Consultation response for

Exterior panels and cladding

Version 2.0

2024-09-30

Nordic Ecolabelling

Nordic Swan Ecolabelled exterior panels and cladding – Consultation response

0114/2.0 – 2024.09.30

1 Summary

The consultation on reviewing the draft criteria for Panels for exterior use, gen 2, has been conducted in all Nordic countries in the period from 14 February 2024 to 26 April 2024. Several consultation comments have been received to the proposed draft.

The overall aim of this revision is to ensure that the Nordic Ecolabelling criteria continue to ensure positive environmental benefits via ecolabelling and that the criteria are viable and clear for the industry. The main comments apply to the following sections and requirements:

Product group definition
Stakeholders has recommended to be more precise when it comes to handling traditional durable wood, such as modified- and preservative treated wood, used for cladding. The text has been adjusted so it is clear that durable wood/surface treated solid wood is part to criteria for O86 durable wood.

Share of recycled materials in cement based- and mineral wool façade panels
Several stakeholders point out that proposed minimum share of recycled materials in the panels are too strict. Not possible to fulfil 30% recycled materials in cement-based panels and 50% in mineral wool-based panels. The limits have been adjusted to respectively 15% for cement-based panels and 40% for mineral wool-based panels.

Chemicals used in both production and surface treatment
PVA (Polyvinyl alcohol) fibres are used in the production of cement primarily to reinforce and reduce shrinkage. PVA fibres often contain a small amount of boric acid classified as H360 (reproductive toxicity) and boric acid is also on the Candidate list. Due to quality issue stakeholders recommend an exemption for use of boric acid in the production of cement used in cement-based panels. Nordic Ecolabelling is cautious when it comes to introducing exemptions for substances that are both CRM classified and listed on the Candidate List. Although boric acid (today) is used in very small amounts in PVA fibres, we hope that the industry will substitute to les problematic alternative substance in the nearest future. Therefore, no exemption for PVA fibres containing boric acid has been introduced in the new generation of the criteria.

Durability – expected working life of the panel
Comments saying that claims on expected working life on EPDs is very uncertain and may even vary between countries. The requirement has therefore been changed to minimum guarantee of 15 years for all types of panels.
Façade panels/cladding marked as semi-finished products must in addition be able to sustain 5 years after installation on the buildering before its recommended to apply a finish paint/topcoat/primer etc.

In section 6, you find a table showing all the changes than been done in the criteria document after the final draft consultation.

2 About the consultation

This document consists of feedback received during the public consultation for revised criteria for panels for exterior use and Nordic Ecolabelling's response to this feedback.
The purpose of this document is to show how external feedback has affected the development of the draft criteria in compliance with the ISO 14024 standard.

Nordic Ecolabelling is grateful for all inputs that helped us in the development of both environmentally ambitious and market-based criteria for panels for exterior use.

Response to consultation comments
Nordic Ecolabelling has in section 4 given a response to all comments and described if the requirement has been adjusted. In section 5, you find a table showing all the changes that has been done in the criteria document after the final draft consultation.

3 Compilation of received responses

Table 1: Summery of stakeholder consultation comments on the draft for Nordic Ecolabelling criteria for panels for exterior use.

Country	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification	Totally
Denmark	5					5
Sweden	6			3		9
Finland	3					3
Norway	1	1				2
Iceland						
Totally	15	1		3		19

Table 2: Danish consultation responses comments on the draft for Nordic Ecolabelling criteria for panels for exterior use.

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
James Hardie	x				
Danske Tegl	x				
Swisspearl group	x				
Frøslev	x				
Rockpanel	x				

Table 3: Swedish consultation responses comments on the draft for Nordic Ecolabelling criteria for panels for exterior use.

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
Swedish wood	x				
Nordic Wood Preservation Council	x				
Träskydd - Svenska Träskyddsföreningen	x				
Sveriges Kommuner och Regioner (SKR)				x	
AB Svenska Bostäder				x	
Folkhälsomyndigheten				x	
Kemisk Tekniska Företagen (KFT)	x				
Pretty Plastic	x				
The Nordic PVC Network:	x				

Table 4: Finnish consultation responses comments on the draft for Nordic Ecolabelling criteria for panels for exterior use.

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
Veljekset Vaara Oy	x				
THE FINNISH HOME-OWNERS ASSOCIATION	x				
The Confederation of Finnish Construction Industries RT	x				

Table 5: Norwegian consultation responses comments on the draft for Nordic Ecolabelling criteria for panels for exterior use.

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
Vyrk AS		x			
Treindustrien	x				

4 Comments to the criteria, in detail

The various comments from the consultation stakeholders have been inserted below and grouped in relation to the specific requirement. Nordic Ecolabelling has given a response to all comments and described if the requirement has been adjusted.
In section 6, you find a table showing all the changes that have been done in the criteria document after the consultation.

4.1 General comments

The Nordic PVC Network

The Nordic PVC Network strongly question the categoric rejection and ban of PVC materials as a part of exterior panels and cladding, found in criteria 012 and 027. The background on this blanket ban on PVC materials given in criteria 027 is based on obsolete knowledge and an outdated view of the European PVC industry.

Instead of a blanket ban on PVC, a more nuanced approach should be taken. Such an approach could involve dialogue with companies that manufacture PVC and products containing PVC, involving a transparent life cycle scrutiny. That would also work as an incentive for PVC products that are safe, fully traceable, and compatible with a circular economy.

The main concerns given in the background are on "waste management, the use of additives and dioxin emissions, for example in the manufacture and incineration of PVC". These concerns could easily be met by a nuanced approach.

Concerning waste management in general: There are several initiatives for end-of-life retake and recycling of PVC (and other plastic) products. For instance, the WUPPI system in Denmark has worked successfully since 1997 for rigid PVC. Instead of categorically banning PVC products from the Nordic Swan, criteria could be set up that require traceability and circular models.

When it comes to waste incineration, the EU Industrial Emission Directive imposes strict limits on the emission of all harmful pollutants, including PCDD/Fs(dioxins), from waste incineration plants.

The claim that PVC waste generates dioxins –which are anyway managed by flue gas cleaning systems –is not substantiated by facts. According to the European Chemicals Agency, the formation of dioxins "does not seem proportional to the amount of chlorine present but rather the production of PCDD/Fs in incinerations processes is strongly linked to furnace types, their operating conditions and the type and efficiency of air pollution control systems."[1] Even if PVC is not incinerated, other sources of chlorine, e.g. salty foods, are always present in the waste and can generate dioxins in poorly run incineration plants.

