostels) Sale of soap/shampoo/detergents	Req. deleted		Low relevance.
P25	Bed linen and towels	Amended	P23	Included in ecolabelled durables
P26	Lighting	Amended	P10	Included in automated lighting controls
P27	Television sets	Req. tightened	P35	
P28	Minibars	Req. tightened	P36	
P29	Water-saving showers	Req. tightened	P18	
P30	Single-level mixer taps	Req. deleted		Governed by limit value for water. Low relevance.
P31	Disposable items	Amended	P34	It is now an obligatory requirement and includes disposable toiletries.
P32	Waste sorting	Amended	O17	It is now an obligatory requirement.
P33	Waste paper bin	Req. deleted		Low potential.
P34	Rooms adapted for the physically disabled or allergy sufferers	Amended	P37	Req. to physically disabled are removed. req. to rooms for allergy sufferers.

P-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	REW REQ.	WHY HAS REQUIREMENT BEEN AMENDED OR DELETED?
P35	Points for organic foodstuffs and beverages	Amended	O25, O38, P28	Breakfast serving separate req. Food serving merged with restaurant requirements.
P36	Fairtrade products (Fairtrade/Max Havelaar)	Req. deleted		Deleted due to problems differentiating between social/ethical labels, plus our focus is on the environment, not social issues.
P37	Ecolabelled dishwashing chemicals	Req. deleted		Covered by obligatory req. for dishwashing chemicals.
P38	Dosage of dishwashing chemicals	Req. tightened	O13	It is now an obligatory requirement.
P39	Nordic Ecolabelled restaurant	Req. deleted		Restaurants now covered by the criteria.
P40	Regional foodstuffs and beverages	Amended	P31	Merged with restaurant req.
P41	Vegetarian dishes	Amended	O39	It is now an obligatory requirement.
P42	Declaration of GMO content	Amended	O37	It is now an obligatory requirement and entails a ban.
P43	Origin of main ingredients	Amended	O35	It is now an obligatory requirement.
P44	Food with significant environmental impact	Amended	O36	It is now an obligatory requirement.
P45	Energy and water-saving actions	Amended		Split up and covered by energy limit value and separate req.
P46	Cleaning without chemicals	Req. tightened	P12	It is now an obligatory requirement.
P47	Ecolabelled laundry products	Req. tightened	O10	It is now an obligatory requirement.
P48	Ecolabelled cleaning products	Req. tightened	O11	It is now an obligatory requirement.
P49	Bed linen and towels	Amended	P23	Covered by Ecolabelled durables
P50	Exact dosing	Amended	P13	
P51	Concentrated products	Req. deleted		Low potential because not on the market.
P52	Further waste sorting	Deleted		
P53	Returnable packaging	Req. deleted		Low potential.
P54	Organic waste	Amended	P20	
P55	Own vehicles	Req. deleted		Low potential.
P56	Public transport	Req. deleted		Low potential.
P57	Bicycles and horses	Req. deleted		Low potential.
P58	Extra points from the limit values	Req. deleted		Points system replaced with amended points levels for each limit value.
P59	Energy consumption lower than limit value	Amended	P1	Change to points system.
P60	Waste sorting	Amended		Covered by the general req. for waste sorting.
P61	Conference pads	Req. deleted		Covered by purchasing of consumables.
P62	Flipcharts and pens	Req. deleted		Covered by purchasing of consumables.
P63	Drinking glasses	Req. deleted		Covered by req. regarding disposable items.

P-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	REW REQ.	WHY HAS REQUIREMENT BEEN AMENDED OR DELETED?
P64	Organically grown fruit	Req. deleted		Req. governed by organic purchasing.
P65	Pool disinfection	Amended	P37	
P66	Pool cleaning chemicals	Req. deleted		Pool chem: most have it, low potential.
P67	Pool facilities/whirlpool/ hot springs	Req. deleted		Pools included in limit values for energy and water.
P68	Pool temperature	Req. deleted		Pools included in total limit value.

Table 9 Key to changes from Restaurant Criteria 1.5 to the current version

O-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	REW REQ.	WHY HAS REQUIREMENT BEEN AMENDED OR DELETED?
O1	Description of the restaurant	Amended	O1	Now included in the general description of all businesses.
O2	Origin of main ingredients	Amended	O35	Amended req. now called "Origin of meat and fish".
O3	Food with documented sustainable origin	Amended	O36, P29	Req. tightened and covered by one O-req on very problematic raw materials and one P-req. on problematic raw ingredients.
O4	Food containing GMOs	No change	O37	
O5	Minimum proportion of organic foodstuffs and beverages	Req. tightened	O38	Minimum level raised generally. See each country in table.
O6	Chemical products for dishwashing and cleaning	Amended	O9, O11	Req. now split into separate requirements for dishwashing chemicals and cleaning chemicals for the whole establishment.
O7	Reactive chlorine compounds	Req. deleted	(O12)	Included instead in req. for non-ecolabelled products.
O8	Kitchen roll, paper towels and toilet paper	Amended	O20	Merged with hotel criteria.
O9	Disposable items	Amended	O23	Merged with hotel criteria.
O10	Disposable items for take away, catering and fast food establishments	Req. tightened	O24	Req. for action plan deleted.
O11	Electricity and gas metering	Req. deleted		Now included in energy use with limit value for whole establishment.
O12	Refrigerants	Req. deleted		Not relevant. Refrigerant CFC governed by law.
O13	Dishwashers	Req. deleted		Req. not relevant according to our RPS analysis.
O14	Environmentally dangerous waste	Req. deleted		Handling of hazardous waste governed by statutory requirements.
O15	Waste sorting	Amended	O17	Merged with hotel criteria.
O16	Organisation and responsibility	Amended	O1	Merged with hotel criteria.
O17	Legislation and regulatory requirements	Amended	O27	Merged with hotel criteria.

O-REQ.	REQUIREMENT HEADING	CHANGE TO PREVIOUS REQUIREMENT	REW REQ.	WHY HAS REQUIREMENT BEEN AMENDED OR DELETED?
O18	Documentation of Nordic Ecolabel criteria	Amended	O33	Merged with hotel criteria.
O19	Handling of chemical products	Amended	O16	Merged with hotel criteria.
O20	Energy-demanding equipment and service log	Req. deleted		Low relevance.
O21	Operation and maintenance of dishwashers	Req. deleted	-	Low relevance.
O22	Information about the Nordic Ecolabel for staff	Amended	O28	Merged with hotel criteria.
O23	Guest information	Amended	O29	Merged with hotel criteria.
O24	Non-smoking dining area	Req. deleted		Legal requirement, no potential.
O25	Annual follow-up	Req. deleted		Annual follow-up in procedures for follow-up inspections.
P-REQ.	**REQUIREMENT HEADING**	**CHANGE TO PREVIOUS REQUIREMENT**	**REW REQ.**	**WHY HAS REQUIREMENT BEEN AMENDED OR DELETED?**
P1	Points for organic foodstuffs and beverages	Req. tightened	P28	
P2	Points for regional foodstuffs and beverages	Req. tightened	P31	
P3	Vegetarian dishes	Req. tightened	O39	It is now an obligatory requirement.
P4	Fairtrade products (Fairtrade/Max Havelaar)	Req. deleted		Decision taken by Nordic Ecolabelling.
P5	Actions to reduce consumption of chemical products	Amended	O13 O14, P13	Req. split into separate requirements and some requirements deleted.
P6	Returnable systems for beverages	Req. deleted		Req. has low potential and low traceability.
P7	Paper towels and fabric hand towel rolls	Req. deleted		Req. has low relevance and low potential.
P8	Purchase of ecolabelled consumables and services	Amended	P21, P24	Merged with hotel criteria. Split into two requirements.
P9	Ecolabelled durable goods	Amended	P23	Merged with hotel criteria.
P10	Water metering	Req. deleted		Now included in water use with limit value for whole establishment.
P11	Energy and water-saving actions	One req. split into several.		Parts of the req. fall into the energy and water requirements.
P12	Renewable energy	Req. deleted		Nordic Ecolabelling does not promote renewable electricity.
P13	Refrigerants	Req. tightened	P7	Merged with hotel criteria.
P14	Further waste sorting	Deleted		Merged with hotel criteria.
P15	Waste reduction	Req. deleted		Req. governed by limit value for waste and separate req. for organic waste.
P16	Eco-friendly transport	Amended	P26, P27	Parts of the req. fall into two new requirements for transport.
P17	Actions to reduce environmental impact	Req. deleted		Covered in part by new req. O33.
P18	Training	Req. deleted		Low relevance.