Further, ECHA acknowledges that waste incineration plants can safely accept waste with PVC content up to 2%. It is also worth mentioning that the HaloSep technology developed in the Nordics since the 1990s can now utilize residual waste from waste incineration. The technology is ready to be implemented across the Nordics and beyond.[2]

Additives are added to most plastics. According to a new report by the Swiss-Norwegian project PlastChem, PVC ranks 5thafterrubber, polyurethane (PUR), acrylonitrile butadiene styrene (ABS), and polycarbonate (PC) in the use of additives. When looking at the full lifecycle, PVC require far fewer substances than PET, PE, and PP which are commonly used for wood-plastic composites (WPC.[3] Thanks to REACH and proactive work from the PVC industry, problematic additives are continuously phased out and substituted by new, non-toxic substances that are increasingly non-fossil based. The Nordic Swan Eco-label should promote this substitution to safer chemicals.

[1] European Chemicals Agency. (2023). Investigation report on PVC and PVC additives.https://echa.europa.eu/documents/10162/17233/rest_pvc_investigation_report_en.pdf. p. 7
[2] https://www.halosep.com/
[3] Wagner, M., Monclús, L., Arp, H. P. H., Groh, K. J., Løseth, M. E., Muncke, J., Wang, Z., Wolf, R., & Zimmermann, L. (2024). State of the science on plastic chemicals -Identifying and addressing chemicals and polymers of concern. Zenodo. https://doi.org/10.5281/zenodo.10701706. p. 34

The mercury method for producing chlorine for PVC resin has been legally phased out in Europe since 2017. Since there are no obstacles to trace back where PVC resin is produced, such a requisite would be easily implemented by the Nordic Swan.

The membrane method certainly utilizes PFAS material, but that should be considered an invalid point. PFAS is not one material, but more than 10000 different materials, with different properties. The industry at large (not limited to chloro-vinyl) uses PFAS materials in diversified applications, such as membranes for electrolysers, gaskets, and lined piping or vessels because of their unique properties. Some applications are recognized as Best Available Techniques, while others provide significant benefit for safe and continued reliable operations of industrial assets, with no equivalent alternatives currently available.

As an industry committed to human health and environmental safety the chloro-vinyl industry continues to review all PFAS-containing material and equipment as well as available alternatives.

It is also in place to point out that virtually all products somehow depend on PFAS at some stage in their value chain. An important aspect is industrial processes, which rely heavily on materials containing PFAS for gaskets, refrigerants, conveyor belts and much more. But PFAS such as fluoropolymers are also essential for renewable energy, automotive, electronics, food, pharmaceuticals, water, oil and gas, aviation, architecture, water, and protective equipment.[4] Thus, if 'PFAS-free' would be a prerequisite for obtaining the Nordic Swan Eco-label, no product would be able to meet these criteria.

It is important to note that PVC is an integral part of the chlor-alkali industry. Chlor-alkali is vital to society, e.g. medicines, water purification and batteries for electric vehicles. Only 30% of the chlorine produced in Europe is used for PVC. Moreover, by excluding PVC from exterior panels Nordic end-users are missing the advantages of a fire-safe, highly durable, resource-efficient, and recyclable material.

First, PVC has inherent fire-retarding properties due to its high chlorine content. According to ECHA, "the use of flame retardants in PVC is quite limited, especially in the case of rigid PVC, compared to other commodity plastics like e.g. polyolefins, styrenics and acrylics."[5] Time and again, the tragic necessity for fire-safe materials in our buildings has been demonstrated, and PVC fulfills these requirements.

Second, PVC is known for its very long service life and has unique properties for exterior use. PVC does not corrode and can withstand the harsh Nordic climate with freezing winters, hot summers and increasing rainfall. PVC is therefore a chosen material for windows, doors, rain gutters, downpipes, roofing membranes, decking, siding, and other outdoor applications.

Third, PVC is inherently a low carbon material made from 57% chlorine from common salt and consumes less primary energy than other plastics such as PET, PE, PS, and PP, which are often used for WPC. Bio-attributed and bio-circular (mass

[4] https://fluoropolymers.eu/irreplaceable-uses-of-fps/
[5] European Chemicals Agency. (2023). Investigation report on PVC and PVC additives.https://echa.europa.eu/documents/10162/17233/rest_pvc_investigation_report_en.pdf. p. 21

balance) PVC are already available from resin manufacturers situated in Norway and Sweden.

Fourth, PVC can, depending on application, be recycled 8 to 10 times without loss of functional properties or needing new raw material or additives. PVC also has the longest history of plastic recycling. At European level, PVC's recycling rate is above the average for plastics.

We sincerely hope that the Nordic Swan Eco-label will carefully consider our detailed arguments, and the data presented in support of a more nuanced approach to the use of PVC in exterior panels. The undersigned parties are fully committed to engaging in productive dialogues and developing criteria that allow consumers to confidently select PVC-based products that are safe, durable, and environmentally responsible. By working together, we can establish standards that not only reflect current scientific and industry practices but also promote advancements in sustainability and circular solutions.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.
Nordic Ecolabelling acknowledges that much has been done by industry to reduce the climate and health impact of PVC manufacturing and PVC products within the last 10 years. However, Nordic Ecolabelling reckons that the use of PVC in exterior panels is still problematic for the following reasons:

- *Although the recyclability of PVC and PVC products is undeniable, and PVC recycling systems are under development, it is still a challenge for the industry to collect, sort and process the material so that it does not contaminate new products with harmful legacy chemicals. Nordic Ecolabelling has looked into the possibilities of requiring take back systems for specific PVC product areas. Unfortunately, it may take time before all actors involved throughout the service life of an exterior panel/cladding manage to run a fully functional take-back system.*

- *Although emissions of polyaromatic hydrocarbons (PAH), benzo-a -pyrene, dioxins and furans from incineration plants have been significantly reduced, and technologies for the management of air pollution control residues have been developed, not all the Nordic countries allow incineration of PVC. Denmark has a waste legislation that states that all PVC products must be sorted for material recycling. However, the difference in composition of products made of soft PVC (such as flooring) render their recycling difficult and must currently be sent to landfill, resulting in potential leaching of additives to the environment.[6] Furthermore, as a principal matter, Nordic Ecolabelling does not want to certify products that end up in landfills.*

- *Although the use of the most problematic phthalates is now restricted in the EU, other additives hazardous to the environment and health (e.g., plasticizers and stabilizers) can still be used in PVC as well as in other plastics.[7] The*

[6] https://op.europa.eu/en/publication-detail/-/publication/e9e7684a-906b-11ec-b4e4-01aa75ed71a1
[7] https://echa.europa.eu/sv/mapping-exercise-plastic-additives-initiative

recent ECHA's work on a restriction proposal on the use of PVC and its additives is in line with Nordic Ecolabelling's specific concerns with PVC.[8,9]

- *Although mercury cells are not used in Europe anymore, the replacing membrane technology requires the use of harmful substances (PFAS) to produce the chlorine gas needed in PVC and other chemicals/plastics production.*[10,11] *How much PFAS are released to the environment throughout the service life of the membrane and how the membrane is disposed afterwards as waste, are issues in need of more investigation.*

- *Although the purpose of Nordic Ecolabelling is to guide the consumer to choose the best products from an environmental perspective, communicating on potentially Nordic Ecolabelled PVC products could be challenging and be regarded as misleading. Additionally, there is a risk that the trustworthiness of the Nordic Ecolabel could be undermined if Nordic Ecolabelled PVC based exterior panels were to be found on the market, as many NGOs still advise to avoid the use of PVC products.*

The Finnish Home Owners Association
The Finnish Homeowners Association thanks you for the opportunity to provide an expert statement on the consultation on Nordic Ecolabelling for Panels for exterior use.
The Finnish Homeowners Association is the only national advocacy and service organization for homeowners and vacation home owners and residents in Finland.

We are promoting a lifestyle centred around single-family and vacation homes.
We are a non-profit and politically independent civil society organization, with approximately 230 member associations comprising around 70,000 individual members (households).

In Finland, there are nearly 1.2 million single-family homes inhabited by around 2.7 million people, as well as 0.5 million leisure-time residences used by 2.5–2.9 million individuals.

According to the consultation, Nordic Swan Ecolabelled panels and cladding for exterior use have a reduced environmental and climate impact throughout their lifecycle – and strict requirements for materials, chemicals and quality promoting circular economy.

Homeowners Association emphasizes the importance of developing environmentally sustainable and ecological building materials for consumers. Single family house- and vacation home owners are responsible for the renovation of their buildings. Also, many take steps on building a new home for their families either themselves or as building project from a professional, such as companies who sell prefabricated house

8
https://echa.europa.eu/documents/10162/17233/mandate_pvc_and_additives_rev_en.pdf/a860fd87-4231-5ed4-157b-f6cda1ee5832?t=1655721970555
9 https://echa.europa.eu/documents/10162/7d64f1d7-b29f-94ec-4477-9bcebf737a82
10 https://eippcb.jrc.ec.europa.eu/reference/production-chlor-alkali-0
11 https://www.eurochlor.org/publication/fluoropolymers/

packages. People are interested on environmental aspects and need much more information about the available possibilities.

We believe it to beneficial to have long duration for the exterior panels as well as different options, of which consumers can choose their preferred products. The extended lifespan of the materials in single family homes is a valued feature. However, we also acknowledge the constantly rising costs of living and the financial means of households. Long durability is advantageous as long as the investment cost for the material remains reasonable enabling consumer to acquire Ecolabelled building materials.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The aim of Nordic Swan Ecolabel is to make it easy for consumers to choose products with lower environmental and climate impact. One important aspect is to set requirements for ensuring long service life and quality. Nordic Ecolabelling does not have any possibilities to affect the price of the products.

The Confederation of Finnish Construction Industries RT
References mentioned in the text should be corrected so that reference is made to an existing standard: EN 13986 -> EN 13986 + A1, EN 15534 -> EN 15534-5, EN 12467 -> EN 12467+A2.
Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The reference to standards has been updated.

4.2 Definition of the product group

4.2.1 What can carry the Nordic Swan Ecolabel?

Swedish wood
Thank you for granting us a one-week respite to provide our feedback on the draft criteria document.

We appreciate the opportunity to contribute to this consultation and commend your commitment to promoting safe and sustainable products through the Nordic Swan Ecolabel. We recognize the high standards set by the Swan label to reduce risks to health and the environment and the use of resources and to minimize the carbon footprint throughout the product lifecycle. However, we believe there is room to reconsider certain aspects of the criteria for exterior panels to enhance their sustainability and practical viability further.

Firstly, we advocate for the reconsideration of excluding preservative-treated wood from the Ecolabel criteria (or related criteria). Modern advancements in wood treatment technologies have significantly increased the safety and environmental compatibility of treated wood. Such treatments extend the lifespan of wood products, which in turn preserves forest resources by reducing the frequency of replacement. Furthermore, the enhanced durability through treatment by environmentally friendly products or methods means longer carbon storage time in the products which is of great added value in minimizing the impact of climate change do to CO2e emissions.

To support a longer service life, we propose a holistic approach that includes:

- Design enhancements of structures and their installation methods to prolong service life. An engineering approach to estimate the expected lifespan of wood panels is well-documented in reports from the WoodExter and WoodBuild projects and includes a universal for biobased panel materials for designing long service life and to avoid mistakes.
- Utilizing locally sourced wood products like pine and spruce supports both economic and social sustainability. Economically, it boosts local economies by creating jobs in forestry and wood processing, while also reducing transportation costs. Socially, it strengthens community ties by promoting stewardship of local resources and preserving traditional woodworking skills. This approach not only lessens environmental impact but also fosters a resilient, interconnected community.
- The use of approved wood preservatives is safe and effective and is already acknowledged and implemented in the Nordic Swan Ecolabel criteria for "Outdoor furniture, playground and park equipment 073," to maximise durability, and also in “New buildings 089”. Treated wood is also evaluated and classified safe by other environmental schemes.

Products fulfilling requirements according to the above list should rightfully be accepted, acknowledged, and reasonably granted some points/credits where appropriate in the Swan Label System. Under the criteria with requirement for a minimum of 50 years life expectancy, products that can exceed this requirement should be rewarded. Many wood-based building products can reach at least 70-100 years or more with the proper economically viable maintenance measures.