5.17.1 Limit value – Chemicals

As stated above, the criteria for hotels previously had an optional limit value for use of chemicals but we have now decided to remove this. There was no equivalent requirement in the first version of the restaurant criteria.

On the basis of the licence data for a total of 402 Nordic Ecolabelled hotels, we see an average use of chemicals that lies around 40% lower than the limit value for the respective hotel. If we ignore the outlying values in the data material and instead focus on the median value, this is a whole 50% lower than the limit value. The trend whereby the majority of hotels are meeting the limit value by a good margin is clear in all the Nordic countries.

The following weaknesses of the requirement in the previous version of the criteria (version 3) have been identified:

Chemical use varies depending on more parameters than just guest nights and for certain types of product, guest days are virtually irrelevant to the amounts used. The amount of cleaning chemicals is largely dependent on the area of the hotel, while the amount of dishwashing detergent is determined by the size/turnover of the restaurant.

Products intended for laundry are not included in the limit value – despite the fact that the RPS showed that their relevance is high for this part of the hotel's operations. The background to this is that the majority of hotels use external laundries. Special cleaning was not included either – despite the fact that these products often have properties that are harmful to the environment and to health.

Nor does the limit value distinguish between chemicals with different characteristics – for example, the effect of 1 kg of sodium hypochlorite is not the same as the effect of 1 kg "green soap" (grönsåpa). In the limit value 1 kg is calculated as 1 kg whether it is harmful to health and the environment or not.

The concept "active substance" (the product's total chemical content minus water) is not a familiar concept in the hotel and restaurant industry. Hotels, restaurants and conference facilities have an overview of the amounts purchased and what they have paid for the products. The amount of active substance can be obtained from their suppliers but it is not a parameter that they themselves monitor changes in over time or when switching product. There are also some suppliers who do not wish customers to be aware of the content of active substance in the products they sell.

Documenting use of chemicals in terms of amount of active substance is a complex process and is made even more complicated if the chemicals supplier does not want its customers to find out the active content of its products.

The requirement is documented on the basis of purchased volume and not actual consumption. This uncertainty removes some of the precision associated with using an active substance.

The limit for use of chemicals has been high and can therefore not be said to have produced any environmental effect.

Based on the points above, in this version of the criteria it is proposed that the limit value for use of chemicals be removed. This should not be seen as Ecolabelling

facilitating the unlimited use of chemicals but as an evaluation of the parameters that steer the use of chemicals in a hotel, in a restaurant and/or in a conference facility.

Nordic Ecolabelling will continue to have criteria that stimulate keeping the use of chemicals to the minimum that is necessary in order to meet the relevant hygiene requirements. In this version of the criteria we do this partly by encouraging chemical-free cleaning methods. Furthermore, the requirements on the proportion of ecolabelled chemical products have also been increased, which will indirectly reduce the use of chemicals as these products are effective and their water content is limited.

6 Alternative requirements for restaurants

In autumn 2016, Nordic Ecolabelling noted that the desired goals behind ecolabelling of restaurants had not been achieved. A project to identify the reasons for this was consequently launched.

It became apparent that the RPS (Relevance – Potential – Steerability) for restaurants did not match the requirement levels and the available points we had set. A restaurant's primary focus is food and waste. Only then do energy and water enter the picture. But that is not how our criteria are set out. Here, fulfilment of the energy requirement takes priority. We also realise that we have too small a focus on the requirements concerning food and food waste.

The energy requirements are not tailored to restaurants and staff canteens that are based in office buildings or shopping centres, for example. Few restaurants of this type have their own electricity meter, and it is both difficult and expensive to have a meter installed in order for them to monitor their own energy consumption. The same applies for water consumption. Restaurants located in the same premises as other commercial operations find it hard to pin down their exact water consumption. In addition, many staff canteens have little or no steerability when it comes to the water and energy-intensive equipment that already exists in the premises where they run their business. They simply have to make do with the equipment that is there.

The conclusion was that these obstacles in the criteria document were the leading cause of the ecolabelling goals not being achieved. The restaurant business generally shows major environmental commitment. Nordic Ecolabelling has therefore developed alternative requirements for restaurants, in the hope that these will better match the reality in the business. In practice, this means more focus on food and food waste, and less focus on energy and water consumption.

Between 6th of July and the 15th of August 2017, the proposal was published for referral. The referral generated 23 responses that have given rise to some changes in the original proposal.

6.1 Overall requirements

In addition to the obligatory requirements O40–O46 and the optional point score requirements P40–P43 contained in this chapter (Alternative requirements for restaurants), the restaurant must also fulfil certain requirements in chapters 1 and 2 of the criteria document.

The table below provides an overview of the obligatory requirements that the restaurant must fulfil and the point score requirements that the restaurant is able to choose between.

Company	Obligatory requirements	Optional point score requirements
Restaurants not linked to hotels	O1, O6, O9 O11–O21 O23–O24 O26–O37 O39 O40–O46 (new requirements chapter 5)	P3, P9 P13–P15 P20, P25–P27 P29–P32 P40–P43 (new requirements chapter 5)

This table only presents the requirements that are relevant for restaurants that are not linked to some other business.

The O26 requirement that governs transport using own vehicles for catering business applies only if the catering business exceeds 30% of the total business in terms of sales.

See below under the heading "Points total" for an explanation of why some point score requirements have been deleted from the criteria document.

6.2 Energy

O40 Purchases of new energy-intensive equipment

Restaurants generally have little or no opportunity to influence the existing water and energy-intensive equipment that is in place when a new business takes over the operation. Usually, the owner of the premises owns the equipment, and the restaurant business has to work with what is already there. However, the operational manager has a say in the purchase of new equipment, and Nordic Ecolabelling has therefore chosen to set requirements for high energy efficiency for "purchases of new energy-intensive equipment".

The EU Ecolabel is carrying out an ongoing revision of its requirements concerning environmentally aware public procurement of "Food and Catering Services", and they propose setting requirements concerning purchases of new energy-intensive kitchen equipment.

Choosing equipment with a high energy class is an important way to reduce a restaurant's use of electricity. The difference in energy efficiency between various energy classes varies for different product groups. Refrigerators and freezers, for example, have one scale and TVs have another. As a rule of thumb, a combined fridge/freezer in energy class A+++ uses 60% less electricity than equivalents in energy class A. The actual energy use also naturally depends on how energy efficiently the product is actually used. The focus of energy labelling is on domestic products, but professional refrigerators, freezers and combined fridge-freezers have also been subject to energy rating label requirements since 1 July 2016.