Furthermore, the adoption of the NTR quality scheme (NTR AB and NTR GRAN) and Certifierad Målad Panel - CMP coating systems as quality certifications should be acknowledged. These industrial best practices have proven to extend the service life of wood-based products, particularly in harsh environments such as coastal areas, and in more typical installations. The direct benefits of this approach include reduced maintenance costs, enhanced robustness of the wood panels, and a decrease in the frequency of early failures. These treatments also facilitate the reuse of the components in later applications. All of these outcomes are in line with sustainability and circularity ideals, and most beneficial to the environment and society.

To exclude this holistic approach will reduce the sustainable use of wood, and detrimental to users and society at large.

Moreover, the risk assessment of wood preservatives, currently conducted by the European Chemicals Agency (ECHA) under the Biocidal Products Regulation (BPR), is both relevant and reliable. We suggest that the Nordic Swan Ecolabel utilizes these assessments to recognize and approve safe, treated wood products.

The practice of using treated wood varies across the Nordic countries, with countries like Norway commonly using treated wood panels to enhance durability without any recorded negative impact to the environment or people’s health. Recognising such practices within the Ecolabel criteria could lead to more efficient use of resources and promote sustainable practices in the housing sector.

In addition to these more fundamental issues, we also have some minor remarks regarding other aspects of the draft document such as the need to clarify the responsibility of "Product manufacturer/Subcontractor" and some definitions that are not in line with other standards in the industry (e.g. meaning of "Laminates" in the Eurocodes" vs. that in the Swan Label).

Considering these points, we propose a meeting where we can further elaborate our thoughts and suggestions. We believe a collaborative discussion could lead to further understanding and enhancements that align both with sustainability goals in general, the customers and end-users' conditions and practical industry needs.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling has decided to label/handle "durable wood" in another separate product group O86 Durable wood. By durable wood is meant solid wood with natural long durability and different types of modified wood such as chemical- and thermal modified wood. Preservative treated wood is also addressed in the product group for O86 Durable wood.
The environmental impact through an exterior panel's life cycle is assessed from a holistic perspective. This means that we are focusing on environmental relevance, environmental potential and finally steerability of the environmental impact. The rapport from WoodExter and WoodBuild you are referring to, contains many good recommendations for extending a products lifetime. However, many of these recommendations such as installation and ongoing maintenance (surface treatment) lie outside of what we influence by the criteria (lack of steerability). This means that the requirements primarily focus on raw materials and manufacturing face.
The definition of laminates has been clarified.

Nordic Wood Preservation Council and Träskydd
Thank you for granting us a one-week respite to provide our feedback on the draft criteria document.

We appreciate the opportunity to contribute to this consultation and commend your commitment to promoting safe and sustainable products through the Nordic Swan Ecolabel. We recognize the high standards set by the Nordic Swan Ecolabel to reduce risks to health and environment and the use of resources and to minimize the carbon footprint throughout the product lifecycle. However, we believe there is room to reconsider certain aspects of the criteria for exterior panels to enhance their sustainability and practical viability further.
Firstly, we advocate for the reconsideration of excluding preservative-treated wood from the Ecolabel criteria (or related criteria). Modern advancements in wood treatment technologies have significantly increased the safety and environmental compatibility of treated wood. Such treatments extend the lifespan of wood products, which in turn preserves forest resources by reducing the frequency of replacement.

To support a longer service life, we propose a holistic approach that includes:

- Design enhancements of structures and their installation methods to prolong service life. An engineering approach to estimate the expected lifespan of wood panels is well-documented in reports from the WoodExter and

WoodBuild projects and includes a universal tool for designing long service life of biobased panel materials, and to avoid mistakes.

- Utilising locally sourced wood products like pine and spruce supports both economic and social sustainability. Economically, it boosts local economies by creating jobs in forestry and wood processing, while also reducing transportation costs. Socially, it strengthens community ties by promoting stewardship of local resources and preserving traditional woodworking skills. This approach not only lessens environmental impact but also fosters a resilient, interconnected community.
- The use of approved wood preservatives is safe and effective and is already acknowledged and implemented to maximise durability in the Nordic Swan Ecolabel criteria for "Outdoor furniture, playground and park equipment 073", and in “New buildings 089”. Treated wood is also evaluated and classified safe by other environmental schemes such as Basta, Sunda Hus and more.

Products fulfilling requirements according to the above list should rightfully be accepted, acknowledged, and reasonably granted some points/credits where appropriate in the Swan Label System. Under the criteria with requirement for a minimum of 50 years life expectancy, products that can exceed this requirement should be rewarded. Many wood-based building products can reach at least 70-100 years or more with the proper economically viable maintenance measures.

Furthermore, the adoption of the NTR quality scheme (NTR AB and NTR GRAN) and Certifierad Målad Panel - CMP coating systems as quality certifications should be acknowledged. These industrial best practices have proven to extend the service life of wood based products, particularly in harsh environments such as coastal areas, and in more typical installations. The direct benefits of this approach include reduced maintenance costs, enhanced robustness of the wood panels, and a decrease in the frequency of early failures.

These treatments also facilitate the re-use of the components in later applications. All of these outcomes are in line with sustainability and circularity ideals, and most beneficial to the environment and society. Waste from treated wood is not Hazardous waste according to the Waste Framework Directive and is instead classified as ”mixed wood” and can safely be reused, repurposed or recovered or used for final carbon storage.

To exclude this holistic approach will reduce the sustainable use of wood.

We also urge a critical reassessment of the inclusion of wood-plastic composites, modified wood products and wood-based panels, all that are susceptible to biodeterioration and rot, and they are often assigned an unrealistic service life without empirical or practical evidence." It is essential that such materials undergo third party evaluation according to accepted standards to ascertain their performance on service life and performance and overall sustainability and proved in practical use during a reasonable time before receiving a Nordic Swan Ecolabel

Moreover, the risk assessment of wood preservatives, currently conducted by the European Chemicals Agency (ECHA) under the Biocidal Products Regulation (BPR),

is both relevant and reliable. We suggest that the Nordic Swan Ecolabel utilises these assessments to recognise and approve safe, treated wood products.

The practice of using treated wood varies across the Nordic countries, with countries like Norway commonly using treated wood panels to enhance durability. Recognising such practices within the Ecolabel criteria could lead to more efficient use of resources and promote sustainable practices in the housing sector.

Considering these points, we propose a meeting where we can further elaborate our thoughts. We believe a collaborative discussion could lead to further understanding and enhancements that align with both our sustainability goals and practical industry needs.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. See above answer to Swedish wood.

Danske Tegl
Vi kan konstatere, at teglværkernes produkter ikke er omfattet af de relevante produktgrupper, jf. side 5 i høringsmaterialet, 5. pkt.:

*Hard covering products such as tiles, block, slab, slates (roof or wall slates), clinker made of natural stone, agglomerated stone, ceramic, fired clay or precast concrete/cement. Hard covering products can be labelled according to EU Ecolabel criteria for Hard Covering products**

Vi kan også konstatere, at det af høringsbrevet fremgår, at facadetegl i henhold til EN 717 (som ikke omhandler facadetegl) ikke er en del af høringskriterierne på grund af manglende energidata.

Heraf fremgår det dog, at der fortsat arbejdes på at skaffe flere data til at afgøre en eventuel og mulig inddragelse af murede facadefliser i de fremtidige kriterier.

Som følge af ovenstående har Danske Tegl derfor ikke nogen kommentarer eller input til selve høringsforslaget i forhold til ændrede kriterier på Svanemærkning af facadeplader.
Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Overall Nordic Swan Ecolabelling is very positive to clay façade tiles used for façade cladding. However, we have found it difficult to assess the potential to make an environmental difference when comparing different tiles on the market. The industry has already done a lot to make the production more efficient and minimize its energy consumption. Clay façade tiles is therefore not included in the criteria. Clay façade tiles are part of EN 1304 which now has been clarified in the criteria.

Treindustrien
Treindustrien mener kriteriesettet bør endre navn slik at det kun står kledning (engelsk cladding) og ikke panel. Panel er en benevnelse som først og fremst benyttes om produkter til innendørs bruk, mens kledning er til utendørs bruk.

Treindustrien er positiv til at overflatebehandlet kledning er inkludert i kriteriesettet. Svanemerket skal hjelpe forbrukeren til å ta gode og miljøvennlige valg. I kriteriesettet inngår også plastprodukter og andre materialer. Det er betenkelig at ubehandlet trekledning som er et rent naturprodukt ikke er mulig å svanemerke. En ubehandlet trekledning, som påføres svanemerket maling på byggeplass, vil kunne være et vel så bra eller bedre klima- og miljøalternativ enn enkelte av produktene som nå inngår i kriteriesettet. Det bør derfor vurderes om også ubehandlet trekledning skal kunne Svanemerkes, for eksempel hvis det selges med FDV som viser til Svanemerket maling, eller eventuelt selges som en "pakke-løsning".

Levetid og kvalitet
Svanen ønsker å fremme både miljø, klima og sirkularitet. Det er bra. Samtidig er det behov for å gjøre avveininger mellom ulike hensyn. Hensyn til holdbarhet, kvalitet, lang levetid og vedlikeholdsintervaller krever også at det benyttes ulike former for behandling av trevirket. Treindustrien mener det ikke reflekteres i kriteriesettet, der det verken er tillatt med nanopartikler eller biocider som kan bidra til bedre råtebeskyttelse og lengre levetid i tøffe værforhold.

Maling danner et beskyttende lag på overflaten av kledningen som beskytter mot fuktighet, sopp, UV-stråler, vind og andre værforhold. Levetid på produkter og behov for vedlikehold vil avhenge av hvordan produktene benyttes, hvordan bygget er konstruert (er det for eksempel takutstikk) og belastningen som påføres. I et tøffere klima med mer nedbør og ekstremvær vil trevirke utfordres i større grad, og ved å påføre en råtebestandig grunning/behandling på treverket før eventuell maling eller beising, vil du forlenge levetiden til treverket ved å gi det et ekstra beskyttelseslag mot fuktighet og forvitring. Slik reduseres behovet for hyppig vedlikehold, reparasjoner og utskiftning som følge av råteskader. Det finnes et eget kriteriesett for holdbart trevirke, der også kledningsprodukter inngår. Heller ikke i det kriteriesettet er det tillatt med eksempelvis CU-impregnert.

Vi er enig i at Svanemerket skal være noe å "strekke seg etter", samtidig må ikke kriteriene utformes slik at det som over tid kan være det beste klima- og miljøvalget ikke blir tilgjengelig. Det skjer svært mye innovasjonsarbeid i bransjen knyttet til dette, og vi tar gjerne en nærmere dialog med Nordisk Miljømerking om denne tematikken.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. We agree that the name of the PG is a little bit unclear since we added solid surface treated wood to the draft criteria for consultation. All other types of product's part of the criteria can be referred to as panels (wood-, cement- mineral wool, HPL- and WPC based panels). These types of panels are often marked as "used for cladding" but overall, we see them as panels. Due to confusion, solid surface treated wood has been removed from this product group to the criteria for O86 durable wood which is currently under revision. The possibility of use Ecolabelled paint for surface treatment is also proposed as an option in this product group.

4.3 Comments to the individual requirements

4.3.1 Product information

O1 Description of the product

No comments received.

4.3.2 Quality

O2 Quality and properties

No comments received.

4.3.3 Raw materials

O3 Tree species – restrictions

No comments received.

O4 Traceability and certification

No comments received.

O5 Chemicals – recycled material in wood-based panels

No comments received.

O6 Lignocellulose raw materials (other than wood)

No comments received.

Paper and cellulose fibre

O7 Ecolabelled paper

No comments received.

O8 Tree species – restrictions (pulp and paper)

No comments received.

O9 Traceability and certification of wood raw materials (pulp and paper)

No comments received.

O10 Chemicals in the manufacture of pulp and paper

No comments received.

O11 COD emissions from the production of paper and pulp

No comments received.

Wood-plastic composite material (WPC)

O12 Wood fibre and plastic

No comments received.

O13 Chemicals in recycled plastic used in WPC

No comments received.

O14 Additives – prohibited substances

Mineral raw materials

O15 Responsible sourcing of virgin mineral raw materials

No comments received.

O16 Heavy metals

No comments received.

Cement based- and mineral wool façade panels

O17 Cement based- and mineral wood-based panels

James Hardie

Vi har kigget kriterierne igennem igen. Som vi talte om i telefonen i går, er det ikke muligt at opfylde kravet som beskrevet:
"At least 30% by weight of the raw materials in the product must consist of renewable and/or recycled materials"
I dag er man ikke i stand til at recycle fibrecement. Risikoen for at få en enkelt asbestholdig plade blandet i produktionsanlægget og senere ud til forbrugeren, er simpelthen for stor. For nogle få produkters vedkommende (lavere kvalitetsplader) kan man genanvende en meget lille procentdel af egen produktionsspild.
Hvis dette kriterie skulle blive gældende, tvivler jeg på at Svanemærket vil være relevant for fibrecement facadeplader producenter.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling acknowledges that the proposed minimum limit of 30% renewable and/or recycled materials in the product is very ambiguous. The minimum limit has therefore been adjusted to 15%.