Out of all professional equipment, only freezers and coolers with its own cooling units are covered by the EU's Energy Labelling Directive 2010/30/EU. Nordic Ecolabelling

will therefore require a routine that demonstrates the energy use of the equipment. The routine should include requesting energy information from the manufacturer or supplier. In the case where the freezer or refrigerator has its own cooling units and is covered by EU's Energy Labelling Directive 2010/30/EU, Nordic Ecolabelling recommends choosing the highest or second highest energy efficiency class

O41 Training in efficient use of energy-intensive equipment

To be as resource-efficient as possible, it is important to use the equipment correctly. We now know that a considerable amount of energy can be saved by using the restaurant's kitchen equipment correctly. Nordic Ecolabelling therefore believes in the need for staff training and information on how best to use the equipment to consume as little energy as possible.

Staff should be aware of the procedures that apply when using the equipment and why they need to follow the procedures. The training must contain enough information to ensure that the staff use the equipment in an efficient way.

It is important that the kitchen staff is given training in how all the machines in the kitchen work. Good knowledge of how the machines operate is a foundation for working more efficiently with them. Training staff in how to adapt the use of the machines to the flow of guests is extremely important, as the kitchen equipment can often be left running unnecessarily. One example of this is that the griddle or ovens are on at times with small numbers of guests. The way dishes are chilled and regular defrosting of the chiller room are other examples of procedures that save energy and that are important to be conveyed to the staff.

O42 Energy and water-efficient actions – plus P40

Most restaurants are located in a building together with other businesses and therefore do not have their own energy and water meters to measure their consumption. This applies, for example, to restaurants in shopping centres or dining rooms in other, larger premises or similar. It is therefore difficult to identify the precise level of consumption and this makes calculating the limit values for energy and water a problem.

A US study presented earlier in the background text shows that the energy consumption of a restaurant business usually breaks down as follows:

- 35% comes from food preparation
- 28% from heating and ventilation
- 18% from dishwashing
- 13% from lighting
- 6% from cold storage[145]

In a hospital kitchen dishwashing consumes the most energy (47%). Refrigeration, on the other hand, accounts for a larger proportion in small kitchens than in larger kitchens.[146]

[145] Baldwin, C., Wilberforce, N. & Kapur, A. (2010), Restaurant and food service life cycle assessment and development of a sustainability standard, The International Journal of Life Cycle Assessment, Vol 16 No. 1 40–49.
[146] TTS, 1998.

Bearing in mind the large differences in energy impact and water consumption for different restaurant types, we have chosen to place energy and water-efficient actions for restaurants on an equal footing. We have done this by creating a proposal that brings flexibility to the requirements concerning energy and water consumption.

The wording of the requirements has been based on requirements already set out in the original criteria for restaurants, except that we have chosen to introduce "own actions" in order to reduce energy and water consumption. The restaurant must be able to show that the actions result in a substantial reduction in energy consumption, at least 5 % per action. Nordic Ecolabelling wants to point out that the measures taken must be based on technical installations that affect consumption and not handling, as actions based on handling are included in the training in the efficient use of equipment (O41).

The purpose of being able to take score points on energy analysis with action proposals is to clarify the energy potential of the restaurant from an energy perspective, as well as demonstrate cost-effective measures for implementation.

We see that there is a great potential for improvement in restaurants making their own measurements of energy and water with an accompanying action plan.

Nordic Ecolabelling believes that the consumption of water during dishwashing accounts for a large proportion of the total water consumption in a restaurant, therefore we have chosen to maintain the requirement concerning water consumption of dishwashers as one of six possible actions.

To meet the obligatory requirement, 2 of the 6 actions must be completed.

The restaurant is awarded points if it meets more than 2 requirements. A total of max 6 points are available in P40.

6.3 Waste

The waste requirement for Nordic Swan Ecolabelled restaurants is good and relevant for the restaurant business, but we have not previously set any requirements concerning food waste.

In addition to the food waste requirements set out in the new chapter 5 of the criteria for restaurants, other requirements from the criteria document apply too. The limit value for waste (O6) remains in place, meaning that the restaurant must not have more than 0.80 kg unsorted waste per food guest. We also set requirements for sorting at source (O17) and clear sorting instructions where guests sort their washing up themselves (O18). We have replaced O7 (Constant measurements of limit values) with O43 (Constant measurements of waste amounts).

The remaining point score requirements are P3 Waste, where a maximum of 3 points are available depending on how far the amount of waste (in %) comes in below the obligatory limit value. Points are also available if the restaurant separates out organic waste (P20) and sends it for biological treatment.

O43 Measurement of food waste

The goal of reducing food waste is part of the 17 global Sustainable Development Goals (SDG) that have succeeded the Millennium Development Goals. These goals were

adopted by all member states of the UN in September 2015. The Sustainable Development Goal on Responsible Consumption has the following target, SDG 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses. All the Nordic countries are bound by this target, and it should therefore be seen as our national target for the reduction of food waste.[147] Food waste is a pressing theme for today's restaurants. A large amount of food waste has serious consequences for the environment, while also having a major impact on a restaurant's finances.

Food waste is defined as food that could have been served if it had been handled differently and it occurs due to incorrect storage or due to preparing and cooking too much food for the number of guests (overproduction). The surplus food ends up in the waste bin along with other unavoidable food waste, and is usually used for composting, biogas production or energy recovery, depending on the facilities available locally.

Depending on their type, restaurants usually generate large amounts of unavoidable food waste, such as eggshells and trimmings from vegetables, meat and fish, that are not fit for human consumption. This sort of unavoidable food waste is not included in the overall food waste count and does not need to be measured.

A restaurant may have little organic unavoidable waste for many different reasons. It may buy in many peeled and preprepared foodstuffs (e.g. pre-trimmed vegetables, ready-made egg mix) or it may not be very good at sorting its organic waste. Nordic Ecolabelling therefore finds it less interesting to measure the total amount of organic waste. We want the restaurants to focus on reducing food waste, because they are able to influence this and it thus achieves the greatest environmental benefit.

Reporting brings no direct environmental gain, but it will make the restaurants more aware and lay the foundation for future improvements and initiatives. Measurements are to be taken twice per year and each time they are to be conducted during a representative week. Nordic Ecolabelling is happy to provide templates that can be used to assist the restaurants in their analysis of food waste.

P41 Actions to reduce environmental impact by reducing food waste

In the same way that Nordic Ecolabelling has developed requirements for the measurement of food waste and various actions to reduce food waste in grocery stores, we are now setting similar requirements for restaurants.

We have focused on actions that the restaurants have good control over and on those that are relatively simple and easy to communicate with guests and staff.

Information for guests on how they themselves can affect the food waste is of great significance for two reasons: Firstly, the amount of food waste at the restaurant will fall and secondly, the restaurants' communication will influence the guests' behaviour in their own home. The information and communication with the guests should continue on a rolling basis and be varied, so the effect does not decline after a while.

[147] Swedish National Food Agency, Swedish Board of Agriculture and Swedish Environmental Protection Agency. Slutrapport – Regeringsuppdrag för minskat matsvinn 2013–2015, "En bra start".

Nudging[148] is a method that restaurants can introduce to steer their guests' behaviour in a desired direction. Nordic Ecolabelling therefore values inventiveness among the restaurants in finding new actions that nudge guests towards reducing food waste.

The role of staff is important and can influence the reduction of food waste in many different ways. Procedures concerning how ingredients should be ordered, how much food should be prepared, times when different dishes should be cooked, keeping food hot and chilling it, calculating the number of potential guests and so on, are some examples of areas where staff have a role to play.

And when food waste does occur, Nordic Ecolabelling wishes to reward those that make sure the food is used for charitable purposes. Donating food to an organisation can have various effects. In addition to the environmental effect of not discarding edible food, there is also a social effect. We feel there are great opportunities in this area. A restaurant can donate directly to a charity, which in turn will make sure that the food is consumed by people who would ordinarily not be able to afford it, or the food could be donated to an organisation that then sells the food and uses the profits for charitable purposes.

Selling surplus food from the regular business at a cheaper price is a trend that has become more prominent and easier thanks to new IT and mobile technology.

6.4 Food

In addition to requirements O45 and P42 in chapter 5, other requirements from the criteria document also apply.

- O36 Non-sustainable ingredients – fish and shellfish
- O37 Ban on the use of food containing GMOs
- O39 Vegetarian dishes
- P29 Proportion of fish and shellfish labelled as sustainable
- P30 Vegetarian restaurant, vegetarian and/or meat-free day
- P31 Locally produced food and beverages
- P32 Drinking water

Nordic Ecolabelling sets relevant requirements for food and restaurants, and we work to minimise the environmental impact in various ways. One of the areas in which we set requirements is organic food and beverages, where we have seen the range expand and the restaurant business develop in Norway, Sweden, Denmark and Finland. The proportion of organic products available has risen as demand has grown. The fact that the availability of organic products has grown, not only for private customers but also for restaurants, gives us an opportunity to make sharper demands in the alternative requirements for restaurants. The availability of ingredients remains very varied across the Nordic countries, and we therefore need to continue setting differentiated requirements for each country.

O44 Minimum proportion of organic foodstuffs and beverages

[148] See for example http://awinwinworld.com

The restaurant business is increasing employing existing organic certification systems for restaurants in the Nordic countries, (read more below about each country's organic certification systems). Nordic Ecolabelling has therefore chosen at obligatory level to position itself at the lowest level with some minor moderations of existing organic labelling systems for restaurants in Norway[149] and Denmark[150] when setting its requirements. For Swedish restaurants, Nordic Ecolabelling will work on the basis of the same definition of organic food as in the criteria for hotel, restaurant and conference, i.e. food and drink (except fish and shellfish) labelled according to EU Regulations EC 834/2007 and EC 203/2013 or KRAV, Finnish "Solmark" (Luomu), Debio, State-controlled Organic (Ø-Mark) and Tún- lífrænt. The Finnish restaurants have a six-step scale[151] and we have chosen to position ourselves at Step 4 in the proposed requirements. Nordic Ecolabelling has thus accepted that there are some differences in the requirement levels between the countries, both in terms of the proportion of ecolabelled products and the calculation method. Nordic Ecolabelling appreciates the challenges that exist in being able to compare the requirements between countries, but since there is such a large difference in the market for organic goods in the Nordic countries, it is considered reasonable to adapt the requirements to each country's own system.

We will not be requiring restaurants to be certified, but they will be able to document fulfilment of our requirements using approval from an organic certification system, since we are aware that many have already achieved this. At the same time, we want to give restaurants an opportunity to report to Nordic Ecolabelling in the same way as they do for their national organic certification systems, in order to make the reporting work as easy as possible.

A restaurant earns points depending on how high a proportion of organic products they have, with a maximum of 6 points available in this requirement.

Danish restaurants may be certified by "Det Økologiske Spisemerket", which is a free state-controlled labelling scheme for food outlets in Denmark. Spisemerket comes in three forms: Bronze, Silver and Gold. Bronze is achieved if the proportion of organic goods served is within the range of 30–60%. Achieving Silver requires 60–90% and Gold requires 90–100%. The percentage is calculated on the basis of the restaurant's purchases, either in money or quantity (kg) over the course of at least three months. Alcohol and other drinks (except flavouring-free water) are to be included in the calculation. All Nordic and EU organic labelling systems are valid on the same terms, but MSC-labelled fish and shellfish is not approved and must not be included in the calculation.[152]

As far as Swedish restaurants are concerned, according to KRAV's comments on the referral, it has been stated that KRAV does not approve of EU organic animal products. Nordic Ecolabelling welcomes KRAV's stricter rules for animal production in terms of animal health and environmental requirements. However, we cannot deny EU organic animal products since we are a Nordic organization and this would eventually lead to different rules in different countries. There is also the possibility that such a denial could

[149] http://debio.no
[150] http://oekologisk-spisemaerke.dk
[151] http://portaatluomuunvanha.bonsait.fi/
[152] "Vejledning om økologisk storkøkkendrift", taken from: https://www.foedevarestyrelsen.dk/SiteCollectionDocuments/Kemi%20og%20foedevarekvalitet/%C3%98kologi/%C3%98kologi%20og%20stok%C3%B8kkener/Vejledning%20om%20%C3%B8kologisk%20stork%C3%B8kkendrift%2018%20marts%202014.pdf (27.04.2017)

be considered as a trade barrier if the EU organic would not be included as ecological for Swedish Swan Ecolabelled restaurants.

Nordic Ecolabelling will set a minimum limit for the organic proportion of food and beverages to 20% based on the same definition of organic as in the criteria for hotel, restaurant and conference. MSC-labelled seafood cannot be labelled ecologically but can be taken into consideration if the restaurant wishes to. If the restaurant buys wild game, the purchase value will be excluded from the total purchase value. Deer, wild boar and other animals that are bred in captivity, as well as reindeer, are not considered wild animals. It is optional if the restaurant includes alcohol in the calculation.

Nordic Ecolabelling will approve KRAV's certificate as documentation requirement if the restaurant is approved after level 1 (Percent Option), level 2, or level 3

Norwegian restaurants can obtain the Debio labels Bronze, Silver and Gold. These labels are used to promote the proportion of organic/Debio-approved products in catering and food retail. The proportion of organic products is measured either in NOK (purchase value) or in weight. The Bronze label requires the proportion of organic products to be at least 15%, Silver at least 50% and Gold at least 90%.[153] MSC-labelled fish and shellfish cannot be labelled as organic, but it can be included in the calculation if the restaurant so wishes. The % of MSC-labelled fish must not, however, exceed 50% of the calculated total.

Debio's Bronze label can be achieved in various ways: Either at least 15% of what is served must be organic/Debio-approved, based on the purchase amount/value or weight, or at least 15 different organic products must be regularly used in the food served. In order to use the alternative of 15 regularly used products, at least 5 of these must be basics such as milk, eggs, bread, fruits, vegetables, and so on.[154] It is up to the restaurant to decide whether it wants to include alcohol in the calculation.