Swisspearl Group

With cement having often more than 50% weight share in a façade panel, it is very challenging to reach the 30% recycled material requirement. Even by recycling all the production waste this is not feasible. A take back system is required, but product produced currently are expected to be on buildings for quite some time. Collecting the current fibre cement waste brings challenges due to asbestos concerns as well.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling acknowledges that the proposed minimum limit of 30% renewable and/or recycled materials in the product is very ambiguous. The minimum limit has therefore been adjusted to 15%.

Rockpanel

To my knowledge, Rockpanel is the only façade cladding material made of stone wool. If the criteria are "At least 50% by weight of the raw materials in the product must consist of recycled materials.", Rockpanel will not be able to fulfil this. The amount of

recycled materials used in our materials is subject to change. It can be around 30% (post-consumer and pre-consumer material together). It is not 50%.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling acknowledges that the proposed minimum limit of 50% renewable and/or recycled materials in the product is very ambiguous. The minimum limit has therefore been adjusted to 40%.

The Confederation of Finnish Construction Industries RT

The requirement for wt-% of recycled materials in mineral wool panels is said to be 45 % in background document while in the criteria wt-% 50 is used. We propose to correct the criteria and follow the wt-% described in the background document.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The required minimum wt-% for recycled materials has been adjusted to min. 40 wt-% in both criteria and background document.

O18 Chemicals in recycled mineral wool

No comments received.

Metal – aluminium

O19 Production of aluminium

No comments received.

4.3.4 Chemicals

Chemicals used in the production of panels

O20 Classification of chemical products

Swisspearl Group

Questions for O20, O21, O29 and O31

Must a declaration from the chemical manufacturer be obtained for every chemical product going into the production of our panels? If so, this is a very extensive task, as we have many suppliers for our raw materials, and it could take several months to retrieve this information.

For a declaration, Annex 4 or 5 may be used. In Annex 4 and 5 it is not clear what the difference is to "Chemical products" and "Ingoing substances" as the tables to fill in for both O20, O21, O29 and O31 contain the sentence "*Does the chemical product contain substances classified with any of the hazard phrases below?*".

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The chemical manufacturer or -supplier needs to declare for each ingoing chemical used in the production of the product. All the chemical requirements are grouped in appendix 4 and 5 to simplify the declaration process. Appendix 4 are for chemicals (or chemical products) used in the production of the panel while appendix 5 is for chemicals used in any surface treatment for the panel.

We agree that the text in appendix 4 and 5 referring to O20 and O28 needs to be updated as these are referring to chemical product and not ingoing substances.

O21 Classification of ingoing substances

Swisspearl Group
The requirements in this section seem fair but we are also surprised to notice that there are no limit values for the content of substances classified according to the given table. We would not be able to fulfill this requirement as one of the chemical substances contained in the chemical products used for production are classified with the hazard code H360 and, unfortunately, also on the Candidate List. In this specific case the raw material in PVA fibres and the problematic substance is boric acid, which is a residue from the production of the PVA fibres. The boric acid makes up for <0,7% of the PVA fibres, which itself does maximum make up for 2% of our finished panel. The total content of boric acid in one of our finished panels would be <0,014%. At this point we are not able to substitute the PVA fibres, as they bring one of the key functions to our products, but we are looking into other solutions. However, some suppliers of PVA fibres declare a lower amount of boric acid in their product and choosing them is the only change we are able to make today.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling is cautious when it comes to introducing exemptions for substances that are both CRM classified and listed on the Candidate List. Although boric acid (today) is used in very small amounts in PVA fibres, we hope that the industry will substitute to les problematic alternative substance in the nearest future. Therefore, no exemption for PVA fibres containing boric acid has been introduced in the new generation of the criteria.

O22 Prohibited substances

No comments received.

O23 Nanomaterials

No comments received.

O24 Preservatives

Kemisk Tekniska Förtagen (KTF)
Vi motsätter oss kravet på IPBC där halten är satt till 0,2%. Vi anser att det behövs 0,3 % för att ge ett fullgott skydd. Det är viktig att produkterna håller över tid i den utsatta utemiljö de används i, vi vill inte riskera att behöva byta ut paneler i förtid.
Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. We agree and the limit has therefore been adjusted to 0,3%.

O25 Volatile organic compounds in adhesives

No comments received.

O26 Free formaldehyde

No comments received.

Surface treatment

O27 Plastic foiling

No comments received.

O28 Ecolabelled products

No comments received.

O29 Classification of chemical products

Swisspearl Group
Again, it is surprising to notice, that there are no limit values to these requirements. The different paints on our products add up to approximately 0,83% of the total weight of one of our products. An example of one of the ingoing substances in one of the chemical products used in the production of the paints for our products is:

An ingoing substance with hazard classification H400 and H410 makes up for maximum 0,0015% of the chemical product it is contained in. Said chemical product makes up for 0,17% of the total weight of one of our products.

We have very low limits for some of these substances in both our finished product and the chemical products going into the production of those, and we would, of course, wish that this could also be taken into account. On the other hand, we do also understand that carrying your label means living up to very strict requirements in regard to content of harmful substances and environmental pollution, and that this also enforces the EU Chemical Strategy for Sustainability.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Requirement O29 applies for the classification of chemical product and not the classification of ingoing substances.

O30 UV curing surface treatment system

No comments received.

O31 Classification of ingoing substances

Swisspearl Group
Again, it is surprising to notice, that there are no limit values to these requirements. The different paints on our products add up to approximately 0,83% of the total weight of one of our products. An example of one of the ingoing substances in one of the chemical products used in the production of the paints for our products is:

An ingoing substance with hazard classification H400 and H410 makes up for maximum 0,0015% of the chemical product it is contained in. Said chemical product makes up for 0,17% of the total weight of one of our products.

We have very low limits for some of these substances in both our finished product and the chemical products going into the production of those, and we would, of course, wish that this could also be taken into account. On the other hand, we do also understand that carrying your label means living up to very strict requirements in

regard to content of harmful substances and environmental pollution, and that this also enforces the EU Chemical Strategy for Sustainability.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The requirement O31 does not prohibit classifications H400 or H410 in ingoing substances.

O32 Prohibited substances

No comments received.

O33 Nanomaterials

No comments received.

O34 Preservatives

No comments received.

O35 Free formaldehyde

No comments received.

Surface treatment system

O36 Application method and quantity applied – surface treatment

No comments received.

O37 Quantity of applied volatile organic compounds (VOC)

Treindustrien

Til kravene til VOC (O36-O38), så stiller vi spørsmål om hvorfor dette tas med i vurderingen for utvendige produkter, da dette temaet først og fremst omhandler innemiljø.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The requirement O36 and O37 has to do with the work environment when operating the surface treatment system. We do not have requirement for emission of VOC from the finished panel.

4.3.5 Emissions

Emissions from the production - COD

O38 Emissions of COD from wet processes

No comments received.

Emissions from the production – working environment

O39 Emissions to air from production of laminate in HPL, compact laminate and panels based on resin binder

No comments received.

O40 Emissions of dust

No comments received.

4.3.6 Climate and energy

O41 Energy consumption in the production of kraft paper and pulp that is included in HPL and compact laminate

No comments received.

O42 Energy consumption – laminate production

No comments received.

O43 Energy consumption – wood-based panels

No comments received.

O44 Energy consumption – panels made from other lignocellulose raw materials

No comments received.

O45 Energy consumption - Solid wood panels and cladding

Treindustrien
Dette punktet er ikke hensiktsmessig utformet og vanskelig å dokumentere. For et energi-krav vil det være svært krevende for en produsent å hente ut data for dette. Det er ikke mulig å hente tall fra EPDen direkte, og det er svært vage retningslinjer for hvordan beregningen skal utføres, der ulik metodikk kan gi ulike resultater. Krav til dokumentasjon av energiforbruk er derfor både for omfattende og upresist. Alle lokasjoner har minst en strømmåler, utstrakt bruk av bioenergi og flere produktgrupper gjennom produksjonslinjen. Eksempelvis skilles det ikke på strømforbruket per produktgruppe (gulvbord eller kledningsbord). I praksis vil man allokere en viss mengde strøm til de ulike produksjonslokalitetene etter skjønn (eksempelvis x % til tørke og xx % til høvleri etc). Videre skilles det ikke på produktgrupper, selv om det å tørke kledningsbord til 18 % fukt krever mindre energi enn et gulvbord til 8 % fukt. Ulik praksis og tolkning vil derfor gi ulike resultater. Vi stiller også spørsmål ved relevans til kriteriet. Det bør vurderes om det er mer hensiktsmessig å stille krav til klimagassutslipp for kledningsproduksjonen (fase A1-A3 for eks) med gwp-verdi som kan hentes ut av EPDer.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. We agree that it can be difficult to calculate the exact energy use for manufacturing solid wood panels/cladding. This is also why the energy consumption can be calculated as an annual average for either just the ecolabellled production line(s) or for the whole production site. Allocation is accepted in the calculations. The energy consumption is calculated as MJ/kg product produced, and encompasses all energy used from gate to gate (phase A3 in EPDs) at the panel production site.
Changing the requirement from use of "real" energy to CO_2 is subject to even more uncertainties as EPD's is based on average reference data and assumptions and exceptions is part of the individual calculations.

Mineral- and non-renewable raw materials

O46 Energy consumption - Wood Plastic Composite panels (WPC)

No comments received.

O47 Energy consumption - mineral wool-based panel (incl. facing/finishing)

No comments received.

O48 Energy consumption – Cement

No comments received.

O49 Energy consumption - cement-based panels

Swisspearl Group
We have some products that would fit this requirement. I would argue that it very much depends on the way of calculating the share of energy per kg/panel, especially in production sites where multiple different product types are produced. Is calculation the share based on the total energy consumption of the site enough or does it require specific measurements for a specific product type?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The energy requirement can be calculated as an annual average for either just the specific production line(s) of Nordic Swan Ecolabelled panels or the whole production site that is relevant for Nordic Swan Ecolabelled panels. Appendix 6 in the draft criteria describes how the energy calculation should be carried out in more details.

4.3.7 Circularity

O50 Durability – expected lifespan

Pretty Plastic
Our products, facade cladding from Pretty Plastic, are from 100% recycled PVC and we make great efforts in ensuring good and transparent environmental data by for instance performing LCA's and lab material tests. We are very enthused about your eco-label!

One of the research topics is the lifespan. Specifically, because in theory there is a great variance in lifespan for recycled plastics as observed in theory. In practice, it seems not easy to evidence. See also summarized in our drafted lifespan memo:

In the building sector, PVC is used due to its stability and longevity. It requires minimum care and maintenance during use, plus PVC products are found to have the lowest price over their lifetime. Average lifetime of PVC construction products varies depending on the application used. PVC window frames are assumed to have a lifetime between 30 and 40 years[12] [13], while some argue this is even above 50 years[14].

[12] https://plasticactioncentre.ca/wp-content/uploads/2019/04/Polymer-Degradation-and-Stability.pdf
[13] https://www.mdpi.com/2073-4360/14/15/3035
[14] https://journals.sagepub.com/doi/10.1177/0734242X0302100211

PVC pipes for water transport have lifetime between 40 to 80 years[15] while some argue above 100 years[16].

If your criteria allow for an expected lifespan of 50 years, we are wondering how to prove this as an applicant? As understood your label works with recycled plastics and we are curious on your take of lifetime for plastics.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. A lot has happened in the PVC industry the last 10 years e.g. facing out various hazardous substances. However, Nordic Swan Ecolabelling is still critical to accept this material in exterior panels as there are many other less critical alternatives raw materials on the market. Recycling plastic and PVC is very good from a circular economic perspective, but potentially entails a number of other problems. Old PVC potentially contains a lot of hazardous substances such as mercury, which is not desirable to incorporate into new products. Therefore, PVC/recycled PVC is not allowed to be used in the criteria.

Swisspearl Group
I expect fibre cement suppliers not to have direct proof for 50 years. Usually, the information mentioned in the EPD is based on for instance a table listed by authorities, such as the Federal Office for Building and Regional Planning (Germany). However, these might differ between countries. Currently the 50 years does not require the manufacturer to do something remarkable.