Finnish restaurants do not have a system that is comparable to those in Norway, Sweden and Denmark, but the organisation EkoCentria is responsible for the "Steps to Organic" (Portaat luomuun) programme, which is a voluntary system for restaurants and restaurant chains. Over 2,430 restaurants in Finland signed up to the programme in March 2017. The programme focuses on improving the use of organic products on a regular basis in restaurant kitchens. It comprises 6 steps:

1. The restaurant regularly uses 1 organic product.
2. The restaurant regularly uses 2 organic products.
3. The restaurant regularly uses 4 organic products.
4. The restaurant regularly uses 8 organic products, or organic ingredients make up over 30% of the total ingredients purchased.
5. The kitchen regularly uses 20 organic products, or organic ingredients make up over 60% of the total ingredients purchased.
6. Organic alternatives are used in all ingredient groups. Non-organic products are used only where there is no organic alternative.

[153] "Regler for merker og merkebruk", taken from: https://debio.no/content/uploads/2017/04/Regler-for-merker-og-merkebruk-2017-3.pdf (27.04.2017)
[154] "Regler for bruk av Debio-merker i serveringer", taken from: https://debio.no/content/uploads/2017/04/Regler-for-bruk-av-Debio-merker-i-serveringer.pdf (27.04.2017)

The term "regular", as used by EkoCentria, requires that organic products are used at least twice a week or more.

When calculating the number of organic products, restaurants can present the figures either as a percentage of weight or in EUR. Products certified under the Luomua, Ladybird or EU organic labels are defined as "organic products" for the purposes of restaurants and EkoCentria.

The "Steps to Organic" programme has been revised and restaurants are now able to promote their organic profile with the help of a new Luomua logo, together with different numbers of stars, depending on which step the restaurant has reached. The restaurant is awarded:

- 1 star when it is at Step 2 or 3
- 2 stars when it is a Step 4
- 3 stars when it is at Step 5 or 6

Nordic Ecolabelling wishes to position itself at the same requirement level as Step 4 with the proposed requirements.[155] [156]

Nordic Ecolabelling wishes to retain the requirement levels for restaurants in Iceland and the Baltics, since we do not have information and sufficient background knowledge to set stricter restaurant requirements here.

P42 Organic food and beverages

Different numbers of points are given from country to country due to the variation in the availability of organic products. All the countries have different scales for achieving the maximum 6 points, in the form of percentages or number of items. Account has been taken of the different levels within the organic labelling systems in setting the points for this requirement.

6.5 Other requirements

P43 Ecolabelled products and services

The criteria document's requirements P21 (Ecolabelled consumables), P23 (Ecolabelled durable goods) and P24 (Ecolabelled services) are tailored to hotels and have therefore been deleted from chapter 5. Nordic Ecolabelling nevertheless wishes to reward the use of ecolabelled goods and services by creating a point score requirement (P43) containing a list of goods and services for the restaurants to choose between.

Ecolabelled goods and services (amount purchased as % of total purchased volume)	Points
Paper napkins ≥ 50%	1 p
Candles ≥ 50%	1 p
Soaking agents ≥ 50%	1 p

[155] Natur och Miljö, taken from: http://www.naturochmiljo.fi/vad_vi_gor/miljo_och_livsstil/article-28656-9656-t-ekologiskt
[156] Ekocentria/Stegvis mot eko, taken from: http://portaatluomuunvanha.bonsait.fi/se/page/20

Furniture per category, chairs, tables, etc. ≥ 10%	1 p per product, max 2 p
Textiles (tablecloths and napkins) ≥ 20%	1 p
Workwear, at least one staff category, at least one garment	0.5 p
Coffee services	1 p
Cleaning	1 p
Car washing	1 p
Other ≥ 50%	1 p per product, max 2 p

O45 Points total

The total number of points restaurants can achieve in chapter 5, Alternative requirements for restaurants, is 47 points. To fulfil the obligatory requirement, at least 35% must be achieved, which equates to 16 points.

The requirement that at least 5 points must come from the Food chapter has been deleted, since the level in the obligatory food requirements has been raised.

The reason why there are now fewer points than for other businesses in the criteria document is because some point score requirements have been deleted from chapters 1 and 2, since they are not relevant to restaurants that are not part of a hotel business.

7 Changes compared to previous version

- The criteria for hotels and youth hostels are being merged with the criteria for restaurants while simultaneously opening up an opportunity to ecolabel conference facilities provided that their food comes from a Nordic Ecolabelled supplier (internal or external).
- If several of these different elements are part of the same business and are marketed as a unit, all of them must be included in the licence.
- We have moved away from the previous division of hotels into different classes. Instead, the limit value requirements are set based on the conditions of the specific business.
- A brand new energy and carbon dioxide tool has been developed to produce a limit value based on optimum energy use for the specific business in question.
- The same energy and carbon dioxide tool also calculates a carbon dioxide limit value.
- It is now possible to apply from the Baltic countries.
- The requirements on the proportion of organic food have been tightened up.
- The requirements on fish that may not be served have been tightened up.
- A new requirement has been introduced on the proportion of fish and shellfish from sustainable fishing.

8 New criteria

In a future review there will be an interest in revising the following points:

- Tightening up the requirement levels for limit values, particularly the energy limit value and primary energy.

- Reviewing if the limit value on chemicals should be reintroduced.
- Reviewing the possibility to increase the share of ecolabelled cleaning products.
- Reviewing the need to amend/adjust the product group definition for restaurants.
- Tightening up the requirement levels for the proportion of organic food and beverages in restaurants and look at the possibility to set requirement to organic food and beverages in % of total purchased volume also for Norway, Finland, Iceland and the Baltic countries.
- Reviewing the requirement on locally produced food and beverages.
- Tightening up the requirement regarding fish and shellfish, especially deep sea fishing.
- Consider requirement to other commodities than fish.
- Consider obligatory requirement to fulfil the limit value for waste for businesses that have disposable items in the rooms.
- Drawing up requirements for limit values for organic waste for restaurants.
- Reviewing the opportunity to reward the use of disinfection methods other than chlorine in pools.
- Reviewing the possibility to set a requirement to that disposable items in guest rooms must be ecolabelled.