An example: The same fibre cement panel has 35 expected lifetime in the Netherlands according to the SBR guide which is used for EPD published in the Netherlands, whereas in Germany this is 50 years according to the BBSR.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Durability and expected lifespan are most important for how much the product affects the environment. The proposed requirement for expected lifespan/service life according to data in EPDs is subjected to certain uncertainties but so is an alternative requirement for warranty. However, based on received comments and dialog with stakeholders NSE has decided to change the requirement from expected lifespan to warranty of at least 15 years for alle types of panels/cladding. The guarantee can be provided, given that the product is used and maintained according to manufacturers' recommendations.

Frøslev
It is very difficult to get reliable data on lifetime expectancy for many types of materials since no standards are in place to assess this.

How should one estimate the lifetime expectancy?

If firm requirements are not set here, Producer A can state that Coating X has a lifetime expectancy of 10 years while Producer B will state that Coating X has a lifetime expectancy of 50 years.

[15] https://pure.au.dk/ws/portalfiles/portal/13386408/pvc-final_report_lca.pdf
[16]https://www.riool.net/documents/20182/5616999/Extensive%20testing%20on%20PVC%20sewer%20pipes%20towards%20identifying%20the%20factors%20that%20affect%20their%20operational%20lifetime.pdf/98e3201d-9c71-4ec8-9ebc-bddcbacac0c0

There are no standards in place to determine lifetime expectancy of wood cladding and/or coating systems. Reference to service life (RSL) for wood cladding is not in place in all Nordic countries at the moment.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. See above answer to SwissPearl Group.

Rockpanel

New requirement for durability or expected lifespan of the panel has been introduced in the criteria. By durability/expected lifespan is meant the stated service life in technical documents such as EPDs, ETA's or other 3 party verified declarations. Question: Is this a good way of documenting the requirement or should we focus on warranty? – Yes, this is the correct approach, as warranty covers only parts of the product, and depends on the product.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. See above answer to SwissPearl Group.

Veljekset Vaara Oy

A 50-year useful life requires at least 28mm strong wood-outdoor cladding and industrial treatment and surface painting, as well as maintenance/treatment of the relevant finished façade surface at regular intervals.
https://puuinfo.fi/puupinnat/ulkoverhoukset/
The origin of the raw material must be Nordic. Raw material from Russia will not be accepted.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling require traceability of wood raw materials and prohibits the use of Russian wood in Nordic Swan Ecolabelled products.

The Confederation of Finnish Construction Industries RT

Reference service life used for EPD is not directly indicating actual durability of a product. The performance of the product in construction works (use case) defines the durability. The RSL in EPD or ETA doesn't verify the overall durability. In addition, it includes different uncertainties, which vary largely depending on product group. Such uncertainties should be transparently declared and verified.
Proposed requirement for durability (50 years) will be difficult to verify from a declaration of durability /expected lifespan. Instead, we propose that warranty and maintenance instructions are given.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. See above answer to SwissPearl Group.

O51 Information for consumers

No comments received.

O52 Take-back system

The Confederation of Finnish Construction Industries RT

Criteria should be in accordance with the Nordic Ecolabelling for New buildings (P14). We propose to add the following to O52:

Take back systems can be organized directly by the producer or by a waste management company.
Packaging material is not covered by the requirement.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been updated with the two proposed adding's: Take back systems can be organized directly by the producer or by a waste management company and packaging material is not covered by the requirement.

4.3.8 Innovation

O53 Innovation in production

No comments received.

4.3.9 License maintenance

O54 Customer complaints

No comments received.

O55 Traceability

No comments received.

4.3.10 Appendices

No comments received.

5 Comments to the background, in detail

No comments received.

6 Discussion and conclusion

Several consultation comments have been received to the proposed draft proposal criteria for Panels for exterior use, generation 2. The comments concentrate on the proposed new and adjusted requirements. Nordic Ecolabelling is grateful for all-round responses.

The main comments apply to the following sections and requirements:

Product group definition
Stakeholders has recommended to be more precise when it comes to handling traditional durable wood, such as modified- and preservative treated wood, used for cladding. The text has been adjusted so it is clear that durable wood/surface treated solid wood is part to criteria for O86 durable wood.

Share of recycled materials in cement based- and mineral wool façade panels
Several stakeholders point out that proposed minimum share of recycled materials in the panels are too strict. Not possible to fulfil 30% recycled materials in cement-based panels and 50% in mineral wool-based panels. The limits have been adjusted to respectively 15% for cement-based panels and 40% for mineral wool-based panels.

Durability – expected working life of the panel
Comments saying that claims on expected working life on EPDs is very uncertain and may even vary between countries. The requirement has therefore been changed to minimum guarantee according to the different types of panels.

Table 1: Overview of changes done in the generation 2 of criteria for exterior panels and cladding, based on received consultation responses in the final draft process.

Requirement	Consultation comments	Change in the requirement after the consultation
Product group definition	Unclear if traditional durable wood such as preservative-treated wood used for cladding is part of the criteria.	Surface treated solid wood has been removed from the criteria to criteria for O86 durable wood. Clarified that durable wood is part of another product group.
O17 Cement based- and mineral wool façade panels.	Proposed limits for min. share of recycled materials in the panels are too ambiguous.	The requirement for cement-based panels has been adjusted from min. 30% to 15% recycled materials. Mineral wool-based panels have been adjusted from min. 50% to 40%,
O24 Preservatives	Proposed limit of 0,2% should be changed to 0,3%.	The limit has been changed from 0,2 to 0,3%
O28-O30 Chemicals used in surface treatment		
O45 Energy consumption – solid wood panels and cladding	Dialog with stakeholders after end consultation. Proposed requirement for use of energy in production of solid wood cladding + any surface treatment is not possible to fulfill.	The limit has been changed from 1350 MJ/m3 to 1850 MJ/m3.
O50 Durability – expected lifespan	The proposed requirement for min. 50 years expected lifespan/service life according to data in EPDs is subjected to uncertainties. The guarantee should be used instead.	The requirement has been changed from expected lifespan (based on information in EPDs) to warranty of at least 15 years for alle types of panels/cladding. Façade panels/cladding marked as semi-finished products must in addition be able to sustain 5 years after installation on the buildering before its recommended to apply a finish paint/topcoat/primer etc.
O52 Take back system	Take back systems should also be able to be offered through agreement with a waste management company.	Take back systems can be organized directly by the producer or by a waste management company.