Appendix 1 Climate zone map

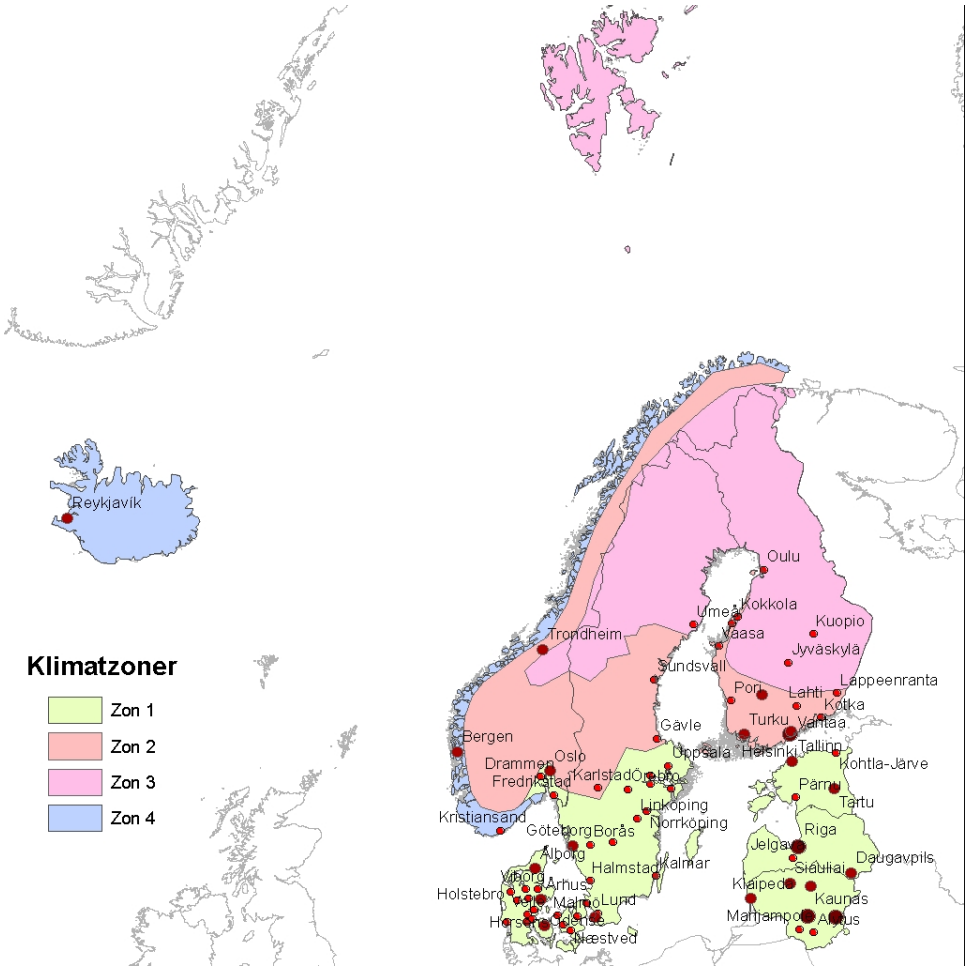

Figure 1: Climate zones, all countries

- Denmark counts as one zone, and is assumed to have the same climate as Sweden's zone 1 and the Baltic States.
- The Baltic States count as one zone, and are assumed to have the same climate as Sweden's zone 1 and Denmark.
- The proposed map splits Finland into two zones. The southern zone has the same climate as Sweden's zone 2, i.e. Central Sweden. Northern and Central Finland is taken as belonging to the same zone as Northern Sweden and the Polar and Arctic zone in Norway.
- Norway is generally divided into four zones[157]: the Warm Temperate zone, the Cold Temperate zone, the Polar zone and the Arctic zone, which includes Svalbard. In the energy tool, Norway is divided into three zones, with the Polar and Arctic zones counted as one and belonging to the same zone as Northern Sweden and Northern and Central Finland.

[157] Categorisation by the Norwegian Meteorological Institute (www.met.no)

- Iceland counts as one zone, and is assumed to have the same climate as Norway's Warm Temperate zone, i.e. the coastal areas.

The zone divisions have been developed using data from RETScreen (www.retscreen.net), a program created by the Natural Resources Canada. Average monthly temperatures have been collected from a number of measuring stations in each country from 1983 onwards. Based on the temperatures from each station, a number of zones have been assigned for each country, depending on how much the temperatures vary. The measuring stations have then been sorted into the different zones and the average monthly temperatures for each zone have then been calculated. The degree days for each zone have then been produced, based on these average temperatures, see figure 1.

Appendix 2 Model values and calculations in the energy tool

Below is a description of how the energy tool calculates different target values, as a combination of the various assumed heat loss factors, hot water use and electricity use.

It should be noted that the purpose of the calculations is to give a target value that is somewhat better than the average for the various categories (around 30% will meet it). This means that assumptions have been made that can seem "poor", e.g. low level of heat exchange compared with the best possible, etc.

The values here are chosen such that they are considered to vary in a reasonable and fair way for the businesses that, for example, have a different season to what is normal, or in some other way have a business that deviates from the norm.

Heating
The use of heating is calculated by estimating ventilation losses, transmission losses, hot water and the impact of a pool. The calculations for these are shown below.

Ventilation losses

Pvent = qm x cp x (Tt – Ti) [kW]

- Pvent = Ventilation loss, effect
- qm = Air flow in kg per second, 1 m^3 air weights around 1.2 kg
- cp = The heat capacity for air is a measure of how much thermal energy can be stored in air and is a constant that at 20°C is 1.005 kWs/kg°C
- Tt = Temperature of output air, i.e. the indoor temperature. The calculations use 19.5°C for all establishments. It is important to differentiate between the value used for the calculations and the perceived indoor temperature, which would normally be around 21-23°C.
- Ti = Temperature of input air, i.e. the outdoor temperature for the location in the month in question

According to the Swedish National Board of Housing, Building and Planning, premises should have an air flow (qm) from ventilation of at least 0.35 litres per second when in use. Then further airflow is necessary, depending on the activity taking place on the premises. The following has been assumed for the different types of business:

- Hotels need a further 4 litres of air per second and guest when the guest is at the hotel
- Restaurants need a further 10 litres of air per second, serving when the guest is at the restaurant
- Conference facilities need a further 6 litres of air per second, delegate when the delegate visits the facility

$$Sch_LuftflodeLogi_Jan = Sch_AntalGastLogi_Jan \times LiterPerPerson_Logi$$

Sch_LuftflodeLogi_Jan – calculates how much air flow per second in the month of January (hotels), which depends on the number of visitors (Sch_AntalGastLogi_Jan) and

the assumed values for the ventilation flow (LiterPerPerson_Logi) that the various businesses have.

- Sch_LuftflodeLogi_Jan – ventilation losses per second in January in a hotel
- Sch_LuftflodeRest_Jan – ventilation losses per second in January in a restaurant
- Sch_LuftflodeKonf_Jan – ventilation losses per second in January at a conference facility
- Sch_AntalGastLogi_Jan – No. of hotel visitors in the month of January
- Sch_AntalGastRest_Jan – No. of restaurant guests in the month of January
- Sch_AntalGastKonf_Jan – No. of conference guests in the month of January

Assumed air flow for different businesses:

- LiterPerPerson_Logi – Ventilation need that depends on type of business, here a hotel
- LiterPerPerson_Rest – Ventilation need that depends on type of business, here a restaurant
- LiterPerPerson_Konf – Ventilation need that depends on type of business, here a conference facility

$$ventForlustLogi_Jan = 8760 / 12 \times (((OmsBasLogiJan \times AreaLogi) + (0.3 \times Sch_LuftflodeLogi_Jan)) \times 1.2 \times 1.005 \times (19.5 - UteTemp_Jan) / 1000) \times Vvx \times LuftVaxl$$

ventForlustLogi_Jan – the amount of energy lost due to ventilation losses in January.

Explanation of formula:

- 8760/12 is the number of hours in a month, taking all months as the same length
- OmsBasLogiJan is the value 0.35 that was explained above. However, if there is less than 1 person per 50 m^2 this will instead be 0.1
- AreaLogi – The area of the business, here a hotel
- 1.2 is the density of air at 20°C which is 1.2 kg per square metre
- 1.005 is the heat capacity for air and is a measure of how much thermal energy can be stored in air. It is a constant that at 20°C is 1.005 kWs/kg°C
- 19.5 is the indoor temperature in °C as assumed for the calculations
- UteTemp_Jan – is the average outdoor temperature for the location in question in January
- To get an answer in MWh, the equation is divided by 1000
- Vvx is the assumed efficiency of the heat exchanger, here 0.8, which gives the loss (1-0.8)
- LuftVaxl is a factor for unregulated ventilation, here 1,03
- 0.3 is a factor that describes the extent to which the guest is in the establishment over 24 hours. It is a combination of the time the guest spends in the establishment and how much of the establishment the guest visits. In hotels, for example, most guests will spend the night in their room, while in the evening and morning they can be expected to move throughout the building. The following times have been assumed for the different businesses:
  – 0.34 i.e. about 8 hours for hotels

– 0.045 i.e. about 1 hour for restaurants
– 0.34 i.e. about 8 hours for conference facilities

The ventilation losses are given in kW, i.e. energy loss per time. To calculate the ventilation loss for one month, this value is multiplied by the number of hours in a month (simplified here to 1/12 of the hours in a year).

At other times, the premises are assumed to be unoccupied and only need 0.32 litres of input air per second and square metre, according to the standards of the Swedish National Board of Housing, Building and Planning, unless they are completely empty, when the value of 0.1 is used instead.

It is also assumed that the establishment's ventilation system has a heat exchanger for input and output air. The efficiency of the heat exchanger is taken as 0.8, which means that heat in the output air is used to warm incoming air before it enters the room, which reduces ventilation losses by 80%.

Transmission losses

Ptrans = U x A x (Ti – Tu) [kW]

- Ptrans is the transmission losses from the building through walls, roofs and windows per second
- U is the average U-value for the building's roof, walls and windows. The value has been calculated according to the above-mentioned assumptions and depends on the area and number of floors in the building
- A is the area exposed to the outdoors, i.e. facades and roofs that are open to the elements
- Ti is the indoor temperature which, for the sake of the calculations, is assumed to be 19.5°C. In fact, the indoor temperature is normally higher, at around 21-23°C, but 19.5 is a correction to take account of the fact that the difference between the temperatures of the surfaces (inner wall and outer wall) is in practice often rather smaller than the difference between the internal operational temperature and the outdoor temperature as measured at a meteorological station and without the influence of the building wall.
- Tu is the outdoor temperature, which is dependent on which zone the building is located in.

The following U-values are based on the values used by Swedish National Board of Housing, Building and Planning:

- Wall: 0.18 W/m²K
- Roof: 0.13 W/m²K
- Window: 1.3 W/m²K
- Floor: 0.15 W/m²K

Losses due to thermal bridges are assumed to account for 10% of the transmission losses.

Since the tool only requires a statement of area and number of floors for the building(s), each building is assumed to be square in order to calculate an average U-value for the whole building. From the statistics gathered as part of the project STIL2 Hotels, restaurants and public venues, the proportion of window area to facade area has been set at 10%. Each floor is assumed to be 3 metres high. A calculation is also made of heat loss through the floor. It is considered to be constant throughout the year at a ground temperature of 6°C.

Up to 6 buildings may be entered in the model. The type, number of floors and total area must be stated for each building. This affects transmission losses, since the wall area changes based on how many and what type of buildings make up the applicant establishment.

```
Dim Uvarde_Tak As Single
Uvarde_Tak = 0.13
Dim Uvarde_Vagg As Single
Uvarde_Tak = 0.18
Dim Uvarde_Fonster As Single
Uvarde_fonster = 1.3

Dim Uvarde_Golv As Single

Uvarde_Golv = 0.15

Sch_Area_Tak = Sch_AreaTotal / AntalVaningar
```

- Sch_Area_Tak – the roof area, which depends on the building's area and number of floors. This is also assumed to be the same as the floor area
- Sch_AreaTotal – the area of the building
- AntalVaningar – the number of floors in the building in question

```
If ByggTyp = 1 Then
AntalFriaVaggar = 4                 'standalone building
End If

If ByggTyp = 2 Then
AntalFriaVaggar = 3                 'gable building
End If

If ByggTyp = 2 Then
AntalFriaVaggar = 3                 'block building
End If
```

- AntalFriaVaggar – states how many sides of the building facade are open to the elements. This affects how much heat is transferred to the surrounding area

```
Dim Sch_Area_Fasad As Single
Sch_Area_Fasad = (Sch_Area_Tak ^0.5) x AntalFriaVaggar x (AntalVaningar x 3)

Dim Sch_Area_Vagg As Single
Sch_Area_Vagg = Sch_Area_Fasad x 0.9

Dim Sch_Area_Fonster As Single
Sch_Area_Fonster = Sch_Area_Fasad x 0.1
```

- Sch_Area_Fasad – the facade area, which depends on the area of the building, the number of sides open to the elements and the number of floors, based on the assumption that all sections of the facade are the same size (derived from the roof area). Each floor is assumed to be 3 metres high

- Sch_Area_Vagg – the area of the facade that is made up of wall, i.e. an assumed 90%
- Sch_Area_Fonster – the area of the facade that is made up of windows, i.e. an assumed 10%

UA_Varde = (Sch_Area_Tak x Uvarde_Tak) + (Sch_Area_Vagg x Uvarde_Vagg) + (Sch_Area_Fonster x Uvarde_Fonster)

- UA_Varde – is the total U-value for all the sections of the building (roof, walls and windows) multiplied by the area of each section

TransForlustGolv = Uvarde_Golv x Sch_Area_Tak x (19.5 - 6)

- TransForlustGolv – is the transmission loss through the floor. The area of the roof is used here, as it is assumed to be the same size as the floor.

TransForlust_Jan = ((UA_Varde x (19.5 - UteTemp_Jan) + TransForlustGolv) x (8760 / 12) / 1000) x KoldBrygg_Faktor

- TransForlust_Jan – is the size of the transmission losses through the roof, walls and windows in January. The value varies depending on the outdoor temperature.
- KoldBrygg_Faktor is a factor that corrects for thermal bridges in the building, in this case 1.1.

To get an answer in MWh, the equation is divided by 1000. Each month is taken as having 8760/12 hours when calculating transmission losses.

Hot water

'åranvändning varmvatten logi:
Dim Total_VarmVatten_Logi As Single
Total_VarmVatten_Logi = AntalGast x 4.5

'åranvändning varmvatten Rest:
Dim Total_VarmVatten_Rest As Single
Total_VarmVatten_Rest = AntalPort x 0.25

'åranvändning varmvatten Konf:
Dim Total_VarmVatten_Konf As Single
Total_VarmVatten_Konf = AntalGastKonf x 1.1

'total varmvatten
Dim Sch_Total_VarmVatten_Bygg As Single
Sch_Total_VarmVatten_Bygg = Total_VarmVatten_Logi + Total_VarmVatten_Rest + Total_VarmVatten_Konf

- Total_VarmVatten_Logi – is the total energy needed for hot water, which depends on the number of annual visitors as follows:
  – Hotel 4.5 kWh per guest
  – Restaurant 0.25 kWh per guest
  – Conference facility 1.1 kWh per delegate
- Sch_Total_VarmVatten_Bygg – is the total energy needed for hot water from the various businesses

Hot water use is taken to vary only according to the number of guests for the various businesses, which is why no separate temperature dependent monthly values are calculated.

Pool heating

```
Dim Sch_Varme_Pool_PerArea As Single
Sch_Varme_Pool_PerArea = 700

'VärmeAnvändningPool
Dim Sch_Varme_Pool As Single
Sch_Varme_Pool = Sch_Varme_Pool_PerArea * AreaPool
```

- Sch_Varme_Pool – Energy needed to heat the pool
- Sch_Varme_Pool_PerArea – Energy needed per square metre to heat the pool, in this case 700 kWh per square metre per year
- AreaPool – the total pool area

Electricity use

Electricity use in the target value building is calculated with the help of model values for the business, drawn from the STIL2 survey. In the model, the applicant enters the area for the various businesses in the building, which is then multiplied by the model values for each business. The target value building thus has the same area allocation between businesses as the building in the application.

If the building has a pool, the electricity use for this is added based on model values and the surface area of the pool. The calculation is made in the same way as for the pool's use of heating (see above).

If the building does catering, preparing food that is not eaten in the building (which does not affect the number of restaurant guests), this is entered in the model. The number of catering servings is multiplied by a set factor and added to the electricity use. Each catering serving gives 2 kWh electricity.

- Sch_AreaLogi is the same as the area stated for accommodation in the applicant building
- Sch_El_Logi is the model value for electricity use in premises providing accommodation (Logi)
- The same principle applies for Restaurants (Rest) and Conference facilities (Konf)

$$Sch_El_Total_MWh = ((Sch_El_Pool \times Sch_AreaPool) + (Sch_El_Logi_Total \times Sch_AreaLogi) + (Sch_El_Rest_Total \times Sch_AreaRest) + (Sch_El_Konf_Total \times Sch_AreaKonf) + (CateringPort \times 2)) \ / \ 1000$$

The equation is divided by 1000 to get a value in MWh.

Electric heating

The applicant building states its total electricity use, including electric heating. In order for potential electric heating to be corrected for a normal year, some of the total stated electricity use must be separated into electric heating and "operating electricity". The model therefore calculates that all electricity use that exceeds the set model values for the business in the building is electric heating, and this is then corrected for a normal year. If the applicant building uses less energy than the model value, the building is assumed not to have electric heating and no normal year correction is applied to the electricity use.

- El_MWh is the electricity use stated for the applicant building
- AreaLogi is the area for accommodation, as stated for the applicant building

- ElLogi is the model value for electricity use in premises providing accommodation (Logi)
- The same principle applies for Restaurants (Rest) and Conference facilities (Konf)

If El_MWh < (((AreaLogi x ElLogi) + (AreaRest x ElRest) + (AreaKonf x ElKonf)) / 1000) Then
El_Verk_MWh = El_MWh
El_Varme_MWh = 0
Else:
El_Verk_MWh = (((AreaLogi x ElLogi) + (AreaRest x ElRest) + (AreaKonf x ElKonf)) / 1000)
El_Varme_MWh = El_MWh - (((AreaLogi x ElLogi) + (AreaRest x ElRest) + (AreaKonf x ElKonf)) / 1000)
End If

The equation is divided by 1000 to get a value in MWh.

The total electricity use, with the electric heating portion corrected for a normal year, will thus be:

(El_Verk_MWh + (El_Varme_MWh x NormalArsKorr))

Note that the target value building does not have any electric heating to be corrected for a normal year. The heating method in the target value building is always taken to be district heating.

Laundry
The following assumptions have been made for laundry firms:

Facilities that use a Nordic Ecolabelled laundry firm are weighted with 1.35 kWh/kg (and 310 g CO_2e/kg) for hotel laundry (bed linen and towels, usually only lightly soiled) and 2.45 kWh/kg (and 540 g CO_2e/kg) for restaurant laundry (tablecloths, napkins and so on from restaurants and catering kitchens. These textiles are often medium soiled but they may have stains that require relaundering).

Facilities that use a non-Nordic Ecolabelled laundry firm are weighted with 1.5 times the factors stated above.

If Tvatt_SvanJN = "Ja" Then
Tvatt_Hotellgods_EnergiFaktor = 1.35
Else: Tvatt_Hotellgods_EnergiFaktor = (1.35 x 1.5)
End If

If Tvatt_SvanJN = "Ja" Then
Tvatt_Restgods_EnergiFaktor = 2.45
Else: Tvatt_Restgods_EnergiFaktor = (2.45 x 1.5)
End If

Energi_Tvatt = ((Tvatt_Hotellgods_kg x Tvatt_Hotellgods_EnergiFaktor) + (Tvatt_Restgods_kg x Tvatt_Restgods_EnergiFaktor)) / 1000

The equation is divided by 1000 to get a value in MWh.

Laundry is added to the total energy use and is not separated into electricity and heating. The target value building always launders the same amount of laundry as the applicant building, but always uses a Nordic Ecolabelled laundry firm.

Appendix 3 Guidelines for assessing sustainability labelling for fish and shellfish

Nordic Ecolabelling sets requirements regarding standards for certified fish and shellfish. The requirements are summarised in this document which is updated on an ongoing basis. Each individual standard and certification system is examined by Nordic Ecolabelling to ensure that all the requirements are met.

General requirements regarding standards for sustainability labelling of fish and shellfish

The following requirements apply for both wild-caught and farmed fish:

- The standard shall follow all relevant laws and agreements and comply with the conventions and guidelines of the FAO and the UN:

  - 1982 UN Convention on the Law of the Sea
  - 1995 UN Fish Stocks Agreement
  - FAO Guidelines for the ecolabelling of fish and fishery products from marine capture fisheries
  - FAO Guidelines for aquaculture certification
  - FAO Code of Conduct for Responsible Fisheries

- The standard must balance economic and environmental interests. The standard must be drawn up in an open process in which the environmental, economic and social stakeholders have been invited to take part. This means that that there as a minimum must be a public consultation about the standard.
- The standard and documents related to the standard must be public.
- The standard is evaluated and revised on a regular basis so that the process is developed and environmental impact reduced on an ongoing basis.
- Nordic Ecolabelling places particular emphasis on the standard having absolute criteria that protect against illegal fishing and depletion of natural biodiversity.

Requirements regarding standards for wild-caught fish and shellfish

- The standard must have criteria stating that the fished stocks must not be overfished and that they are to be preserved at a level that promotes the goal of optimum exploitation over the long term.
- Assessment of fish stock status and trends, and the impact of the fishing on surrounding ecosystems are to be based on adequate and scientifically relevant data/information.
- The standard must require consideration of ecosystems, i.e. assessment of the negative effects of the fishing.
- The standard must have criteria aimed at minimising by-catch/discards. This can be fulfilled for instance by doing a risk assessment.

Requirements regarding farmed fish and shellfish

- The standard must contain criteria concerning environmental aspects that ensure sustainable farming, which includes requirements on fishing for feed purposes.
- Animal health and welfare.
- Food safety.

Requirements on certification systems and certification bodies

- The certification system must be transparent, have major national or international credibility and be able to verify that the requirements of the standard are met.
- The certification body must be impartial and trustworthy, i.e. certification must be carried out by an accredited, competent third party.
- The certification system must be suitable to verify that the requirements of the standard have been met. The methods used in certification must be replicable and applicable for fishing/farming. Certification must primarily take place in accordance with a specific standard.
- Checks must be carried out of the standard of the fishing/farming before the certificate is issued.
- The certified fishing/farming must be checked/audited on a regular basis.

Requirement regarding CoC (Chain of Custody) certification

A requirement for CoC may be evaluated if the requirements laid down by authorities require supplementing:

- The products must be traceable throughout the production chain with at least the catch zone, trade name (scientific name) and production method (farmed/wild) (ref.: Regulation 104/2000/EC which only applies to non-processed products).
- Chain of Custody certification is to be carried out by an accredited competent third party, as is the requirement for certification of the fishing.
- The system must set requirements for the CoC chain guaranteeing traceability, documentation and checks throughout the production chain.

Documentation

- Copy of standard
- Contact information (name, address and telephone number) to the organization who has developed the standard and audit report.
- References to persons who represents stakeholders who have been invited to participate in the standard development.

Please note that Nordic Ecolabelling may request further documentation to examine whether the requirements of the standard and certification system in question can be approved.